

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO**

DOCKET NO. 09R-618E

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IN THE MATTER OF THE EMERGENCY RULES AMENDING THE COMMISSION’S  
RENEWABLE ENERGY STANDARD RULES, 4 CCR 723-3-3650 THROUGH 3665.

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**DECISION ADOPTING EMERGENCY RULES**

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Mailed Date: August 26, 2009  
Adopted Date: August 26, 2009

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**I. BY THE COMMISSION**

**A. Statement**

1. This matter comes before the Commission for adoption of emergency rules that modify our current rules for implementing the Renewable Energy Standard (RES), 4 *Code of Colorado Regulations* (CCR) 723-3-3650, *et seq.*, as required by Senate Bill (SB) 09-051. For the reasons set forth in this decision, we now adopt on an emergency basis the rules appended to this Decision as Attachment A.

2. Pursuant to emergency rule provisions of §§ 24-4-103(6) and 40-2-108(2), C.R.S., we adopt these rule changes immediately, without implementing the rulemaking requirements for permanent rules generally set forth in § 24-4-103, C.R.S. The rules attached to this order are effective September 1, 2009, and will remain in effect until permanent rules become effective or for 210 days after the Mailed Date of this Decision, whichever period is less. We note that we have already initiated a rulemaking for permanent rules pursuant to § 24-4-103, C.R.S, in Docket No. 08R-424E and will address the permanent rule changes necessitated by SB09-051 in that proceeding.

3. SB09-051 clearly impacts our existing RES rules as it modifies § 40-2-124, C.R.S., establishing Colorado's Renewable Energy Standard. This new legislation requires the Commission to encourage investor owned Qualified Retail Utilities (QRUs) to design solar programs that allow consumers of all income levels to obtain the benefits of on-site solar electricity and to extend participation to customers in market segments that have not been responding to investor owned QRU's standard offer programs.

4. In general, SB09-051 defines on-site solar facilities as facilities that are sized to supply no more than one hundred twenty percent of the average annual consumption of electricity by the consumer at that site. The statute further allows investor owned QRUs to establish one or more standard offers for renewable energy credits generated by on-site solar facilities (SO-RECs) as long as the generation is 500 kW or less in size. SB09-051 further allows for customers with on-site solar systems to make a one-time election to carry forward excess electricity as a credit from month to month indefinitely until the customer terminates service with its investor owned QRU. The new statute additionally allows for certain contracts for SO-RECs to have terms different than 20 years and permits third-party owners or operators of

on-site solar systems to serve customers, so long as the on-site solar systems are sized to supply no more than one hundred twenty percent of the average annual consumption of electricity by the consumer at that site.

5. We solicited written comments on the provisions of SB09-051 for the purpose of establishing permanent rules in Docket No. 08R-424E by issuing a Supplemental Notice of Propose Rulemaking (NOPR) on July 30, 2009 (Decision No. C09-0817). The rules we have attached to this Order as Attachment A are crafted, in part, according to the proposed rule changes in the Supplemental NOPR and the written comments received to date.

6. We find that the legislative mandates in SB09-051 necessitate the emergency rule changes as indicated in the rules attached to this Order as Attachment A. We also find that immediate adoption of the emergency rules is imperative and necessary to implement the requirements of SB09-051. Without adopting the emergency rules, the utility filings made under our existing RES rules and our decisions related to those filings cannot adequately comport to the requirements of the new statute. We further find that compliance with the requirements of § 24-4-103, C.R.S., generally would be contrary to the public interest.

## **B. Discussion of Rule Changes**

### **1. Rule 3652 Definitions**

7. We modify the definition of “on-site solar system” under rule 3652 in order to incorporate the expanded definition of “on-site solar system” from the new language contained in § 40-2-124, C.R.S. (2009)

8. We further add “service entrance capacity” as a defined term. We make this addition to clarify that the customer’s service entrance capacity is not intended to serve as a “demand cap” on distributed generation systems that are net metered under paragraph 3664(a).

9. We also modify the definition of “standard rebate offer” by eliminating the reference to the 100 kW cap on the \$2.00 per watt standard rebate offer and by adding a reference to rule 3658 which will be modified to incorporate the expanded standard offers for SO-RECs allowed under SB09-051.

**2. Rule 3655 Resource Acquisition**

10. In light of the opportunity under SB09-051 for investor owned QRUs to extend standard offers for SO-RECs for systems up to and including 500 kW, we modify paragraph 3655(a) to eliminate the requirement that SO-RECs from systems greater than 100 kW must be acquired through competitive bidding.

11. We similarly modify paragraph 3655(b) to acknowledge that SO-RECs may be acquired from on-site solar systems absent competitive solicitations under SB09-051.

12. We further modify subparagraph 3555(e)(III) to incorporate the provisions of SB09-051 that allow for contracts with terms different than twenty years for SO-RECs from on-site solar systems sized between 100 kW and one MW.

**3. Rule 3658 Standard Rebate Offer**

13. We modify paragraph 3658(b) by replacing outdated provisions with new provisions from SB09-051 concerning the ability of investor owned QRUs to offer one or more standard offers for SO-RECs. Consistent with the new language in § 40-2-124(1)(e)(III), C.R.S., these standard offers may be extended to on-site solar facilities up to and including 500 kW in size.

14. In light of the requirement in SB09-051 that the Commission encourage investor owned QRUs “to design solar programs that allow consumers of all income levels” to participate

and “to extend participation to customers in market segments that have not been responding to the standard offer program,” we add several new provisions to rule 3658.

15. First, we modify subparagraph 3658(c)(VII) to allow for tenants of commercial properties to participate in standard offer programs. Under our modified rule, commercial tenants may receive payments for SO-RECs on a metered basis if the customer requires the flexibility to move their on-site solar installations to a new location within the investor owned QRU’s service area within the term of the customer’s SO-REC sales contract. We also modify subparagraph 3658(c)(XII) to acknowledge the new provisions in subparagraph 3658(c)(VII).

16. Second, we modify subparagraph 3658(c)(VIII) to acknowledge that third-party owners or operators of on-site solar systems may provide service to an investor owned QRU’s customers, including residential, low-income, and small commercial customers in leased facilities.

17. Third, we add new subparagraphs to paragraph 3658(c) that allow for the participation of apartment dwellers and condominium owners in investor owned QRU standard rebate programs.

18. Fourth, we add a new paragraph 3658(d) that incorporates the new provisions of § 40-2-124(1)(e)(II), C.R.S., that allow for the sales of electricity to consumers by third-party owners and operators of on-site solar systems.

#### **4. Rule 3664 Net Metering**

19. We modify paragraph 3664(a) concerning net metered systems to conform to the new size threshold established by SB09-051. Given that the size of net metered systems will now be capped based on a percentage of electricity usage at the site, we further find that

subparagraph 3664(a)(II) would benefit from the clarity of including “service entrance capacity” as a defined term under rule 3652 as described above.

20. Finally, we add a provision to paragraph 3664(b) to address a net metered customer’s ability to make a one-time election to carry kilowatt hour credits from month to month indefinitely, rather than accepting a calendar year cash out, as now allowed under § 40-2-124, C.R.S.

**II. ORDER**

**A. The Commission Orders That:**

1. The rules appended to this Decision as Attachment A are hereby adopted as emergency rules consistent with the above discussion.

2. The attached rules shall be effective on September 1, 2009.

3. This Order is effective upon its Mailed Date.

**B. ADOPTED IN COMMISSIONERS’ WEEKLY MEETING  
August 26, 2009.**

(S E A L)



ATTEST: A TRUE COPY

Doug Dean,  
Director

THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

RONALD J. BINZ

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JAMES K. TARPEY

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MATT BAKER

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Commissioners

## COLORADO DEPARTMENT OF REGULATORY AGENCIES

### Public Utilities Commission

#### 4 CODE OF COLORADO REGULATIONS (CCR) 723-3

#### PART 3 RULES REGULATING ELECTRIC UTILITIES

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[signifies omission of unaffected rule sections]

#### RENEWABLE ENERGY STANDARD

\* \* \*

[signifies omission of unaffected rule sections]

#### 3652. Definitions.

The following definitions apply only to rules 3650 – 3665. In the event of a conflict between these definitions and a statutory definition, the statutory definition shall apply.

- (a) "Annual compliance report" means the report a QRU is required to file annually with the Commission pursuant to rule 3662 to demonstrate compliance with the Renewable Energy Standard.
- (b) "Biomass" means nontoxic plant matter consisting of agricultural crops or their byproducts, urban wood waste, mill residue, slash, or brush; animal wastes and products of animal wastes; or methane produced at landfills or as a by-product of the treatment of wastewater residuals.
- (c) "Community-based project" means a project located in Colorado and: (a) that is owned by individual residents of a community, a local nonprofit organization, a cooperative, a local government entity, or a tribal council; (b) whose generating capacity does not exceed thirty megawatts; and (c) for which there is a resolution of support adopted by the local governing body of each local jurisdiction in which the project is to be located.
- (d) "Compliance plan" means the annual plan a QRU is required to file with the Commission pursuant to rule 3657.
- (e) "Compliance year" means a calendar year for which the renewable energy standard is applicable.
- (f) "Eligible energy" means renewable energy, recycled energy or RECs.
- (g) "Eligible energy resources" are recycled energy or facilities that generate electricity by means of the following energy sources: solar radiation, wind, geothermal, biomass, hydropower, and fuel

cells using hydrogen derived from eligible energy resources. Fossil and nuclear fuels and their derivatives are not eligible energy resources. Hydropower resources in existence on January 1, 2005 must have a nameplate rating of thirty megawatts or less. Hydropower resources not in existence on January 1, 2005 must have a nameplate rating of ten megawatts or less.

- (h) "Off-grid on-site solar system" means an on-site solar system located on the premises of an end-use electric consumer located within the service territory of a QRU or an electric utility that is eligible to become a QRU pursuant to § 40-2-124(5)(b), C.R.S., that is not connected to, and operates completely independently from, the distribution system or transmission system facilities of any electric utility.
- (i) "On-site solar system" means a solar renewable energy system located on the premises of an end-use electric consumer located within the service territory of a QRU or an electric utility that is eligible to become a QRU pursuant to § 40-2-124(5)(b), C.R.S. For the purposes of this definition, the non-residential end-use electric customer, prior to the installation of the solar renewable energy system, shall not have its primary business being the generation of electricity for retail or wholesale sale from the same facility. In addition, at the time of the installation of the solar renewable energy system, the non-residential end-use electric customer must use its existing facility for a legitimate commercial, industrial, governmental, or educational purpose other than the generation of electricity. ~~An On-site solar system is limited to a maximum size of two MW.~~ An on-site solar system shall be sized to supply no more than one hundred twenty percent of the average annual consumption of electricity by the consumer at that site. The consumer's site shall include all contiguous property owned or leased by the consumer, without regard to interruptions in contiguity caused by easements, public thoroughfares, transportation rights-of-way, or utility rights-of-way.
- (j) "Person" means Commission staff or any individual, firm, partnership, corporation, company, association, cooperative association, joint stock association, joint venture, governmental entity, or other legal entity.
- (k) "Qualifying retail utility" or "QRU" means any provider of retail electric service in the state of Colorado other than municipally owned electric utilities that serve 40,000 customers or fewer.
- (l) "Recycled energy" means energy produced by a generation unit with a nameplate capacity of not more than fifteen megawatts that converts the otherwise lost energy from the heat from exhaust stacks or pipes to electricity and that does not combust additional fossil fuel. Recycled energy does not include energy produced by any system that uses energy, lost or otherwise, from a process whose primary purpose is the generation of electricity, including, without limitation, any process involving engine-driven generation or pumped hydroelectricity generation.
- (m) "Renewable energy" means energy generated from eligible energy resources.
- (n) "Renewable energy credit" or "REC" means a contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, directly attributable to a specific amount of electric energy generated from an eligible energy resource. One REC results from one megawatt-hour of electric energy generated from an eligible energy resource. For the purposes of these rules, RECs include, but are not limited to, S-RECs and SO-RECs.

- (o) “Renewable energy credit contract” means a contract for the sale of renewable energy credits without the associated energy.
- (p) “Renewable energy standard” means the electric resource standard for eligible renewable energy resources specified in § 40-2-124, C.R.S.
- (q) “Renewable energy supply contract” means a contract for the sale of renewable energy and the RECs associated with such renewable energy. If the contract is silent as to renewable energy credits, the renewable energy credits will be deemed to be combined with the energy transferred under the contract.
- (r) “Service entrance capacity” means the capacity of the QRU’s electric service conductors that are physically connected to the customer’s electric service entrance conductors.
- ~~(s)~~ “Solar electric generation technologies” means any technology that uses solar radiation energy to generate electricity.
- ~~(t)~~ “Solar on-site renewable energy credit” or “SO-REC” means a REC created by an on-site solar system.
- ~~(u)~~ “Solar renewable energy credit” or “S-REC” means a REC created by a solar renewable energy system. For the purposes of these rules, S-RECs include, but are not limited to, SO-RECs.
- ~~(v)~~ “Solar renewable energy system” means a system that uses a solar electric generation technology to generate electricity.
- ~~(w)~~ “Standard rebate offer” or “SRO” means a standardized incentive program offered by a QRU to its retail electric service customers for on-site solar systems ~~that do not exceed 100 kW per installation, as set forth in rule 3658.~~
- ~~(x)~~ “Watt” means a unit of measure of alternating current electric power at a point in time, as capacity or demand. For the purposes of measurement of output from solar renewable energy systems used in the solar program, the watts referenced herein mean those determined by a nationally accepted testing organization.

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[signifies omission of unaffected rule sections]

### 3655. Resource Acquisition.

- (a) It is the Commission’s policy that utilities should meet the renewable energy standard in the most cost-effective manner. To this end, the investor owned QRU shall acquire SO-RECs from on-site solar systems use competitive bidding for acquiring renewable energy from eligible energy resources using solar electric generation technologies with nameplate rating greater than 100 kW in accordance with a process set forth in a Commission-approved compliance plan.

- (b) Competitive solicitations shall be conducted by each investor owned QRU to achieve the statutory policies contained in the legislative declaration of intent, with the exception of renewable energy from on-site solar systems acquired under rule 3658. Whenever a QRU acquires renewable energy and/or RECs by competitive acquisition, to the extent possible, the solicitations and evaluations of proposals should be coordinated to avoid redundancy and to minimize the cost of acquiring such renewable energy and/or RECs. A QRU may conduct, in its discretion, separate solicitations or combined solicitations, for any of the following:
- (I) Renewable energy from on-site solar systems;
  - (II) Renewable energy from solar energy systems that are not on-site solar systems;
  - (III) Renewable energy from non-solar resources such as wind, geothermal, biomass, hydropower, fuel cells;
  - (IV) Renewable energy credits (RECs);
  - (V) Solar renewable energy credits (S-RECs); and
  - (VI) Solar on-site renewable energy credits (SO-RECs).
- (c) The investor owned QRU may apply to the Commission, at any time, for review and approval of renewable energy supply contracts and renewable energy credit contracts. The Commission will review and rule on these contracts within sixty days of their filing. The Commission may set the contract for expedited hearing, if appropriate, under the Commission's Rules of Practice and Procedure. If the QRU enters into a renewable energy supply contract or a renewable energy credit contract in a form substantially similar to the form of contract approved by the Commission as part of the investor owned QRU's compliance plan, that contract shall be deemed approved by the Commission under this rule.
- (d) Renewable energy supply contracts entered into after July 2, 2006:
- (I) Shall be for the acquisition of both renewable energy and the associated RECs;
  - (II) May reflect a fixed price, or a price that varies by year;
  - (III) Shall have a minimum term of 20 years (or shorter at the sole discretion of the seller); and
  - (IV) Shall require the seller to relinquish all REC ownership associated with contracted renewable energy to the buyer.
- (e) Renewable energy credit contracts entered into after July 2, 2006:
- (I) Shall be for the acquisition of RECs only;
  - (II) May reflect a fixed price, or a price that varies by time period; and

- (III) Shall have a minimum term of 20 years if the REC is from an on-site solar system, except that such contracts for on-site solar systems of between 100 kilowatts and one megawatt may have a different term if mutually agreed to by the parties.
- (f) Competitive solicitations for eligible energy from on-site solar systems that provide SO-RECs shall be conducted at least two times per year by each investor owned QRU in 2006 and 2007 and thereafter as necessary to comply with the renewable energy standard.
  - (I) The treatment of any solar-generated electricity generated on-site in excess of the consumption of the host facility will be governed by the net metering provisions pursuant to rule 3664.
- (g) Competitive solicitations for the acquisition of S-RECs may be conducted by each investor owned QRU as needed to comply with the renewable energy standard.
- (h) Competitive solicitations for renewable energy or RECs from eligible energy resources other than on-site solar systems shall be conducted by each investor owned QRU in a timeframe that takes into account the projected needs of the QRU.
- (i) Each competitive solicitation pursuant to these rules shall be targeted toward acquiring the amount of eligible energy required for compliance with each component of the renewable energy standard, and taking into account:
  - (I) The retail rate impact, and
  - (II) The estimated number of SO-RECs procured under and expected to be procured under the standing standard rebate offer.
- (j) Each investor owned QRU shall provide all parties to the bid process timely notice of bidding procedure.
- (k) Each investor owned QRU shall disclose, at the Commission's request, all information that will be used in the acquisition process, including but not limited to, interconnection and transmission studies, and methods for modeling or otherwise analyzing bids. Confidential information may be protected in accordance with rules 1100 through 1102 of the Commission's Rules of Practice and Procedure.
- (l) If the investor owned QRU intends to accept proposals for eligible energy resources from the QRU or from an affiliate of the QRU, it shall include a written separation policy and name an independent auditor whom the utility proposes to hire to review and report to the Commission on the fairness of the competitive acquisition process. The independent auditor shall have at least five years' experience conducting and/or reviewing the conduct of competitive electric utility resource acquisition, including computerized portfolio costing analysis. The independent auditor shall be unaffiliated with the utility; and shall not, directly or indirectly, have benefited from employment or contracts with the utility in the preceding five years, except as an independent auditor under these rules. The independent auditor shall not participate in, or advise the utility with respect to, any decisions in the bid-solicitation or bid-evaluation process. The independent auditor shall conduct an audit of the utility's bid solicitation and evaluation process to determine whether it was conducted fairly. For purposes of such audit, the utility shall provide the

independent auditor immediate and continuing access to all documents and data reviewed, used or produced by the utility in its bid solicitation and evaluation process. The utility shall make all its personnel, agents and contractors involved in the bid solicitation and evaluation available for interview by the auditor. The utility shall conduct any additional modeling requested by the independent auditor to test the assumptions and results of the bid evaluation analyses. Within 60 days of the utility's selection of final resources, the independent auditor shall file a report with the Commission containing the auditor's views on whether the utility conducted a fair bid solicitation and bid evaluation process, with any deficiencies specifically reported. After the filing of the independent auditor's report, the utility, other bidders in the resource acquisition process and other interested parties shall be given the opportunity to review and comment on the independent auditor's report.

- (m) Responses to competitive solicitations shall be evaluated and ranked by the investor owned QRU.
  - (I) In addition to the cost of the renewable energy and RECs, the QRU may take into consideration the characteristics of the underlying eligible energy resource that may impact the ability of the bidder to fulfill the terms of the bid including, but not limited to project in-service date, resource reliability, viability, economic development benefits, energy security benefits, amount of water used, fuel cost savings, environmental impacts including tradable emissions allowances savings, load reduction during higher cost hours, transmission capacity and scheduling, and any other factor the QRU determines is relevant to the QRU's needs.
  - (II) Bids with prices that vary by year will be evaluated by discounting the yearly prices at the utility discount rate.
  - (III) A QRU is not required to accept any bid and may reject any and all bids offered. However, each solicitation shall culminate in a report detailing the outcome of the solicitation and identifying which bids were selected, which were rejected, and why.
  - (IV) For purposes of comparing bids for RECs only with bids for electricity and RECs, the QRU shall assign a value for the electricity and subtract this value from the electricity and RECs bid, and evaluate bids on the basis of RECs only. The QRU shall include, as part of its Compliance Plan, a description of its methodology and price(s) it intends to use for this evaluation.
- (n) Within 15 days, the investor owned QRU shall notify respondents as to whether their bid has met the bid submission criteria.
- (o) Upon ranking of eligible bids, each investor owned QRU shall within 15 days indicate to all respondents with which proposals it intends to pursue a contract
- (p) If there is a dispute between a bidder and the investor owned QRU, either party may refer the dispute to the Commission for resolution.

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[signifies omission of unaffected rule sections]

**3658. Standard Rebate Offer.**

- (a) Each investor owned QRU shall make available to its retail electricity customers a standard rebate offer of \$2.00 per watt for on-site solar systems, up to a maximum of 100 kW per system, that become operational on or after December 1, 2004. At the QRU's option, the standard rebate offer may be paid based upon the direct current (DC) watts produced by the on-site solar systems. Any SO-RECs acquired by the QRU pursuant to such SRO program, regardless of whether the associated renewable energy is specifically metered or contractually specified without specific metering, may be counted by the QRU for purposes of compliance with the renewable energy standard.
- (b) ~~On or before June 1, 2006, each QRU shall make a one-time offer to purchase, under a renewable energy credit contract, the SO-RECs associated with on-site solar systems, up to a maximum of ten kW per system existing prior to December 1, 2004, and off-grid on-site solar systems, up to a maximum of ten kW per system. The purchase price offered by the QRU for such SO-RECs shall be no less than the QRU's then-current standard offer payment rate for SO-RECs, exclusive of the standard rebate payment, associated with the QRU's standard rebate offer and established pursuant to rule 3658. Subsequent offers shall be made at the discretion of the QRU. SO-RECs purchased by a QRU pursuant to this rule may be counted for purposes of compliance with the renewable energy standard. Investor owned QRUs may establish one or more standard offers to purchase renewable energy credits from on-site solar systems that meet the definition of subparagraph 3652(i) so long as the on-site solar system is 500 kW or less in size. Subject to the retail rate impact in rule 3661, the investor owned QRU shall design standard offers that allow consumers of all income levels to obtain the benefits offered by on-site solar systems and that extend participation to consumers in all market segments eligible for standard offer programs.~~
- (c) The standard rebate offer of the investor owned QRUs shall be set forth at least annually and shall meet the following requirements:
- (I) The QRU need not offer a rebate for an on-site solar system smaller than 500 watts.
  - (II) The rebate must be made available to all retail utility customers of the QRU on a non-discriminatory, first-come, first-served basis, based upon the date of contract execution.
  - (III) Applicants who are accepted for SRO rebates shall have one year from the date of contract execution to demonstrate substantial completion of their proposed on-site solar system. Substantial completion means the purchase and installation on the customer's premises of all major system components of the on-site solar system. Customers who do not achieve substantial completion within one year will not receive a rebate, unless the substantial completion date is extended. When substantial completion of an on-site solar system has been achieved by an applicant pursuant to this rule the SO-RECs may be counted for purposes of compliance with the renewable energy standard. Within 30 days of substantial completion, the SRO rebate, pursuant to rule 3658(a), and SO-REC payment, pursuant to rule 3658(c)(VIII), shall be paid to the applicant.
  - (IV) With the exception of batteries, all on-site solar systems eligible for SRO rebates shall be covered by a minimum five-year warranty. Contracts will require customers to maintain the on-site solar system so that it remains operational for the term of the contract.

- (V) On-site solar systems must consist of equipment that is commercially available and factory new when installed on the original customer's premises to be eligible for the SRO rebate. Rebuilt, used, or refurbished equipment is not eligible to receive the rebate unless the equipment is transferred by a commercial tenant from another premise as permitted by subparagraph 3658(c)(VII)(iii).
- (VI) Customers may contract to expand their on-site solar systems and obtain a rebate for the expanded capacity.
- (VII) In order to receive the SRO rebate payment:
- (A) ~~the A residential~~ customer must enter into an agreement with the investor owned QRU, with a minimum term of 20 years, that transfers the SO-RECs generated by the on-site solar system during the term of the agreement from the customer to the investor owned QRU.
- (B) A commercial customer may enter into an agreement with the investor owned QRU, with a minimum term of 20 years, that transfers the SO-RECs generated by the on-site solar system during the term of the agreement from the customer to the investor owned QRU; provided, however, that if the agreement is for less than 20 years as permitted by subparagraph 3655(e)(III), the rebate shall be prorated to reflect the shorter term.
- (C) Irrespective of the term of the SO-REC transfer agreement between the customer and the investor owned QRU, if the customer is in a leased facility, the customer must obtain the approval of the investor owned QRU, which shall not be unreasonably conditioned, delayed or withheld, and either permission from the customer's landlord, or other documentation evidencing the tenant's unequivocal right to install an on-site solar system. Such commercial tenant customer may relocate the on-site solar system to a substitute premise reasonably acceptable to the investor owned QRU at any time during the term of the agreement, provided that:
- (i) Payment for all SO-RECs shall be made by the investor owned QRU on a metered basis;
- (ii) The new location is within the investor owned QRU's service territory;
- (iii) The on-site solar system is not out of operation for more than 90 days due to such relocation;
- (iv) The agreement is extended for the period of time the on-site solar system is out of operation; and
- (v) The customer bears the cost of relocating the production meter, or the costs of setting a new production meter, at the new location.
- (D) If the on-site solar system of a commercial customer is out of operation for more than 90 days, the investor owned QRU may terminate the agreement and upon

such termination the customer must repay the pro rata share of the rebate based on the number of years remaining in the term of the agreement.

- (VIII) Except for on-site solar systems of commercial tenants who opt for an agreement under subparagraph 3658(c)(VII)(iii), and except for solar facilities that are owned by entities other than the on-site consumer of the solar energy, for For on-site solar systems, up to and including ten kW, that become operational on or after December 1, 2004, the investor owned QRU shall offer to make a one-time payment, in addition to the standard rebate payment, for the SO-RECs contracted to be transferred from the customer to the investor owned QRU. Any customer that receives the rebate payment and one-time SO-REC payment under this program shall not be entitled to any other compensation for the SO-RECs contracted to be transferred to the investor owned QRU. To facilitate installation of these small systems, all procedures, forms, and requirements shall be clear, simple, and straightforward to minimize the time and effort of homeowners and small businesses.
- (IX) For on-site solar systems greater than ten kW that become operational on or after December 1, 2004, and for all on-site solar systems of whatever size that are owned by an entity other than the on-site consumer of the solar energy, the investor owned QRU, in addition to the standard rebate payment, shall offer to pay for the SO-RECs contracted to be transferred from the customer to the investor owned QRU. Such SO-RECs and the associated payments shall be determined by the specifically metered renewable energy output from the on-site solar system.
- (X) The customer or its representative shall provide a calculation of the annual expected kilowatt-hour production from the customer's on-site solar system. The customer or its representative shall provide the following documentation to back up the customer's calculation:
- (A) Tilt of the system in degrees (horizontal = 0 degrees);
  - (B) Orientation of the system in degrees (south = 180 degrees);
  - (C) A representation that the orientation of the system is free of trees, buildings and or other obstructions that might shade the system measured from the center point of the solar array through a horizontal angle plus or minus 60 degrees and a through vertical angle between 15 degrees and 90 degrees above the horizontal plane.
  - (D) A calculation of the annual expected kWh of electricity produced by the system. For PV systems, the calculation of annual expected kWh of electricity will be based on the public domain solar calculator PVWatts Version 1 (or equivalent upgrade).
    - (i) The weather station that is either nearest to or most similar in weather to the installation site;
    - (ii) The system output rating which equals the module rating times the inverter efficiency times the number of modules;

- (iii) Array type: fixed tilt, single axis tracking, or 2 axis tracking; For variable tilt systems, the PVWatts calculations can be run multiple times corresponding to the number of times per year that the system tilt is expected to be changed using those months corresponding to the specific tilt angle used;
  - (iv) Array tilt (degrees); and
  - (v) Array azimuth (degrees).
- (E) In the event PVWatts is no longer available, an equivalent tool shall be established.
- (F) For on-site solar systems up to and including ten kW, the REC payment may be adjusted, either up or down, based on the calculation of expected kWh of electric output derived from rule 3658(c)(X)(D) as compared with an optimally oriented fixed, i.e. non-tracking, system at the customer's location, but only if the calculated system output differs from the optimally oriented system output by more than ten percent.
- (XI) The level of SO-REC payments for systems of ten kW and smaller offered in connection with a QRU's SRO program may be adjusted from time to time as needed to achieve compliance with the renewable energy standard.
- (XII) Except for on-site solar systems of commercial tenants who opt for an agreement under subparagraph 3658(c)(VII)(iii), the on-site solar system installed must remain in place on the customer's premises for the duration of its useful-contract life. However, all The customer's equipment must have electrical connections in accordance with industry practice for permanently installed equipment, and it must be secured to a permanent surface (e.g., foundation, roof, etc.). Any indication of portability, including, but not limited to, wheels, carrying handles, dolly, trailer or platform, will render the-any on-site solar system ineligible for participation and payments under the SRO program.
- (XIII) On-site solar systems installed on an apartment building must either be owned and operated by the owner of the building or the owner of the facility must provide documentation of the right to install and maintain the solar panels on the apartment building premises for 20 years. Each on-site solar system must be dedicated to a specific meter and the load at the meter must meet the size limits for net metering of on-site solar systems.
- (XIV) On-site solar systems installed on condominiums must be owned by the condominium owner, or by a third party on behalf of the condominium owner, and metered to that owner's unit. The owner must provide documentation that the owner has the legal right to install and maintain the solar panels at the site for the term of the 20-year agreement. If the on-site solar system serves a general common element common area, the contract will be with the condominium owners' association. If the on-site solar system serves a limited common element common area, the contract will be with the condominium unit owner or owners. If the condominium unit is sold, either the on-site solar system owned by the condominium owner shall become the property of the new owner who is

responsible for the net metered electric bill or the new owner shall continue the agreement with the third party who owns the on-site system on behalf of the condominium owner.

(d) Sales of electricity may be made by an owner or operator of an on-site solar system to the end-use electric consumer located at the site of the on-site solar system. If the on-site solar system is not owned by the electric consumer, the investor owned QRU shall pay for the SO-RECs on a metered basis. The owner or operator of the on-site solar system shall pay the cost of installing the production meter.

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[signifies omission of unaffected rule sections]

### **3664. Net Metering.**

- (a) All investor owned QRUs shall allow the customer's retail electricity consumption to be offset by the electricity generated from eligible energy resources on the customer's side of the meter that are interconnected with the QRU, provided that the generating capacity of the customer's facility meets the following two criteria:
- (I) The ~~rated capacity of the generator~~ shall be sized to supply no more than 120 percent of the customer's average annual electricity consumption at that site does not exceed 2000 kW; and
  - (II) The rated capacity of the generator does not exceed the customer's service entrance capacity.
- (b) If a customer of an investor owned QRU with an eligible energy resource generates renewable energy pursuant to subsection (a) of rule 3664 in excess of the customer's consumption, the excess kilowatt-hours shall be carried forward from month to month and credited at a ratio of 1:1 against the customer's retail kilowatt-hour consumption in subsequent months. Within 60 days of the end of each calendar year, or within 60 days of when the customer terminates its retail service, the investor owned QRU shall compensate the customer for any accrued excess kilowatt-hour credits, at the investor owned QRU's average hourly incremental cost of electricity supply over the most recent calendar year. However, the customer may make a one-time election, in writing, on or before the end of a calendar year, to request that the excess kilowatt hours be carried forward as a credit from month to month indefinitely until the customer terminates service with the investor owned QRU, at which time no payment shall be required from the investor owned QRU for any remaining excess kilowatt hour credits supplied by the customer.
- (c) The QRU shall file tariffs that comply with these rules within 30 days of the effective date of these rules.
- (d) A customer's facility that generates renewable energy from an eligible energy resource shall be equipped with metering equipment that can measure the flow of electric energy in both directions. The QRU shall utilize a single bi-directional electric revenue meter.
- (e) If the customer's existing electric revenue meter does not meet the requirements of these rules, the QRU shall install and maintain a new revenue meter for the customer, at the company's

expense. Any subsequent revenue meter change necessitated by the customer shall be paid for by the customer.

- (f) The QRU shall not require more than one meter per customer to comply with this rule 3664. Nothing in this rule 3664 shall preclude the QRU from placing a second meter to measure the output of a solar renewable energy system for the counting of RECs subject to the following conditions:
- (I) For customer facilities over ten kW, a second meter shall be required to measure the solar renewable energy system output for the counting of RECs.
  - (II) For systems ten kW and smaller, an additional meter may be installed under either of the following circumstances:
    - (A) The QRU may install an additional production meter on the solar renewable energy system output at its own expense if the customer consents; or
    - (B) The customer may request that the QRU install a production meter on the solar renewable energy system output in addition to the revenue meter at the customer's expense.
- (g) A QRU shall provide net metering service at non-discriminatory rates to customers with eligible energy resources. A customer shall not be required to change the rate under which the customer received retail service in order for the customer to install an eligible energy resource. Nothing in this rule shall prohibit a QRU from requesting changes in rates at any time.

[Rule 3665 – 3699 omitted, unaffected rule sections]

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[signifies omission of unaffected rule sections]