

$$\text{Capacity Factor}_i = \frac{12}{n} \sum_{t=1}^n \frac{E_{i,t}}{8760 \times C_{i,t}}$$

where

- i = the individual renewable generation facility (source of the RECs)
- n = the number of months the facility has been in operation over the past 24 months, with n representing at least 12 months
- $E_{i,t}$ = the total energy output (MWh) by renewable generation facility i during compliance period t
- $C_{i,t}$ = the average total generator capacity (MW) by renewable generation facility i during compliance period t

State of Kansas

Kansas Corporation Commission

Permanent Administrative Regulations

Article 16.—ELECTRIC UTILITY RENEWABLE ENERGY STANDARDS

82-16-1. Definitions. As used in these regulations, the following definitions shall apply:

(a) "Act" means renewable energy standards act (RESA), K.S.A. 66-1256, 66-1257, and 66-1259 and amendments thereto.

(b) "Auxiliary power" has the meaning assigned to "station power" in K.S.A. 66-1,170, and amendments thereto.

(c) "Capacity from generation" means the net capacity of renewable energy resources owned or leased by a utility. Net capacity is the gross capacity minus auxiliary power required to operate the resource as determined in a test conducted as soon as possible after commercial operation begins. This test shall reflect operation of the resource over a four-hour period under conditions that do not limit performance due to ambient conditions, equipment, or operating or regulatory restrictions. The determination for a multiunit resource, including a wind farm, may be made through tests for a representative sample of at least 10% of the units. If the tests specified in this subsection are not practicable, the nameplate capacity of the resource minus the associated auxiliary power may be used as the net capacity unless there are factors that would prevent the resource from achieving nameplate capacity, other than ambient conditions, equipment, or operating or regulatory restrictions.

(d) "Capacity from net metering systems" means the rated generating capacity of systems interconnected with a utility pursuant to the net metering and easy connection act, K.S.A. 66-1263 et seq. and amendments thereto.

(e) "Capacity from purchased energy" means the capacity associated with energy purchased by a utility from renewable energy resources. The capacity from purchased energy shall be the nameplate capacity of the resource minus auxiliary power, adjusted as appropriate to reflect the utility's share of the output of the resource.

(f) "Capacity from RECs" means the capacity associated with the purchase of renewable energy credits. For each source of RECs, this capacity shall be determined according to the following formulas:

$$\text{Capacity (MWs)} = \frac{\text{RECs}}{\text{Capacity Factor} \times 8760 \text{ hours}}$$

The capacity factor shall be calculated for the source of the RECs, if possible. If the utility is unable to calculate the capacity factor for the source of the RECs, the capacity factor shall be the capacity factor of the utility's own renewable generation from the prior calendar year for the same or similar type of resource as the source of the RECs, if known. If the utility has multiple installations of the same or similar type of resource, the capacity factor shall be the average of the facilities. If the utility did not have the same or similar type of resource as the source of the RECs or if the source is unknown, the overall capacity factor of the utility's total renewable generation shall be used. In the absence of renewable resource generation, a default capacity factor of 34% shall be used.

(g) "Data year" means the calendar year that occurred before the due date of the utility's report to the commission specified in K.A.R. 82-16-2.

(h) "Electric distribution cooperative" means a cooperative as defined by K.S.A. 17-4603, and amendments thereto, that is engaged in the retail sale and distribution of electricity and does not own or operate any generation or wholesale transmission facilities within the state of Kansas.

(i) "Electric utility" and "utility" mean any "affected utility," as defined by K.S.A. 66-1257 and amendments thereto.

(j) "Generation and transmission cooperative" means a cooperative as defined by K.S.A. 17-4603, and amendments thereto, that does not engage in the retail distribution and sale of electricity and operates generation facilities and transmission facilities solely for the wholesale distribution and sale of electricity.

(k) "Nameplate capacity" means the maximum rated output of a generator under specific conditions designated by the manufacturer, generally indicated in units of kilovolt-amperes (kVA) and in kilowatts (kW) on a nameplate attached to the generator.

(l) "REC" means "renewable energy credit," which means a credit representing energy produced by renewable energy resources and issued as part of a program that has been approved by the commission. For purposes of these regulations, this term is reflected on a certificate representing the attributes associated with one megawatt-hour (MWh) of energy generated by a renewable energy resource.

(m) "Renewable energy resources" has the meaning specified in K.S.A. 66-1257, and amendments thereto.

For the purposes of K.S.A. 66-1257(d)(9)(A) and (B) and amendments thereto, the following shall apply:

(1) "Existing hydropower" shall mean hydropower that existed on or before May 27, 2009.

(2) "New hydropower" shall mean hydropower that existed after May 27, 2009.

(n) "Renewable energy goal" means the goal established by K.S.A. 66-1256, and amendments thereto, for energy and energy portfolios of each utility subject to the provisions of the act. (Authorized by K.S.A. 2016 Supp. 66-106; implementing K.S.A. 2016 Supp. 66-1257 and 66-1259; effective Nov. 19, 2010; amended Feb. 24, 2017.)

82-16-2. Renewable energy goal and report. (a) Any utility may attain the renewable energy goal in K.S.A. 66-1256, and amendments thereto, by maintaining a portfolio of renewable capacity from generation, purchased energy, RECs, or net metering systems.

(b) Each utility planning to seek commission approval for recovery of reasonable costs incurred under RESA and either related to the previous mandatory requirement or due to attaining the renewable energy goal, pursuant to K.S.A. 66-1259 and amendments thereto, shall submit a report to the commission detailing that utility's efforts related to attainment of the renewable energy goal. A generation and transmission cooperative may submit a collective report on behalf of the electric distribution cooperatives it represents. If this collective report is submitted, the electric distribution cooperatives shall not be required to file their own reports as required by this subsection. The report shall specify the renewable generation that has been put into service or the portion of the utility's portfolio of renewable generation resources served from purchased energy, RECs, or net metering systems on or before December 31 of each data year. An annual report shall be due on or before March 31 of each year. Each report shall contain the following information:

(1) A description of each type of renewable energy resource that was purchased or put into service on or before December 31 of the data year, including type, location, owner, operator, date of commencement of operations, nameplate capacity, and for the data year, the monthly capacity factor, monthly availability factor, and monthly and annual amounts of energy generated;

(2) a narrative supporting the rationale for selecting each capacity resource that was purchased or put into service and each purchased power contract that was executed during the data year;

(3) a description of the utility's plans for attaining the renewable energy goal for the current calendar year, including the utility's assessment of the expected impact to revenue requirements;

(4) the Kansas retail one-hour peak demand for each of the three calendar years before the data year and the average for these three years, with supporting data and calculations if the demand differs from the information reported on the federal energy regulatory commission's FERC form 1. Each electric distribution cooperative that does not file FERC form 1 with the commission shall file a Kansas electric cooperative utility annual report with the commission;

(5) the amount of renewable energy capacity that will qualify as a portion of the year's peak demand as calculated pursuant to paragraph (b)(4), broken down by

capacity from generation, purchased energy, RECs, and net metering systems;

(6) the renewable energy capacity identified in paragraph (b)(5) from a facility constructed in Kansas after January 1, 2000; and

(7) total retail energy sales, as measured in kilowatt-hours (kWh), in Kansas for the data year. (Authorized by K.S.A. 2016 Supp. 66-106; implementing K.S.A. 2016 Supp. 66-1259; effective Nov. 19, 2010; amended Feb. 24, 2017.)

82-16-3. (Authorized by and implementing K.S.A. 2009 Supp. 66-1261; effective Nov. 19, 2010; revoked Feb. 24, 2017.)

82-16-4. Retail revenue requirement. The retail revenue requirement attributable to attainment of the renewable energy goal shall be calculated as follows for each utility:

(a) In conjunction with the reports required by K.A.R. 82-16-2, each affected utility shall calculate the retail revenue requirement for each capacity resource used to attain the renewable energy goal. A capacity resource may result from generation resources, purchased energy, RECs, or net metering systems.

(b) Each determination of the retail revenue requirement shall reflect the total revenues required to allow the utility the opportunity to do the following:

- (1) Earn a return on rate base items;
- (2) earn a return on plant investments through depreciation;
- (3) recover taxes other than income taxes;
- (4) recover fuel and purchased power costs, including incremental fuel expense resulting from the inefficient dispatch of power generation if this expense is known;
- (5) recover operating and maintenance costs;
- (6) recover administrative and general expenses; and
- (7) recover income taxes, including current deferred income taxes.

(c) In order to calculate a return on rate base items, each utility shall use the overall rate of return authorized by the commission from its last litigated rate case or specified in a stipulation and agreement authorized by the commission. If an overall rate of return was not specified in a utility's last rate case, then the average of the utility's proposed rate of return and the rate of return proposed by commission staff shall be used. (Authorized by K.S.A. 2016 Supp. 66-106; implementing K.S.A. 2016 Supp. 66-1259; effective Nov. 19, 2010; amended Feb. 24, 2017.)

82-16-5. (Authorized by K.S.A. 2009 Supp. 66-1261; implementing K.S.A. 2009 Supp. 66-1257 and 66-1262; effective Nov. 19, 2010; revoked Feb. 24, 2017.)

82-16-6. Renewable energy credit program. (a) Renewable energy credits shall be issued and used as part of a REC program either established or approved by the commission. Each application for approval of any program not approved by the commission in any prior year shall be submitted on or before January 1 of the calendar year in which the RECs are proposed to be included in the portfolio.

(b) Any utility may purchase or sell RECs without commission approval. However, each renewable energy

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credit shall be counted only once. A REC or any attributes associated with renewable energy generation sold or intended for any purpose other than attainment of the renewable energy goal shall not be applied toward attainment of the renewable energy goal.

(c) For the purpose of RESA, unused RECs shall remain valid for up to two years from the end of the calendar year in which the associated electricity was generated and shall be permanently retired when used for attainment of the renewable energy goal prescribed by the act. To the extent that RECs or attributes associated with renewable energy generation are sold or used for any purpose other than attainment of the renewable energy goal, the utilities shall reduce the capacity used for attainment of the renewable energy goal according to the formula specified in this subsection.

Total Renewable Capacity for Voluntary Attainment =
TRC - C_{OP}

where

$$C_{OP} = \frac{E_{OP}}{CF \times 8760}$$

TRC = total renewable capacity

C_{OP} = renewable capacity sold or used for any other purpose than attainment of the renewable energy goal

E_{OP} = energy from RECs or renewable energy attributes sold or used for any other purpose than attainment of the renewable energy goal

CF = capacity factor for source of E_{OP}

(d) Each REC created, sold, or purchased by any Kansas utility shall be reported in an approved registry that documents and verifies attributes and other compliance conditions as well as tracks the creation, sale, retirement, and other transactions regarding the REC to prevent double counting and misuse, in accordance with these regulations and commission direction. (Authorized by K.S.A. 2016 Supp. 66-106; implementing K.S.A. 2016 Supp. 66-1259; effective Nov. 19, 2010; amended Feb. 24, 2017.)