ORDER NO. 11 381

ENTERED SEP 29 2011

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

AR 558

In the Matter of Revisions to the Solar Photovoltaic Pilot Program Rules.	ORDER

DISPOSITION: RULES AMENDED

I. INTRODUCTION

In Order No. 11-089,[1] we changed the solar photovoltaic pilot program originally adopted in Order No. 10-198[2] by: (1) implementing a lottery-based method to reserve capacity for small- and medium-scale systems using net metering; and (2) equally dividing medium-scale capacity between net metering and competitive bidding options. We ordered our Staff to identify the Commission actions and rule changes necessary to implement these decisions.

In docket UM 1452, we addressed the policy changes necessary to implement these decisions.[3] In this docket, Staff proposes changes to the rules governing the solar photovoltaic pilot program (OAR chapter 860, division 084) to implement Order No. 11-089. Staff also proposes some changes to clarify certain issues, such as the method for estimating the capacity of solar photovoltaic systems for new construction.

We filed a Notice of Proposed Rulemaking Hearing with the Secretary of State on July 15, 2011, and held a rulemaking hearing on August 23, 2011. The deadline for submitting comments on the proposed rule changes was originally set for September 12, 2011, to allow participants to include comments related to the order in docket UM 1452. On September 15, 2011, the Administrative Law Judge (ALJ) issued a ruling taking official notice of any comments filed in docket UM 1452 related to the proposed rule changes. The deadline for submitting comments in this docket was extended to September 23, 2011, to allow participants the opportunity to respond to the facts noticed in the ALJ's ruling.

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[1] *In the Matter of Public Utility Commission of Oregon Solar Photovoltaic Program Draft*, Docket No. UM 1505, Order No. 11-089 (Mar 17, 2011).

[2] *In the Matter of Public Utility Commission of Oregon Investigation into Pilot Programs to Demonstrate the Use and Effectiveness of Volumetric Rates for Solar Photovoltaic Energy Systems,* Docket No. UM 1452, Order No. 10-198 (May 28, 2010).

[3] *In the Matter of Public Utility Commission of Oregon Investigation into Pilot Programs to Demonstrate the Use and Effectiveness of Volumetric Rates for Solar Photovoltaic Energy Systems,* Docket No. UM 1452, Order No. 11-339 (Sep 1, 2011).

Idaho Power Company filed comments in this docket on August 22, 2011. Portland General Electric Company and PacifiCorp, dba Pacific Power, (collectively the Joint Utilities) filed comments on September 12, 2011. Staff filed comments on September 23, 2011.

II. DISCUSSION

The rulemaking participants generally approve of the proposed rule changes. Idaho Power states that the revisions appropriately reflect the recent changes to the solar photovoltaic pilot program, address issues that have arisen over time, and better organize the rules to provide clarity.

The Joint Utilities also generally support the proposed rule changes, but suggested two specific revisions. First, the Joint Utilities note that the revisions to OAR 860-084-0130(2) provide more flexibility in determining the appropriate interconnection method for those customers who secure a capacity reservation through competitive bidding. To ensure that interconnections continue to be made consistent with standard utility practice, the Joint Utilities suggest adding "subject to utility approval and to the extent authorized by law" to the end of the second sentence in the rule.

Second, the Joint Utilities propose modifying the reporting requirements from quarterly to bi-annually to correspond with the bi-annual enrollment windows. The Joint Utilities state that this will reduce administrative burdens and costs while still meeting the goals of the reporting requirements.

Staff agrees with both of the Joint Utilities' suggested changes and recommends that the Commission adopt the specific rule language proposed by the Joint Utilities.

We agree with Staff and the Joint Utilities. We adopt the rule changes as proposed by Staff in the Notice of Proposed Rulemaking Hearing, with minor grammatical and clarifying changes, and with the following additional changes (in bold font):

> OAR 860-084-0130(2)(b): Eligible systems with capacity reserved under the competitive bidding option must connect to the distribution feeder that services the customer's property. The point of common coupling may be located on the load side of the retail customer's existing electric service **subject to utility approval and to the extent authorized by law.**
>
> OAR 860-084-0430(2): **Upon request, e**~~**E**~~ach electric company must provide the data collected ~~**pursuant to**~~ **under** OAR 860-084-0400 and 860-084-0420~~,~~ in a format established by the Commission~~, upon request~~. Reports that include this raw data and a summary of this data for the pilot program to date~~,~~ must be provided to the Oregon Department of Energy, the Energy Trust of Oregon, the Oregon Department of Revenue, and ~~to~~ the Commission ~~quarterly~~ **bi-annually** on the 15th day **in February and August** ~~of the first month of each calendar quarter~~.

III. ORDER

IT IS ORDERED that:

1. The amendments to OAR chapter 860, division 084 set forth in Appendix A are adopted.

2. The amended rules become effective upon filing with the Secretary of State.

Made, entered, and effective SEP 29 2011.

John Savage
Chairman

Susan K. Ackerman
Commissioner

A person may petition the Public Utility Commission of Oregon for the amendment or repeal of a rule under ORS 183.390. A person may petition the Oregon Court of Appeals to determine the validity of a rule under ORS 183.400.

SOLAR PHOTOVOLTAIC PROGRAMS

860-084-0010

Definitions for Solar Photovoltaic Capacity Standard and Pilot Programs

(1) "Contracted system" means an eligible system under contract in the solar photovoltaic pilot program **associated with a single meter.**

(2) "Electric company" has the meaning given that term in ORS 757.600.

(3) "Eligible consumer" means a retail electricity consumer receiving service at the property where the solar photovoltaic ~~energy~~ system will be installed.

(4) "Eligible energy" or "eligible generation" means the kilowatt-hours that may be paid at the volumetric incentive rate. For the net metering option of the pilot program, eligible energy is equal to the usage of the retail electricity consumer in the year that the energy is generated by the eligible system. In a given month, this eligible energy is equal to the actual usage of the retail electricity consumer for that month. For the bidding option of the pilot program, eligible energy equals actual generation, net of system requirements.

(5) "Eligible participant" or "participant" means an eligible consumer who has signed a contract with the electric company and is participating in the pilot program. A regulated utility is not an eligible participant in pilot programs.

(6) "Eligible system" means a qualifying system that meets the requirements of OAR 860-084-0120.

(7) "Equipment package" means a group of components connecting an electric generator with an electric distribution system and includes all interface equipment including switchgear, inverters, or other interface devices. An equipment package may include an integrated generator or electric production source.

(8) "Excess energy" or "excess generation" means the kilowatt-hours generated in excess of actual annual usage under the net metering option of the volumetric incentive rate pilot program. In a given month, excess energy means kilowatt-hours generated in excess of monthly usage.

(9) "IEEE standards" means the standards published in the 2003 edition of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, titled "Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE SA Standards Board on June 12, 2003, and in the 2005 edition of the IEEE Standard 1547.1, titled "IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE SA Standards Board on June 9, 2005.

(10) "Installed System" means an eligible system that is completely built, has passed final electrical inspection by the local authority with jurisdiction, and is pending completion of utility work to connect it to the utility grid.

(~~9~~11) "Nameplate capacity" means the maximum rated output of a solar photovoltaic system, measured at an irradiance level of 1000 W/~~m²~~**m²**, with reference air mass 1.5 solar spectral irradiance distribution and cell or module junction temperature of 25°C.

~~(10) "IEEE standards" means the standards published in the 2003 edition of the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, entitled "Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE SA Standards Board on June 12, 2003, and in the 2005 edition of the IEEE~~

~~Standard 1547.1, entitled "IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems," approved by the IEEE SA Standards Board on June 9, 2005.~~

(~~11~~12) "On-line" means that the **solar** photovoltaic system is installed and providing power to the electric company's electrical system or to serve the load of the retail electricity consumer.

(~~12~~13) "Payable generation" is the eligible generation for each month plus accrued excess generation, up to the actual monthly usage. Excess generation accrues monthly.

(~~13~~14) "Pilot capacity limit" means the maximum installed capacity that each electric company may contract during the pilot program.

(~~14~~15) "Pilot year" means each twelve-month period of the solar photovoltaic pilot program beginning on April 1 and ending on March 31.

(~~15~~16) "Qualifying assignee" or "assignee" means a person to whom a retail electricity consumer may assign volumetric incentive rate payments under the standard contract. An electric company or its affiliate or any other regulated utility is not a qualifying assignee. Qualifying assignees include, but are not limited to:

(a) A lender providing up-front financing to a retail electricity consumer;~~,~~

(b) A company or individual who enters into a financial agreement with a retail electricity consumer to own and operate a solar photovoltaic ~~energy~~ system on behalf of the retail electricity consumer in return for compensation;~~,~~

(c) A company or individual who contracts with the retail electricity consumer to locate a solar photovoltaic system on property owned by the retail electricity consumer;~~,~~ or

(d) Any party identified by the retail electricity consumer to receive payments that the electric company is obligated to pay to the retail electricity consumer.

(~~16~~17) "Qualifying third party" or "third party" means a party who is the owner or operator of a **solar** photovoltaic system installed under the pilot program but who is not the retail electricity consumer at that location. An electric company is not a qualifying third party under the pilot programs.

(~~17~~18) "Reservation start date" means the date the retail electricity consumer is notified of securing capacity through a capacity reservation process and of the start and expiration dates for that capacity reservation. The reservation start date initiates the time to interconnection agreement.

(~~18~~19) "Retail electricity consumer" means a consumer who is a direct customer of the electric company and is the end user of electricity for specific purposes, such as heating, lighting, or operating equipment. Retail electricity consumers include **direct access** consumers ~~on direct access~~.

(~~19~~20) "System requirements" means the input electricity required to ~~allow~~**operate** the solar photovoltaic ~~energy~~ system ~~to operate~~, sometimes referred to as the parasitic load.

(~~20~~21) "Time to interconnection agreement" means the time between the reservation start date and the date an eligible participant signs an interconnection agreement.

(~~21~~22) "Volumetric incentive payments" or "payments" ~~means~~**mean** the monthly amount that an electric company pays to an eligible participant or assignee in the solar photovoltaic pilot program for payable energy generated by a contracted system.

(~~22~~23) "Volumetric incentive rate" means the rate per kilowatt-hour paid by an electric company to a retail electricity consumer or assignee for payable generation.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

Solar Photovoltaic Capacity Standard

860-084-0020
Solar Photovoltaic Capacity Standard

~~**On or before**~~**By** January 1, 2020, each electric company must own~~,~~ or contract to purchase the capacity and output of qualifying solar photovoltaic ~~**energy**~~ systems to ~~**achieve, or exceed,**~~**meet** and maintain the following minimum solar photovoltaic capacity standards:

(1) Portland General Electric: 10.9 megawatts
(2) Pacific Power: 8.7 megawatts
(3) Idaho Power Company: 0.5 megawatts.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0030

Qualifying Systems under the Solar Photovoltaic Capacity Standard

Individual solar photovoltaic ~~**energy**~~ systems used to comply with the solar photovoltaic capacity standards ~~**specified**~~ in OAR 860-084-0020 must have a nameplate generating capacity greater than or equal to 500 kilowatts and less than or equal to 5 megawatts.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0040
Measurement of Capacity under the Solar Photovoltaic Capacity Standard

(1) The capacity of solar photovoltaic ~~**energy**~~ systems used to satisfy the requirements of OAR 860-084-0020 must be measured on the alternating current side of the system's inverter.

(2) Each electric company must convert nameplate capacity ratings reported by manufacturers in terms of direct current watts under standard test conditions to an alternating current rating in watts to account for inverter and other system component losses and to account for the effect of normal operating temperature on solar module

output. This conversion will be calculated as 85 percent of the manufacturer's nameplate rating.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0050
Compliance Report

(1) ~~**On or before**~~**By** February 1, 2020, each electric company must file a report with the Commission demonstrating compliance, or explaining in detail any failure to comply, with the solar photovoltaic capacity standards ~~**specified**~~ in OAR 860-084-0020.

(2) The report required in section (1) of this rule must include the following information associated with each solar photovoltaic ~~**energy**~~ system:

(a) The name of the facility;

(b) The location of the facility;

(c) The in-service date of the facility;

(d) The manufacturer's nameplate capacity rating;

(e) The electric company's capacity rating on the alternating current side of the system's inverter;

(f) The execution date of any associated power purchase agreement; and

(g) The contracted capacity and output delivery period of any associated power purchase agreement.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0070
Renewable Energy Certificates and Compliance with the Renewable Portfolio Standards

(1) Each renewable energy certificate associated with the electricity produced by solar photovoltaic ~~**energy**~~ systems used to ~~**achieve, or exceed**~~**meet**~~,~~ the minimum solar photovoltaic capacity standards ~~**specified**~~ in OAR 860-084-0020 may be used to comply with the renewable portfolio standards established under ORS 469A.005 ~~**to**~~**through** ORS 469A.120.

(2) Each renewable energy certificate associated with the electricity produced by solar photovoltaic ~~**energy**~~ systems may be ~~**used, or**~~ counted~~,~~ twice to comply with the renewable portfolio standards established under ORS 469A.005 ~~**to**~~**through** ORS 469A.120, if the solar photovoltaic ~~**energy**~~ systems:

(a) First become operational before January 1, 2016~~;~~**.**

(b) Are installed in Oregon~~;~~**.** and

(c) ~~**Are within**~~**Meet** the solar photovoltaic capacity standards ~~**specified**~~ in OAR 860-084-0020.

(3) Renewable energy certificates used ~~**pursuant to**~~**under** sections (1) and (2) of this rule must comply with the standards ~~**of**~~ **in** OAR 860-083-0050.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

Solar Photovoltaic Pilot Programs

860-084-0100
Solar Photovoltaic Pilot Programs

(1) Each electric company must establish pilot programs to demonstrate the use and effectiveness of volumetric incentive rates and payments for electricity delivered from qualifying solar photovoltaic ~~energy~~ systems.

(2) Each electric company must offer a net metering option under the pilot program. This option has the following characteristics:

(a) ~~Qualifying~~**Eligible** systems installed on the customer side of the service meter;

(b) Volumetric incentive rates established by Commission order;

(c) Volumetric incentive rate payments for ~~generation up to the actual annual usage of the retail electricity consumer (eligible generation);~~**payable generation;**

(d) ~~Generation in excess of net metered annual usage (excess~~**Excess** generation~~)~~ donated to the electric company's low income bill assistance program; ~~and~~

(e) Capacity of ~~qualifying~~**eligible** systems sized to ~~provide an estimated~~**generate** energy ~~generation equal~~**up** to 90 percent of the ~~rolling average of~~ **actual usage in** the ~~usage~~ **12 most recent billing periods** at the premises ~~at which~~**where** the ~~qualifying~~**eligible** system will be installed~~. If this average cannot be determined, the nameplate capacity can be no more;~~

(f) Capacity of eligible systems with less than **12 billing periods of actual usage for existing premises or new construction sized to generate energy up to** 90 percent of ~~a rolling average of three year's~~**the annual** usage by a similarly-situated customer~~,~~ **or by a utility-provided load estimation document as determined by the utility;**

(g) Capacity of eligible systems for irrigation or agriculture customers sized up to 90 percent of average usage during a normal 12-month billing period as determined by the ~~electric company.~~**utility; and**

(h) The ~~methodology used to calculate this energy generation will~~**methodologies used to estimate the usage if there is no sufficient actual usage to size the system must** be consistent with the methodologies used by the Energy Trust of Oregon ~~and,~~ the Oregon Department of Energy~~.~~**, or other methodologies acceptable to the Commission.**

(3) Each electric company must offer a volumetric incentive rate bid option under the pilot program. This option has the following characteristics:

(a) Volumetric incentive rate paid to each retail electricity consumer is established by a successful bid for capacity in the volumetric incentive rate pilot program; and

(b) Volumetric incentive rate payments for 100 percent ~~of energy generated,~~**of payable generation** net of system requirements.

(4) Retail electricity consumers eligible for each pilot program option will be defined by Commission order.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0120
Systems Eligible for Enrollment in Pilot Programs

(1) Individual solar photovoltaic ~~energy~~ systems eligible for the Solar Photovoltaic Pilot Programs must have a nameplate generating capacity less than or equal to 500 kilowatts and must be:

(a) In compliance with the siting, design, interconnection, installation, and electric output standards and codes required by the laws of Oregon;

(b) Installed with meters or other devices to monitor and measure the quantity of energy generated;

(c) Permanently installed in the State of Oregon by a retail electricity consumer of the electric company;

(d) Installed in the service territory of the electric company;

(e) First operational and on-line after the launch of the pilot programs;

(f) Financed without expenditures under ORS 757.612 (3)(b)(B) or tax credits under ORS 469.160 or ORS 469.185 ~~to~~**through** 469.225;

(g) Certified by the residential electric consumer as constructed from new components (modules, inverter, batteries, mounting hardware, etc.); and

(h) Compliant with Commission quality and reliability requirements for solar photovoltaic systems and system installation.

(2) Systems ~~that are~~ uninstalled before the end of the contract term are not eligible for subsequent volumetric incentive rates, other feed-in tariffs, or pilot programs during the remainder of the **original** contract term. **T**~~; and t~~hese systems cannot be reinstalled for the purposes of entering a new contract under any solar photovoltaic pilot program, volumetric incentive or other feed-in tariff program in the service territory of any electric company in the State of Oregon during the **original** contract term of the system, except that a system may be uninstalled and reinstalled at another location under the same contract under the conditions ~~set forth~~ in OAR 860-084-0280.

(3) Retail electricity consumers submitting applications for a 500 kilowatt project are not eligible to reserve capacity in the solar photovoltaic pilot program if the same project is also competing for a purchased power agreement under the ~~S~~solar ~~C~~capacity ~~S~~standard **in OAR 860-084-0020**.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0130
Ownership and Installation

(1) An electric company must contract to provide an incentive for solar photovoltaic energy generated from an eligible system owned by a retail electricity consumer who has been granted a capacity reservation in the solar photovoltaic pilot program and has executed all agreements with the electric company.

(2) Eligible systems must be installed on the same property ~~as the property~~ where the retail electricity consumer buys electricity from the electric company.

(a) ~~Retail electricity consumers required to choose~~ **Eligible systems with capacity reserved under** the net metering option ~~of the volumetric pilot programs~~ must ~~connect their systems~~ **be connected** to the customer ~~load~~ side of ~~their~~**the** meter.

(b) ~~Retail electricity consumers required to choose the volumetric incentive rate~~**Eligible systems with capacity reserved under the competitive** bidding option ~~of the pilot program~~ must connect ~~into~~**to** the distribution feeder that services the ~~consumer~~**customer's property. The point of common coupling may be located on the load side of the retail customer's existing electric service subject to utility approval and to the extent authorized by law.**

(c) If cost effective, eligible systems may be connected at **other distribution feeders on** the ~~property.~~ **utility grid subject to utility approval and to the extent authorized by law.**

(3) A retail electricity consumer may transfer its existing contract to another retail electricity consumer eligible to contract with the electric company and residing at the same address where the system is installed.

(4) Eligible systems may be owned, operated, or owned and operated by qualifying third parties~~,~~ if the eligible system is:

(a) Owned by a qualifying third party as part of a loan agreement~~;~~, or

(b) Owned and operated by a qualifying third party on behalf of the retail electricity consumer~~;~~, or

(c) Operated by a third party on behalf of the retail electricity consumer.

(5) The electric company will own the rights to 100 percent of the renewable energy certificates associated with the energy provided by the contracted systems. The electric company may perfect the renewable energy certificates.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0140
Assignment of Payments

(1) An electric company must allow a retail electricity consumer to assign payments to a single qualifying assignee under standard contracts approved by the Commission and must allow changes to assignment over the contract term.

(2) An electric company may charge a reasonable fee for the assignment of payments for account setup at the time that the standard contract is assigned. An electric company may charge a reasonable fee for changes to assignment of payments over the contract term.

(3) An electric company ~~must provide payment~~ **must make volumetric incentive payments** to the qualifying assignee within 45 days ~~from the last day~~ of the retail electricity consumer's prior billing period.

(4) Upon request by the retail electricity consumer, the electric company may make the volumetric incentive payments in one of the following methods:

(a) Full payment for payable generation directly to the retail electricity consumer; the retail electricity consumer is billed the standard monthly bill for electricity purchased under the tariff; or

(b) Full payment for payable generation net of the retail electricity consumer's standard monthly bill; the retail electricity consumer receives or pays the net amount; or

(c) Full payment for payable generation to the qualified assignee identified on the standard contract; the retail electricity consumer is billed separately for electricity purchased under the tariff.

(5) The retail electricity consumer is responsible for the minimum monthly charge and other non-volumetric charges on the standard monthly bill.

(6) Payments for payable generation will be held by the electric company until the amount accrued per customer generator exceeds $25.00.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0150
Solar Photovoltaic Pilot Capacity Limit

~~(1)~~ New capacity reservations will not be accepted after March 31, 2015, or ~~when~~ **after** the cumulative capacity of contracted systems in pilot programs reaches 25 megawatts of nameplate capacity, whichever is earlier.

~~(2) Power that qualifies against this capacity limit is measured as the sum of power generated on the alternating current side of system inverters across all contracted systems.~~

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0180
Distributing Electric Company Capacity Limit by Allocation Period

(1) Each electric company must ~~allocate a percentage of~~**distribute** its ~~total~~ allocated capacity ~~limit~~**among the enrollment periods** as established by Commission order.

(2) The Commission may consider requests to adjust the allocation percentage for any electric company.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0190
Distributing Capacity by System Size

~~(1) A solar photovoltaic system capacity is the total capacity contracted by a single retail electricity consumer.~~

(~~2~~1) Three size classes of qualifying systems are established and defined by a range of nameplate capacity. T~~;~~ ~~t~~he Commission may modify these capacity ranges.

(a) A small-scale system has a nameplate capacity of less than or equal to 10 kilowatts;

(b) A medium-scale system has a nameplate capacity greater than 10 kilowatts and less than or equal to 100 kilowatts; and

(c) A large-scale system has a nameplate capacity greater than 100 kilowatts and less than or equal to 500 kilowatts.

(~~3~~2) Small-scale and medium-scale systems must be targeted to attain a goal of 75 percent of the capacity deployed under the solar photovoltaic pilot program.

(~~4~~3) An electric company must ~~**allocate**~~**distribute** certain percentages of its pilot capacity allocation ~~**for**~~**to** small-scale, medium-scale, and large-scale capacity systems as directed by Commission order.

(~~5~~4) An electric company with less than one megawatt of total allocation must allocate 100 percent of its solar photovoltaic capacity limit to ~~**retail electricity consumers installing**~~ small-scale systems.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10; PUC 6-2010, f. & cert. ef. 11-19-10

860-084-0195
Mechanisms for Reserving Capacity

~~**(1) Capacity reservations for small-scale and medium-scale systems are awarded on a first-come first-served basis, until the annual capacity limit for the system size class is reached,**~~

~~**(a) Application packages for capacity may be submitted to the electric company at any time during the pilot year.**~~

~~**(b) A capacity reservation starts when an application package meeting the requirements of OAR 860-084-0230(2) is received by the electric company.**~~

~~**(2) Unless otherwise directed by Commission order, capacity reservations for large-scale systems are awarded on the basis of competitive bidding.**~~

~~**(a) Electric companies must issue a Request for Proposal for large-scale systems no later than 30 business days prior to the start of each pilot year.**~~

~~**(b) Electric companies must set the bidder response deadline no later than the first business day of each pilot year.**~~

~~**(c) Electric companies must award capacity to winning bidders no later than fifteen business days after the bidder response deadline. Selection of winning bids must be based solely on the bidder's volumetric incentive rate bid.**~~

~~**(d) If capacity remains available after all bids are awarded, then the remaining capacity will roll over to the next pilot year.**~~

~~**(e) A large-scale capacity reservation begins when the bidder receives notification of a successful bid.**~~

(1) Annual capacity reservations must be made as follows:

(a)For small-scale systems: 100 percent of the allocated capacity will be awarded to the net metering option by lottery or as otherwise directed by Commission order.

(b) For medium-scale systems: The allocated capacity will be divided between the net metering and the competitive bidding options as directed by Commission order.

(c) For large-scale systems: 100 percent of the allocated capacity will be awarded by competitive bidding.

(2) Reservations made by either competitive bidding or lottery must be awarded within each system size independent of the other classes.

(3) The following governs capacity distributed through a lottery:

(a) Electric companies must conduct a lottery-based capacity reservation process on April 1 and October 1 during each of the remaining pilot years unless otherwise directed by Commission order.

(b) Electric companies must collect reservation applications for 24 hours before selecting winning participants unless otherwise directed by Commission order.

(c) Electric companies must notify winning lottery participants no later than three business days after the close of the reservation application window. Deposits are due within three days of this notification. Electric companies then have 15 days to confirm that reservation applications conform to all program rules.

(d) In any enrollment period, if the eligible capacity is not reserved through the lottery, the remaining capacity will be made available on a first-come, first-served basis. Any remaining capacity thereafter will roll over to the next capacity reservation period unless otherwise directed by Commission order.

(4) The following governs capacity distributed through a competitive bidding option:

(a) Electric companies must issue a Request for Proposal for**:**

(A) ~~I~~Large-scale **bid option** systems no later than 30 business days prior to ~~the start~~**April 1 of each pilot year or as otherwise directed by Commission order; and**

(B) Medium-scale bid option systems no later than 30 business days prior to October 1 of each pilot year **or as otherwise directed by Commission order**.

(b) Electric companies must set the bidder response deadline **for**

(A) large-scale bid option systems no later than ~~the first business day~~**April 1** of each pilot year **and**

(B) for medium-scale bid option systems no later than October 1 of each pilot year or as otherwise directed by Commission order.

(c) Electric companies must award capacity to winning bidders no later than fifteen business days after the bidder response deadline. Selection of winning bids must be based solely on the bidder's volumetric incentive rate bid.

(d) If capacity remains available after all bids are awarded, then the remaining capacity will roll over to the next ~~pilot year~~**appropriate bid-option enrollment window as defined by subsection (4)(a) of this rule.**

(e) A **medium- and** large-scale ~~capacity~~**bid-option** reservation begins when the bidder receives notification of a ~~successful~~**winning** bid.

(~~3~~**5**) Electric companies must require a capacity reservation deposit of $**500 or $**20 per kilowatt of the proposed system capacity**, whichever is larger**.

(6) Capacity reservations are non-transferable from one customer generator to another.

(7) A capacity reservation starts upon notification by the electric company to the successful program participant that capacity has been awarded.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0200
Capacity Reservation, Timing, and Volumetric Incentive Rates

~~(1)~~ A **retail electricity** consumer ~~that~~**who** has made a capacity reservation ~~under~~**and who has executed all required agreements with** the ~~net metered option may receive~~**electric company must be paid** the **effective** volumetric incentive rate ~~in place~~ at the time of ~~the consumer's capacity reservation~~**enrollment** for 100 percent of ~~the eligible energy generated by the consumer's system.~~**payable generation.** Capacity reservation applications and standard contracts ~~provided to retail electricity consumers~~**must provide the volumetric incentive rate in effect** ~~at~~ **on** the ~~time of capacity reservation must state the volumetric incentive rate that the retail electricity consumer is eligible to receive, based on the~~ capacity reservation date.

~~(2) An eligible system owned by a retail electricity consumer who has been granted a capacity reservation in the solar photovoltaic pilot program and has executed all agreements with the electric company under the volumetric bidding option may receive the volumetric incentive rate bid by the retail electricity consumer, to be paid on 100 percent of the energy generated by the contracted system, net of system requirements. Capacity reservation applications and standard contracts provided to these retail electricity consumers must state the successful volumetric incentive rate bid awarded to the retail electricity consumer.~~

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0210
Capacity Reservation, Timing, and Duration

(1) ~~The~~**A** capacity reservation ~~for small-scale and medium-scale systems expires~~ **expires** if a completed interconnection application is not filed within two months of the reservation start date~~,~~ or if the system has not been installed within twelve months of the reservation start date**, unless a waiver is granted under OAR 860-084-0000. Any delay resulting from the utility not completing required work to connect the eligible system to the grid will be excluded from this 12-month installation requirement.**

~~(2) The capacity reservation for large-scale systems expires six months from the date that an interconnection application is filed or within twelve months from the reservation start date, whichever is longer, if the system has not been installed.~~

~~(3) Electric companies must collect data on the time to interconnection agreement and conduct pilot program satisfaction surveys in order to improve capacity reservation and interconnection processes over the pilot program. Data collection and surveys must include:~~

~~(a) Interconnection agreements that have not been negotiated between the electricity company and the retail electricity consumer within a six-month window after an application for interconnection has been filed, or~~

~~(b) Retail electricity consumers that have reserved capacity under the pilot programs and whose capacity reservations expire before solar photovoltaic energy systems are installed.~~

(2) Once the capacity reservation expires, the retail electricity consumer must newly apply for a capacity reservation and will not be given preferential treatment.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0220
Capacity Availability

(1) Each electric company must announce the **total** ~~available~~ capacity **available** for ~~the upcoming capacity~~ reservation **before each enrollment** period. ~~and solicit applications no later than two months before the start of the capacity reservation period.~~

(2) Each electric company must announce when the capacity allocation is fully reserved.

~~(2) Capacity allocated to small-scale, medium-scale, and large-scale systems that is not reserved in a capacity reservation~~

(3) Unreserved capacity in any enrollment period must be added to the available capacity for the respective size systems in the next capacity reservation period.

(3) In January 2013, the remaining pilot capacity may be reallocated. This reallocation may redistribute the remaining pilot program capacity so that 75 percent of the energy generated is from small-scale systems at the time the pilot program reaches 25 megawatts of alternating current.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0230
Application for Capacity Reservation

(1) The electric company must establish, in compliance with Commission order, a capacity application process for both the net metering and ~~volumetric incentive rate~~ **competitive** bid**ding** options. The electric company must provide ~~eligible participants~~ the necessary instructions ~~on how~~ to complete a satisfactory capacity application. Fees collected during the capacity application process must be refunded to the retail electricity consumer if a capacity reservation is not secured.

(2) For the purposes of these rules, an application package **must** include~~s~~ a capacity reservation application, payment of fees required under OAR 860-084-0280, and an interconnection application that complies with OAR 860-084-0270(4)(a), (c), (d), (f), and (g). Electric companies may not require a retail electricity consumer to provide the

information required by OAR 860-084-0270(4)(b) and (4)(e) as part of this initial application package.

~~(3) Within two months of securing a capacity reservation, a retail electricity consumer must submit a completed application for interconnection that meets all the requirements of OAR 860-084-0270 and that includes an estimate of annual system energy generation using the methodology identified in OAR 860-084-0100(2)(e).~~

(43) The capacity reservation application must certify that the retail electricity consumer has read and understands the standard contract established under the pilot program. Standard contract forms must be provided to retail electricity consumers as part of the application process.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

Interconnection: Application And Agreements

860-084-0260
Interconnection Requirements for Solar Photovoltaic Pilot Program

(1) To be qualified for interconnected operation, a qualifying system must be certified as complying with the following standards as applicable:

(a) IEEE standards; and

(b) UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems~~.~~ (January 2001).

(2) A system is considered as certified to the standards of section (1) of this rule, and the electric company may not require further design review, testing, or additional equipment, if:

(a) The system is a complete equipment package that has been submitted by a manufacturer to a nationally recognized testing and certification laboratory, and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards listed in section (1) of this rule; or

(b) The system is an equipment package ~~which~~ **that** includes a generator or other electric source and the equipment package has been tested and listed as an integrated package in compliance with the applicable codes and standards listed in section (1) of this rule~~;~~, or

(c) The certified equipment package comprises only the interface components (switchgear, inverters, or other interface devices)~~,~~ and the interconnection applicant has shown that

(A) The solar photovoltaic ~~energy~~ system being ~~utilized~~ **used** is compatible with the equipment package~~;~~,

(B) Testing and listing of the solar photovoltaic generator being ~~utilized~~**used**, as performed by the nationally recognized testing and certification laboratory, is consistent with the testing and listing of the interface component equipment package~~;~~, and

(C) The testing and listing specified for the package is consistent with the applicable codes and standards listed in section (1) of this rule.

(3) A qualifying system may not interconnect to a transmission line.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0270
Authorization to Interconnect

(1) ~~**A person may not interconnect an**~~**An** eligible system **may not be interconnected** to an electric company's distribution system ~~**without**~~**before obtaining** authorization from the electric company.

~~**(2) A person proposing to interconnect an eligible system to an electric company's distribution system must submit an application for interconnection to the electric company.**~~

~~**(3) A person with a contracted system who proposes to make any change to the facility, other than a minor equipment modification, must submit an application to the electric company.**~~

(2) Changes affecting the nameplate capacity or the output capacity of the system authorized in the agreement governing the contract require ~~**that the applicant apply for an additional capacity reservation and for a new interconnection review**~~**prior authorization from the electric company**.

(4) ~~**An application for interconnection**~~ **Interconnection applications** must be ~~**submitted on a standard form, available from**~~**provided by** the electric company and posted on the electric company's website. The submission of a completed **interconnection** application initiates interconnection review. The application ~~**form**~~ must ~~**require**~~**include** the following ~~**types of information**~~:

(a) The name of the applicant and the electric company ~~**involved**~~;

(b) The type and specifications of **each component of** the ~~**complete equipment package of the**~~ **qualified** solar photovoltaic ~~**energy**~~ system~~**, including the solar photovoltaic generator**~~;

(c) The level of interconnection review ~~**sought (; e.g.**~~ Level 1, Level 2, or Level 3**)**;

(d) The ~~**contractor who will install**~~**name of** the **installer of the qualified** solar photovoltaic ~~**energy**~~ system;

(e) Equipment certifications;

(f) The anticipated **operation** date **of** the solar photovoltaic ~~**energy**~~ system ~~**will be operational**~~; and

(g) Other information ~~**that**~~ the utility deems ~~**is**~~ necessary to ~~**determine compliance**~~**comply** with ~~**these**~~**the** solar photovoltaic pilot program interconnection rules.

(5) Within three business days ~~**after**~~**of** receiving ~~**an application for Level 1, Level 2, or Level 3**~~ **the** interconnection ~~**review**~~**application**, the electric company must provide ~~**written or electronic mail notice to**~~ the applicant ~~**that it received the application**~~**a written notice of receipt** ~~**and**~~ **stating** whether the application meets **the** established criteria.

(a) If the application does not meet established criteria, the written notice must include a list of all of the information needed to complete the application.

(b) If the number of applications ~~received~~ in a **regular business** week exceeds 20, the electric company ~~may notify~~ **must inform the** customers ~~by electronic mail~~ that the ~~company will respond within~~**written notice period is** ten business days.

(6) Each electric company must designate an employee or office from which an applicant can obtain ~~basic~~ application forms and **other** information ~~through an informal~~**necessary to complete the application** process; ~~this process must be outlined~~**the electric company must post the application form** and ~~posted~~**the necessary information** on ~~the electric company's~~**its** website. ~~On~~**Upon** request, the electric company must provide all relevant forms, documents, and technical requirements for submittal of an application that meets established criteria for an interconnection application under these solar photovoltaic pilot program rules, as well as specific information necessary to contact the electric company representative assigned to review the application.

(7) A person may also request information about the feasibility of interconnecting a qualifying system~~, in advance of~~**before** filing an application for capacity reservation or interconnection. The information provided by the electric company in response to this request must include relevant existing studies and other materials that may be used to understand the feasibility of interconnecting a solar photovoltaic facility at a particular point on the electric company's distribution system. The electric company must comply with reasonable requests for access to or copies of ~~such~~ **this** information, except to the extent that providing ~~such~~ **these** materials would violate security requirements, confidentiality obligations to third parties, or ~~be contrary to~~ federal or state regulations. The electric company may require a person to sign a confidentiality agreement if required to protect confidential or proprietary information. A person requesting information under this section must reimburse the electric company for the reasonable costs of gathering and copying the requested information.

(8) The electric company is not responsible for the cost of determining the rating of equipment on the customer side of the meter.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0340
Installation, Operation, Maintenance, and Testing of Contracted Systems

A contracted system must include and maintain a manual disconnect switch that will disconnect the solar photovoltaic ~~energy~~ system from the electric company's system.

(1) The disconnect switch must be a lockable, load-break switch that plainly indicates whether it is in the open or closed position.

(2) The disconnect switch must be readily accessible to the electric company at all times and be located within 10 feet of the electric company meter. The disconnect switch may be located more than 10 feet from the electric company meter if permanent instructions are posted at the meter indicating the precise location of the disconnect

switch. The electric company must approve the location of the disconnect switch prior to the installation of the facility.

(3) The retail electricity consumer must install and maintain the required disconnect switch at the retail electricity consumer's expense.

(4) For customer services of 600 volts or less, an electric company may not require a disconnect switch for an eligible system that is inverter-based with a maximum rating as shown below.

(a) Service type: 240 Volts, Single-phase, 3 Wire -- Maximum size 7.2 kilowatts.

(b) Service type: 120/208 Volts, 3-Phase, 4 Wire -- Maximum size 10.5 kilowatts.

(c) Service type: 120/240 Volts, 3-Phase 4 Wire -- Maximum size 12.5 kilowatts.

(d) Service type: 277/480, 3-Phase, 4 Wire -- Maximum size 25.0 kilowatts.

(e) For other service types, the eligible system must not ~~**impact**~~ **affect** the retail electric consumers' service conductors by more than 30 amperes.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

Rates and Cost Recovery

860-084-0360
Volumetric Incentive Rates and Payments -- Net Metering Option

(1) Each electric company must pay the retail electricity consumer on a monthly basis for ~~**eligible**~~**payable** generation up to the consumer's actual usage in the month. Any excess generation in the month transfers to the next month's eligible generation. At the end of a generation year, any remaining excess generation is donated to the low income bill assistance.

(2) The default generation year is April 1to March 31. ~~**At the time of entering into the standard contract for the net metering option, a retail electricity consumer may choose an alternative generation year.**~~ **For irrigation and agriculture customers, the default generation year is November 1 to October 31.**

(3) The monthly incentive payment equals the product of the volumetric incentive rate specified in the standard contract minus the retail rate in effect at the time of payment **for** eligible generation for the month.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0365
Volumetric Incentive Rate Bidding Option

(1) A retail electricity consumer participating under the volumetric incentive rate bidding option of the pilot program receives a payment that equals the product of the ~~**eligible kilowatt-hours of electricity**~~**payable generation** delivered to the electric company and the volumetric incentive rate per kilowatt-hour established through the

consumer's successful bid in the ~~volumetric incentive rate bidding process that secured a capacity reservation~~pilot program.

(2) Each company will conduct a volumetric incentive rate bidding process with capacity awarded in the second month of each pilot year, or as otherwise directed by the Commission, through a ~~R~~request for ~~P~~proposal process approved by the Commission.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

Data Collection and Reporting

860-084-0400
Data Collection

Except as provided in OAR 860-084-0440, each electric company must collect from the retail electricity consumer participating in the pilot program data on the installed solar photovoltaic ~~energy~~ system. The collected data elements must include, but are not limited to:

(1) Nameplate Capacity;
(2) Total Installed Cost;
(3) Photovoltaic module cost;
(4) Non-photovoltaic module cost (including inverters, other hardware, labor, overhead, and regulatory compliance costs);
(5) Total financing cost;
(6) Financing terms (including fees paid, loan term, and interest rate secured);
(7) System location, including street address and GPS location;
(8) Technology type (building-integrated versus rack-mounted, crystalline silicon versus thin-film, solar tracking versus rack-mounted, etc.);
(9) Federal tax credit;
(10) In-service date;
(11) Expected annual energy output;
(12) Date of certification of compliance; and
(13) Class of service of retail electricity consumer.

(14) Electric companies must collect data on the time to interconnection agreement and conduct pilot program satisfaction surveys in order to improve capacity reservation and interconnection processes over the pilot program. Data collection and surveys must include:

(a) Interconnection agreements that have not been negotiated between the electricity company and the retail electricity consumer within six months after an application for interconnection has been filed; or

(b) Retail electricity consumers that have reserved capacity under the pilot programs and whose capacity reservations expire before solar photovoltaic energy systems are installed.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0420
Compliance with Pilot Program Requirements

(1) The participant agrees to the confidential release of information from participant surveys and pilot program applications to the organizations ~~given~~ **listed** in section (2) of this rule.

(2) Each electric company must send a list of all reserved and contracted systems that have completed ~~this certification~~**the release of confidential information** to the Energy Trust of Oregon, the Oregon Department of Revenue, or the Oregon Department of Energy, upon request by each organization. Data in this list~~ing~~ **must include the following minimum information:** ~~includes, but is not limited to:~~

(a) ~~Name and address of retail electricity consumer;~~

~~(b) Name and address of individual receiving volumetric incentive rate payments;~~

~~(c)~~ Installation location of system;

(~~d~~**b**) Nameplate capacity of installed system;

(~~e~~**c**) Name, business name, and business address of contractor installing system;

(~~f~~**d**) Financer of system;

(~~g~~**e**) In-service date; ~~and~~

(~~h~~**f**) Date of certification of ~~c~~**C**ompliance**; and.**

(g) Customer account number.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0430
Data Availability

(1) Each electric company must verify that the data collected pursuant to OAR 860-084-0400 and 860-084-0420 has been recorded in an appropriate electronic database prior to making volumetric incentive rate payments to participating retail electricity consumers.

(2) **Upon request, e**~~E~~ach electric company must provide the data collected ~~pursuant to~~**under** OAR 860-084-0400 and 860-084-0420, in a format established by the Commission~~, upon request~~. Reports that include this raw data and a summary of this data for the pilot program to date, must be provided to the Oregon Department of Energy, the Energy Trust of Oregon, the Oregon Department of Revenue, and ~~to~~ the Commission, ~~quarterly~~**bi-annually**, on the 15th day **in February and August**~~of the first month of each calendar quarter~~.

(3) Each electric company must provide the Commission or the Oregon Department of Energy location information that will enable one of these state agencies to make graphically visible, on a publically accessible website, the general locations and sizes of reserved and contracted systems of all electric companies within the state of Oregon. This information must not include consumer names or installation addresses or total capacity deployed to date.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

860-084-0440
Pilot Program Overhead

(1) Electric companies must ~~**develop and**~~ submit for Commission ~~-~~approval~~,~~ evaluations of solar photovoltaic pilot programs including~~, but not limited to~~:

(a) Proposals for the design and execution of surveys to measure participant satisfaction with and recommendations for improving the pilot program processes;

(b) Proposals for the design and execution of surveys to understand participant decision processes in choosing between the volumetric incentive rate program and the existing net metering program;

(c) Comments on Commission recommendations for regulatory policy changes that ~~may lead to the increased~~**may increase the** use of solar photovoltaic ~~energy~~ systems, ~~making~~ **make** solar photovoltaic systems more affordable, ~~reducing~~ **reduce** the cost of incentives to utility customers, ~~and~~**or** promot~~ing~~**e** the development of the solar industry in Oregon; and

(d) Additions to the list of required data to be collected under OAR 860-084-0400.

(2) Each electric company may enter into a contract with the Energy Trust of Oregon to provide **the** data collection and summary services required by OAR 860-084-0400 through 860-084-0440. An electric company may also contract with the Energy Trust of Oregon to administer pilot programs, including capacity reservation services, survey execution**,** or program evaluation. The Commission may direct the electric companies to contract with the Energy Trust of Oregon~~,~~ if the Commission ~~judges~~ **finds** that the costs to administer individual pilot programs are unreasonable.

Stat Auth: ORS 757.360 - 757.380
Stats. Implemented: ORS 757.360 - 757.380
Hist.: PUC 2-2010, f. & cert. ef. 6-1-10