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ARCHIVES DIVISION

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**NOTICE OF PROPOSED RULEMAKING**  
INCLUDING STATEMENT OF NEED & FISCAL IMPACT

CHAPTER 345  
DEPARTMENT OF ENERGY  
ENERGY FACILITY SITING COUNCIL

**FILED**

04/27/2022 2:50 PM  
ARCHIVES DIVISION  
SECRETARY OF STATE

FILING CAPTION: Implementation of HB 2021 (2021) and Updates to Carbon Dioxide Emissions Standards

LAST DAY AND TIME TO OFFER COMMENT TO AGENCY: 06/23/2022 6:00 PM

*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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Salem, OR 97301

Filed By:  
Christopher Clark  
Rules Coordinator

HEARING(S)

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

DATE: 06/23/2022

TIME: 5:00 PM

OFFICER: Christopher Clark

ADDRESS: Oregon Department of Energy

550 Capitol St. NE

Meitner Conference Room

Salem, OR 97301

SPECIAL INSTRUCTIONS:

Written comments must be submitted by June 23, 2022 at 5:00 pm. Oral comments will be accepted until close of hearing.

Additional options for in-person and remote participation will be provided. For additional information see:

<https://www.oregon.gov/energy/Get-Involved/Pages/Energy-Facility-Siting-Council-Rulemaking.aspx>

NEED FOR THE RULE(S)

HB 2021 (2021) established new requirements for new and amended site certificates for fossil-fueled power plants (see ORS 469.413). Rulemaking is needed to implement the provisions of the bill related to energy facility siting, to establish clear standards and procedures for future siting decisions related to fossil-fueled power plants, and to clarify what constitutes a "significant increase" in the gross carbon dioxide emissions that are reasonably likely to result from operation of a fossil-fueled power plant.

While ORS 469.413 establishes requirements for new fossil fueled power plants, the existing carbon dioxide emissions standards adopted under ORS 469.503(2) continue to be applicable to nongenerating facilities and may apply to existing fossil fueled power plants under limited circumstances. As a result, the standards need to be updated to ensure that carbon dioxide emissions are mitigated to the full extent allowed by law. Members of the public are encouraged to submit data and views on whether continued maintenance of the standards after this rulemaking is reasonable, just, and necessary.

## DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE

Staff report, presentation, and meeting recording for Agenda Item E of the April 22, 2022 Energy Facility Siting Council Meeting. Available from: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/Council-Meetings.aspx>  
2021 Oregon Laws Chapter 508. Available from: <https://www.oregonlegislature.gov/>  
Any other data or documents referenced in this notice are available from the Oregon Department of Energy upon request.

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## STATEMENT IDENTIFYING HOW ADOPTION OF RULE(S) WILL AFFECT RACIAL EQUITY IN THIS STATE

These rules implement and expand upon the new standards for fossil-fueled power plants established under ORS 469.413 and update carbon dioxide emissions standards for energy facilities established under ORS 469.503(2). The provisions of HB 2021 and the implementing rules prohibit the Council from issuing a site certificate for a new fossil fueled power plant unless the Council finds that the facility will only generate electricity in a manner that does not emit greenhouse gasses into the atmosphere. The new law also prohibits the Council from approving the amendment of a site certificate for an existing fossil fueled power plant that would significantly increase the greenhouse gas emissions from that facility. The rules do not directly affect racial equity in Oregon; however, the rules are generally intended to reduce future greenhouse gas emissions produced by energy facilities in Oregon and, by extension, the disproportionate climate impacts those emissions would have on the health, safety, and wellbeing of tribal communities, communities of color, and other communities that have historically been underrepresented in public decision-making processes. The updates to the carbon dioxide emissions standards under ORS 469.503(2) are intended to mitigate some of the carbon dioxide emissions that may result from the construction or modification of nongenerating facilities or the incremental increases in emissions that may result from minor modifications in the design or operation of existing fossil-fueled power plants. There are currently three carbon dioxide emitting nongenerating facilities and seven fossil-fueled power plants operating under site certificates in Oregon. New non-generating facilities could be proposed anywhere in Oregon, but the existing facilities are located in rural northwest Oregon. The existing fossil-fueled power plants are located in Columbia, Klamath, Morrow, and Umatilla counties. Overall, these counties have similar demographics as the statewide population, however, Umatilla and Klamath County both contain tribal lands and according to 2021 data from the US Census Bureau Population Estimates Program, have a higher percentage of people who identify as American Indian than the statewide population. Morrow and Umatilla Counties also have a higher percentage of people that identify as Hispanic or Latino than the statewide population. Most of the existing fossil-fueled power plants are located on lands zoned for industrial development, and as a result, are located in areas that may have elevated levels of air pollutants or other environmental burdens. While the rules are expected to reduce climate impacts as described above, they are not expected to have a significant impact on local air quality or other environmental indicators.

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## FISCAL AND ECONOMIC IMPACT:

These rules implement and expand upon the new standards for fossil-fueled power plants established under ORS 469.413 and update carbon dioxide emissions standards for energy facilities established under ORS 469.503. Excluding fiscal and economic impacts that are attributable to the enactment of ORS 469.413, these rules are expected to have minimal fiscal and economic impacts on state agencies, units of local government, or members of the public.

The proposed changes to the carbon dioxide emissions standards in OAR 345-024-0550, 345-024-0590, and 345-024-0620, and to the monetary offset rate in OAR 345-024-0580 may result in small increases in costs of compliance associated with the mitigating carbon dioxide emissions that would result from the construction or modification of an energy facility.

Based on cost and performance estimates provided in the 2022 Annual Energy Outlook, the combined effect of the proposed increase in the monetary offset rate from \$2.85 to \$4.27 and of resetting the carbon dioxide emissions standard for base load power plants from 0.614 pounds of carbon dioxide per kilowatt hour to 0.574 pounds of carbon dioxide per kilowatt hour would increase the cost of constructing a new natural gas-fired power plant by approximately

3.9 percent, or approximately \$0.40 for each megawatt hour the fossil fueled power plant is expected to produce over its assumed 30-year life. For comparison, the average retail price of electricity in the United States in January 2022 was approximately \$137.20 per megawatt hour. While we are unable to quantify the impacts on nongenerating facilities that emit carbon dioxide, we assume that these impacts will be of similar magnitude. These relatively small increases are expected to be economically achievable for various types of power plants.

The small increases in costs incurred by applicants and certificate holders would provide for the mitigation of approximately 120 additional pounds of carbon dioxide per megawatt hour over the existing rules. Using an assumed social cost of carbon of \$58 per ton of carbon dioxide, this represents a benefit of \$3.96 per megawatt hour of electricity produced by a new fossil fueled power plant. Accounting for the \$.040 increase in costs, this represents a net social benefit of \$3.56 per megawatt hour.

The methods used to develop these estimates do not account for the provisions of ORS 469.413 which prohibit the Council from issuing a site certificate for a new fossil-fueled power plant and restrict the amendment of site certificates for existing fossil fueled power plants. While the estimates above likely reflect the magnitude and direction of impacts that would occur if the rule changes were applied to the development or modification of a carbon dioxide emitting facility, the limited applicability means that it is unlikely that either the costs or benefits of the rule change will be fully realized, and the actual impacts of the rules are expected to be minimal.

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**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).*

As described above, the proposed rules are expected to increase the cost of compliance with the Council's carbon dioxide emissions standards, if applicable, by approximately 3.9 percent. These costs would only be incurred by a utility, independent power producer, or other person that proposed to construct or modify a carbon dioxide emitting energy facility. While the proposed rules change information and application requirements that could apply to other energy facilities, these changes are not expected to result in additional costs associated with reporting, recordkeeping, administrative activities or professional services. Because the rules only apply to the construction and operation of large energy facilities, no small businesses, as that term is defined in ORS 183.310, are likely to be subject to the proposed rules.

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

Small businesses are not expected to be affected by the proposed rules and were not specifically consulted in their development.

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**WAS AN ADMINISTRATIVE RULE ADVISORY COMMITTEE CONSULTED? NO IF NOT, WHY NOT?**

A RAC was not consulted in the development of proposed rules due to the narrow scope of issues involved in the rulemaking, and because the public comment period and hearings established by the notice provide reasonable opportunities for interested persons to submit additional data and views.

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**RULES PROPOSED:**

345-001-0010, 345-020-0011, 345-020-0016, 345-021-0010, 345-021-0021, 345-024-0500, 345-024-0503, 345-024-0510, 345-024-0550, 345-024-0570, 345-024-0580, 345-024-0590, 345-024-0620, 345-025-0010, 345-027-0375

AMEND: 345-001-0010

RULE SUMMARY: Provides definitions for OAR chapter 345. Adopts definitions in ORS 469.300 by reference.

References related to carbon dioxide emissions standards relocated to new rule in OAR 345-024-0500 to 345-024-0720.

CHANGES TO RULE:

345-001-0010

Definitions ¶¶

In this chapter, ~~the following definitions apply~~ unless the context requires otherwise or a term is specifically defined within a division or a rule:¶¶

~~(1) "Adjusted to ISO conditions" as defined in ORS 469.503(2)(e).~~ terms have the meaning provided in ORS 469.300 and the following definitions:¶¶

~~(2)~~ (21) "Analysis area" means the area or areas specifically described in the project order issued under OAR 345-015-0160(1), containing resources that the proposed facility may significantly affect. The analysis area is the area for which the applicant must describe the proposed facility's impacts in the application for a site certificate. A proposed facility might have different analysis areas for different types of resources. For the purpose of submitting an application for a site certificate in an expedited review granted under 345-015-0300 or 345-015-0310, the analysis areas are the study areas defined in this rule, subject to modification in the project order.¶¶

~~(3)~~ (32) "Applicant" as defined in ORS 469.300 or, if an application has not been submitted, a person who has submitted, or intends to submit, a notice of intent or a request for expedited review.¶¶

~~(4) "Associated transmission lines" as defined in ORS 469.300.¶¶~~

~~(5) "Average electric generating capacity" as defined in ORS 469.300.¶¶~~

~~(6)~~ (63) "Background radiation" means the direct radiation (gamma) and concentrations of potential radionuclide contaminants in construction materials and the environment in the vicinity of the plant not associated with the nuclear operation and retirement of the facility. Background must be determined as follows:¶¶

(a) For direct radiation, the results of any background measurements taken prior to operation of the facility must be provided and 6 to 10 measurements must be taken in areas in the vicinity of the site with materials and/or geological formations representative of the site that have not been affected by the operation and retirement of the facility. Background must be calculated at the average and at the 95% confidence level.¶¶

(b) Environmental samples must be taken for soil, sediment, water, and other materials present at the facility site that could have been affected by facility operations and retirement. Measurements for these samples must be calculated at the average and 95% confidence levels, based on 6 to 10 measurements. Background environmental samples must be taken at locations on site or in the immediate vicinity of the site which are unaffected by plant operations. Background must be calculated at the average and 95% confidence levels, based on 6 to 10 measurements at each location.¶¶

(c) For construction material such as concrete, asphalt, block, brick and other materials used to construct the buildings and systems at the site, representative samples of materials unaffected by site operations must be selected and surveyed. Six to ten samples of each material must be taken to determine the level of naturally occurring and artificially induced concentrations of naturally occurring radioactivity present. Measurements must include direct radiation (beta-gamma and alpha), wipes and qualitative and quantitative laboratory analyses. Concentrations of fission and activation products from historical fallout must be characterized as well.¶¶

(d) All measurements must be made using appropriate instruments, properly calibrated, and in sufficient number to determine compliance with requirements.¶¶

~~(7) "Base load gas plant" as defined in ORS 469.503(2)(e).¶¶~~

~~(8) "Carbon dioxide equivalent" as defined in ORS 469.503(2)(e).¶¶~~

~~(9)~~ (94) "Certificate holder" means the person to whom a site certificate has been granted by the Council pursuant to this chapter.¶¶

~~(10)~~ (105) "Chair" means the chairman or chairwoman of the Energy Facility Siting Council.¶¶

~~(11)~~ (116) "Committed firm energy and capacity resources" means generating facilities or power purchase contracts that are assured to be available to the energy supplier over a defined time period. Committed firm energy and capacity resources include existing generating facilities, existing power purchase contracts and planned generating facilities that sponsors have made firm commitments to develop.¶¶

~~(12) "Construction" as defined in ORS 469.300.¶¶~~

~~(13)~~ (137) "Corridor" means a continuous area of land not more than one-half mile in width and running the entire length of a proposed transmission line or pipeline. "Micrositing corridor" is defined below in this rule.¶¶

~~(14)~~ (148) "Council" means the Energy Facility Siting Council established under ORS 469.450.¶¶

~~(15)~~ (159) "Council Secretary" means the person designated by the Director of the Oregon Department of Energy to serve as secretary to the Council.¶¶

- (160) "Department" means the Oregon Department of Energy created under ORS 469.030.¶
- (171) "Direct cost" means the discounted sum of all monetary costs to the ultimate consumer over the lifetime of the facility or resource plan or resource strategy.¶
- (182) "Energy facility" includes:¶
- (a) An energy facility as defined in ORS 469.300; ¶
  - (b) A small generating plant for which an applicant must have a site certificate according to OAR 345-001-0210; and¶
  - (c) A facility for which a developer or governing body has elected to defer regulatory authority to the Council under ORS 469.320(8).¶
- (193) "Energy supplier" means:¶
- (a) A retail electric utility, a federal power marketing agency, or a local gas distribution company, or¶
  - (b) A person or public agency generating electric energy for its own consumption, lawfully purchasing electric energy directly from a generator for its own consumption, or transmitting or distributing natural or synthetic gas from an energy facility for its own consumption.¶
- (2014) "Existing corridor," as used in ORS 469.300 and 469.442, means the right-of-way of an existing transmission line, not to exceed 100 feet on either side of the physical center line of the transmission line or 100 feet from the physical center line of the outside lines if the corridor contains more than one transmission line.¶
- (215) "Facility" as defined in ORS 469.300 or a small generating plant for which an applicant must have a site certificate according to OAR 345-001-0210 together with any related or supporting facilities.¶
- (2216) "Facility substantially similar to the proposed facility" means:¶
- (a) A facility that uses the same fuel and substantially similar technology, that has substantially the same in-service date, and that has a direct cost not substantially greater than that of the proposed facility; or¶
  - (b) A facility that is demonstrated to provide as good a mix of reliability, compatibility with the power system, strategic flexibility, environmental impact and direct cost as the proposed facility taking into account reasonable trade-offs among such factors.¶
- (2317) "Fossil fuel" means natural gas, petroleum, coal and any form of solid, liquid or gaseous fuel derived from such materials that is used to produce useful energy.¶
- ~~(24) "Fossil-fueled power plant" as defined in ORS 469.503(2)(e).¶~~
- (2518) "Fuel chargeable to power heat rate" means the net heat rate of electric power production during the first twelve months of commercial operation. A fuel chargeable to power heat rate is calculated with all factors adjusted to the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate using the formula,  $FCP = (FI - FD) / P$ , where:¶
- (a) FCP = Fuel chargeable to power heat rate.¶
  - (b) FI = Annual fuel input to the facility applicable to the cogeneration process in British thermal units (higher heating value).¶
  - (c) FD = Annual fuel displaced in any industrial or commercial process, heating, or cooling application by supplying useful thermal energy from a cogeneration facility instead of from an alternate source, in British thermal units (higher heating value). (d) P = Annual net electric output of the cogeneration facility in kilowatt-hours.¶
- ~~(26) "Generating facility" as defined in ORS 469.503(2)(e).¶~~
- ~~(27) "Greenhouse gas" as defined in ORS 469.503(2)(e).¶~~
- ~~(28) "Gross carbon dioxide emissions" as defined in ORS 469.503(2)(e). The Council must measure the gross carbon dioxide emissions of a fossil-fueled power plant on a new and clean basis. For nongenerating energy facilities that emit carbon dioxide, the Council must measure the gross carbon dioxide emissions as described in OAR 345-024-0620(1).¶~~
- (219) "High efficiency cogeneration facility" means an energy facility, except coal and nuclear power plants, that sequentially produces electrical and useful thermal energy from the same fuel source and under average annual operating conditions:¶
- (a) Has a nominal electric generating capacity of less than 50 megawatts and the fuel chargeable to power heat rate value is not greater than 5550 Btu per kilowatt-hour (higher heating value); or¶
  - (b) Has a nominal electric generating capacity of 50 megawatts or more and the fuel chargeable to power heat rate value is not greater than 6000 Btu per kilowatt-hour (higher heating value).¶
- (320) "Land use approval" means a final quasi-judicial decision or determination made by a local government that:¶
- (a) Applies existing comprehensive plan provisions or land use regulations to a proposed facility;¶
  - (b) Amends a comprehensive plan map or zoning map to accommodate a proposed facility;¶
  - (c) Amends comprehensive plan text or land use regulations to accommodate a proposed facility;¶
  - (d) Applies the statewide planning goals to a proposed facility; or¶
  - (e) Takes an exception to the statewide planning goals adopted by the Land Conservation and Development Commission for a proposed facility.¶

(321) "Local government" as defined in ORS 469.300.¶

(32) "Micrositing corridor" means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.¶

(3322) "Mitigation" means taking one or more of the following actions listed in order of priority:¶

(a) Avoiding the impact altogether by not taking a certain action or parts of an action;¶

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;¶

(c) Partially or completely rectifying the impact by repairing, rehabilitating or restoring the affected environment;¶

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate corrective measures;¶

(e) Partially or completely compensating for the impact by replacing or providing comparable substitute resources or environments; or¶

(f) Implementing other measures approved by the Council.¶

(34) "Natural gas" means gas as defined in ORS 520.005.¶

(35) "Natural gas-fired facility" means an energy facility that is intended to be fueled by natural gas except for infrequent periods when the natural gas supply is interrupted, during which an alternate fuel may be used. Such alternate fuel use may not exceed 10 percent of expected fuel use in British thermal units, higher heating value on an annual basis.¶

(36) "Net carbon dioxide emissions" as defined in ORS 469.503(2)(e).¶

(37) "Net electric power output" means the electric power produced or capacity made available for use.

Calculation of net electric power output subtracts losses from on-site transformers and power used for any on-site electrical loads from gross capacity as measured or estimated at the generator terminals for each generating unit.¶

(38) "New and clean basis" means the average carbon dioxide emissions rate per hour and net electric power output of the energy facility, without degradation. The site certificate holder must determine the new and clean basis:¶

(a) By a 100-hour test at full power that the site certificate holder completes during the first 12 months of commercial operation of the energy facility, unless the Council specifies a different testing period for a non-base load power plant (or power augmentation) or a nongenerating energy facility. A 100-hour test performed for purposes of the certificate holder's commercial acceptance of the facility may suffice in lieu of testing after beginning commercial operation;¶

(b) With the results adjusted for the average annual site condition for temperature, barometric pressure and relative humidity and use of alternative fuels unless the Council specifies that the results for a non-base load power plant (or power augmentation) or a nongenerating energy facility be adjusted for the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate;¶

(c) Using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel (higher heating value); and,¶

(d) Using a rate of 161 pounds of carbon dioxide per million Btu of distillate fuel (higher heating value), if such fuel use is proposed by the applicant.¶

(e) Notwithstanding subsection (a) and including subsections (b) through (d), for a facility that employs major power generating equipment that has previously been used, the new and clean basis means the average carbon dioxide emissions rate and net electric power output for the first use of the equipment at the site, as determined by historical data from the previous usage or by testing on site.¶

(39) "Nominal electric generating capacity" as defined in ORS 469.300.¶

(40) "Non-base load power plant" means a fossil-fueled generating facility that is limited by the site certificate to an average number of hours of operation per year of not more than 6,600 hours. For a non-base load power plant designed to operate at variable loads, the facility's annual hours of operation are determined by dividing the actual annual electric output of the facility in megawatt-hours by the facility's nominal electric generating capacity in megawatts. The Council will assume a 30-year life for the plants for purposes of determining gross carbon dioxide emissions, unless the applicant requests and the Council approves a shorter operational life in the site certificate. If the Council approves a shorter operational life, the certificate holder must operate the facility for no longer than the approved operational life or, before the expiration of the approved operational life, must request an amendment of the site certificate to extend the operational life.¶

(41) "Nongenerating facility" as defined in ORS 469.503(2)(e).¶

(42) "Offset" as defined in ORS 469.503(2)(e).¶

(43) "Offset funds" means the amount of funds determined by the Council to satisfy the applicable carbon dioxide emissions standard pursuant to OAR 345-024-0560(3), 345-024-0600(3) or 345-024-0630(2) and (4).¶

(423) "Net electric power output" means the electric power produced or capacity made available for use.

Calculation of net electric power output subtracts losses from on-site transformers and power used for any on-

site electrical loads from gross capacity as measured or estimated at the generator terminals for each generating unit.

(24) "Owner" means owner or lessee under a capital lease.

(425) "Permit" means any permit, license, certificate or other approval required by federal law, state statute, state administrative rule or local government ordinance.

(46) "Person" as defined in ORS 469.300.

(47) "Power augmentation" means technologies that increase the capacity and the heat rate of the plant above the capacity and heat rate of the base load gas plant. These include, but are not limited to, duct burning and some forms of steam augmentation.

(48) "Project order" as defined in ORS 469.300.

(49) "Qualified organization" means an organization that:

(a) Is exempt from federal taxation under section 501(c)(3) of the Internal Revenue Code as amended and in effect on September 18, 2015;

(b) Either is incorporated in the State of Oregon or is a foreign corporation authorized to do business in the State of Oregon;

(c) Has in effect articles of incorporation that:

(A) Require that offset funds received under OAR 345-024-0710(3) are used for offsets;

(B) Require that decisions on the use of the offset funds are made by a decision-making body composed of seven voting members of which three are appointed by the Council, three are Oregon residents appointed by the Bullitt Foundation or an alternative environmental nonprofit organization named by the body, and one is appointed by the applicants for site certificates that are subject to OAR 345-024-0550, 345-024-590, and 345-024-0620 and the holders of such site certificates; and

(C) Require nonvoting membership on the decision-making body for holders of site certificates that have provided funds not yet disbursed under OAR 345-024-0710(3);

(d) Has made available on an annual basis, beginning after the first year of operation, a signed opinion of an independent certified public accountant stating that the qualified organization's use of funds pursuant to ORS 469.503 conforms with generally accepted accounting procedures except that the qualified organization will have one year to conform with generally accepted accounting principles in the event of a nonconforming audit;

(e) Has to the extent applicable, except for good cause, entered into contracts obligating at least 60 percent of the offset funds to implement offsets within two years after the commencement of construction of the facility; and

(f) Has to the extent applicable, except for good cause, complied with OAR 345-024-0710(3).

(5026) "Related or supporting facilities" as defined in ORS 469.300. The Council interprets the terms "proposed to be constructed in connection with" to mean that a structure is a related or supporting facility if it would not be built but for construction or operation of the energy facility. "Related or supporting facilities" does not include any structure existing prior to construction of the energy facility, unless such structure must be substantially modified solely to serve the energy facility.

(5127) "Reviewing agency" means any of the following officers, agencies or tribes:

(a) The Department of Environmental Quality;

(b) The Water Resources Commission and the Water Resources Director through the Water Resources Department;

(c) The Fish and Wildlife Commission through the Oregon Department of Fish and Wildlife;

(d) The State Geologist;

(e) The Department of Forestry;

(f) The Public Utility Commission of Oregon;

(g) The Oregon Department of Agriculture;

(h) The Department of Land Conservation and Development;

(i) The Oregon Department of Aviation;

(j) The Pacific Northwest Electric Power and Conservation Planning Council;

(k) The Office of State Fire Marshal;

(l) The Department of State Lands;

(m) The State Historic Preservation Office;

(n) Any other agency identified by the Department;

(o) Any tribe identified by the Legislative Commission on Indian Services as affected by the proposed facility;

(p) The governing body of any incorporated city or county in Oregon within the study area as defined in OAR 345-001-0010 for impacts to public services;

(q) Any special advisory group designated by the Council under ORS 469.480; and

(r) The federal land management agency with jurisdiction if any part of the proposed site is on federal land.

(528) "Significant" means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or

on the importance of the natural resource affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.¶

(5329) "Site" as defined in ORS 469.300. "Energy facility site" means all land upon which an energy facility is located or proposed to be located. "Related or supporting facilities site" means all land upon which related or supporting facilities for an energy facility are located or proposed to be located.¶

(5430) "Site boundary" means the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas and all corridors and micro-siting corridors proposed by the applicant.¶

~~(55) "Site certificate" as defined in ORS 469.300.¶~~

~~(56)~~ 31) "Solar photovoltaic power generation facility" includes, but is not limited to, an assembly of equipment that converts sunlight into electricity and then stores or transfers that electricity. This includes photovoltaic modules, mounting and tracking equipment, posts, electrical cabling, inverters, transformers, collection systems, fencing, and other components.¶

(a) For the purposes of applying the acreage standards of ORS 469.300(11)(a)(D), the land used by a solar photovoltaic power generation facility includes the land occupied by its related or supporting facilities. Related or supporting facilities are not otherwise considered to be components of the solar photovoltaic power generation facility;¶

(b) A proposed solar photovoltaic power generation project may be determined to be an expansion of any existing or proposed solar photovoltaic power generation facility that is:¶

(A) Within one mile of the proposed project; and¶

(B) Determined to be under common ownership with the proposed project. Projects connected to the same parent company or individuals will be considered to be in common ownership, regardless of the operating business structure;¶

(c) As used in this rule and OAR 345-001-0250, a "proposed solar photovoltaic power generation project" means:¶

(A) The proposed development of a separate and independent solar photovoltaic power generation facility; or¶

(B) The proposed expansion or modification of a proposed or existing solar photovoltaic power generation facility.¶

~~(57)~~ 32) "Special nuclear material" means plutonium, uranium-233 or uranium enriched in the isotope 233 or in the isotope 235.¶

~~(58)~~ 33) "Strategic flexibility" means the value of a resource as part of a strategy to manage variance in costs or risks caused by future uncertainty.¶

~~(59)~~ 34) "Study area" means an area defined in this rule. Except as specified in subsections (f) and (g), the study area is an area that includes all the area within the site boundary and the area within the following distances from the site boundary:¶

(a) For impacts to threatened and endangered plant and animal species, 5 miles.¶

(b) For impacts to scenic resources and to public services, 10 miles.¶

(c) For land use impacts and impacts to fish and wildlife habitat, one-half mile.¶

(d) For impacts to recreational opportunities, 5 miles.¶

(e) For impacts to protected areas described in OAR 345-022-0040, 20 miles.¶

(f) The distance stated in subsection (a) above does not apply to surface facilities related to an underground gas storage reservoir.¶

(g) The distances stated in subsections (a) and (d) above do not apply to pipelines or transmission lines.¶

~~(60)~~ 35) "Substantial loss of steam host" means the thermal energy user associated with a high efficiency cogeneration facility has made such long-term changes in its manner and magnitude of operation as to result in the loss of one or more work shifts for at least a year, accompanied by at least a 30 percent resultant reduction in the use of thermal energy.¶

~~(36)~~ 1) "Substantial loss of fuel use efficiency" means an increase in the fuel chargeable to power heat rate at a high efficiency cogeneration facility to greater than 7000 Btu per kilowatt-hour (higher heating value), or reduction of the fraction of energy output going to the thermal energy user associated with the facility to less than 20 percent, as a result of a substantial loss of steam host. Substantial loss of fuel use efficiency does not include efficiency losses due to equipment wear or condition.¶

~~(62)~~ 37) "Surface facilities related to an underground gas storage reservoir" means structures or equipment adjacent to and associated with an underground gas storage reservoir that are proposed to be built in connection with an underground gas storage reservoir and include, but are not limited to:¶

(a) Facilities such as stripping plants, main line dehydration stations, offices, warehouses, equipment shops, odorant storage and injection equipment and compressors;¶

(b) Pipelines, such as gathering lines and liquid collection lines; and¶



(c) Roads and road maintenance equipment housing at the reservoir site.¶

~~(63) "Thermal power plant" as defined in ORS 469.300.¶~~

~~(6438) "Total energy output" means the sum of useful thermal energy output and useful electrical energy output.¶~~

~~(65) "Underground gas storage reservoir" as defined in ORS 469.300.¶~~

~~(6639) "Useful thermal energy" means the verifiable thermal energy used in any industrial or commercial process, heating or cooling application;¶~~

~~(67) "Utility" as defined in ORS 469.300.¶~~

~~(6840) "Vice-chair" means the vice-chairman or vice-chairwoman of the Energy Facility Siting Council.¶~~

~~(69) "Waste disposal facility" as defined in ORS 469.300.~~

Statutory/Other Authority: ORS 469.470, 469.503

Statutes/Other Implemented: ORS 469.300-469.570, 469.590-469.619, 469.992

AMEND: 345-020-0011

RULE SUMMARY: Clarifies requirements for information that must be included in Notice of Intent for electric power generation plants that produce electricity from fossil or renewable fuels. Establishes new information requirements for fossil fueled power plants to facilitate implementation of ORS 469.413.

CHANGES TO RULE:

345-020-0011

Contents of a Notice of Intent ¶

(1) The applicant must, to the extent reasonably practicable, include in the notice of intent (NOI) the information described in the following subsections. If the applicant proposes alternative sites, the applicant must describe each alternative separately. The applicant must designate the information with the appropriate exhibit label identified in the following subsections:¶

(a) Exhibit A. Information about the applicant and participating persons, including:¶

(A) The name and address of the applicant including all co-owners of the proposed facility, the name, mailing address, email address and telephone number of the contact person for the NOI, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person;¶

(B) The contact name, mailing address, email address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and persons upon whom the applicant will rely in meeting any facility standard adopted by the Council;¶

(C) If the applicant is a corporation:¶

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;¶

(ii) The date and place of its incorporation;¶

(iii) A copy of its articles of incorporation and its authorization for submitting the NOI; and¶

(iv) In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon;¶

(D) If the applicant is a wholly owned subsidiary of a company, corporation or other business entity, in addition to the information required by paragraph (C), the full name and business address of each of the applicant's full or partial owners;¶

(E) If the person submitting the NOI is an association of citizens, a joint venture or a partnership:¶

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI;¶

(ii) The name, business address and telephone number of each person participating in the association, joint venture or partnership and the percentage interest held by each;¶

(iii) Proof of registration to do business in Oregon;¶

(iv) A copy of its articles of association, joint venture agreement or partnership agreement and a list of its members and their cities of residence; and¶

(v) If there are no articles of association, joint venture agreement or partnership agreement, the applicant must state that fact over the signature of each member;¶

(F) If the applicant is a public or governmental entity:¶

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI; and¶

(ii) Written authorization from the entity's governing body to submit an NOI;¶

(G) If the applicant is an individual, the individual's mailing address, email address and telephone number; and¶

(H) If the applicant is a limited liability company:¶

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;¶

(ii) The date and place of its formation;¶

(iii) A copy of its articles of organization and its authorization for submitting the NOI; and¶

(iv) In the case of a limited liability company not registered in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.¶

(b) Exhibit B. Information about the proposed facility, including:¶

(A) A description of the proposed energy facility, including as applicable:¶

(i) ~~For electric power generating plants, the nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300;~~¶

- (ii) Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate, store, transmit, or transport electricity ~~and~~, useful thermal energy, or fuels;¶
- (iii) Methods for waste management and waste disposal, including, to the extent known, the amount of wastewater the applicant anticipates, the applicant's plans for disposal of wastewater and storm water, and the location of disposal;¶
- (iv) For thermal power plants, combustion turbine power plants, or other facilities designed to generate electricity from any gas, liquid, or solid fuels;¶
- (I) A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy;¶
- (II) ~~M~~If the facility will generate electric power from natural gas, petroleum, coal or any form of solid, liquid or gaseous fuel derived from such material, a discussion of methods the facility will use to ensure that the facility does not emit greenhouse gasses into the atmosphere, and a description of any equipment the facility will used to capture, sequester, or store greenhouse gases;¶
- (III) A discussion of the methods for the disposal of waste heat generated by the facility;¶
- (v) For transmission lines, approximate transmission line voltage, load carrying capacity and type of current;¶
- (vi) For pipelines, approximate operating pressure and delivery capacity in thousand cubic feet per day;¶
- (vii) For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors;¶
- (viii) For facilities to store liquefied natural gas, the approximate volume, maximum pressure, liquefaction and gasification capacity in thousand cubic feet per hour;¶
- (B) A description of major components, structures and systems of each related or supporting facility; and¶
- (C) The approximate dimensions of major facility structures and visible features.¶
- (c) Exhibit C. A description of the location of the proposed energy facility site and the proposed site of each related or supporting facility and all areas that might be temporarily disturbed during construction of the facility, including the approximate land area of each.¶
- (d) Exhibit D. If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, identification of at least two proposed corridors, as defined in OAR 345-001-0010, or identification of a single proposed corridor with an explanation of why alternate corridors are unlikely to better meet the applicant's needs and satisfy the Council's standards. The applicant must include an explanation of the basis for selecting the proposed corridors and, for each proposed corridor, the information described in subsections (e), (g), (i), (j), (k), (n) and (p) that is available from existing maps, aerial photographs, and a search of readily available literature.¶
- (e) Exhibit E. Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, address, email address and telephone number of the agency or office responsible for each permit. For each permit, the applicant must provide a preliminary analysis of whether the permit should or should not be included in and governed by the site certificate.¶
- (f) Exhibit F. A list of the names and mailing addresses of property owners, as described in this rule:¶
- (A) The list must include all owners of record, as shown on the most recent property tax assessment roll, of property located:¶
- (i) Within 100 feet of property which the subject of the NOI, where the subject property is wholly or in part within an urban growth boundary;¶
- (ii) Within 250 feet of property which is the subject of the NOI, where the subject property is outside an urban growth boundary and not within a farm or forest zone; or¶
- (iii) Within 500 feet of property which is the subject of the NOI, where the subject property is within a farm or forest zone; and¶
- (B) In addition to incorporating the list in the NOI, the applicant must submit the list to the Department in an electronic format acceptable to the Department.¶
- (g) Exhibit G. A map or maps showing:¶
- (A) The proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features;¶
- (B) The proposed locations of the corridors the applicant has identified under subsection (d) in relation to major roads, water bodies, cities and towns, important landmarks and topographic features;¶
- (C) The study areas for the proposed facility as defined in OAR 345-001-0010;¶
- (D) The topography of the study areas including streams, rivers, lakes, major roads and contour lines;¶
- (E) All protected areas in the study area as defined in OAR 345-001-0010 for impacts to protected areas;¶
- (F) The location of any potential waters of the state or waters of the United States that are on or adjacent to the

site; and¶¶

(G) For energy generation facilities, the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.¶¶

(h) Exhibit H. If the proposed facility is a non-generating energy facility for which the applicant must demonstrate need under OAR 345-023-0005, identification of the rule in division 23 of this chapter under which the applicant intends to demonstrate need and a summary statement of the need and justification for the proposed facility.¶¶

(i) Exhibit I. A statement indicating whether the applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by obtaining local land use approval under ORS 469.504(1)(a) or by seeking a Council determination under ORS 469.504(1)(b).¶¶

(j) Exhibit J. Identification of significant potential environmental impacts of construction and operation of the proposed facility on the study areas, including those impacts affecting air quality, surface and ground water quality and availability, wildlife and wildlife habitat, threatened and endangered plant and animal species, historic, cultural and archaeological resources, scenic and aesthetic areas, recreation, and land use.¶¶

(k) Exhibit K. Information about significant potential adverse impacts of construction and operation of the proposed facility on the ability of communities in the study area to provide the services listed in OAR 345-022-0110.¶¶

(l) Exhibit L. Information about anticipated water use during construction and operation of the proposed facility, including:¶¶

(A) A description of each source of water and the applicant's estimate of the amount of water the facility will need from each source;¶¶

(B) If a new water right is required, the approximate location of the points of diversion and the estimated quantity of water to be taken at each point; and¶¶

(C) For operation, the source of cooling water and the estimated consumptive use of cooling water, based on annual average conditions.¶¶

(m) Exhibit M. If the proposed facility would emit carbon dioxide, an estimate of the gross ~~rate of~~ carbon dioxide emissions, ~~a table listing all the factors that~~ that are reasonably likely to result from the basis for calculating the estimate, operation of the facility and a statement of the means by which the applicant intends to comply with the applicable carbon dioxide emissions standard under OAR 345-024-560, ~~345-024-600, or 345-024-6300.~~¶¶

(n) Exhibit N. Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant must analyze and describe any problems the applicant foresees in satisfying the requirements of any such statute, rule or ordinance.¶¶

(o) Exhibit O. A schedule stating when the applicant expects to submit a preliminary application for a site certificate.¶¶

(p) Exhibit P. Evidence of consultation with the Legislative Commission on Indian Services to identify each appropriate tribe to consult with regarding the proposed facility's possible effects on Indian historic and cultural resources.¶¶

(2) Documents prepared in connection with an environmental assessment or environmental impact statement for the proposed facility under the National Environmental Policy Act of 1970, if any, may contain some of the information required by section (1) of this rule. The applicant may copy relevant sections of such documents into the appropriate exhibits of the NOI. The applicant may otherwise submit full copies of those documents and include, in the appropriate exhibits of the NOI, cross-references to the relevant sections of those documents. The applicant may use such documents only to avoid duplication. The applicant must include additional information in the NOI as needed to meet the requirements of section (1) of this rule.¶¶

(3) The applicant must include a table of contents in the NOI identifying the location of each exhibit required by this rule.¶¶

(4) The applicant must submit, to the Department, two printed copies of the NOI, and an electronic version of the NOI in a non-copy-protected format acceptable to the Department. The applicant must submit additional printed copies of the NOI to the Department upon request. The applicant must prepare and distribute additional copies of the NOI as required by OAR 345-020-0040. ¶¶

(5) The applicant or the applicant's representative must attend all public informational meetings on the NOI as described in OAR 345-015-0130 to discuss the proposed facility and to answer questions from the public. If the applicant has identified one or more proposed corridors in Exhibit D of the NOI as required by section (1)(d), the applicant may present adjustments to the proposed corridor(s) at any public informational meeting. An adjustment is any change that is outside the boundaries of the corridors proposed in the NOI and may include an entirely new corridor.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.330

AMEND: 345-020-0016

RULE SUMMARY: Requires Department to give public notice of a change to a Notice of Intent that would significantly increase the estimated gross carbon dioxide emissions that are reasonably likely to result from operation of a proposed facility. Makes additional changes to improve clarity and consistency of rules.

CHANGES TO RULE:

345-020-0016

Amendment of Notice of Intent ¶

(1) The applicant may amend the notice of intent (NOI). The applicant must submit, to the Department, two printed copies of the amended NOI, and an electronic version of the amended NOI in a non-copy-protected format acceptable to the Department. The applicant must prepare and submit additional copies of the amended NOI as required by OAR 345-020-0040.¶

(2) The Department must inform the public, in the manner described in OAR 345-015-0110, of any amendment that:¶

(a) Significantly changes the proposed site boundary or location of the proposed energy facility or related or supporting facility;¶

(b) ~~Changes the proposed fuel type, significantly increases t~~Significantly increases:¶

(A) The estimated quantity of fuel that will be used or produced by the proposed facility, or changes the proposed fuel type or source;¶

(B) The generating capacity of the proposed energy facility, increases t;¶

(C) The voltage of a proposed transmission line, or significantly increases t;¶

(D) The capacity or operating pressure of a proposed pipeline; or¶

(e) Increases water consumption or disposal by more than 5 percent;¶

~~(d) Changes the source of water; or¶~~

(e) Significantly changes the The estimated gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed facility, or the proposed means of compliance with thany applicable carbon dioxide standard, if applicableemissions standard.¶

(c) Increases water consumption or disposal by more than 5 percent; or¶

(d) Changes the source of water.¶

(3) Submission of an amended NOI does not extend the expiration date of the NOI. The applicant, however, may petition the Council to extend the duration of the NOI as provided in OAR 345-020-0060.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.330

AMEND: 345-021-0010

RULE SUMMARY: Clarifies application requirements for proposed facility that would generate electricity from a solid, liquid, or gaseous fuel. Relocates application requirements for fossil-fueled power plants to OAR 345-021-0021. Makes additional changes to improve clarity and consistency of rules.

CHANGES TO RULE:

345-021-0010

Contents of an Application ¶¶

(1) The project order described in OAR 345-015-0160(1) identifies the provisions of this rule applicable to the application for the proposed facility, including any appropriate modifications to applicable provisions of this rule. The applicant must include in its application for a site certificate information that addresses each provision of this rule identified in the project order. The applicant must designate the information with the appropriate exhibit label identified in the following subsections. If the same information is required in each of several exhibits the applicant may provide the required information in one exhibit and include appropriate references in the others. For the purpose of submitting an application for a site certificate in an expedited review granted under OAR 345-015-0300 or 345-015-0310, the applicant must include information that addresses all provisions of this rule. In such expedited reviews, analysis areas addressed in this rule are the study areas defined in OAR 345-001-0010, subject to later modification in the project order.¶¶

(a) Exhibit A. Information about the applicant and participating persons, including:¶¶

(A) The name and address of the applicant including all co-owners of the proposed facility, the name, mailing address, email address and telephone number of the contact person for the application, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person;¶¶

(B) The contact name, mailing address, email address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and, if known, other persons upon whom the applicant will rely in meeting any facility standard adopted by the Council;¶¶

(C) If the applicant is a corporation:¶¶

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the application;¶¶

(ii) The date and place of its incorporation;¶¶

(iii) A copy of its articles of incorporation and its authorization for submitting the application; and¶¶

(iv) In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon;¶¶

(D) If the applicant is a wholly owned subsidiary of a company, corporation or other business entity, in addition to the information required by paragraph (C), the full name and business address of each of the applicant's full or partial owners;¶¶

(E) If the applicant is an association of citizens, a joint venture or a partnership:¶¶

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the application;¶¶

(ii) The name, business address and telephone number of each person participating in the association, joint venture or partnership and the percentage interest held by each;¶¶

(iii) Proof of registration to do business in Oregon;¶¶

(iv) A copy of its articles of association, joint venture agreement or partnership agreement and a list of its members and their cities of residence; and¶¶

(v) If there are no articles of association, joint venture agreement or partnership agreement, the applicant must state that fact over the signature of each member;¶¶

(F) If the applicant is a public or governmental entity:¶¶

(i) The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the application; and¶¶

(ii) Written authorization from the entity's governing body to submit an application;¶¶

(G) If the applicant is an individual, the individual's mailing address, email address and telephone number; and¶¶

(H) If the applicant is a limited liability company:¶¶

(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the application;¶¶

(ii) The date and place of its formation;¶¶

- (iii) A copy of its articles of organization and its authorization for submitting the application; and¶
- (iv) In the case of a limited liability company not registered in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.¶
- (b) Exhibit B. Information about the proposed facility, construction schedule and temporary disturbances of the site, including:¶
  - (A) A description of the proposed energy facility, including as applicable:¶
    - (i) ¶For electric power generating plants, the nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300;¶
    - (ii) Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate, store, transmit, or transport electricity ~~and~~, useful thermal energy, or fuels;¶
    - (iii) A site plan and general arrangement of buildings, equipment and structures;¶
    - (iv) Fuel and chemical storage facilities, including structures and systems for spill containment;¶
    - (v) Equipment and systems for fire prevention and control;¶
    - (vi) For thermal power plants, combustion turbine power plants, or other facilities designed to generate electricity from gas, liquid, or solid fuels;¶
    - (I) A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy;¶
    - (II) Process flow, including power cycle and steam cycle diagrams to describe the energy flows within the system;¶
    - ~~(III) If the facility will generate electric power from natural gas, petroleum, coal or any form of solid, liquid or gaseous fuel derived from such material, a discussion of methods the facility will use to ensure that the facility does not emit greenhouse gasses into the atmosphere, and a description of any equipment the facility will use to capture, sequester, or store greenhouse gases;~~¶
    - (III) A description of energy flows within the facility, including power cycle and steam cycle diagrams, as appropriate;¶
    - (IV) A description of equipment and systems for disposal of waste heat generated by the facility;¶
    - (IV) The fuel chargeable to power heat rate of the energy facility;¶
    - (vii) For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors;¶
    - (viii) For facilities to store liquefied natural gas, the volume, maximum pressure, liquefaction and gasification capacity in thousand cubic feet per hour;¶
  - (B) A description of major components, structures and systems of each related or supporting facility;¶
  - (C) The approximate dimensions of major facility structures and visible features;¶
  - (D) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, a corridor selection assessment explaining how the applicant selected the corridors for analysis in the application. In the assessment, the applicant must evaluate the corridor adjustments the Department has described in the project order, if any. The applicant may select any corridor for analysis in the application and may select more than one corridor. However, if the applicant selects a new corridor, then the applicant must explain why the applicant did not present the new corridor for comment at an informational meeting under OAR 345-015-0130. In the assessment, the applicant must discuss the reasons for selecting the corridors, based upon evaluation of the following factors:¶
    - (i) Least disturbance to streams, rivers and wetlands during construction;¶
    - (ii) Least percentage of the total length of the pipeline or transmission line that would be located within areas of Habitat Category 1, as described by the Oregon Department of Fish and Wildlife;¶
    - (iii) Greatest percentage of the total length of the pipeline or transmission line that would be located within or adjacent to public roads and existing pipeline or transmission line rights-of-way;¶
    - (iv) Least percentage of the total length of the pipeline or transmission line that would be located within lands that require zone changes, variances or exceptions;¶
    - (v) Least percentage of the total length of the pipeline or transmission line that would be located in a protected area as described in OAR 345-022-0040;¶
    - (vi) Least disturbance to areas where historical, cultural or archaeological resources are likely to exist;¶
    - (vii) Greatest percentage of the total length of the pipeline or transmission line that would be located to avoid seismic, geological and soils hazards;¶
    - (viii) Least percentage of the total length of the pipeline or transmission line that would be located within lands zoned for exclusive farm use;¶
  - (E) If the proposed energy facility is a pipeline or transmission line or has, as a related or supporting facility, a transmission line or pipeline of any size:¶
    - (i) The length of the pipeline or transmission line;¶



- (ii) The proposed right-of-way width of the pipeline or transmission line, including to what extent new right-of-way will be required or existing right-of-way will be widened;¶¶
- (iii) If the proposed transmission line or pipeline corridor follows or includes public right-of-way, a description of where the transmission line or pipeline would be located within the public right-of-way, to the extent known. If the applicant proposes to locate all or part of a transmission line or pipeline adjacent to but not within the public right-of-way, describe the reasons for locating the transmission line or pipeline outside the public right-of-way. The applicant must include a set of clear and objective criteria and a description of the type of evidence that would support locating the transmission line or pipeline outside the public right-of-way, based on those criteria;¶¶
- (iv) For pipelines, the operating pressure and delivery capacity in thousand cubic feet per day and the diameter and location, above or below ground, of each pipeline;¶¶
- (v) For transmission lines, the rated voltage, load carrying capacity, and type of current and a description of transmission line structures and their dimensions; and¶¶
- (F) A construction schedule including the date by which the applicant proposes to begin construction and the date by which the applicant proposes to complete construction. Construction is defined in OAR 345-001-0010. The applicant must describe in this exhibit all work on the site that the applicant intends to begin before the Council issues a site certificate. The applicant must include an estimate of the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor, that the applicant anticipates or has performed as of the time of submitting the application.¶¶
- (c) Exhibit C. Information about the location of the proposed facility, including:¶¶
  - (A) A map or maps showing the proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features, using a scale of 1 inch = 2000 feet or smaller when necessary to show detail;¶¶
  - (B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the total land area (in acres) within the proposed site boundary, the total area of permanent disturbance, and the total area of temporary disturbance. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant must state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known; and¶¶
  - (C) For energy generation facilities, a map showing the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services;¶¶
- (d) Exhibit D. Information about the organizational expertise of the applicant to construct and operate the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0010, including:¶¶
  - (A) The applicant's previous experience, if any, in constructing and operating similar facilities;¶¶
  - (B) The qualifications of the applicant's personnel who will be responsible for constructing and operating the facility, to the extent that the identities of such personnel are known when the application is submitted;¶¶
  - (C) The qualifications of any architect, engineer, major component vendor, or prime contractor upon whom the applicant will rely in constructing and operating the facility, to the extent that the identities of such persons are known when the application is submitted;¶¶
  - (D) The past performance of the applicant, including but not limited to the number and severity of any regulatory citations in constructing or operating a facility, type of equipment, or process similar to the proposed facility;¶¶
  - (E) If the applicant has no previous experience in constructing or operating similar facilities and has not identified a prime contractor for construction or operation of the proposed facility, other evidence that the applicant can successfully construct and operate the proposed facility. The applicant may include, as evidence, a warranty that it will, through contracts, secure the necessary expertise;¶¶
  - (F) If the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program, a description of the program; and¶¶
  - (G) If the applicant relies on mitigation to demonstrate compliance with any standards of Division 22 or 24 of this chapter, evidence that the applicant can successfully complete such proposed mitigation, including past experience with other projects and the qualifications and experience of personnel upon whom the applicant will rely, to the extent that the identities of such persons are known at the date of submittal.¶¶
- (e) Exhibit E. Information about permits needed for construction and operation of the facility, including:¶¶
  - (A) Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, mailing address, email address and telephone number of the agency or office responsible for each permit;¶¶
  - (B) A description of each permit, the reasons the permit is needed for construction or operation of the facility and

the applicant's analysis of whether the permit should or should not be included in and governed by the site certificate;¶

(C) For any state or local government agency permits, licenses or certificates that are proposed to be included in and governed by the site certificate, evidence to support findings by the Council that construction and operation of the proposed facility will comply with the statutes, rules and standards applicable to the permit. The applicant may show this evidence:¶

(i) In Exhibit J for permits related to wetlands; or¶

(ii) In Exhibit O for permits related to water rights;¶

(D) For federally-delegated permit applications, evidence that the responsible agency has received a permit application and the estimated date when the responsible agency will complete its review and issue a permit decision;¶

(E) If the applicant relies on a state or local government permit or approval issued to a third party, identification of any such third-party permit and for each:¶

(i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit;¶

(ii) Evidence that the third party has, or has a reasonable likelihood of obtaining, the necessary permit;¶

(iii) An assessment of the impact of the proposed facility on any permits that a third party has obtained and on which the applicant relies to comply with any applicable Council standard;¶

(F) If the applicant relies on a federally-delegated permit issued to a third party, identification of any such third-party permit and for each:¶

(i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit;¶

(ii) Evidence that the responsible agency has received a permit application;¶

(iii) The estimated the date when the responsible agency will complete its review and issue a permit decision; and¶

(G) The applicant's proposed monitoring program, if any, for compliance with permit conditions.¶

(f) Exhibit F. A list of the names and mailing addresses of property owners, as described in this subsection: ¶

(A) The list must include all owners of record, as shown on the most recent property tax assessment roll, of property located:¶

(i) Within 100 feet of property which is the subject of the application, where the subject property is wholly or in part within an urban growth boundary;¶

(ii) Within 250 feet of the property which is the subject of the application, where the subject property is outside an urban growth boundary and not within a farm or forest zone; or¶

(iii) Within 500 feet of the property which is the subject of the application, where the property is within a farm or forest zone;¶

(B) The applicant must submit an updated list of property owners as requested by the Department before the Department issues notice of any public hearing on the application for a site certificate as described in OAR 345-015-0220; and¶

(C) In addition to incorporating the list in the application, the applicant must submit the list to the Department in an electronic format approved by the Department.¶

(g) Exhibit G. A materials analysis including:¶

(A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation;¶

(B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills; and¶

(C) The applicant's plans to manage non-hazardous waste materials during construction and operation.¶

(h) Exhibit H. Information from reasonably available sources regarding the geological and soil stability within the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0020, including:¶

(A) A geologic report meeting the Oregon State Board of Geologist Examiners geologic report guidelines. Current guidelines must be determined based on consultation with the Oregon Department of Geology and Mineral Industries, as described in paragraph (B) of this subsection;¶

(B) A summary of consultation with the Oregon Department of Geology and Mineral Industries regarding the appropriate methodology and scope of the seismic hazards and geology and soil-related hazards assessments, and the appropriate site-specific geotechnical work that must be performed before submitting the application for the Department to determine that the application is complete;¶

(C) A description and schedule of site-specific geotechnical work that will be performed before construction for inclusion in the site certificate as conditions;¶

(D) For all transmission lines, and for all pipelines that would carry explosive, flammable or hazardous materials, a description of locations along the proposed route where the applicant proposes to perform site specific

geotechnical work, including but not limited to railroad crossings, major road crossings, river crossings, dead ends (for transmission lines), corners (for transmission lines), and portions of the proposed route where geologic reconnaissance and other site specific studies provide evidence of existing landslides, marginally stable slopes or potentially liquefiable soils that could be made unstable by the planned construction or experience impacts during the facility's operation;¶

(E) An assessment of seismic hazards, in accordance with standard-of-practice methods and best practices, that addresses all issues relating to the consultation with the Oregon Department of Geology and Mineral Industries described in paragraph (B) of this subsection, and an explanation of how the applicant will design, engineer, construct, and operate the facility to avoid dangers to human safety and the environment from these seismic hazards. Furthermore, an explanation of how the applicant will design, engineer, construct and operate the facility to integrate disaster resilience design to ensure recovery of operations after major disasters. The applicant must include proposed design and engineering features, applicable construction codes, and any monitoring and emergency measures for seismic hazards, including tsunami safety measures if the site is located in the DOGAMI-defined tsunami evacuation zone; and¶

(F) An assessment of geology and soil-related hazards which could, in the absence of a seismic event, adversely affect or be aggravated by the construction or operation of the facility, in accordance with standard-of-practice methods and best practices, that address all issues relating to the consultation with the Oregon Department of Geology and Mineral Industries described in paragraph (B) of this subsection. An explanation of how the applicant will design, engineer, construct and operate the facility to adequately avoid dangers to human safety and the environment presented by these hazards, as well as:¶

(i) An explanation of how the applicant will design, engineer, construct and operate the facility to integrate disaster resilience design to ensure recovery of operations after major disasters; and¶

(ii) An assessment of future climate conditions for the expected life span of the proposed facility and the potential impacts of those conditions on the proposed facility.¶

(i) Exhibit I. Information from reasonably available sources regarding soil conditions and uses in the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0022, including:¶

(A) Identification and description of the major soil types in the analysis area;¶

(B) Identification and description of current land uses in the analysis area, such as growing crops, that require or depend on productive soils;¶

(C) Identification and assessment of significant potential adverse impact to soils from construction, operation and retirement of the facility, including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills;¶

(D) A description of any measures the applicant proposes to avoid or mitigate adverse impact to soils; and¶

(E) The applicant's proposed monitoring program, if any, for adverse impact to soils during construction and operation.¶

(j) Exhibit J. Information based on literature and field study, as appropriate, about waters of this state, as defined under ORS 196.800, including:¶

(A) A description of all areas within the site boundary that might be waters of this state and a map showing the location of these features;¶

(B) An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state;¶

(C) A description of the significance of potential adverse impacts to each feature identified in (A), including the nature and amount of material the applicant would remove from or place in the waters analyzed in (B);¶

(D) If the proposed facility would not need a removal-fill authorization, an explanation of why no such authorization is required for the construction and operation of the proposed facility;¶

(E) If the proposed facility would need a removal-fill authorization, information to support a determination by the Council that the Oregon Department of State Lands should issue a removal-fill permit, including information in the form required by the Department of State Lands under OAR Chapter 141 Division 85; and¶

(F) A description of proposed actions to mitigate adverse impacts to the features identified in (A) and the applicant's proposed monitoring program, if any, for such impacts.¶

(k) Exhibit K. Information about the proposed facility's compliance with the statewide planning goals adopted by the Land Conservation and Development Commission, providing evidence to support a finding by the Council as required by OAR 345-022-0030. The applicant must state whether the applicant elects to address the Council's land use standard by obtaining local land use approvals under ORS 469.504(1)(a) or by obtaining a Council determination under ORS 469.504(1)(b). An applicant may elect different processes for an energy facility and a related or supporting facility but may not otherwise combine the two processes. Once the applicant has made an election, the applicant may not amend the application to make a different election. In this subsection, "affected local government" means a local government that has land use jurisdiction over any part of the proposed site of the facility. In the application, the applicant must:¶

- (A) Include a map showing the comprehensive plan designations and land use zones in the analysis area;¶
- (B) If the applicant elects to obtain local land use approvals:¶
  - (i) Identify the affected local governments from which land use approvals will be sought;¶
  - (ii) Describe the land use approvals required in order to satisfy the Council's land use standard;¶
  - (iii) Describe the status of the applicant's application for each land use approval;¶
  - (iv) Provide an estimate of time for issuance of local land use approvals;¶
- (C) If the applicant elects to obtain a Council determination on land use:¶
  - (i) Identify the affected local governments;¶
  - (ii) Identify the applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and that are in effect on the date the application is submitted and describe how the proposed facility complies with those criteria;¶
  - (iii) Identify all Land Conservation and Development Commission administrative rules, statewide planning goals and land use statutes directly applicable to the facility under ORS 197.646(3) and describe how the proposed facility complies with those rules, goals and statutes;¶
  - (iv) If the proposed facility might not comply with all applicable substantive criteria, identify the applicable statewide planning goals and describe how the proposed facility complies with those goals;¶
  - (v) If the proposed facility might not comply with all applicable substantive criteria or applicable statewide planning goals, describe why an exception to any applicable statewide planning goal is justified, providing evidence to support all findings by the Council required under ORS 469.504(2); and¶
- (D) If the proposed facility will be located on federal land:¶
  - (i) Identify the applicable land management plan adopted by the federal agency with jurisdiction over the federal land;¶
  - (ii) Explain any differences between state or local land use requirements and federal land management requirements;¶
  - (iii) Describe how the proposed facility complies with the applicable federal land management plan;¶
  - (iv) Describe any federal land use approvals required for the proposed facility and the status of application for each required federal land use approval;¶
  - (v) Provide an estimate of time for issuance of federal land use approvals; and¶
  - (vi) If federal law or the land management plan conflicts with any applicable state or local land use requirements, explain the differences in the conflicting requirements, state whether the applicant requests Council waiver of the land use standard described under paragraph (B) or (C) of this subsection and explain the basis for a waiver.¶
- (L) Exhibit L. Information about the proposed facility's impact on protected areas, providing evidence to support a finding by the Council as required by OAR 345-022-0040, including:¶
  - (A) A list of the protected areas within the analysis area showing the distance and direction from the proposed facility and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1);¶
  - (B) A map showing the location of the proposed facility in relation to the protected areas listed in OAR 345-022-0040 located within the analysis area; and¶
  - (C) A description of significant potential impacts of the proposed facility, if any, on the protected areas including, but not limited to, potential impacts such as:¶
    - (i) Noise resulting from facility construction or operation;¶
    - (ii) Increased traffic resulting from facility construction or operation;¶
    - (iii) Water use during facility construction or operation;¶
    - (iv) Wastewater disposal resulting from facility construction or operation;¶
    - (v) Visual impacts of facility structures or plumes; and¶
    - (vi) Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 Areas as described in OAR 340-204-0050.¶
- (m) Exhibit M. Information about the applicant's financial capability, providing evidence to support a finding by the Council as required by OAR 345-022-0050(2). Nothing in this subsection requires the disclosure of information or records protected from public disclosure by any provision of state or federal law. The applicant must include:¶
  - (A) An opinion or opinions from legal counsel stating that, to counsel's best knowledge, the applicant has the legal authority to construct and operate the facility without violating its bond indenture provisions, articles of incorporation, common stock covenants, or similar agreements;¶
  - (B) The type and amount of the applicant's proposed bond or letter of credit to meet the requirements of OAR 345-022-0050; and¶
  - (C) Evidence that the applicant has a reasonable likelihood of obtaining the proposed bond or letter of credit in the amount proposed in paragraph (B), before beginning construction of the facility.¶
- (n) Exhibit N. If the proposed facility is a non-generating facility for which the applicant must demonstrate need under OAR 345-023-0005, information about the need for the facility, providing evidence to support a finding by the Council as required by OAR 345-023-0005, including:¶

- (A) Identification of the rule in Division 23 of this chapter under which the applicant chooses to demonstrate need;¶
- (B) If the applicant chooses to demonstrate need for the proposed facility under OAR 345-023-0020(1), the least-cost plan rule:¶
- (i) Identification of the energy resource plan or combination of plans on which the applicant relies to demonstrate need;¶
  - (ii) The name, address and telephone number of the person responsible for preparing each energy resource plan identified in subparagraph (i);¶
  - (iii) For each plan reviewed by a regulatory agency, the agency's findings and final decision, including:¶
    - (I) For a plan reviewed by the Oregon Public Utility Commission, the acknowledgment order; or¶
    - (II) For a plan reviewed by any other regulatory agency, a summary of the public process including evidence to support a finding by the Council that the agency's decision process included a full, fair and open public participation and comment process as required by OAR 345-023-0020(1)(L), and the location of and means by which the Department can obtain a complete copy of the public record;¶
  - (iv) Identification of the sections of the short-term action plan that call for the acquisition of the proposed facility or, as defined in OAR 345-001-0010, a facility substantially similar to the proposed facility;¶
  - (v) The attributes of the proposed facility that qualify it as one called for in the short-term action plan of the energy resource plan or combination of plans identified in subparagraph (i) or a demonstration that, as defined in OAR 345-001-0010, a facility substantially similar to the proposed facility is called for in the plan;¶
- (C) In addition to the information described in paragraph (B), if the applicant chooses to demonstrate need for the proposed facility under OAR 345-023-0020(1), the least-cost plan rule, and relies on an energy resource plan not acknowledged by the Public Utility Commission of Oregon:¶
- (i) The names, addresses and telephone numbers of members of any public advisory groups that participated in the preparation and review of each plan identified in paragraph (B);¶
  - (ii) A discussion of how the plan or combination of plans conforms to the standards in OAR 345-023-0020(1)(a) through (L) including citations to relevant portions of the plan documents or other supporting evidence;¶
  - (iii) The expected annual emissions in tons of nitrogen oxides, PM-10 particulate, sulfur dioxide, carbon dioxide and mercury and a discussion of other environmental impacts, as compared to resources in the applicable energy resource plan;¶
- (D) In addition to the information described in paragraphs (B) and (C), if the applicant chooses to demonstrate need for a proposed natural gas pipeline or storage facility for liquefied natural gas under OAR 345-023-0020(1), the least-cost plan rule, and relies on an energy resource plan not acknowledged by the Public Utility Commission of Oregon, the applicant must include the information described in paragraph (G) of this subsection if the energy resource plan or combination of plans does not contain that information. If the energy resource plan or combination of plans contains the information described in paragraph (G), the applicant must provide a list of citations to the sections of the energy resource plan that contain the information;¶
- (E) In addition to the information described in paragraphs (B) and (C), if the applicant chooses to demonstrate need for a proposed electric transmission line under OAR 345-023-0020(1), the least-cost plan rule and relies on an energy resource plan not acknowledged by the Public Utility Commission of Oregon, the applicant must include the information described in paragraph (F) of this subsection if the energy resource plan or combination of plans does not contain that information. If the energy resource plan or combination of plans contains the information described in paragraph (F), the applicant must provide a list of citations to the sections of the energy resource plan that contain the information;¶
- (F) If the applicant chooses to demonstrate need for a proposed electric transmission line under OAR 345-023-0030, the system reliability rule:¶
- (i) Load-resource balance tables for the area to be served by the proposed facility. In the tables, the applicant must include firm capacity demands and existing and committed firm resources for each of the years from the date of submission of the application to at least five years after the expected in-service date of the facility;¶
  - (ii) Within the tables described in subparagraph (i), a forecast of firm capacity demands for electricity and firm annual electricity sales for the area to be served by the proposed facility. The applicant must separate firm capacity demands and firm annual electricity sales into loads of retail customers, system losses, reserve margins and each wholesale contract for firm sale. In the forecast, the applicant must include a discussion of how the forecast incorporates reductions in firm capacity demand and firm annual electricity sales resulting from:¶
    - (I) Existing federal, state or local building codes, and equipment standards and conservation programs required by law for the area to be served by the proposed facility;¶
    - (II) Conservation programs provided by the energy supplier, as defined in OAR 345-001-0010;¶
    - (III) Conservation that results from responses to price; and¶
    - (IV) Retail customer fuel choice;¶
  - (iii) Within the tables described in subparagraph (i), a forecast of existing and committed firm resources used to

meet the demands described in subparagraph (ii). The applicant must include, as existing and committed firm resources, existing generation and transmission facilities, firm contract resources and committed new resources minus expected resource retirements or displacement. In the forecast, the applicant must list each resource separately;¶

(iv) A discussion of the reasons each resource is being retired or displaced if the forecast described in subparagraph (iii) includes expected retirements or displacements;¶

(v) A discussion of the annual capacity factors assumed for any generating facilities listed in the forecast described in subparagraph (iii);¶

(vi) A discussion of the reliability criteria the applicant uses to demonstrate the proposed facility is needed, considering the load carrying capability of existing transmission system facilities supporting the area to be served by the proposed facility;¶

(vii) A discussion of reasons why the proposed facility is economically reasonable compared to the alternatives described below. In the discussion, the applicant must include a table showing the amounts of firm capacity and firm annual electricity available from the proposed facility and each alternative and the estimated direct cost, as defined in OAR 345-001-0010, of the proposed facility and each alternative. The applicant must include documentation of assumptions and calculations supporting the table. The applicant must evaluate alternatives to construction and operation of the proposed facility that include, but are not limited to:¶

(I) Implementation of cost-effective conservation, peak load management and voluntary customer interruption as a substitute for the proposed facility;¶

(II) Construction and operation of electric generating facilities as a substitute for the proposed facility;¶

(III) Direct use of natural gas, solar or geothermal resources at retail loads as a substitute for use of electricity transmitted by the proposed facility;¶

(IV) Adding standard sized smaller or larger transmission line capacity;¶

(viii) The earliest and latest expected in-service dates of the facility and a discussion of the circumstances of the energy supplier, as defined in OAR 345-001-0010, that determine these dates; and¶

(G) If the applicant chooses to demonstrate need for a proposed natural gas pipeline or a proposed facility for storing liquefied natural gas under OAR 345-023-0040, the economically reasonable rule:¶

(i) Load-resource balance tables for the area to be served by the proposed facility. In the tables, the applicant must include firm demands and resource availability for each of the years from the date of submission of the application to at least five years after the expected in-service date of the proposed facility. In the tables, the applicant must list flowing supply and storage supply separately;¶

(ii) Within the tables described in subparagraph (i), a forecast of firm capacity demands for the area to be served by the proposed facility. The applicant must separate firm capacity demands into firm demands of retail customers, system losses and each wholesale contract for firm sale. The applicant must accompany the tables with load duration curves of firm capacity and interruptible demands for the most recent historical year, the year the facility is expected to be placed in service and the fifth year after the expected in-service date. In the forecast of firm capacity demands, the applicant must include a discussion of how the forecast incorporates reductions in firm capacity demand resulting from:¶

(I) Existing federal, state or local building codes and equipment standards and conservation programs required by law for the area to be served by the proposed facility;¶

(II) Conservation programs provided by the energy supplier, as defined in OAR 345-001-0010;¶

(III) Conservation that results from responses to price; and¶

(IV) Retail customer fuel choice;¶

(iii) Within the tables described in subparagraph (i), a forecast of existing and committed firm resources used to meet the demands described in subparagraph (ii). The applicant must include, as existing and committed firm capacity resources, existing pipelines, storage facilities, and scheduled and budgeted new facilities minus expected resource retirements or displacement. In the forecast, the applicant must list each committed resource separately;¶

(iv) A discussion of the reasons each resource is being retired or displaced if the forecast described in subparagraph (iii) includes expected retirements or displacements;¶

(v) A discussion of the capacity factors assumed for any storage facilities listed in the forecast described in subparagraph (iii);¶

(vi) A discussion of the reliability criteria the applicant uses to demonstrate the proposed facility is needed, considering the capacity of existing gas system facilities supporting the area to be served by the proposed facility;¶

(vii) A discussion of reasons why the proposed facility is economically reasonable compared to the alternatives described in subparagraphs (viii) or (ix). In the discussion, the applicant must include a table showing the amounts of firm capacity available from the proposed facility and each alternative and the estimated direct cost, as defined in OAR 345-001-0010, of the proposed facility and each alternative. The applicant must include documentation of

assumptions and calculations supporting the table;¶

(viii) In an application for a proposed natural gas pipeline, an evaluation of alternatives to construction and operation of the proposed facility including, but not limited to:¶

(I) Implementation of cost-effective conservation, peak load management and voluntary customer interruption as a substitute for the proposed facility;¶

(II) Installation of propane storage systems, facilities to store liquefied natural gas and underground gas storage reservoirs as a substitute for the proposed facility;¶

(III) Direct use of electricity, solar or geothermal resources at retail loads as a substitute for use of natural gas supplied by the proposed facility;¶

(IV) Adding standard sized smaller or larger pipeline capacity;¶

(ix) In an application for a proposed liquefied natural gas storage facility, an evaluation of alternatives to construction and operation of the proposed facility including, but not limited to:¶

(I) Implementation of cost-effective conservation, peak load management and voluntary customer interruption as a substitute for the proposed facility;¶

(II) Installation of propane storage systems, natural gas pipelines and underground gas storage facilities as a substitute for the proposed facility;¶

(III) Direct use of electricity, solar or geothermal resources at retail loads as a substitute for use of natural gas supplied by the proposed facility;¶

(IV) Adding smaller or larger liquefied natural gas storage capacity; and¶

(x) The earliest and latest expected in-service date of the facility and a discussion of the circumstances of the energy supplier, as defined in OAR 345-001-0010, that determine these dates.¶

(o) Exhibit O. Information about anticipated water use during construction and operation of the proposed facility. The applicant must include:¶

(A) A description of the use of water during construction and operation of the proposed facility;¶

(B) A description of each source of water and the applicant's estimate of the amount of water the facility will need during construction and during operation from each source under annual average and worst-case conditions;¶

(C) A description of each avenue of water loss or output from the facility site for the uses described in (A), the applicant's estimate of the amount of water in each avenue under annual average and worst-case conditions and the final disposition of all wastewater;¶

(D) For thermal power plants, a water balance diagram, including the source of cooling water and the estimated consumptive use of cooling water during operation, based on annual average conditions;¶

(E) If the proposed facility would not need a groundwater permit, a surface water permit or a water right transfer, an explanation of why no such permit or transfer is required for the construction and operation of the proposed facility;¶

(F) If the proposed facility would need a groundwater permit, a surface water permit or a water right transfer, information to support a determination by the Council that the Water Resources Department should issue the permit or transfer of a water use, including information in the form required by the Water Resources Department under OAR Chapter 690, Divisions 310 and 380; and¶

(G) A description of proposed actions to mitigate the adverse impacts of water use on affected resources.¶

(p) Exhibit P. Information about the fish and wildlife habitat and the fish and wildlife species, other than the species addressed in subsection (q) that could be affected by the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0060. The applicant must include:¶

(A) A description of biological and botanical surveys performed that support the information in this exhibit, including a discussion of the timing and scope of each survey;¶

(B) Identification of all fish and wildlife habitat in the analysis area, classified by the general fish and wildlife habitat categories as set forth in OAR 635-415-0025 and the sage-grouse specific habitats described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025 (core, low density, and general habitats), and a description of the characteristics and condition of that habitat in the analysis area, including a table of the areas of permanent disturbance and temporary disturbance (in acres) in each habitat category and subtype;¶

(C) A map showing the locations of the habitat identified in (B);¶

(D) Based on consultation with the Oregon Department of Fish and Wildlife (ODFW) and appropriate field study and literature review, identification of all State Sensitive Species that might be present in the analysis area and a discussion of any site-specific issues of concern to ODFW;¶

(E) A baseline survey of the use of habitat in the analysis area by species identified in (D) performed according to a protocol approved by the Department and ODFW;¶

(F) A description of the nature, extent and duration of potential adverse impacts on the habitat identified in (B) and species identified in (D) that could result from construction, operation and retirement of the proposed facility;¶

(G) A description of any measures proposed by the applicant to avoid, reduce, or mitigate the potential adverse impacts described in (F) in accordance with the general fish and wildlife habitat mitigation goals and standards described in OAR 635-415-0025 and a description of any measures proposed by the applicant to avoid, minimize, and provide compensatory mitigation for the potential adverse impacts described in (F) in accordance with the sage-grouse specific habitat mitigation requirements described in the Greater Sage-Grouse Conservation Strategy for Oregon at OAR 635-140-0000 through 635-140-0025, and a discussion of how the proposed measures would achieve those goals and requirements; and¶

(H) A description of the applicant's proposed monitoring plans to evaluate the success of the measures described in (G).¶

(q) Exhibit Q. Information about threatened and endangered plant and animal species that may be affected by the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0070. The applicant must include:¶

(A) Based on appropriate literature and field study, identification of all threatened or endangered species listed under ORS 496.172(2) and ORS 564.105(2) that may be affected by the proposed facility;¶

(B) For each species identified under (A), a description of the nature, extent, locations and timing of its occurrence in the analysis area and how the facility might adversely affect it;¶

(C) For each species identified under (A), a description of measures proposed by the applicant, if any, to avoid or reduce adverse impact;¶

(D) For each plant species identified under (A), a description of how the proposed facility, including any mitigation measures, complies with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3);¶

(E) For each plant species identified under paragraph (A), if the Oregon Department of Agriculture has not adopted a protection and conservation program under ORS 564.105(3), a description of significant potential impacts of the proposed facility on the continued existence of the species and on the critical habitat of such species and evidence that the proposed facility, including any mitigation measures, is not likely to cause a significant reduction in the likelihood of survival or recovery of the species;¶

(F) For each animal species identified under (A), a description of significant potential impacts of the proposed facility on the continued existence of such species and on the critical habitat of such species and evidence that the proposed facility, including any mitigation measures, is not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and¶

(G) The applicant's proposed monitoring program, if any, for impacts to threatened and endangered species.¶

(r) Exhibit R. An analysis of significant potential impacts of the proposed facility, if any, on scenic resources identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area, providing evidence to support a finding by the Council as required by OAR 345-022-0080, including:¶

(A) A list of the local, tribal and federal plans that address lands within the analysis area;¶

(B) Identification and description of the scenic resources identified as significant or important in the plans listed in (A), including a copy of the portion of the management plan that identifies the resource as significant or important;¶

(C) A description of significant potential adverse impacts to the scenic resources identified in (B), including, but not limited to, impacts such as:¶

(i) Loss of vegetation or alteration of the landscape as a result of construction or operation; and¶

(ii) Visual impacts of facility structures or plumes;¶

(D) The measures the applicant proposes to avoid, reduce or otherwise mitigate any significant adverse impacts;¶

(E) A map or maps showing the location of the scenic resources described under (B); and¶

(F) The applicant's proposed monitoring program, if any, for impacts to scenic resources.¶

(s) Exhibit S. Information about historic, cultural and archaeological resources. Information concerning the location of archaeological sites or objects may be exempt from public disclosure under ORS 192.345(11). The applicant must submit such information separately, clearly marked as "confidential," and shall request that the Department and the Council keep the information confidential to the extent permitted by law. The applicant must include information in Exhibit S or in confidential submissions providing evidence to support a finding by the Council as required by OAR 345-022-0090, including:¶

(A) Historic and cultural resources within the analysis area that have been listed, or would likely be eligible for listing, on the National Register of Historic Places;¶

(B) For private lands, archaeological objects, as defined in ORS 358.905(1)(a), and archaeological sites, as defined in ORS 358.905(1)(c), within the analysis area;¶

(C) For public lands, archaeological sites, as defined in ORS 358.905(1)(c), within the analysis area;¶

(D) The significant potential impacts, if any, of the construction, operation and retirement of the proposed facility on the resources described in paragraphs (A), (B) and (C) and a plan for protection of those resources that includes



at least the following:¶

(i) A description of any discovery measures, such as surveys, inventories, and limited subsurface testing work, recommended by the State Historic Preservation Officer or the National Park Service of the U.S. Department of Interior for the purpose of locating, identifying and assessing the significance of resources listed in paragraphs (A), (B) and (C);¶

(ii) The results of the discovery measures described in subparagraph (i), together with an explanation by the applicant of any variations from the survey, inventory, or testing recommended;¶

(iii) A list of measures to prevent destruction of the resources identified during surveys, inventories and subsurface testing referred to in subparagraph (i) or discovered during construction; and¶

(E) The applicant's proposed monitoring program, if any, for impacts to historic, cultural and archaeological resources during construction and operation of the proposed facility.¶

(t) Exhibit T. Information about the impacts the proposed facility would have on important recreational opportunities in the analysis area, providing evidence to support a finding by the Council as required by OAR 345-022-0100, including:¶

(A) A description of the recreational opportunities in the analysis area that includes information on the factors listed in OAR 345-022-0100(1) as a basis for identifying important recreational opportunities;¶

(B) A description of any significant potential adverse impacts to the important opportunities identified in (A) including, but not limited to:¶

(i) Direct or indirect loss of a recreational opportunity as a result of facility construction or operation;¶

(ii) Noise resulting from facility construction or operation;¶

(iii) Increased traffic resulting from facility construction or operation;¶

(iv) Visual impacts of facility structures or plumes;¶

(C) A description of any measures the applicant proposes to avoid, reduce or otherwise mitigate the significant adverse impacts identified in (B);¶

(D) A map of the analysis area showing the locations of important recreational opportunities identified in (A); and¶

(E) The applicant's proposed monitoring program, if any, for impacts to important recreational opportunities.¶

(u) Exhibit U. Information about significant potential adverse impacts of construction and operation of the proposed facility on the ability of public and private providers in the analysis area to provide the services listed in OAR 345-022-0110, providing evidence to support a finding by the Council as required by OAR 345-022-0110.

The applicant must include:¶

(A) The important assumptions the applicant used to evaluate potential impacts;¶

(B) Identification of the public and private providers in the analysis area that would likely be affected;¶

(C) A description of any likely adverse impact to the ability of the providers identified in (B) to provide the services listed in OAR 345-022-0110;¶

(D) Evidence that adverse impacts described in (C) are not likely to be significant, taking into account any measures the applicant proposes to avoid, reduce or otherwise mitigate the impacts; and¶

(E) The applicant's proposed monitoring program, if any, for impacts to the ability of the providers identified in (B) to provide the services listed in OAR 345-022-0110.¶

(v) Exhibit V. Information about the applicant's plans to minimize the generation of solid waste and wastewater and to recycle or reuse solid waste and wastewater, providing evidence to support a finding by the Council as required by OAR 345-022-0120. The applicant must include:¶

(A) A description of the major types of solid waste and wastewater that construction, operation and retirement of the facility are likely to generate, including an estimate of the amount of solid waste and wastewater;¶

(B) A description of any structures, systems and equipment for management and disposal of solid waste, wastewater and storm water;¶

(C) A discussion of any actions or restrictions proposed by the applicant to reduce consumptive water use during construction and operation of the facility;¶

(D) The applicant's plans to minimize, recycle or reuse the solid waste and wastewater described in (A);¶

(E) A description of any adverse impact on surrounding and adjacent areas from the accumulation, storage, disposal and transportation of solid waste, wastewater and stormwater during construction and operation of the facility;¶

(F) Evidence that adverse impacts described in (D) are likely to be minimal, taking into account any measures the applicant proposes to avoid, reduce or otherwise mitigate the impacts; and¶

(G) The applicant's proposed monitoring program, if any, for minimization of solid waste and wastewater impacts.¶

(w) Exhibit W. Information about site restoration, providing evidence to support a finding by the Council as required by OAR 345-022-0050(1). The applicant must include:¶

(A) The estimated useful life of the proposed facility;¶

(B) Specific actions and tasks to restore the site to a useful, non-hazardous condition;¶

- (C) An estimate, in current dollars, of the total and unit costs of restoring the site to a useful, non-hazardous condition;¶
- (D) A discussion and justification of the methods and assumptions used to estimate site restoration costs; and¶
- (E) For facilities that might produce site contamination by hazardous materials, a proposed monitoring plan, such as periodic environmental site assessment and reporting, or an explanation why a monitoring plan is unnecessary.¶
- (x) Exhibit X. Information about noise generated by construction and operation of the proposed facility, providing evidence to support a finding by the Council that the proposed facility complies with the Oregon Department of Environmental Quality's noise control standards in OAR 340-035-0035. The applicant must include:¶
- (A) Predicted noise levels resulting from construction and operation of the proposed facility;¶
- (B) An analysis of the proposed facility's compliance with the applicable noise regulations in OAR 340-035-0035, including a discussion and justification of the methods and assumptions used in the analysis;¶
- (C) Any measures the applicant proposes to reduce noise levels or noise impacts or to address public complaints about noise from the facility;¶
- (D) Any measures the applicant proposes to monitor noise generated by operation of the facility; and¶
- (E) A list of the names and addresses of all owners of noise sensitive property, as defined in OAR 340-035-0015, within one mile of the proposed site boundary.¶
- (y) Exhibit Y. If the facility is a base load gas plant, a non-base load power plant, or a nongenerating energy facility that emits carbon dioxide, a statement of the means by which the applicant elects to comply with the applicable carbon dioxide emissions standard under OAR 345-024-0560, 345-024-0600, or 345-024-0630 and information, showing detailed calculations, about the carbon dioxide emissions of the energy facility. The applicant may present the calculations in tabular form. The applicant must include the following information and calculations:¶
- (A) Fuel cycle and usage including the maximum hourly fuel use at net electrical power output at average annual conditions for a base load gas plant and the maximum hourly fuel use at nominal electric generating capacity for a non-base load power plant or a base load gas plant with power augmentation technologies, as applicable;¶
- (B) The gross capacity as estimated at the generator output terminals for each generating unit. For a base load gas plant, gross capacity is based on the average annual ambient conditions for temperature, barometric pressure and relative humidity. For a non-base load plant, gross capacity is based on the average temperature, barometric pressure and relative humidity at the site during the times of year when the facility is intended to operate. For a baseload gas plant with power augmentation, gross capacity in that mode is based on the average temperature, barometric pressure and relative humidity at the site during the times of year when the facility is intended to operate with power augmentation;¶
- (C) A table showing a reasonable estimate of all on-site electrical loads and losses greater than 50 kilowatts, including losses from on-site transformers, plus a factor for incidental loads, that are required for the normal operation of the plant when the plant is at its designed full power operation;¶
- (D) The maximum number of hours per year and energy content (Btu per year, higher heating value) of alternate fuel use;¶
- (E) The total gross carbon dioxide emissions for 30 years, unless an applicant for a non-base load power plant or nongenerating energy facility proposes to limit operation to a shorter time;¶
- (F) The gross carbon dioxide emissions rate expressed as:¶
- (i) Pounds of carbon dioxide per kilowatt-hour of net electric power output for a base load gas plant, including operation with or without power augmentation, as appropriate, or for a non-base load power plant;¶
- (ii) Pounds of carbon dioxide per horsepower hour for nongenerating facilities for which the output is ordinarily measured in horsepower; or¶
- (iii) A rate comparable to pounds of carbon dioxide per kilowatt-hour of net electric power output for nongenerating facilities other than those measured in horsepower;¶
- (G) The total excess carbon dioxide emissions for 30 years, unless an applicant for a non-base load power plant or a nongenerating energy facility proposes to limit operation to a shorter time;¶
- (H) The excess carbon dioxide emissions rate, using the same measure as required for paragraph (F);¶
- (I) The average annual site conditions, including temperature, barometric pressure and relative humidity, together with a citation of the source and location of the data collection devices;¶
- (J) For a non-base load power plant (or when using power augmentation), the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate, together with a citation of the source and location of the data collection devices;¶
- (K) The annual fuel input in British thermal units, higher heating value, to the facility for each type of fuel the facility will use, assuming:¶
- (i) For a base load gas plant, a 100-percent capacity factor on a new and clean basis and the maximum number of hours annually that the applicant proposes to use alternative fuels;¶
- (ii) For a non-base load power plant, the applicant's proposed annual hours of operation on a new and clean basis;

the maximum number of hours annually that the applicant proposes to use alternative fuels and, if the calculation is based on an operational life of fewer than 30 years, the proposed operational life of the facility;¶

(iii) For a nongenerating energy facility, the reasonably likely operation of the facility based on one-year, 5-year, 15-year, and 30-year averages, unless an applicant proposes to limit operation to a shorter time;¶

(L) For each type of fuel a base load gas plant or a non-base load power plant will use, the estimated heat rate and capacity of the facility measured on a new and clean basis with no thermal energy to cogeneration, consistent with the data supplied in Exhibit B;¶

(M) For each type of fuel a nongenerating energy facility will use, the estimated efficiency and capacity of the facility with no thermal energy to cogeneration;¶

(N) If the facility provides thermal energy for cogeneration to lower its net carbon dioxide emissions rate:¶

(i) The estimated annual useful thermal energy available from the facility for non-electric processes, annual useful thermal energy used by non-electric processes, and annual thermal energy rejected as waste heat;¶

(ii) For a base load gas plant or non-base load power plant, the estimated annual net electric power output and annual fuel input in British thermal units higher heating value for the facility for each type of fuel the facility will use and the basis of such estimates;¶

(iii) A description of the non-electric thermal processes, the names and addresses of the persons intending to use the non-electric thermal energy, and a description and an estimate of the fuel displaced by cogeneration, including supporting assumptions;¶

(iv) A description of the products produced and thermal energy needed for production of the primary products made by the persons intending to use the non-electric thermal energy produced by the proposed facility, supported by fuel use and steam production records or estimates, if the production facility is new;¶

(v) The efficiency of each boiler that the thermal energy will displace;¶

(vi) For each boiler, the annual fossil fuel displaced in million Btu, higher heating value, by type of fuel that will be displaced by the thermal energy;¶

(vii) The annual carbon dioxide offset by the cogeneration host, using 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);¶

(viii) The cumulative carbon dioxide offset by the steam host through the thirtieth year of facility operation, or for a shorter period if an applicant for a nongenerating facility proposes a shorter operational period;¶

(ix) A copy of the contractual agreement between the applicant and the cogeneration host for the use of the thermal energy;¶

(x) A description of the guarantees of offsets that the applicant must provide for cogeneration projects, pursuant to OAR 345-024-0560(1) and 345-024-0600(1);¶

(xi) A proposed monitoring and evaluation plan and an independent verification plan, pursuant to subparagraphs (O)(xix) and (O)(xx);¶

(xii) A copy of the instrument by which the certificate holder will transfer the offsets to the Council for it to hold in trust;¶

(O) If the applicant proposes to offset carbon dioxide emissions as described in OAR 345-024-0550(3), 345-024-0560(2), 345-024-0590(3), 345-024-0600(2), 345-024-0620(3) or 345-024-0630(1):¶

(i) A description of each offset project;¶

(ii) A description of who will implement the offset project, including qualifications and experience;¶

(iii) Detailed estimates of the of carbon dioxide offset, measured in short tons, that the offset projects will achieve over the life of the project;¶

(iv) For each offset project, an explanation of how the applicant quantified its carbon dioxide estimates to a degree of certainty acceptable to the Council through a transparent and replicable calculation methodology;¶

(v) For each offset project, evidence that the offset project would not likely have been implemented if not for the applicant's activities or funding;¶

(vi) For each offset project, a description of a "Baseline" projection that does not include the proposed project and a "Project Case" projection that does. The historic Baseline must use reliable emissions data or pre-project data available for the most recent three years unless the applicant can demonstrate that a different period more closely represents historical operations or unless it can demonstrate that another method provides a more reasonable estimate. The applicant must show how the Baseline projection changes over time if changes from business-as-usual could be reasonably anticipated during the project life;¶

(vii) For each offset project, a description, in a transparent and realistic manner, of the assumptions and methodologies used to quantify the Baseline and the Project Case projections, including a description of key parameters and data sources. This must include a description of the formulae used to estimate carbon dioxide emissions or sequestration within the project boundary and a net change of carbon dioxide emissions or sequestration that occurs outside of the project boundary that is measurable and attributable to the project activity;¶

- (viii) For projects that avoid conventional electricity generation, a description of a Baseline that calculates the carbon dioxide emissions per kilowatt hour in two steps:¶¶
- (I) For the first five years of operation, a description of the rate based on dispatch data or models or, absent that, a weighted average of all resources in a power pool except zero-fuel-cost or must-run facilities; and¶¶
  - (II) A description of the rate for any subsequent years based on a group of similar facilities built within the prior five years or under construction in the electrical distribution region of the project or the three most recent plants built in the region, whichever rate is lower;¶¶
- (ix) For projects that avoid conventional electricity generation, a description of avoided transmission and distribution losses, using average grid-area or national losses;¶¶
- (x) A description of any guarantee for offsets from projects that the applicant proposes pursuant to OAR 345-024-0560(2), 345-024-0600(2), and 345-024-630(1), if the applicant chooses to offer a guarantee;¶¶
- (xi) A description of the offset project boundary. The boundary must encompass all carbon dioxide emissions under the control of the project that are significant and reasonably attributable to the project activity. If the project is being conducted by one part of a corporation, the boundary must include the emissions and reductions of the whole corporate entity and the carbon dioxide emissions resulting from processes and facilities that are related to the project, with identification of subsidiaries that are affected by the project;¶¶
- (xii) A description of significant risks and risk mitigation strategies, including an estimate of the range of uncertainty around the expected carbon dioxide offsets;¶¶
- (xiii) For biological sequestration projects, an assessment of the risk of climate change to natural systems that are sequestering the carbon dioxide, including, if appropriate, the risks from forest fires, pest and other unplanned releases of carbon from sequestration;¶¶
- (xiv) A description of whether the offset project will permanently avoid or displace emissions of carbon dioxide. If a project only temporarily sequesters carbon, an indication of the duration of sequestration or storage;¶¶
- (xv) A description of the amount of funding the applicant will provide for each offset project it proposes;¶¶
- (xvi) If the applicant anticipates that a project will have funding sources in addition to itself, identification of the sources of those funds, the amount of other funding that is required to implement a project, the amount of funds other parties have committed, and the risks of other funds not being available;¶¶
- (xvii) If the applicant proposes that a project will have funding sources in addition to itself, a description of how ownership of the offsets will be allocated among the several funding sources;¶¶
- (xviii) A copy of the instrument by which the certificate holder will transfer all the offsets to the Council for it to hold in trust;¶¶
- (xix) A description of a transparent and replicable methodology for the applicant's monitoring and evaluation plan and for an independent verification plan, including:¶¶
- (I) Procedures the applicant and the independent entity will employ;¶¶
  - (II) How the applicant will assure funds for ongoing monitoring, evaluation and verification;¶¶
  - (III) The time frame and frequency over which the applicant will conduct monitoring and evaluation and over which the independent entity will conduct verification, including the frequency of site visits, if applicable;¶¶
  - (IV) The reporting procedures and guidelines for the plans; and¶¶
  - (V) Whether the applicant has identified the independent entity that will perform the verification;¶¶
- (xx) The monitoring and evaluation plan and the verification plan must identify the data needs and data quality with regard to accuracy, comparability, completeness and validity. It must include methodologies to be used for data collection, monitoring, storage, reporting and management, including quality assurance and quality control provisions. It must provide complete calculations used to calculate and estimate carbon dioxide emissions from activity within the project boundary. It must show any formulae and assumptions the applicant used to calculate offset project leakage;¶¶
- (xxi) A description of reasonably likely, significant undesirable long-term environmental impacts from the implementation of an offset project; and¶¶
- (P) If the applicant elects to comply with the applicable carbon dioxide emissions standard by using the monetary path under OAR 345-024-0560(3), 345-024-0600(3) or 345-024-0630(2), the applicant must include:¶¶
- (i) A statement of the applicant's election to use the monetary path;¶¶
  - (ii) The amount of carbon dioxide reduction, in tons, for which the applicant is taking credit by using the monetary path;¶¶
  - (iii) The qualified organization to whom the applicant will provide offset funds and funds for the cost of selecting and contracting for offsets. The applicant must include evidence that the organization meets the definition of a qualified organization under OAR 345-001-0010. The applicant may identify an organization that has applied for, but has not received, an exemption from federal income taxation, but the Council will not find that the organization is a qualified organization unless the organization is exempt from federal taxation under section 501(c)(3) of the Internal Revenue Code as amended and in effect on September 18, 2015; and¶¶
  - (iv) A statement of whether the applicant intends to provide a bond or letter of credit to secure the funds it must

provide to the qualified organization or whether it requests the option of providing either a bond or a letter of credit.¶

~~(z)~~ Exhibit Z. If the proposed facility has an evaporative cooling tower, information about the cooling tower plume, including:¶

(A) The predicted size and frequency of occurrence of a visible plume and an assessment of its visual impact;¶

(B) The predicted locations and frequency of occurrence of ice formation on surfaces and ground level fogging and an assessment of significant potential adverse impacts, including, but not limited to, traffic hazards on public roads;¶

(C) The predicted locations and rates of deposition of solids released from the cooling tower (cooling tower drift) and an assessment of significant potential adverse impacts to soils, vegetation and other land uses;¶

(D) Any measures the applicant proposes to reduce adverse impacts from the cooling tower plume or drift;¶

(E) The assumptions and methods used in the plume analysis; and¶

(F) The applicant's proposed monitoring program, if any, for cooling tower plume impacts.¶

~~(aa)~~ Exhibit AAZ. If the proposed energy facility is a transmission line or has, as a related or supporting facility, a transmission line of any size:¶

(A) Information about the expected electric and magnetic fields, including:¶

(i) The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way;¶

(ii) The type of each occupied structure, including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals, within 200 feet on each side of the proposed center line of each proposed transmission line;¶

(iii) The approximate distance in feet from the proposed center line to each structure identified in (A);¶

(iv) At representative locations along each proposed transmission line, a graph of the predicted electric and magnetic fields levels from the proposed center line to 200 feet on each side of the proposed center line;¶

(v) Any measures the applicant proposes to reduce electric or magnetic field levels;¶

(vi) The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line;¶

(vii) The applicant's proposed monitoring program, if any, for actual electric and magnetic field levels; and¶

(B) An evaluation of alternate methods and costs of reducing radio interference likely to be caused by the transmission line in the primary reception area near interstate, U.S. and state highways.¶

~~(bba)~~ Exhibit BBAA. Any other information that the Department requests in the project order or in a notification regarding expedited review.¶

~~(ebb)~~ Exhibit ECBB. Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant must identify all statutes, administrative rules and ordinances that the applicant knows to be applicable to the proposed facility, whether or not identified in the project order. To the extent not addressed by other materials in the application, the applicant must include a discussion of how the proposed facility meets the requirements of the applicable statutes, administrative rules and ordinances.¶

~~(ddc)~~ Exhibit DDCC. If the proposed facility is a facility for which the Council has adopted specific standards, information about the facility providing evidence to support findings by the Council as required by the following rules:¶

(A) For wind energy facilities, OAR 345-024-0010 and 345-024-0015;¶

(B) For surface facilities related to underground gas storage reservoirs, OAR 345-024-0030, including information required by OAR 345-021-0020; and¶

(C) For any transmission line under Council jurisdiction, OAR 345-024-0090.¶

(D) For a fossil-fueled power plant or other facility that emits carbon dioxide, OAR 345-024-0500 to 345-024-0720, including the information required by OAR 345-021-00.¶

(2) Documents prepared in connection with an environmental assessment or environmental impact statement for the proposed facility under the National Environmental Policy Act of 1970, if any, may contain some of the information required under section (1) of this rule. The applicant may copy relevant sections of such documents into the appropriate exhibits of the site certificate application. The applicant may otherwise submit full copies of those documents and include, in the appropriate exhibits of the site certificate application, cross-references to the relevant sections of those documents. The applicant may use such documents only to avoid duplication. The applicant must include additional information in the site certificate application as needed to meet the requirements of section (1) of this rule.¶

(3) The applicant must include a table of contents in the preliminary application identifying the location of each exhibit required by this rule.¶

(4) The applicant must submit, to the Department, an original and a copy of the printed preliminary application, and a non-copy-protected electronic version of the preliminary application in a format acceptable to the Department. The applicant must submit additional printed copies of the preliminary application to the Department upon request. The applicant must prepare and distribute additional copies of the application as required by OAR 345-021-0050.

Statutory/Other Authority: ORS 469.373, 469.470

Statutes/Other Implemented: ORS 469.350, 469.370, 469.413, 469.501, 469.503, 469.504

ADOPT: 345-021-0021

RULE SUMMARY: Replaces application requirements for fossil-fueled power plants and other carbon dioxide emitting facilities formerly located in OAR 345-021-0010(1)(y).

CHANGES TO RULE:

345-021-0021

Specific Application Requirements for Facilities that Emit Carbon Dioxide

In addition to the requirements of OAR 345-021-0010, in an application for a site certificate for a fossil-fueled power plant, or other facility that will emit carbon dioxide into the atmosphere, the application must include the following:

- (1) A description of the means by which the applicant will comply with the applicable carbon dioxide emissions standard under OAR 345-024-0500.
- (2) Information about the carbon dioxide emissions that are reasonable likely to result from the operation of the energy facility, including the following:
  - (a) The maximum hourly fuel use at:
    - (A) Net electrical power output at average annual conditions for a base load gas plant; or
    - (B) Nominal electric generating capacity for a non-base load power plant or a base load gas plant with power augmentation technologies;
  - (b) The gross capacity as estimated at the generator output terminals for each generating unit.
    - (A) For a base load gas plant, gross capacity must be estimated based on the average annual ambient conditions for temperature, barometric pressure and relative humidity at the site. For a baseload gas plant with power augmentation, gross capacity for power augmentation mode must be estimated separately based on the average temperature, barometric pressure and relative humidity at the site during the times of year when the facility is intended to operate with power augmentation; or
    - (B) For a non-base load plant, gross capacity must be estimated based on the average temperature, barometric pressure and relative humidity at the site during the times of year when the facility is intended to operate.
  - (c) A table showing a reasonable estimate of all on-site electrical loads and losses greater than 50 kilowatts, including losses from on-site transformers, plus a factor for incidental loads, that are required for the normal operation of the plant when the plant is at its designed full power operation;
  - (d) The maximum number of hours per year and energy content (Btu per year, higher heating value) of alternate fuel use;
  - (e) The total estimated gross carbon dioxide emissions for 30 years, unless an applicant for a non-base load power plant or nongenerating energy facility proposes to limit operation to a shorter time;
  - (f) The gross carbon dioxide emissions rate expressed as:
    - (A) Pounds of carbon dioxide per kilowatt-hour of net electric power output for a base load gas plant with power augmentations, the rate for plant operations with and without power augmentation must be reported separately;
    - (B) Pounds of carbon dioxide per horsepower hour for nongenerating facilities for which the output is ordinarily measured in horsepower; or
    - (C) A rate comparable to pounds of carbon dioxide per kilowatt-hour of net electric power output for nongenerating facilities other than those measured in horsepower;
  - (g) The total excess carbon dioxide emissions for 30 years, unless an applicant for a non-base load power plant or a nongenerating energy facility proposes to limit operation to a shorter time;
  - (h) The excess carbon dioxide emissions rate, using the same measure as required for subsection (f);
  - (i) The average annual site conditions, including temperature, barometric pressure and relative humidity, together with a citation of the source and location of the data collection devices;
  - (j) For a non-base load power plant (or a base load power plant using power augmentation), the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate, together with a citation of the source and location of the data collection devices;
  - (k) The annual fuel input in British thermal units, higher heating value, to the facility for each type of fuel the facility will use, assuming:
    - (A) For a base load gas plant, a 100-percent capacity factor on a new and clean basis and the maximum number of hours annually that the applicant proposes to use alternative fuels;
    - (B) For a non-base load power plant, the applicant's proposed annual hours of operation on a new and clean basis, the maximum number of hours annually that the applicant proposes to use alternative fuels and, if the calculation is based on an operational life of fewer than 30 years, the proposed operational life of the facility;
    - (C) For a nongenerating energy facility, the reasonably likely operation of the facility based on one year, 5-year, 15-year, and 30-year averages, unless an applicant proposes to limit operation to a shorter time;

(L) For each type of fuel a base load gas plant or a non-base load power plant will use, the estimated heat rate and capacity of the facility measured on a new and clean basis with no thermal energy to cogeneration, consistent with the data supplied in Exhibit B;¶

(m) For each type of fuel a nongenerating energy facility will use, the estimated efficiency and capacity of the facility with no thermal energy to cogeneration;¶

(n) If the facility provides thermal energy for cogeneration to lower its net carbon dioxide emissions rate;¶

(A) The estimated annual useful thermal energy available from the facility for non-electric processes, annual useful thermal energy used by non-electric processes, and annual thermal energy rejected as waste heat;¶

(B) For a base load gas plant or non-base load power plant, the estimated annual net electric power output and annual fuel input in British thermal units higher heating value for the facility for each type of fuel the facility will use and the basis of such estimates;¶

(C) A description of the non-electric thermal processes, the names and addresses of the persons intending to use the non-electric thermal energy, and a description and an estimate of the fuel displaced by cogeneration, including supporting assumptions;¶

(D) A description of the products produced and thermal energy needed for production of the primary products made by the persons intending to use the non-electric thermal energy produced by the proposed facility, supported by fuel use and steam production records or estimates, if the production facility is new;¶

(E) The efficiency of each boiler that the thermal energy will displace;¶

(F) For each boiler, the annual fossil fuel displaced in million Btu, higher heating value, by type of fuel that will be displaced by the thermal energy;¶

(G) The annual carbon dioxide offset by the cogeneration host, using 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);¶

(H) The cumulative carbon dioxide offset by the steam host through the thirtieth year of facility operation, or for a shorter period if an applicant for a nongenerating facility proposes a shorter operational period;¶

(I) A copy of the contractual agreement between the applicant and the cogeneration host for the use of the thermal energy;¶

(J) A description of the guarantees of offsets that the applicant must provide for cogeneration projects, pursuant to OAR 345-024-0560(1) and 345-024-0600(1);¶

(K) A proposed monitoring and evaluation plan and an independent verification plan, pursuant to paragraphs (o)(S) and (T);¶

(L) A copy of the instrument by which the certificate holder will transfer the offsets to the Council for it to hold in trust;¶

(o) If the applicant proposes to offset carbon dioxide emissions as described in OAR 345-024-0550(3), 345-024-0560(2), 345-024-0590(3), 345-024-0600(2), 345-024-0620(3) or 345-024-0630(1);¶

(A) A description of each offset project;¶

(B) A description of who will implement the offset project, including qualifications and experience;¶

(C) Detailed estimates of the of carbon dioxide offset, measured in short tons, that the offset projects will achieve over the life of the project;¶

(D) For each offset project, an explanation of how the applicant quantified its carbon dioxide estimates to a degree of certainty acceptable to the Council through a transparent and replicable calculation methodology;¶

(E) For each offset project, evidence that the offset project would not likely have been implemented if not for the applicant's activities or funding;¶

(F) For each offset project, a description of a "Baseline" projection that does not include the proposed project and a "Project Case" projection that does. The historic Baseline must use reliable emissions data or pre-project data available for the most recent three years unless the applicant can demonstrate that a different period more closely represents historical operations or unless it can demonstrate that another method provides a more reasonable estimate. The applicant must show how the Baseline projection changes over time if changes from business-as-usual could be reasonably anticipated during the project life;¶

(G) For each offset project, a description, in a transparent and realistic manner, of the assumptions and methodologies used to quantify the Baseline and the Project Case projections, including a description of key parameters and data sources. This must include a description of the formulae used to estimate carbon dioxide emissions or sequestration within the project boundary and a net change of carbon dioxide emissions or sequestration that occurs outside of the project boundary that is measurable and attributable to the project activity;¶

(H) For projects that avoid conventional electricity generation, a description of a Baseline that calculates the carbon dioxide emissions per kilowatt hour in two steps;¶

(i) For the first five years of operation, a description of the rate based on dispatch data or models or, absent that, a weighted average of all resources in a power pool except zero-fuel-cost or must-run facilities; and¶



- (ii) A description of the rate for any subsequent years based on a group of similar facilities built within the prior five years or under construction in the electrical distribution region of the project or the three most recent plants built in the region, whichever rate is lower;¶
- (I) For projects that avoid conventional electricity generation, a description of avoided transmission and distribution losses, using average grid area or national losses;¶
- (J) A description of any guarantee for offsets from projects that the applicant proposes pursuant to OAR 345-024-0560(2), 345-024-0600(2), and 345-024-630(1), if the applicant chooses to offer a guarantee;¶
- (K) A description of the offset project boundary. The boundary must encompass all carbon dioxide emissions under the control of the project that are significant and reasonably attributable to the project activity. If the project is being conducted by one part of a corporation, the boundary must include the emissions and reductions of the whole corporate entity and the carbon dioxide emissions resulting from processes and facilities that are related to the project, with identification of subsidiaries that are affected by the project;¶
- (L) A description of significant risks and risk mitigation strategies, including an estimate of the range of uncertainty around the expected carbon dioxide offsets;¶
- (M) For biological sequestration projects, an assessment of the risk of climate change to natural systems that are sequestering the carbon dioxide, including, if appropriate, the risks from forest fires, pest and other unplanned releases of carbon from sequestration;¶
- (N) A description of whether the offset project will permanently avoid or displace emissions of carbon dioxide. If a project only temporarily sequesters carbon, an indication of the duration of sequestration or storage;¶
- (O) A description of the amount of funding the applicant will provide for each offset project it proposes;¶
- (P) If the applicant anticipates that a project will have funding sources in addition to itself, identification of the sources of those funds, the amount of other funding that is required to implement a project, the amount of funds other parties have committed, and the risks of other funds not being available;¶
- (Q) If the applicant proposes that a project will have funding sources in addition to itself, a description of how ownership of the offsets will be allocated among the several funding sources;¶
- (R) A copy of the instrument by which the certificate holder will transfer all the offsets to the Council for it to hold in trust;¶
- (S) A description of a transparent and replicable methodology for the applicant's monitoring and evaluation plan and for an independent verification plan, including:¶
- (i) Procedures the applicant and the independent entity will employ;¶
- (ii) How the applicant will assure funds for ongoing monitoring, evaluation and verification;¶
- (iii) The time frame and frequency over which the applicant will conduct monitoring and evaluation and over which the independent entity will conduct verification, including the frequency of site visits, if applicable;¶
- (iv) The reporting procedures and guidelines for the plans; and¶
- (v) Whether the applicant has identified the independent entity that will perform the verification;¶
- (T) The monitoring and evaluation plan and the verification plan must identify the data needs and data quality with regard to accuracy, comparability, completeness and validity. It must include methodologies to be used for data collection, monitoring, storage, reporting and management, including quality assurance and quality control provisions. It must provide complete calculations used to calculate and estimate carbon dioxide emissions from activity within the project boundary. It must show any formulae and assumptions the applicant used to calculate offset project leakage;¶
- (U) A description of reasonably likely, significant undesirable long-term environmental impacts from the implementation of an offset project; and¶
- (p) If the applicant elects to comply with the applicable carbon dioxide emissions standard by using the monetary path under OAR 345-024-0560(3), 345-024-0600(3) or 345-024-0630(2), the applicant must include:¶
- (A) A statement of the applicant's election to use the monetary path;¶
- (B) The amount of carbon dioxide reduction, in tons, for which the applicant is taking credit by using the monetary path;¶
- (C) The qualified organization to whom the applicant will provide offset funds and funds for the cost of selecting and contracting for offsets. The applicant must include evidence that the organization meets the definition of a qualified organization under OAR 345-001-0010. The applicant may identify an organization that has applied for, but has not received, an exemption from federal income taxation, but the Council will not find that the organization is a qualified organization unless the organization is exempt from federal taxation under section 501(c)(3) of the Internal Revenue Code as amended and in effect on September 18, 2015; and¶
- (D) A statement of whether the applicant intends to provide a bond or letter of credit to secure the funds it must provide to the qualified organization or whether it requests the option of providing either a bond or a letter of credit.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.413, 469.501, 469.503



AMEND: 345-024-0500

RULE SUMMARY: Implements standards for new fossil-fueled power plants enacted by HB 2021 (2021). Clarifies standard for non-generating facilities that will emit carbon dioxide.

CHANGES TO RULE:

345-024-0500

General Standards for Fossil-Fueled Power Plants and Energy Facilities that Emit Carbon Dioxide

~~To issue a site certificate~~ (1) Notwithstanding OAR 345-024-0503 through 345-024-0720, to issue a site certificate for a fossil-fueled power plant on or after September 25, 2021, the Council must find that the energy facility complies with any applicable carbon dioxide emissions standard adopted by the Council or enacted by statute. The Council shall adopt standards for fossil-fueled power plants and may adopt carbon dioxide emission standards for ~~or will only generate electricity in a manner that does not emit greenhouse gasses into the atmosphere.~~

(2) To issue a site certificate for a nongenerating facility that will emit carbon dioxide into the atmosphere, the Council must find that the energy facilities that emit carbon dioxide complies with the carbon dioxide emissions standard under OAR 345-024-0620.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.413(1), 469.501, 469.503

RULE SUMMARY: Replaces definitions related to carbon dioxide standards formerly located in OAR 345-001-0010.

CHANGES TO RULE:

345-024-0503

Definitions for OAR 345-024-0500 to 345-024-0720

In OAR 345-024-0500 to 345-024-0720, unless the context requires otherwise terms have the meaning provided in ORS 469.300, 469.503(2)(e) and the following definitions:¶

(1) "Gross carbon dioxide emissions" as defined in ORS 469.503(2)(e). The Council must measure the gross carbon dioxide emissions of a fossil-fueled power plant on a new and clean basis. For nongenerating energy facilities that emit carbon dioxide, the Council must measure the gross carbon dioxide emissions as described in OAR 345-024-0620(1).¶

(2) "Natural gas-fired facility" means an energy facility that is intended to be fueled by natural gas except for infrequent periods when the natural gas supply is interrupted, during which an alternate fuel may be used. Such alternate fuel use may not exceed 10 percent of expected fuel use in British thermal units, higher heating value on an annual basis.¶

(3) "New and clean basis" means the average carbon dioxide emissions rate per hour and net electric power output of the energy facility, without degradation. The site certificate holder must determine the new and clean basis:¶

(a) By a 100-hour test at full power that the site certificate holder completes during the first 12 months of commercial operation of the energy facility, unless the Council specifies a different testing period for a non-base load power plant (or power augmentation) or a nongenerating energy facility. A 100-hour test performed for purposes of the certificate holder's commercial acceptance of the facility may suffice in lieu of testing after beginning commercial operation:¶

(b) With the results adjusted for the average annual site condition for temperature, barometric pressure and relative humidity and use of alternative fuels unless the Council specifies that the results for a non-base load power plant (or power augmentation) or a nongenerating energy facility be adjusted for the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate:¶

(c) Using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel (higher heating value); and,¶

(d) Using a rate of 161 pounds of carbon dioxide per million Btu of distillate fuel (higher heating value), if such fuel use is proposed by the applicant.¶

(e) Notwithstanding subsection (a) and including subsections (b) through (d), for a facility that employs major power generating equipment that has previously been used, the new and clean basis means the average carbon dioxide emissions rate and net electric power output for the first use of the equipment at the site, as determined by historical data from the previous usage or by testing on site.¶

(4) "Non-base load power plant" means a fossil-fueled generating facility that is limited by the site certificate to an average number of hours of operation per year of not more than 6,600 hours. For a non-base load power plant designed to operate at variable loads, the facility's annual hours of operation are determined by dividing the actual annual electric output of the facility in megawatt-hours by the facility's nominal electric generating capacity in megawatts. The Council will assume a 30-year life for the plants for purposes of determining gross carbon dioxide emissions, unless the applicant requests and the Council approves a shorter operational life in the site certificate. If the Council approves a shorter operational life, the certificate holder must operate the facility for no longer than the approved operational life or, before the expiration of the approved operational life, must request an amendment of the site certificate to extend the operational life.¶

(5) "Offset funds" means the amount of funds determined by the Council to satisfy the applicable carbon dioxide emissions standard pursuant to OAR 345-024-0560(3), 345-024-0600(3) or 345-024-0630(2) and (4).¶

(6) "Power augmentation" means technologies that increase the capacity and the heat rate of the plant above the capacity and heat rate of the base load gas plant. These include, but are not limited to, duct burning and some forms of steam augmentation.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.413, 469.501, 469.503

REPEAL: 345-024-0510

RULE SUMMARY: Repeals OAR 345-024-0510. Principles for the adoption of new standards for fossil-fueled power plants are provided in ORS 469.503(2)(b).

CHANGES TO RULE:

~~345-024-0510~~

~~Principles for the Adoption of New Standards for Fossil-Fueled Power Plants~~

~~The council shall adopt carbon dioxide emissions standards for fossil-fueled power plants by rule. In adopting or amending such carbon dioxide emissions standards, the Council shall consider and balance at least the following principles. In the rule-making record, the Council shall include findings on these principles:¶¶~~

- ~~(1) Promote facility fuel efficiency;¶¶~~
- ~~(2) Promote efficiency in the resource mix;¶¶~~
- ~~(3) Reduce net carbon dioxide emissions;¶¶~~
- ~~(4) Promote cogeneration that reduces net carbon dioxide emissions;¶¶~~
- ~~(5) Promote innovative technologies and creative approaches to mitigating, reducing or avoiding carbon dioxide emissions;¶¶~~
- ~~(6) Minimize transaction costs;¶¶~~
- ~~(7) Include an alternative process that separates decisions on the form and implementation of offsets from the final decision on granting a site certificate;¶¶~~
- ~~(8) Allow either the applicant or third parties to implement offsets;¶¶~~
- ~~(9) Be attainable and economically achievable for various types of power plants;¶¶~~
- ~~(10) Promote public participation in the selection and review of offsets;¶¶~~
- ~~(11) Promote prompt implementation of offset projects;¶¶~~
- ~~(12) Provide for monitoring and evaluation of the performance of offsets;¶¶~~
- ~~(13) Promote reliability of the regional electric system.~~

~~Statutory/Other Authority: ORS 469.470, 469.503~~

~~Statutes/Other Implemented: ORS 469.503~~

AMEND: 345-024-0550

RULE SUMMARY: Resets carbon dioxide standard for base-load power plants to 17 percent below the rate of carbon dioxide emissions per kilowatt hour of net electric output for the most efficient stand-alone combined cycle, combustion turbine, natural gas-fired energy facility that is commercially demonstrated and operating in the United States. NOTE: The rate 0.574 pounds of carbon dioxide per kilowatt hour is based on manufacturer specifications for the combined cycle configuration at the Dania Beach Clean Energy Center in Broward County, Florida. This rate will be revised based on test data for this facility or another facility, as available at the time the Council adopts permanent rules.

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 ~~0.64574~~ 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 ~~345-001-001024-0503~~, 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, ORS 469.501, ORS 469.503

Statutes/Other Implemented: ORS 469.501, ORS 469.503



AMEND: 345-024-0570

RULE SUMMARY: Lowers heat rate based on data used to reset carbon dioxide emissions standard for base load gas plants. This rate may be amended based on data available at the time Council adopts permanent rule. See note under OAR 345-024-0550.

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 ~~6,321.907~~ 6,215.907 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, ORS 469.501, ORS 469.503

Statutes/Other Implemented: ORS 469.501, ORS 469.503



AMEND: 345-024-0580

RULE SUMMARY: Increases monetary offset rate for carbon dioxide emissions by fifty percent based on empirical evidence of the costs of offsets. Note: Members of the public are encouraged to submit data or views regarding the cost of offsets and whether or not the proposed monetary offset rate will be economically achievable with the modified rate for natural gas-fired power plants.

CHANGES TO RULE:

345-024-0580

Monetary Offset Rate ¶

The monetary offset rate is ~~\$2.854.27~~ per ton of carbon dioxide emissions.

Statutory/Other Authority: ORS 469.470, 469.503

Statutes/Other Implemented: ORS 469.503

AMEND: 345-024-0590

RULE SUMMARY: Resets carbon dioxide emissions standard for non-base load power plants to be consistent with proposed changes to OAR 345-024-0550. This rate may change based on data available at the time the Council adopts permanent rules. See note under OAR 345-024-0550 for additional information.

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 0.61574 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, ORS 469.501, ORS 469.503

Statutes/Other Implemented: ORS 469.501, ORS 469.503

AMEND: 345-024-0620

RULE SUMMARY: Modifies standard for nongenerating facilities that emit carbon dioxide to be consistent with proposed changes to OAR 345-024-0550. This rate may be revised based on data available at the time the Council adopts permanent rules. See note under OAR 345-024-0550 for additional information.

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 0.4528 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, ORS 469.501

Statutes/Other Implemented: ORS 469.501

AMEND: 345-025-0010

RULE SUMMARY: Clarifies conditions that must be included in site certificate for fossil fueled power plant or other facility that will emit carbon dioxide.

CHANGES TO RULE:

345-025-0010

Site-Specific Conditions ¶¶

The Council may include the following conditions, as appropriate, in the site certificate:¶¶

(1) If the facility uses coal, the certificate holder must take all necessary steps to ensure that surface and groundwater are not contaminated by run off or seepage associated with coal or ash storage, transport or disposal. The certificate holder must handle coal and ash so as to minimize the likelihood of coal dust and ash being windblown and causing an environmental or public health problem. If the certificate holder permanently disposes of ash on the facility site, the certificate holder must cover the ash with a layer of topsoil and revegetate the area.¶¶

(2) If the energy facility or related or supporting facility is a natural gas pipeline, the certificate holder must submit to the Department copies of all incident reports involving the pipeline required under 49 CFR Sec. 191.15.¶¶

(3) If the facility includes any pipeline under Council jurisdiction:¶¶

(a) The certificate holder must design, construct and operate the pipeline in accordance with the requirements of the U.S. Department of Transportation as set forth in Title 49, Code of Federal Regulations, Part 192, in effect on August 15, 2011; and¶¶

(b) The certificate holder must develop and implement a program using the best available practicable technology to monitor the proposed pipeline to ensure protection of public health and safety.¶¶

(4) If the facility includes any transmission line under Council jurisdiction:¶¶

(a) The certificate holder must design, construct, and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011, by the American National Standards Institute; and¶¶

(b) The certificate holder must develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line.¶¶

(5) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council must specify an approved corridor in the site certificate and must allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.¶¶

(6) If the facility is a surface facility related to an underground gas storage reservoir, the Council must, in the site certificate, specify the site boundary and total permitted daily throughput of the facility.¶¶

(7) If the facility is subject to a carbon dioxide emissions standard adopted by the Council or enacted by statute, the Council must include in the site certificate appropriate conditions as described in OAR ~~345-024-0550, 345-024-0560, 345-024-0590, 345-024-0600, 345-024-0620, 345-024-0630 and 345-024-07100~~ to 345-024-0720.¶¶

[Publications: Publications referenced are available from the agency.]

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.401, 469.413, 469.501, 469.503

AMEND: 345-027-0375

RULE SUMMARY: Implements standard for amendment of a site certificate for a fossil-fueled power plant issued before September 25, 2021 established by HB 2021 (2021). Clarifies that incremental increases in carbon dioxide emissions that do not otherwise require amendment of site certificate continue to be allowed.

CHANGES TO RULE:

345-027-0375

Scope of Council's Review

(1) In making a decision to grant or deny issuance of an amended site certificate, the Council must apply the applicable laws and Council standards required under section (2) of this rule and in effect on the dates described in section (3) of this rule.¶

(2) To issue an amended site certificate, the Council must determine that the preponderance of evidence on the record supports the following conclusions:¶

(a) For a request for amendment proposing to add new area to the site boundary, the portion of the facility within the area added to the site by the amendment complies with all laws and Council standards applicable to an original site certificate application;¶

(b) For a request for amendment to extend the deadlines for beginning or completing construction, after considering any changes in facts or law since the date the current site certificate was executed, the facility complies with all laws and Council standards applicable to an original site certificate application. However, for requests to extend completion deadlines, the Council need not find compliance with an applicable law or Council standard if the Council finds that:¶

(A) The certificate holder has spent more than 50 percent of the budgeted costs on construction of the facility;¶

(B) The inability of the certificate holder to complete the construction of the facility by the deadline in effect before the amendment is the result of unforeseen circumstances that are outside the control of the certificate holder;¶

(C) The standard, if applied, would result in an unreasonable financial burden on the certificate holder; and¶

(D) The Council does not need to apply the standard to avoid a significant threat to the public health, safety or the environment;¶

(c) For ~~any other~~ requests for amendment not described above, the facility, with the proposed change, complies with the applicable laws or Council standards that protect a resource or interest that could be affected by the proposed change; ~~and~~¶

~~(d)~~¶  
(d) For a request for amendment to a site certificate for a fossil-fueled power plant, the proposed change will not result in a significant increase in the gross carbon dioxide emissions that are reasonably likely to result from the operation of the facility. For the purposes of this subsection, an incremental increase in capacity or heat rate resulting from changes that otherwise falls within the limits of OAR 345-027-0353(1) does not significantly increase the gross carbon dioxide emissions that are reasonably likely to result from the operation of the energy facility.¶

(e) For all requests for amendment, the amount of the bond or letter of credit required under OAR 345-022-0050 is adequate.¶

(3) In making findings under section (1) of this rule, the Council must apply the applicable laws and Council standards in effect on the following dates:¶

(a) For the applicable substantive criteria under the Council's land use standard, as described in OAR 345-022-0030, the date the request for amendment was submitted; and¶

(b) For all other applicable laws and Council standards, the date the Council issues its final order on the request for amendment.

Statutory/Other Authority: ORS 469.470

Statutes/Other Implemented: ORS 469.401, 469.405, 469.413(2), 469.504