AMENDATORY SECTION (Amending WSR 15-07-043, filed 3/12/15, effective 4/12/15)

WAC 480-109-060 Definitions. The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

(1) "Annual retail revenue requirement" means the total revenue the commission authorizes a utility an opportunity to recover in Washington rates pursuant to a general rate proceeding or other general rate revision.

(2) "Biomass energy" means:

(a) The electrical energy produced by a generation facility powered by:

(i) Organic by-products of pulping and the wood manufacturing process;

(ii) Animal manure;

(iii) Solid organic fuels from wood;

(iv) Forest or field residues;

(v) Untreated wooden demolition or construction debris;

(vi) Food waste and food processing residuals;

(vii) Liquors derived from algae;

(viii) Dedicated energy crops; and

(ix) Yard waste.

(b) Biomass energy does not include:

(i) Wood pieces that have been treated with chemical preservatives such as creosote, pentachlorophenol, or copper-chrome arsenic;

(ii) Wood from old growth forests; or

(iii) Municipal solid waste.

(3) "Carbon dioxide equivalents" or "CO_2e" has the same meaning as in RCW 70.235.010.

(4) "Certificate" means proof of ownership, registered in WREGIS, of the nonpower attributes associated with a megawatt-hour of generation from an eligible renewable resource.

((~~(4)~~)) (5) "Coal transition power" means the output of a coal-fired electric generation facility that is subject to an obligation to meet the standards contained in RCW 80.80.040 (3)(c).

((~~(5)~~)) (6) "Commission" means the Washington utilities and transportation commission.

((~~(6)~~)) (7) "Conservation" means any reduction in electric power consumption resulting from increases in the efficiency of energy use, production, or distribution.

((~~(7)~~)) (8) "Cost-effective" means, consistent with RCW 80.52.030, that a project or resource is forecast:

(a) To be reliable and available within the time it is needed; and

(b) To meet or reduce the electric power demand of the intended consumers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof.

((~~(8) "Council" means the Northwest Power and Conservation Council.~~))

(9) "Customer" means a person or entity that purchases electricity for ultimate consumption and not for resale.

(10) "Department" means the department of commerce or its successor.

(11) "Distributed generation" means an eligible renewable resource where the generation facility or any integrated cluster of such facilities has a nameplate capacity of not more than five megawatts alternating current. An integrated cluster is a grouping of generating facilities located on the same or contiguous property having any of the following elements in common: Ownership, operational control, or point of common coupling.

(12) "Eligible renewable resource" means:

(a) Electricity from a generation facility powered by a renewable resource other than fresh water that commences operation after March 31, 1999, where:

(i) The facility is located in the Pacific Northwest; or

(ii) The electricity from the facility is delivered into Washington state on a real-time basis without shaping, storage, or integration services.

(b) Incremental electricity produced as a result of efficiency improvements completed after March 31, 1999, to hydroelectric generation projects owned by a qualifying utility and located in the Pacific Northwest, where the additional generation does not result in new water diversions or impoundments;

(c) Hydroelectric generation from a project completed after March 31, 1999, where the generation facility is located in irrigation pipes, irrigation canals, water pipes whose primary purpose is for conveyance of water for municipal use, and wastewater pipes located in Washington, where the generation does not result in new water diversion or impoundments;

(d) Qualified biomass energy; ((~~or~~))

(e) For a qualifying utility that serves customers in other states, electricity from a generation facility powered by a renewable resource other than freshwater that commenced operation after March 31, 1999, where:

(i) The facility is located within a state in which the qualifying utility serves retail electrical customers; and

(ii) The qualifying utility owns the facility in whole or in part or has a long-term contract with the facility of at least twelve months.

((~~(13)~~)) (f)(i) Incremental electricity produced as a result of a capital investment completed after January 1, 2010, that increases, relative to a baseline level of generation prior to the capital investment, the amount of electricity generated in a facility that generates qualified biomass energy as defined under subsection (29)(c)(ii) of this section and that commenced operation before March 31, 1999;

(ii) Beginning January 1, 2007, the facility must demonstrate its baseline level of generation over a three-year period prior to the capital investment in order to calculate the amount of incremental electricity produced;

(iii) The facility must demonstrate that the incremental electricity resulted from the capital investment, which does not include expenditures on operation and maintenance in the normal course of business, through direct or calculated measurement.

(g) That portion of incremental electricity produced as a result of efficiency improvements completed after March 31, 1999, attributable to a qualifying utility's share of the electricity output from hydroelectric generation projects whose energy output is marketed by the Bonneville Power Administration where the additional generation does not result in new water diversions or impoundments; or

(h) The environmental attributes, including renewable energy credits, from (g) of this subsection transferred to investor-owned utilities pursuant to the Bonneville Power Administration's residential exchange program.

(13) "Energy assistance" means a program undertaken by a utility to reduce the household energy burden of its customers.

(a) Energy assistance includes, but is not limited to, weatherization, conservation and efficiency services, and monetary assistance, such as a grant program or discounts for lower income households, intended to lower a household's energy burden.

(b) Energy assistance may include direct customer ownership in distributed energy resources or other strategies if such strategies achieve a reduction in energy burden for the customer above other available conservation and demand-side measures.

(14) "Energy assistance need" means the amount of assistance necessary to achieve an energy burden equal to six percent for utility customers.

(15) "Energy burden" means the share of annual household income used to pay annual home energy bills.

(16) "Greenhouse gas," "greenhouse gases," "GHG," and "GHGs" includes carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and any other gas or gases designated by the department of ecology in WAC 173-441-040 or its successor, should that provision be amended or recodified.

(17) "Greenhouse gas content calculation" means a calculation expressed in carbon dioxide equivalents made by the department of ecology for the purposes of determining the emissions from the complete combustion or oxidation of fossil fuels and the greenhouse gas emissions in electricity for use in calculating the greenhouse gas emissions content in electricity.

(18) "High-efficiency cogeneration" means the sequential production of electricity and useful thermal energy from a common fuel source resulting in a reduction in customer load where under normal operating conditions the useful thermal energy output is no less than thirty-three percent of the total energy output. The reduction in customer load is determined by multiplying the annual electricity output of the cogeneration facility by a fraction equal to one minus the ratio of:

(a) The heat rate (in British thermal units per megawatt hour) of the cogeneration facility based on the additional fuel requirements attributable to electricity production and excluding the fuel that would be required to produce all other useful energy outputs of the project without cogeneration, divided by the heat rate (in British thermal units per megawatt hour) of a combined cycle natural gas-fired combustion turbine. The heat rate of the combustion turbine must be based on a facility using best commercially available technology on a new and clean basis.

(b) Calculation of the reduction in customer load is made with the following formula:

$$\text{Megawatt-hours reductions in customer load} = \left(\begin{array}{c}\text{Annual}\\ \text{megawatt-hours}\\ \text{of cogen. elect.}\end{array}\right) \times \left[1 - \left(\frac{\text{heat rate based on fuel used for electric portion of cogen.}}{\begin{array}{c}\text{heat rate for a new clean natural gas fired combined cycle}\\ \text{combustion turbine using best available commercial technology}\end{array}}\right)\right]$$

((~~(14)~~)) (19) "Incremental cost" means the difference between the levelized delivered cost of an eligible renewable resource, regardless of ownership, compared to the levelized delivered cost of an equiva-

lent amount of reasonably available substitute resources that do not qualify as eligible renewable resources, where the resources being compared have the same contract length or facility life.

((~~(15)~~)) (20) "Integrated resource plan" or "IRP" means the filing made ((~~every two years~~)) by an electric utility in accordance with WAC 480-100-238((~~, integrated resource planning~~)).

((~~(16)~~)) (21) "Load" means the amount of kilowatt-hours of electricity delivered in the most recently completed year by a qualifying utility to its Washington retail customers. Load does not include off-system sales or electricity delivered to transmission-only customers.

((~~(17)~~)) (22) "Low-income" means household incomes that do not exceed the higher of eighty percent of area median income or two hundred percent of federal poverty level, adjusted for household size.

(23)(a) "Nonemitting electric generation" means electricity from a generating facility or a resource that provides electric energy, capacity, or ancillary services to an electric utility and that does not emit greenhouse gases as a by-product of energy generation.

(b) "Nonemitting electric generation" does not include renewable resources.

(24)(a) "Nonpower attributes" means all environmentally related characteristics, exclusive of energy, capacity reliability, and other electrical power service attributes, that are associated with the generation of electricity from a renewable resource including, but not limited to, the facility's fuel type, geographic location, vintage, qualification as an eligible renewable resource, and avoided emissions of pollutants to the air, soil, or water, and avoided emissions of carbon dioxide and other greenhouse gases.

(b) "Nonpower attributes" does not include any aspects, claims, characteristics, and benefits associated with the on-site capture and destruction of methane or other greenhouse gases at a facility through a digester system, landfill gas collection system, or other mechanism, which may be separately marketable as greenhouse gas emission reduction credits, offsets, or similar tradable commodities. However, these separate avoided emissions may not result in or otherwise have the effect of attributing greenhouse gas emissions to the electricity.

((~~(18)~~)) (25) "Pacific Northwest" has the same meaning as defined for the Bonneville Power Administration in section 3 of the Pacific Northwest Electric Power Planning and Conservation Act (94 Stat. 2698; 16 U.S.C. Sec. 839a).

((~~(19)~~)) (26) "Pro rata" means the calculation dividing the utility's projected ten-year conservation potential into five equal proportions to establish the minimum biennial conservation target.

((~~(20)~~)) (27) "Production efficiency" means investments and actions that save electric energy from power consuming equipment and fixtures at an electric generating facility. The installation of electric power production equipment that increases the amount of power generated for the same energy input is not production efficiency in this chapter or conservation under RCW 19.285.030(4) because no reduction in electric power consumption occurs.

((~~(21)~~)) (28) "Pursue all" means an ongoing process of researching and evaluating the range of possible conservation technologies and programs, and implementing all programs which are cost-effective, reliable and feasible.

((~~(22)~~)) (29) "Qualified biomass energy" means electricity produced from a biomass energy facility that:

(a) Commenced operation before March 31, 1999;

(b) Contributes to the qualifying utility's load; and

(c) Is owned either by:

(i) A qualifying utility; or

(ii) An industrial facility that is directly interconnected with electricity facilities that are owned by a qualifying utility and capable of carrying electricity at transmission voltage.

((~~(23)~~)) (30) "Regional technical forum" means the advisory committee established by the Northwest Power and Conservation Council.

((~~(24)~~)) (31) "Renewable energy credit" means a tradable certificate of proof of ((~~at least~~)) one megawatt-hour of an eligible renewable resource ((~~where the generation facility is not powered by fresh water,~~)). The certificate includes all of the nonpower attributes associated with that one megawatt-hour of electricity((~~,~~)) and the certificate is verified by a renewable energy credit tracking system selected by the department.

((~~(25)~~)) (32) "Renewable resource" means:

(a) Water;

(b) Wind;

(c) Solar energy;

(d) Geothermal energy;

(e) Landfill gas;

(f) Wave, ocean, or tidal power;

(g) Gas from sewage treatment facilities;

(h) Biodiesel fuel ((~~as defined in RCW 82.29A.135~~)) that is not derived from crops raised on land cleared from old growth or first-growth forests where the clearing occurred after December 7, 2006;

(i) Generation facilities in which fossil and combustible renewable resources are cofired in one generating unit that is located in the Pacific Northwest and in which the cofiring commenced after March 31, 1999. These facilities produce eligible renewable resources in direct proportion to the percentage of the total heat value represented by the heat value of the renewable resources; or

(j) Biomass energy, where the eligible renewable energy produced by biomass facilities is based on the portion of the fuel supply that is made up of eligible biomass fuels.

((~~(26)~~)) (33) "Request for proposal" or "RFP" means the documents describing an electric utility's solicitation of bids for delivering electric capacity, energy, capacity and energy, or conservation.

((~~(27)~~)) (34) "River discharge" means the total volume of water passing through, over and around all structural components of a hydroelectric facility over a given time.

((~~(28)~~)) (35) "Single large facility conservation savings" means cost-effective conservation savings achieved in a single biennial period at the premises of a single customer of a utility whose recent annual electricity consumption prior to the conservation savings exceeded five average megawatts.

((~~(29)~~)) (36) "System cost" means, consistent with RCW 80.52.030, an estimate of all direct costs of a project or resource over its effective life including, if applicable, the costs of distribution to the consumer and among other factors, waste disposal costs, end-of-cycle costs, and fuel costs (including projected increases), and such quantifiable environmental costs and benefits as are directly attributable to the project or resource.

((~~(30)~~)) (37) "Target year" means the twelve-month period commencing January 1st and ending December 31st used for compliance with the renewable portfolio standard requirement in WAC 480-109-200(1).

((~~(31)~~)) (38) "Utility" means an "electrical company" as that term is defined in RCW 80.04.010 that is subject to the commission's jurisdiction under RCW 80.04.010 and chapter 80.28 RCW.

((~~(32)~~)) (39) "WREGIS" means the Western Renewable Energy Generation Information System. WREGIS is the renewable energy credit tracking system designated by the department according to RCW 19.285.030(20).

((~~(33)~~)) (40) "Year" means the twelve-month period commencing January 1st and ending December 31st.

AMENDATORY SECTION (Amending WSR 15-07-043, filed 3/12/15, effective 4/12/15)

WAC 480-109-100 Energy efficiency resource standard. (1) **Process for pursuing all conservation.**

(a) **Process.** A utility's obligation to pursue all available conservation that is cost-effective, reliable, and feasible includes the following process:

(i) **Identify potential.** Identify the cost-effective, reliable, and feasible potential of possible technologies and conservation measures in the utility's service territory.

(ii) **Develop portfolio.** Develop a conservation portfolio that includes all available, cost-effective, reliable, and feasible conservation. A utility must develop programs to acquire available conservation from all of the types of conservation identified in (b) of this subsection. The portfolio must include all conservation programs and mechanisms identified pursuant to RCW 19.405.120, which pertain to energy assistance and progress toward meeting energy assistance need, including the low-income conservation programs and mechanisms in subsection (10)(b) of this section.

If no cost-effective, reliable and feasible conservation is available from one of the types of conservation, a utility is not obligated to acquire such a resource.

(iii) **Implement programs.** Implement conservation programs identified in the portfolio to the extent the portfolio remains cost-effective, reliable, and feasible. Implementation methods shall not unnecessarily limit the acquisition of all available conservation that is cost-effective, reliable and feasible.

(iv) **Adaptively manage.** Continuously review and update as appropriate the conservation portfolio to adapt to changing market conditions and developing technologies. A utility must research emerging conservation technologies, and assess the potential of such technologies for implementation in its service territory.

(b) **Types.** Types of conservation include, but are not limited to:

(i) End-use efficiency;

(ii) Behavioral programs;

(iii) High-efficiency cogeneration;

(iv) Production efficiency;

(v) Distribution efficiency; and

(vi) Market transformation.

(c) **Pilots.** A utility must implement pilot projects when appropriate and expected to produce cost-effective savings within the current or immediately subsequent biennium, as long as the overall portfolio remains cost-effective.

(2) **Ten-year conservation potential.** By January 1, 2010, and every two years thereafter, a utility must project its cumulative ten-year conservation potential.

(a) This projection must consider all available conservation resources that are cost-effective, reliable, and feasible.

(b) This projection must be derived from the utility's most recent IRP, including any information learned in its subsequent resource acquisition process, or the utility must document the reasons for any differences. When developing this projection, utilities must use methodologies that are consistent with those used in the Northwest Conservation and Electric Power Plan.

(c) The projection must include a list of each measure used in the potential, its unit energy savings value, and the source of that value.

(3) **Biennial conservation target.** Beginning January 2010, and every two years thereafter, a utility must establish a biennial conservation target.

(a) The biennial conservation target must identify, and quantify in megawatt-hours, all available conservation that is cost-effective, reliable, and feasible.

(b) The biennial conservation target must be no lower than a pro rata share of the utility's ten-year conservation potential.

(c) **Excess conservation.** No more than twenty-five percent of any biennial target may be met with excess conservation savings allowed by this subsection. Excess conservation may only be used to mitigate shortfalls in the immediately subsequent two biennia and may not be used to adjust a utility's ten-year conservation potential or biennial target. The presence of excess conservation does not relieve a utility of its obligation to pursue the level of conservation in its biennial target.

(i) Cost-effective conservation achieved in excess of a biennial conservation target may be used to meet up to twenty percent of each of the immediately subsequent two biennial targets.

(ii) A utility may use single large facility conservation savings achieved in excess of its biennial target to meet up to five percent of each of the immediately subsequent two biennial conservation targets.

(iii) Until December 31, 2017, a utility with an industrial facility located in a county with a population between ninety-five thousand and one hundred fifteen thousand that is directly interconnected with electricity facilities that are capable of carrying electricity at transmission voltage, may use cost-effective excess conservation savings from that industrial facility to meet the subsequent two biennial conservation targets. For purposes of this subsection, transmission voltage is one hundred thousand volts or higher.

(4) **Prudence.** A utility retains the responsibility to demonstrate the prudence of all conservation expenditures, consistent with RCW 19.285.050(2).

(5) **Energy savings.** A utility must use unit energy savings values and standard protocols approved by the regional technical forum, unless a unit energy savings value or standard protocol is:

(a) Based on generally accepted methods, impact evaluation data, or other reliable and relevant data that includes verified savings levels; and

(b) Presented to its advisory group for review. The commission retains discretion to determine an appropriate value or protocol.

(6) **High efficiency cogeneration.** A utility may count as conservation savings a portion of the electricity output of a high efficiency cogeneration facility in its service territory that is owned by a retail electric customer and used by that customer to meet its heat and electricity needs. Heat and electricity output provided to anyone other than the facility owner is not available for consideration in determining conservation savings. High efficiency cogeneration savings must be certified by a professional engineer licensed by the Washington department of licensing.

(7) **Applicable sectors.** A utility must offer a mix of conservation programs to ensure it is serving each customer sector, including programs targeted to the low-income subset of residential customers.

(8) **Cost-effectiveness.** A utility's conservation portfolio must pass a cost-effectiveness test consistent with that used in the Northwest Conservation and Electric Power Plan. A utility must evaluate conservation using cost-effectiveness tests consistent with those used by the Northwest Power and Conservation Council, and as required by the commission, except as provided by subsection (10) of this section.

(9) **Utility incentives.** A utility may propose to the commission positive incentives designed to stimulate the utility to exceed its biennial conservation target as identified in RCW 19.285.060(4). Any proposed utility incentive must be included in the utility's biennial conservation plan.

(10) **Low-income conservation.**

(a) A utility ((~~may~~)) must fully fund low-income conservation measures that are determined by the implementing agency to be cost-effective consistent with either the *Weatherization Manual* maintained by the department or when it is cost-effective to do so using utility-specific avoided costs. For purposes of this subsection, "fully fund" may include the agency leveraging other funding sources, in combination with utility funds, to fund low-income conservation projects. Measures identified through the priority list in the *Weatherization Manual* are considered cost-effective. In addition, a utility may fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures.

(b) The utility's biennial conservation plan must include low-income conservation programs and mechanisms identified pursuant to RCW 19.405.120. To the extent practicable, a utility must prioritize energy assistance to low-income households with a higher energy burden.

(c) A utility ((~~may~~)) must exclude low-income conservation from portfolio-level cost-effectiveness calculations. A utility must account for the costs and benefits, including nonenergy impacts, which accrue over the life of each conservation measure.

((~~(c)~~)) (d) A utility must count savings from low-income conservation toward meeting its biennial conservation target. Savings may be those calculated consistent with the procedures in the *Weatherization Manual*.

AMENDATORY SECTION (Amending WSR 15-07-043, filed 3/12/15, effective 4/12/15)

WAC 480-109-200 Renewable portfolio standard. (1) **Renewable resource target.** Each utility must meet the following annual targets.

(a) By January 1st of each year beginning in 2012 and continuing through 2015, each utility must use sufficient eligible renewable resources, acquire equivalent renewable energy credits, or a combination of both, to supply at least three percent of its two-year average load for the remainder of each target year.

(b) By January 1st of each year beginning in 2016 and continuing through 2019, each utility must use sufficient eligible renewable resources, acquire equivalent renewable energy credits, or a combination of both, to supply at least nine percent of its two-year average load for the remainder of each target year.

(c) By January 1st of each year beginning in 2020 and continuing each year thereafter, each utility must use sufficient eligible renewable resources, acquire equivalent renewable energy credits, or a combination of both, to supply at least fifteen percent of its two-year average load for the remainder of each target year.

(2) **Credit eligibility.** ((~~Renewable energy credits produced during the target year, the preceding year or the subsequent year may be used to comply with this annual renewable resource requirement provided that they were acquired by January 1st of the target year.~~)) A qualifying utility may use renewable energy credits to meet the provisions of this section, provided the renewable energy credits meet the following requirements:

(a) Renewable energy credits were acquired by January 1st of the target year;

(b) A renewable energy credit from electricity generated by a resource other than freshwater may be used to meet a requirement applicable to the year in which the credit was created, the year before the year in which the credit was created, or the year after the year in which the credit was created;

(c) A renewable energy credit from electricity generated by freshwater:

(i) May only be used to meet a requirement applicable to the year in which the credit was created; and

(ii) Must be acquired by the qualifying utility through ownership of the generation facility or through a transaction that conveyed both the electricity and the nonpower attributes of the electricity.

(d) A renewable energy credit transferred to an investor-owned utility pursuant to the Bonneville Power Administration's residential exchange program may not be used by any utility other than the utility receiving the credit from the Bonneville Power Administration;

(e) Each renewable energy credit may only be used once to meet the requirements of this section and must be retired using procedures of the renewable energy credit tracking system; and

(f) For purposes of this subsection, the vintage month and vintage year of the renewable energy credit represent the date the associated unit of power was generated.

(3) **WREGIS registration.** All eligible ((~~hydropower generation and all~~)) renewable ((~~energy credits~~)) resources used for utility compliance with the renewable resource target must be registered in WREGIS, regardless of facility ownership. Any ((~~megawatt-hour of eligible hydropower or~~)) renewable energy credit that a utility uses for compliance must have a corresponding certificate retired in the utility's WREGIS account.

(4) **Renewable energy credit multipliers.** The multipliers described in this subsection do not create additional renewable energy credits. A utility may count retired certificates at:

(a) One and two-tenths times the base value where the eligible resource:

(i) Commenced operation after December 31, 2005; and

(ii) The developer of the facility used apprenticeship programs approved by the Washington state apprenticeship and training council.

(b) Two times the base value where the eligible resource was generated by distributed generation and:

(i) The utility owns the distributed generation facility or has purchased the energy output and the associated renewable energy credits; or

(ii) The utility has contracted to purchase the associated renewable energy credits.

(c) A utility that uses a multiplier described in this subsection for compliance must retire the associated certificate at the same time. A utility may not transact the multipliers described in this subsection independent of the associated base value certificate.

(5) **Target calculation.** In meeting the annual targets of this section, a utility must calculate its annual target based on the average of the utility's load for the previous two years.

(6) **Integration services.** A renewable resource within the Pacific Northwest may receive integration, shaping, storage or other services from sources outside of the Pacific Northwest and remain eligible to count towards a utility's renewable resource target.

(7) **Incremental hydropower calculation.**

(a) **Method selection.** A utility must use one of the following methods to calculate the quantity of incremental electricity produced by eligible efficiency upgrades to any hydropower facility, regardless of ownership, that is used to meet the annual targets of this section. A utility shall use the same method for calculating incremental hydropower production at all of the facilities it owns. Once the commission approves a utility's method for calculating incremental hydropower production, that utility shall not use another method unless authorized by the commission.

(b) **Method one.** An annual calculation performed by:

(i) Determining the river discharge for the facility in the target year;

(ii) Measuring the total amount of electricity produced by the upgraded hydropower facility during the target year;

(iii) Using a power curve-based production model to calculate how much energy the pre-upgrade facility would have generated under the same river discharge observed in the target year; and

(iv) Subtracting the model output in (b)(iii) of this subsection from the measurement in (b)(ii) of this subsection to determine the quantity of eligible renewable energy produced by the facility during the target year.

(c) **Method two.** An annual application of a percentage to total production performed by:

(i) Determining the river discharge for the facility over a historical period of at least five consecutive years;

(ii) Using power curve-based production models to calculate the facility's generation under the river discharge of each year in the historical period for the pre-upgrade state and the post-upgrade state;

(iii) Calculating the arithmetic mean of generation in both the pre-upgrade and post-upgrade states over the historical period;

(iv) Calculating a factor by dividing the arithmetic mean post-upgrade generation by the arithmetic mean pre-upgrade generation and subtracting one; and

(v) Multiplying the facility's observed generation in the target year by the factor calculated in (c)(iv) of this subsection to determine the share of the facility's observed generation that may be reported as eligible renewable energy.

((~~(d) **Method three.** A one-time calculation of the quantity of renewable energy performed by:~~

~~(i) Determining the river discharge for the facility over a historical period of at least ten consecutive years;~~

~~(ii) Using a production model to calculate the facility's generation in megawatt-hours under the river discharge of each year in the historical period for the pre-upgrade state and the post-upgrade state;~~

~~(iii) Calculating the arithmetic mean generation of the pre-upgrade and post-upgrade states over the historical period in megawatt hours; and~~

~~(iv) Subtracting the arithmetic mean pre-upgrade generation from the arithmetic mean post-upgrade generation to determine the amount of eligible renewable generation for the target year.~~

~~(e) **Five-year evaluation.** Any utility using method three shall provide, beginning in its 2019 renewable portfolio standard report and every five years thereafter, an analysis comparing the amount of incremental hydropower the utility reported in every year using method three to the amount of incremental hydropower the utility would have reported over the same period using one of the other two methods. If the commission determines that this analysis shows a significant difference between method three and one of the other methods, it may order the utility to use a different method in the future reporting years.~~))

(8) **Qualified biomass energy.** Beginning January 1, 2016, only a utility that owns or is directly interconnected to a qualified biomass energy facility may use qualified biomass energy to meet its annual target obligation.

(a) A utility may no longer use electricity and associated renewable energy credits from a qualified biomass energy facility if the associated industrial pulping or wood manufacturing facility ceases operation other than for purposes of maintenance or upgrade.

(b) A utility may acquire renewable energy credits from a qualified biomass energy resource hosted by an industrial facility only if the facility is directly interconnected to the utility at transmission voltage. For purposes of this subsection, transmission voltage is one hundred thousand volts or higher. The number of renewable energy credits that the utility may acquire from an industrial facility for the utility's target compliance may not be greater than the utility's renewable portfolio standard percentage times the industrial facility load.

(c) A utility that owns a qualified biomass energy facility may not transfer or sell renewable energy credits associated with qualified biomass energy to another person, entity, or utility.

(9) **Use of energy output marketed by Bonneville Power Administration.** Beginning January 1, 2020, a qualifying utility may use eligible renewable resources as identified under RCW 19.285.030 (12)(g) and (h) to meet its compliance obligation under RCW 19.285.040(2). A qualifying utility may not transfer or sell eligible renewable resources ob-

tained from the Bonneville Power Administration to another utility for compliance purposes under RCW 19.285.040.

(10) **Alternative compliance when renewable and nonemitting electric generation used to meet one hundred percent of annual retail electric load.** Pursuant to RCW 19.285.040 (2)(m), beginning January 1, 2030, a qualifying utility is considered to be in compliance with an annual renewable energy target in RCW 19.285.040 (2)(a) if the utility meets one hundred percent of the utility's average annual retail electric load using any combination of electricity from:

(a) Renewable resources and renewable energy credits as defined in RCW 19.285.030; and

(b) Nonemitting electric generation, as defined in WAC 480-109-060(23).

Nothing in subsection (10) of this section relieves the requirements of a qualifying utility to comply with the conservation targets established under RCW 19.285.040(1).

AMENDATORY SECTION (Amending WSR 15-07-043, filed 3/12/15, effective 4/12/15)

WAC 480-109-210 Renewable portfolio standard reporting. (1) **Annual report.** On or before every June 1st, each utility must file an annual renewable portfolio standard report with the commission and the department detailing the resources the utility has acquired or contracted to acquire to meet its renewable resource obligation for the target year.

(2) **Annual report contents.** The annual renewable portfolio standard report must include the utility's annual load for the prior two years, the total number of megawatt-hours from eligible renewable resources and/or renewable resource credits the utility needed to meet its annual renewable energy target by January 1st of the target year, the amount (in megawatt-hours) of each type of eligible renewable resource used, and the amount of renewable energy credits acquired. Additionally, the annual renewable portfolio standard report must include the following:

(a) **Incremental cost calculation.** To calculate its incremental cost, a utility must:

(i) Make a one-time calculation of incremental cost for each eligible resource at the time of acquisition or, for historic acquisitions, the best information available at the time of the acquisition:

(A) **Eligible resource levelized cost.** Determine the levelized cost of each eligible resource, including integration costs as determined by the utility's most recently completed renewable resource integration study, using the utility's commission-approved weighted average cost of capital at the time of the resource's acquisition as the discount rate;

(B) **Eligible resource capacity value.** Identify the capacity value of each eligible renewable resource as calculated in the utility's most recent integrated resource plan acknowledged by the commission;

(C) **Noneligible resource selection.** Select and document the lowest-reasonable-cost, noneligible resource available to the utility at the time of the eligible resource's acquisition for each corresponding eligible resource;

(D) **Noneligible levelized energy cost.** For each noneligible resource selected in (a)(i)(C) of this subsection, determine the cost of acquiring the same amount of energy as expected to be produced by the eligible resource, levelized over a time period equal to the facility life or contract length of the eligible resource and at the same discount rate used in (a)(i)(A) of this subsection;

(E) **Noneligible levelized capacity cost.** Calculate the levelized capital cost of obtaining an equivalent amount of capacity provided by the eligible resource, as determined in (a)(i)(B) of this subsection, from a noneligible resource. This cost must be levelized over a period equal to the facility life or contract length of the eligible resource and at the same discount rate used in (a)(i)(A) of this subsection. To make this calculation, a utility must use the lowest-cost, noneligible capacity resource identified in its most recent integrated resource plan acknowledged by the commission. However, if a utility determines that cost information in the integrated resource plan is no longer accurate, it may use cost information from another source, with documentation of the source and an explanation of why the source was used((~~.~~));

(F) **Calculation.** Determine the incremental cost of each eligible resource by subtracting the sum of the levelized costs of the noneligible resources calculated in (a)(i)(D) and (E) of this subsection from the levelized cost of the eligible resource determined in (a)(i)(A) of this subsection. The result of this calculation may be a negative number((~~.~~));

(G) **Legacy resources.** Any eligible resource that the utility acquired prior to March 31, 1999, is deemed to have an incremental cost of zero.

(ii) **Annual calculation of revenue requirement ratio.** To calculate its revenue requirement ratio, a utility must annually:

(A) Sum the incremental costs of all eligible resources used for target year compliance;

(B) Add the cost of any unbundled renewable energy credits purchased for target year compliance;

(C) Subtract the revenue from the sales of any renewable energy credits and energy from eligible facilities; and

(D) Divide the total obtained in (a)(ii)(A) through (C) of this subsection by the utility's annual revenue requirement, which means the revenue requirement that the commission established in the utility's most recent rate case, and multiply by one hundred.

(iii) **Annual reporting.** In addition to the revenue requirement ratio calculated in (a)(ii) of this subsection, the utility must:

(A) Report its total incremental cost as a dollar amount and in dollars per megawatt-hour of renewable energy generated by all eligible renewable resources in the calculation in (a)(i) of this subsection; and

(B) Multiply the dollars per megawatt-hour cost calculated in (a)(iii)(A) of this subsection by the number of megawatt-hours needed for target year compliance.

(b) **Alternative compliance.** State whether the utility is relying upon one of the alternative compliance mechanisms provided in WAC 480-109-220 instead of fully meeting its renewable resource target. A utility using an alternative compliance mechanism must use the incremental cost methodology described in this section and include sufficient data, documentation and other information in its report to demonstrate that it qualifies to use that alternative mechanism.

(c) **Compliance plan.** Describe the resources that the utility intends to use to meet the renewable resource requirements for the target year.

(d) **Eligible resources.** A list of each eligible renewable resource that serves Washington customers, for which a utility owns the certificates, with an installed capacity greater than twenty-five kilowatts. Resources with an installed capacity of less than twenty-five kilowatts may be reported in terms of aggregate capacity. The list must include:

(i) Each resource's WREGIS registration status ((~~and use of certificates, whether it be for annual target compliance, a voluntary renewable energy program as provided for in RCW 19.29A.090, or owned by the customer~~)); and

(ii) Eligible resources being included in the report for the first time and documentation of their eligibility.

(e) **Multistate allocations.**

(i) If a utility serves retail customers in more than one state, the utility must allocate certificates consistent with the utility's most recent commission-approved interstate cost allocation methodology. The report must show how the utility applied the allocation methodology to arrive at the number of certificates allocated to Washington ratepayers.

(ii) After documenting the number of certificates allocated to Washington ratepayers, a utility may transfer certificates to or from Washington ratepayers. The report must document the compensation provided to each jurisdiction's ratepayers for such transfers.

(f) **Sales.** If a utility sold certificates, report the number of certificates that it sold, their WREGIS certificate numbers, their source, and the revenues obtained from the sales. For multistate utilities, these requirements only apply to certificates that were allocated to the utility's Washington service territory according to (e) of this subsection.

(3) **Report review.**

(a) Interested persons may file written comments regarding a utility's annual renewable portfolio standard report within thirty days of the utility's filing.

(b) Upon conclusion of the commission review of the utility's annual renewable portfolio standard report, the commission will issue a decision accepting or rejecting the calculation of the utility's renewable resource target; determining whether the utility has generated, acquired or arranged to acquire enough renewable energy credits or qualifying generation to comply with its renewable resource target; and determining the eligibility of new renewable resources pursuant to subsection (2)(d) of this section.

(c) If a utility revises its annual renewable portfolio standard report as a result of the commission review, the utility must submit the revised final annual renewable portfolio standard report to the department.

(4) **Publication of reports.** All renewable portfolio standard reports required by chapter 19.285 RCW and this section since January 1, 2012, must be posted and maintained on the utility's website. Reports must be posted on the utility's website within thirty days of the commission order approving the report. A copy of any such report must be provided to any person upon request.

(5) **Customer notification.** Each utility must provide a summary of its annual renewable portfolio standard report to its customers by

bill insert or other suitable method. This summary must be provided within ninety days of final action by the commission on the report.

(6) **Final compliance report.** Within two years following submission of its annual renewable portfolio standard report, a utility must submit, in the same docket, a final renewable portfolio standard compliance report ((~~that~~)).

(a) The report must list((~~s~~)):

(i) The certificates that it retired in WREGIS for the target year; and

(ii) The use of certificates, whether for annual target compliance, a voluntary renewable energy program as provided for in RCW 19.29A.090, or owned by the customer.

(b) If a utility does not meet its annual target described in WAC 480-109-200, the commission will determine the amount in megawatt-hours by which the utility was deficient.

AMENDATORY SECTION (Amending WSR 15-19-032, filed 9/9/15, effective 10/10/15)

WAC 480-109-300 Greenhouse gas content calculation and energy and emissions intensity metrics. (1) A utility must report its greenhouse gas content calculation and metrics of energy and emissions intensity to the commission on or before June 1st of each year. The report must include annual values for each metric for the preceding ten calendar years. Each value reported must be based on the annual energy or emissions from all generating resources providing service to customers of that utility in Washington state, regardless of the location of the generating resources. When the metrics are calculated from generators that serve out-of-state and in-state customers, the annual energy and emissions outputs must be prorated to represent the proportion of the resource used by Washington customers.

(2) ((~~The energy and emissions intensity report~~)) Each utility must perform its greenhouse gas content calculation in accordance with the rules enacted by the department of ecology, consistent with RCW 19.405.020(22).

(3) In addition to the greenhouse gas content calculation, the report shall include the following metrics:

(a) Average megawatt-hours per residential customer;

(b) Average megawatt-hours per commercial customer;

(c) Megawatt-hours per capita;

(d) Million ((~~short~~)) metric tons of CO_2e emissions; and

(e) Comparison of annual million ((~~short~~)) metric tons of CO_2e emissions to 1990 emissions.

((~~(3) **Unknown generation sources.**~~)) (4) **Unspecified electricity.** For resources where the utility purchases energy from unknown generation sources, ((~~often called "spot market" purchases,~~)) from which the emission rates are unknown, the utility ((~~shall report emission metrics using the average electric power CO_2 emissions rate described as the net system mix (spot market) in the Washington state electric utility fuel mix disclosure reports compiled by the department pursuant to RCW 19.29A.080~~)) must use an emissions rate determined by the department of ecology. If the department of ecology has not adopted an emissions rate for unspecified electricity, a utility must apply an

emissions rate of 0.437 metric tons of CO_2 per megawatt-hour of electricity. For the resources described in this subsection, a utility must show in the report required in subsection (1) of this section the following:

(a) ((~~Short~~)) Metric tons of CO_2e from unknown generation sources;

(b) Megawatt-hours delivered to its retail customers from unknown generation sources; and

(c) Percentage of total load represented by unknown generation sources.

((~~(4)~~)) (5) The greenhouse gas content calculation and energy and emissions intensity report must include narrative text and graphics describing trends and an analysis of the likely causes of changes, or lack of changes, in the metrics.