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July 29, 2011

*Via Electronic Filing and U.S. Mail*

Oregon Public Utility Commission  
Attention: Filing Center  
550 Capitol Street NE, #215  
PO Box 2148  
Salem OR 97308-2148

**Re: UM 1452 – Opening Comments of Portland General Electric Company and Pacific Power on the VIR Pilot Program Rule Changes & Implementation**

Attention Filing Center:

Enclosed for filing in UM 1452 are an original and five copies of:

Opening Comments of Portland General Electric Company and Pacific Power on the VIR Pilot Program Rule Changes & Implementation

This document is being filed by electronic mail with the Filing Center. An extra copy of the cover letter is enclosed. Please date stamp the extra copy and return to me in the envelope provided.

This document is being served electronically upon the UM 1452 service list.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Richard George", with a long, sweeping horizontal line extending to the right.

J. Richard George  
Assistant General Counsel

JRG:smc  
Enclosures  
cc: Service List-UM 1452

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON  
UM 1452**

In the Matter of

PUBLIC UTILITY COMMISSION OF  
OREGON

Investigation into Pilot Programs to  
demonstrate the use and effectiveness of  
Volumetric Incentive Rates for Solar  
Photovoltaic Energy Systems

**Opening Comments of Portland General  
Electric Company and Pacific Power on  
the VIR Pilot Program Rule Changes &  
Implementation**

**Introduction**

Portland General Electric Company (“PGE”) and PacifiCorp d/b/a/ Pacific Power (“Pacific Power”)(collectively, the “Joint Utilities”) appreciate the opportunity to provide comments to the rules relating to the Solar Photovoltaic Pilot Program (the “Pilot Program”) and associated program implementation changes in Docket No. UM 1452. The Commission has also initiated a separate proceeding in AR 558 to address amendments to the Commission’s rules to implement any program changes. In light of the interrelationship between this docket and AR 558, the Joint Utilities are providing recommended rule changes herein and anticipate also filing these proposed amendments in AR 558 at a later date.

In Order No. 11-089 (“Order”), the Commission addressed issues for the upcoming enrollment periods in the Pilot Program. A key issue that arose was the effectiveness of the first-come, first-served (“FCFS”) method used to allocate capacity in the small- and medium-scale system sizes. To address this issue, the Commission adopted Staff’s position to implement a lottery system for capacity reservations starting with the October 1, 2011 enrollment window.

Staff proposed a lottery system that included a 24-hour capacity application window. The  
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Page 1

Commission opined that a lottery method would allow for an improved understanding among interested stakeholders as to the actual demand for the Pilot Program. The Commission directed Staff to convene a workshop to identify all necessary rules changes and to provide recommendations in advance of the October 1, 2011 enrollment window.

On June 22, 2011 Staff conducted a workshop where interested parties had the opportunity to review proposed changes to the rules to implement a lottery system for small- and medium-sized systems and a bid-option for medium-sized systems.

Staff filed a Notice of Proposed Rulemaking with the Secretary of State (“SOS”) on July 15, 2011 and served electronically the proposed rules on July 22, 2011 to the AdminRule Electric Notification List and certain legislators as required by ORS 183.335 (hereinafter “Staff’s Proposed SOS Rules”). The proposed rule changes amend OAR 860-084-0010 through 860-084-0450. In addition to implementing changes to the pilot program ordered by the Commission, the proposed rules clarify other issues and include additional changes to the rules. The last day for public comment is September 12, 2011. The Joint Utilities generally agree with Staff’s proposed rules as filed with the Secretary of State. Staff incorporated additional clarifying language since the last workshop. However, our attached rules do not reflect Staff’s additional changes. In these comments, we do reconcile the differences between our proposed rule changes and Staff’s proposed SOS Rules where needed, and state where we support Staff’s proposed language. If the Joint Utilities discover issues with the proposed rules due to the additional changes, we will address those issues in closing comments and/or in the rulemaking docket.

The Joint Utilities expressed concern in the earlier phases of these proceedings, and throughout the Pilot Program, in having adequate time to implement the changes needed to

administer and cost-effectively manage the Pilot Program. The Joint Utilities have learned that an approach that (1) enables all stakeholders to clearly understand and prepare for any changes and (2) provides the Joint Utilities with the necessary time to implement program modifications, creates a more stable program.

Staff has indicated that a Commission Order concerning the implementation and policy issues that are the subject of this proceeding is expected to be issued on or around September 6, 2011, with the capacity enrollment to be on October 3, 2011. This time frame provides the Joint Utilities with less than a month to implement any Pilot Program changes as may be directed by the Commission Order. However, the software vendor, which was retained to implement the IT components of the program, has requested a minimum of 30 days (and prefers up to six weeks) to program and test the modified software. The risk to the success of the Pilot Program of not having adequate time to thoroughly implement and error test the program to ensure trouble free functionality is significant. As a result, to meet the necessary conditions requested by the vendor and to minimize Pilot Program costs, the Joint Utilities urge the parties in this docket to come to agreement on most, if not all, implementation issues prior to September 6, 2011.

In this context, the Joint Utilities recommend settlement discussions among interested stakeholders sometime between August 15-22, 2011, to attempt to resolve critical path issues. The Joint Utilities recommend that the scope of any settlement discussions be limited to the specific issues the Commission set forth in Order 11-089 to ensure a successful outcome for the October enrollment period.

In these comments, the Joint Utilities address the implementation aspects and the associated administrative costs of the pilot program in light of the modifications made since its onset. Next, our comments discuss several key areas in the rules necessary to implement a

lottery system that achieves the objectives of the Commission Order in an efficient and equitable manner. Our comments are generally organized in the order of the rules.

### **Lottery Implementation**

In the upcoming lottery capacity enrollment period<sup>1</sup>, the capacity application form used will be the same as the previous enrollments.<sup>2</sup> As generally proposed by Staff, after the lottery enrollment period closes, there will be a period to review the applications for completeness, a randomizer will be applied to the lottery applicants, the capacity applications will be ranked, and an audit or review of the results will be made. If capacity is not fully reserved in the lottery, then under Staff's proposal, the enrollment period would remain open and the utilities would offer the available remaining capacity to customers on a FCFS basis.

This regime could require the Joint Utilities to effectively offer four enrollment periods a year, rather than two. This will materially increase our efforts and add more processing costs. Program administration costs already have been weighty given needed measures to prevent enrollment gaming, efforts to track demand, and work to implement program changes. The VIR is likely high enough that the capacity will fill during the lottery process, negating the need for the follow-up FCFS application process.<sup>3</sup> Nonetheless, the Joint Utilities expect to develop a new online queuing system to manage the customers who enroll during the FCFS period until capacity is fully reserved or until the end of the enrollment period. In addition, if the vendor does not have adequate time to develop and program a new process the system will be less automated than it was in the original FCFS system.. If we randomly select and rank the

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<sup>1</sup> Staff proposed a lottery system and if there is remaining capacity, then capacity is made available on a first-come, first-served basis.

<sup>2</sup> PGE will add a field for the customer to enter the meter number to avoid duplication applications.

<sup>3</sup> One caveat is that a few of the installers expressed difficulties with selling customers on the lottery concept due to unclear chances of being awarded capacity.

participants in an excel spreadsheet, rather than the online system generating this information, then we will need to manually provide the confirmation number to the participant so that they can make the reservation payment in PayPal. The process will be slower and require more person hours and potentially increased costs. Attachment A is the Joint Utility proposal for the lottery (and FCFS) enrollment process.

### **Proposed Rule Changes**

The Joint Utilities provide revised rule language that we consider housekeeping in nature and also language that is necessary to change to a lottery system. Attachment B are the Joint Utilities proposed rules. In our comments below we highlight a few issues discussed at the workshop and make further recommendations.

#### Definitions

In OAR 860-084-0010(8) the joint utilities offer a definition for “installed.” The definition works in conjunction with OAR 860-084-0210 which concerns the capacity reservation expiring if a system has not been installed within twelve months of the reservation start date. The definition is intended to alleviate confusion or uncertainty concerning when a system is installed and when the capacity reservation expires. It is also an attempt to clarify that utility delay in installation of equipment will not negatively impact participation. In the case of some larger systems, there is additional installation work that must be performed before the solar system is ready for interconnection to the utility grid system. In order to not penalize the customer if the system is not ready for interconnection to the utility grid system, the Joint Utilities propose the definition read as follows: (8) “Installed” means the generation system is completely built and has passed final electrical inspection by the local authority holding jurisdiction.

In Staff's Proposed SOS Rules, the definition of installed, OAR 860-084-0010(10), accomplishes the same result and the Joint Utilities also support the proposed language.

#### New Construction and the 90 Percent Rule

In OAR 860-084-0100(2)(g), Staff proposed revised language requiring that the capacity of qualifying system be sized to provide an estimated energy generation equal to 90 percent of the actual usage during the most recent 12 billing period at the premise where the system will be installed. Further, under Staff's proposal, if the premise has less than 12 billing periods of actual usage, the electric company may use the actual usage of a similarly-situated customer to determine the nameplate capacity. PGE supports Staff's revised language.

#### 24-hour Capacity Reservation Lottery Enrollment Window

Staff proposed that OAR 860-084-0195 be revised to address how capacity reservations will be made for small-, medium-, and large-size systems. Section 0195(3) governs how capacity will be distributed with the lottery. Consistent with Commission Order 11-089, the proposed rule in subsection 3(b) states the "Electric companies must collect reservation applications for a period to be determined by Commission order before selecting winning participants."

The Joint Utilities support the 24-hour lottery as proposed by Staff. However, one party in the workshop recommended a three-hour lottery. The general consensus was to replace "24-hours" with "as directed by Commission Order." In Staff's Proposed SOS Rules, the rule states "[e]lectric companies must collect reservation applications for 24 hours." We recommend parties come to an agreement on this issue before the September 6<sup>th</sup> Commission Order. If the issue must be revisited by the Commission, this creates uncertainty with implementation for the upcoming enrollment period.

### Three-Month Capacity Enrollment Period

We recommend the capacity enrollment period end in three months, rather than six. This would leave adequate time to determine any excess capacity, determine the upcoming available capacity for the next enrollment period, and prepare for the upcoming enrollment period.

### Excess Capacity Rollover

Revised OAR 860-084-0195(3)(d) states that if capacity remains available after the lottery (and FCFS) period ends, then the remaining capacity will roll over to the next capacity reservation period. The purpose of the rule is so that excess capacity rolls over to the next enrollment period and not to the end of the pilot. This is how we have managed excess capacity in the previous enrollment periods. We recommend continuing how we currently rollover excess capacity. Such capacity can result from drop-outs, duplicate capacity reservations, or unreserved capacity.

Remaining capacity after the lottery enrollment period ends and before the FCFS opens is available capacity. Any capacity left over after the follow-up FCFS ends would then be excess capacity that would roll over to the next capacity enrollment period.

The Joint Utilities support Staff's Proposed SOS Rules pertaining to this issue.

### Prequalification Process

One party proposed a two-prong prequalification process for participants in the lottery as a measure to ensure that only the most qualified customers reserve a capacity reservation. This is a departure from the existing method of requiring deposits to deter frivolous applications. This proposed approach would require the utilities to police the consumers, even require some type of prior certification or modification to the existing on-line capacity enrollment application. This

will increase administrative costs at a time when Staff and the utilities are concerned about the costs of this pilot program.

### Medium-sized Systems RFP

Initially, proposed OAR 860-084-0195(1)(b) directs that 50 percent of allocated capacity be awarded to the net metering option and the other 50 percent to the competitive bidding option for medium-sized systems as required by Order 11-089.<sup>4</sup> In Staff's Proposed SOS Rules, the language was revised stating, "The allocated capacity will be divided between the net metering and the competitive bidding options as directed by Commission Order."

The Joint Utilities plan to conduct the medium-sized system request for proposal ("RFP") as we do the large-sized systems. We propose to modify the existing RFP document for large systems by adding language allowing medium-sized systems to submit bids.

Alternating the capacity between enrollment windows and conducting the medium-sized RFP in October 2011 has the potential for lowering the costs of program. The bid option prices could be lower than the net metering 10% rate drop and this would provide the Commission a better price point in which to set the rate for subsequent enrollment periods.

As an alternative, PGE proposes to streamline the process by issuing an RFP for medium and large systems simultaneously, starting in April 2012. This approach would have all the capacity in the upcoming enrollment period be available in the net metering option. Then, the following enrollment period all the capacity, would be available in the RFP.

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<sup>4</sup>On page 8, Commission Order 11-089 states, "*Resolution:* With one modification, we adopt Staffs proposal to allocate medium-scale system capacity on a 50-50 basis using the VIR rates and competitive bidding. For larger systems, competitive bidding can be an effective means for identifying acceptable rates while keeping costs down. We adopt the Joint Utilities' proposal for timing – competitive bidding for the medium-scale systems will occur during the October 1 enrollment period."

### Participant Confidentiality

Proposed OAR 860-084-0420 requires that participants agree to release information from surveys and applications. From this information, the utility is required to send a list of systems, including a participant's name and address, to the Energy Trust of Oregon (ETO), Oregon Department of Revenue, and Oregon Department of Energy (ODOE) upon request. PGE provides this information quarterly to the ETO and the ODOE so these entities can verify that participants are not collecting state and ETO incentives which are prohibited in this pilot. However, the Commission was recently required, pursuant to public information requests, to disclose information concerning participants that we believe most participants would expect to be private. In order to protect our customers from such disclosures, we propose to remove the participant's name and address in these reports and provide the account and meter number. ETO can identify the customer with the account number. The Joint Utilities are working with ODOE to find a solution to preserve participant confidentiality and preclude the release of confidential participant information through public information requests.

### Quarterly Reports

OAR 860-084-0430(2) requires that each electric company provide the data collected (discussed above) on a quarterly basis. The Joint Utilities have provided these reports on a quarterly basis since the onset of the pilot program. Due to the timing of the bi-annual capacity enrollment windows and when participants give consent to release their information, we propose to provide the report bi-annually coinciding with the enrollment window and signing of the contract agreement. Because capacity fills quickly and the interconnection agreement deadline is about 60 days after enrollment, two out of four quarterly reports tend to be superfluous. Furthermore, each bi-annual report will reflect a more complete picture of the number of

participants, application process, and number of drop outs associated with each enrollment window.

We typically receive a signed contract agreement from the participants, which gives the utility consent to release the participant's information, on or around the interconnection agreement deadline, which is about three months after the capacity enrollment window. Three months after the October enrollment window is January, therefore, we would provide one bi-annual report in February. The second report would be provided in August since it is associated with the April capacity enrollment period.

We propose the rule be revised as follows: *"...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, bi-annually ~~quarterly~~, on the 15<sup>th</sup> day in February and August ~~of the first month of each calendar quarter.~~"*

#### Participant Surveys

OAR 860-084-0440 develops the rules for pilot program overhead for the evaluation and survey process. At the time the rules were developed, parties did not foresee changing the capacity reservation system from a FCFS to a lottery process. In an effort to capture information from participants in the first lottery enrollment window, PGE recommends adding a Cohort D group to the survey process to measure participant satisfaction with the pilot program lottery process and to understand the participant decision processes in choosing between the volumetric incentive rate program and the existing net metering program as required in OAR 860-084-0440(1)(a) and (b). At the time PGE developed the participant survey design, we elected to survey participants from the first three enrollment windows (Cohort A, B, and C) in an effort to

minimize costs, rather than all participants from eight enrollment windows. Adding another Cohort will add additional, yet minimal, costs to the pilot program.

PGE thinks the Commission will find including Cohort D useful information to assess participant satisfaction with the lottery system. If we do not include another Cohort group, those participants' experiences with the lottery system will not be captured. Including a Cohort D will extend the timeline to provide an evaluation to the Commission, but will nonetheless be beneficial in the long run when it's time to determine the successfulness or feasibility of one program over another.

### **Conclusion**

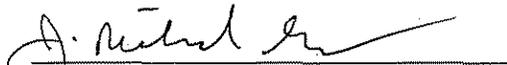
The revised rules reflect the lottery system for small- and medium-sized systems, and the RFP for medium-sized systems as required by the Commission Order. The Joint Utilities provided housekeeping changes and suggested improvements to the rules at the workshops and in informal comments. Staff then issued the Notice of Proposed Rulemaking with additional clarifications based on such input. In general, the Joint Utilities agree with the rules as proposed by Staff, but offer the recommendations for improvement contained herein. If there are outstanding issues remaining in mid-August, the Joint Utilities recommend settlement discussions to attempt to resolve critical path issues so that the Joint Utilities can proceed with the implementation phase as soon as possible.

Each capacity enrollment period we have faced pilot program issues that have required us to redesign and reprogram the capacity enrollment system, which has increased costs. The challenge we faced in the second and third enrollment periods was unusual in that our programmers effectively had to design and implement systems to mitigate against certain participants who employed sophisticated and anti-competitive automated scripts. For the

upcoming enrollment period, we continue to have concerns about having adequate time to implement the pilot program changes and also increased administrative costs due to program changes. To minimize these impacts and cost impacts on utility customers who will bear these costs, we recommend minimal further implementation changes to the pilot as we move through its term.

DATED this 29th day of July, 2011.

Respectfully Submitted,



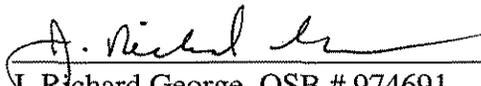
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## CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **OPENING COMMENTS OF PORTLAND GENERAL ELECTRIC COMPANY AND PACIFIC POWER ON THE VIR PILOT PROGRAM RULE CHANGES & IMPLEMENTATION** to be served by electronic mail to those parties whose email addresses appear on the attached service list from OPUC Docket No. UM 1452. Hard copies for this filing will be mailed to the filing center.

Dated at Portland, Oregon, this 29th day of July, 2011.

  
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**PGE/Pacific Power Proposed Enrollment Process**

1. Enrollment Day (**EDay**) – Enrollment website opens at 8am to begin accepting capacity reservation applications. Payment of the deposit is not required until applicant is notified the capacity reservation has been accepted.
2. (**EDay+1**) – Using a randomizer program<sup>i</sup> developed by Epiq all applications received within the first 24 hours are randomly assigned a queue position. Available capacity is distributed in the order of the application queue position until the capacity allocation for the enrollment period and system size is reached. **A review of the application for qualifications is NOT done at this time.**<sup>ii</sup>
3. (**EDay+1**) – Capacity reservation applications continue to be accepted following the randomized position numbers being assigned. Applications are taken on a first come, first served basis, and each application is assigned the next queue position number. The enrollment period stays open for a 3-month period.
4. (**EDay+1**)
  - a. An applicant awarded a capacity reservation is notified by email from Epiq’s system using the contact email address entered on the application form. The email notification provides the application tracking number and a link to the deposit payment website. The deposit must be paid within 3 business days from the date the notification email was sent.
  - b. An applicant not awarded a capacity reservation is notified of no available capacity by email from Epiq’s system utilizing the contact email address entered on the application. The email will state there is currently no capacity available, provide their waiting list position number, and advise that should capacity become available within 3 months of the start of the enrollment period they will be notified of the acceptance of the capacity reservation.
5. (**EDay+1**) – Announce on electric company’s website if capacity is fully subscribed and the number of participants currently on the waiting list.
6. (**EDay+4**) – After 72 hour window to pay deposits has elapsed, Epiq confirms deposit payments made. Applicants not paying the deposit within the specified timeframe will be removed from participation. The capacity allocation will be offered to the next applicant on the waiting list. This will be repeated through the 3-month enrollment period.
7. (**EDay+4 to EDay+18**) – Following payment of deposit, the electric company has 10 days to review and work with application to correct any deficiencies in the application or problems with system sizing.
8. (**EDay+18**) – Electric company awards capacity reservations for lottery participants that have successfully undergone review/qualification process by this day.
9. Applicants have 2 months from capacity award date to submit an Interconnection Application and 1 year within which to install their systems.
10. (**EDay+90**) – Close enrollment period. This is to allow sufficient time to evaluate available capacity for the next enrollment window and make announcement of available capacity 2 months prior to next enrollment period

<sup>i</sup> Auditable process

<sup>ii</sup> Applications are not reviewed by the electric company at this point to qualify the applications. This screening, like in the original first-come, first-served process, is done after the deposit is paid.

## **PUBLIC UTILITY COMMISSION**

### **DIVISION 84**

#### **SOLAR PHOTOVOLTAIC PROGRAMS**

##### **860-084-0000**

##### **Scope and Applicability of Solar Photovoltaic Programs**

- (1) OAR 860-084-0020 through 860-084-0080 (“the Solar Photovoltaic Capacity Standard”) govern implementation of programs requiring electric company installation of solar photovoltaic capacity.
- (2) OAR 860-084-0100 through 860-084-0450 (the “Solar Photovoltaic Pilot Programs”) govern implementation of pilot programs to demonstrate the use and effectiveness of volumetric incentive rates and payments for electricity delivered from solar photovoltaic energy systems.
- (3) The Commission may waive any of the rules contained in Division 084 for good cause.

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

##### **860-084-0010**

##### **Definitions for Solar Photovoltaic Capacity Standard and Pilot Programs**

- (1) “Contracted system” means an eligible system under contract in the solar photovoltaic pilot program.
- (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) "Installed" means the generation system is completely built, and has passed final electrical inspection by the local authority holding jurisdiction. The system is installed when it, and is ready for interconnection to the utility grid system.

*Explanation: Works in conjunction with 860-084-0210 to clarify that utility delay in installation of net metering equipment will not impact participation.*

(89) "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.

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

(1011) "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.

(1112) "On-line" means that the photovoltaic system is installed and providing power to the electric company's electrical system or to serve the load of the retail electricity consumer.

(1213) "Payable generation" is the eligible generation for each month plus accrued excess generation, up to the actual monthly usage. Excess generation accrues monthly.

(1314) "Pilot capacity limit" means the maximum installed capacity that each electric company may contract during the pilot program.

(1415) "Pilot year" means each twelve-month period of the solar photovoltaic pilot program beginning on April 1 and ending on March 31.

(1516) "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.

(4617) “Qualifying third party” or “third party” means a party who is the owner or operator of a 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.

(4718) “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.

(4819) “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 consumers on direct access.

(4920) “System requirements” means the input electricity required to allow the solar photovoltaic energy system to operate, sometimes referred to as the parasitic load.

(2021) “Time to interconnection agreement” means the time between the reservation start date and the date an eligible participant signs an interconnection agreement.

(2422) “Volumetric incentive payments” or “payments” means 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.

(2223) “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 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 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);

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

(e) The methodology used to calculate this energy generation will be consistent with the methodologies used by the Energy Trust of Oregon and the Oregon Department of Energy.

(f) Capacity of qualifying systems sized to provide an estimated energy generation equal to 90 percent of the rolling average of the actual usage during the most recent 12 billing periods at the premises at which where the qualifying system will be installed. If this average cannot be determined, the nameplate capacity can be no more than the premises have less than 90 percent of a rolling average of three year's 12 billing periods of actual usage by a, the electric company may use the actual usage of a similarly-situated customer, as determined by the electric company.

*Explanation: Staff proposal.*

(fg) For new construction, the qualifying systems shall be sized to provide an estimated energy generation equal to 90 percent of the estimated annual load as determined by a the utility electric company provided load estimation document.

*Explanation: Suggestion to use existing utility tools to determine expected load.*

(h) For agricultural customers, if the most recent 12 billing periods is not representative of actual average usage, the qualifying system may be sized to meet 90 percent of the usage for any 12 consecutive billing periods within the last three years.

*Explanation: Suggested addition from previous workshop*

(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, 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 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 contract term; and these 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 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 Solar Capacity Standard.

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 the net metering option of the volumetric pilot programs must connect their systems to the customer load side of their meter.

(b) Retail electricity consumers ~~required to choose~~ participating in the volumetric incentive rate bidding option of the pilot program must connect into ~~the~~ a distribution feeder that services the ~~consumer at the property~~ consumer's retail electric service at the property. The point of common coupling may be located on the load side of the retail customer's existing electric service.

*Explanation: 1) In some situations interconnecting into the distribution feeder is not the most cost-effective method of interconnection for the utility and for the consumer. Unclear as to the reason for initial rule requirement. 2) When the bidding option is extended to medium systems, interconnection into the distribution feeder will potentially add additional cost for the utility and the consumer for the installation of a medium-scale system. 3) Conforms to net metering.*

(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 PaymentsPayment Requirements

(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 payment 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 to the qualifying assignee within 45 days from the last day of the retail electricity consumer's prior billing period.

(4) Retail electricity consumers may request that:

(a) ~~Payments be paid directly to the retail electricity consumer; the retail electricity consumer will~~ The retail electricity consumer be paid directly 100 percent of the volumetric incentive rate payment and continue to receive a standard monthly bill for electricity purchased under the tariff;  
or

(b) Payments for energy generated be netted against the retail electricity consumer's standard monthly bill and the retail electricity consumer receive or pay the resulting amount; or

(c) The qualified assignee identified on the standard contract be paid 100 percent of the volumetric incentive rate payment and the retail electricity consumer be billed separately for the retail electricity consumer's monthly bill.

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

*Explanation: Moved from 860-084-0250. Language clean up proposed at first workshop.*

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

*Explanation: The cost of processing a check in these situations is more than the amount of the payment being made to the consumer or third party. In order to minimize administrative expense we propose to only process payments when the total credit 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 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.~~

*Explanation: Staff change; covered by 860-084-0160(1).*

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

#### **860-084-0160**

##### **Measurement of Capacity under the Solar Photovoltaic Pilot Program**

(1) For purposes of the Solar Photovoltaic Pilot Program, the capacity of solar photovoltaic energy is 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

**860-084-0170**

**Distributing Solar Photovoltaic Pilot Capacity by Electric Company**

- (1) Each electric company will receive a share of the total solar photovoltaic pilot program capacity as established by Commission order.
- (2) An electric company may not solicit or accept additional capacity reservations for a solar photovoltaic pilot program once the company reaches 100 percent of its allocated solar photovoltaic pilot capacity limit.
- (3) The Commission may consider requests to adjust each electric company's solar photovoltaic pilot capacity limit by changing the allocation of the total solar photovoltaic pilot program capacity from ~~those~~that established at pilot program initiation.

*Explanation: Housekeeping change.*

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 its total allocated capacity limit 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 that is attached to associated with a single meter at the retail electricity consumer's premise.

*Explanation: To conform to net metering and avoid cases of virtual metering. Includes edits proposed at first workshop*

(2) Three size classes of qualifying systems are established and defined by a range of nameplate capacity; the 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) 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) An electric company must allocate certain percentages of its pilot capacity allocation for small-scale, medium-scale, and large-scale capacity systems as directed by Commission order.

(5) 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) Annual capacity reservations shall be made as follows:

(a) For small-scale systems: 100 percent of the allocated capacity will be awarded to the net metering option by (i) lottery or (ii) first come first served, as otherwise directed by Commission Order.

(b) For medium-scale systems: (i) 50 percent of the allocated capacity will be awarded to the net metering option by lottery and (ii) 50 percent of the allocated capacity will be awarded by competitive bidding, or as otherwise directed by Commission Order.

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

~~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,~~

*Explanation: Staff change with revisions proposed by utilities.*

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

*Explanation: (a) is in contradiction of the language in 860-084-0170(2) directing the electric company to stop collecting applications when the capacity is fully reserved.*

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

*Explanation: Staff change.*

(3) The following will govern capacity distributed through a lottery:

(a) Electric companies must conduct a lottery-based capacity reservation process on April 1<sup>st</sup> and October 1<sup>st</sup> during each of the remaining pilot years.

(b) Electric companies must collect reservation applications for 24 hours a period to be determined by Commission order before selecting winning participants.

(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 business days of this notification. Electric companies then have 15 business days to confirm that reservation applications conform to all program rules.

~~(2) Unless otherwise directed by Commission order, capacity reservations for large-scale systems are awarded on the basis of competitive bidding. d) If capacity remains available after the lottery, then the remaining capacity will be awarded on a first come, first served basis until 90 days prior to the next capacity reservation period or as otherwise directed by Commission order. Remaining capacity will roll over to the next capacity reservation period.~~

*Explanation: Proposed for lottery.*

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

(a) Electric companies must issue a Request for Proposal for (i) large-scale bid option systems no later than 30 business days prior to the start of each pilot year. April 1<sup>st</sup> of each pilot year and (ii) medium-scale bid option systems no later than 30 business days prior to October 1<sup>st</sup> of each pilot year [EA1].

(b) Electric companies must set the bidder response deadline for (i) large-scale bid option systems no later than the first business day of April 1<sup>st</sup> each pilot year and (ii) for medium-scale bid option systems no later than October 1<sup>st</sup> 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 appropriate bid option~~ enrollment window as defined by 860-084-0195 (4)(a).

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

*Explanation: Rule changes are designed to reflect the Commission Order 11-089 released on Mar 17, 2011 adopting the Joint Utilities Proposal, Feb 28, 2011 pg 6, where distribution of capacity for medium systems alternates between RFP and lottery.*

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

*Explanation: Additional deposit amount requested by solar vendors during first workshop to prevent gaming.*

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

*Explanation: Designed to prevent gaming during the lottery or bidding process.*

(7) A capacity reservation starts when the applicant receives electric company sends confirmation from the electric company that capacity was awarded.

*Explanation: Made as a separate item to apply to both lottery and first-come first served.*

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**

A retail electricity consumer who has made a capacity reservation and who has executed all required agreements with the electric company shall be paid the effective volumetric incentive rate effective at the time of enrollment for 100 percent of the eligible energy generated. Capacity

reservation applications and standard contracts must provide the volumetric incentive rate in effect at the capacity reservation date.

~~(1) A consumer that has made a capacity reservation under the net metered option may receive the volumetric incentive rate in place at the time of the consumer's capacity reservation for 100 percent of the eligible energy generated by the consumer's system. Capacity reservation applications and standard contracts provided to retail electricity consumers at 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.~~

*Explanation: Staff change.*

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~~ Expiration**

(1) The capacity reservation for net metering and bid option pilot programs 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 as described in OAR 860-084-0010.

*Explanation: Works in conjunction with 860-084-0010(8) to clarify that utility delay in installation of net metering equipment will not impact participation.*

~~(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.~~

*Explanation: 860-084-0230(3) requires that an interconnection application be filed within two months. So 210(2) states that a large system will have 8 months (2 months for interconnection application plus 6 months after filing) or 12 months whichever is longer. So rule 0230(1) should be expanded to encompass all reservations and (2) should be removed.*

~~(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.~~

*Explanation: General clean up moving data collection rules into 860-084-0400 Data collection section(4).*

(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 and Announcements**

(1) Each electric company must announce the available capacity for the upcoming capacity reservation period after the previous period ends and solicit applications no later than two months before the start of the upcoming capacity reservation period.

*Explanation: The current capacity reservation period must close and the excess capacity rolled over before the utility can announce the available capacity for the upcoming capacity enrollment period.*

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

(23) Capacity allocated to small-scale, medium-scale, and large-scale systems that is not reserved in a capacity reservation period must be added to the available capacity for the respective size systems in the next capacity reservation period.

(34) 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 bid 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 includes 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).~~

*Explanation: General clean up, requests repetitive information provided during capacity reservation. (4)*

(3) 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

### 860-084-0240

#### Standard Contracts

(1) Each electric company must file, for Commission approval, a separate standard contract for the net metering and competitive bidding volumetric incentive rate programs as part of its volumetric incentive rate tariff filing.

(a) The standard contract will establish an agreement between the electric company and a retail electricity consumer under which the electric company will make volumetric incentive rate payments to participants for energy generated by solar photovoltaic systems installed in the service territory of the electric company for a 15-year period. After the initial 15-year period, the electric company may pay its prevailing avoided cost for energy generated by the solar photovoltaic systems.

(b) Contracts under the solar photovoltaic pilot programs may only be issued to retail electricity consumers of the electric company; these consumers must be eligible to participate in the pilots.

(2) Standard Contracts must include at least the following elements:

(a) Name and address of the retail electricity consumer and the installation address of the eligible system;

(b) Each standard contract must be based on the volumetric incentive rate (bid option) or volumetric incentive rate formula (net metering option) in place at the time of the capacity reservation for the retail electricity consumer;

(c) Each standard contract must require a retail electricity consumer installing capacity under the net metered option to transfer generation in excess of eligible energy to the low income bill assistance program of the electric company.

(d) Standard contracts must provide for certification by the retail electricity consumer under the competitive bidding option that they are eligible to make wholesale sales of energy at market-based rates;

*Explanation: Clean up for extending competitive bidding option to medium-scale systems.*

(de) Each standard contract must include a date of initiation and a date of contract expiration. If mutually agreed upon by the electric company and consumer, the contract may exceed 15 years;

(ef) Each standard contract must include a section to record retail electricity consumer certifications that:

(A) Any investor in the qualifying system has not accepted or will not accept incentives from the Energy Trust of Oregon or Oregon state residential or business tax credits for the qualifying system covered by the contract, and

(B) The system and its individual components are new and have not been previously installed, and meet quality, reliability, and installation criteria approved by the Commission;

(fg) Each standard contract must include a provision under which the retail electricity consumer agrees that the electric company can release lists of all participants in the pilot programs to the Oregon Department of Revenue, the Oregon Department of Energy, the Public Utility

Commission, and the Energy Trust of Oregon. ~~The standard contract must contain descriptions of the confidentiality requirements that those receiving this information must follow;~~

*Explanation: Removed the last sentence because there is likely no confidentiality protection for this information.*

(h) Each standard contract must require the retail electricity consumer to agree to complete up to three surveys on the effectiveness of the pilot programs in order to remain eligible for participation in the pilot program. Each standard contract must also include the retail electricity consumer's agreement that the electric company may release information obtained from the surveys to the Commission and the Energy Trust of Oregon;

(hi) Monthly payments must be made directly to the retail electricity consumer or to a qualifying assignee;

(ij) Each standard contract must allow a retail electricity consumer to assign payments to a single qualifying assignee. Contracts must allow the retail electricity consumer to change the assignee at any time during the contract term;

(jk) Each standard contract must allow the transfer of an existing retail electricity consumer's contract under the pilot program to another retail electricity consumer eligible to contract with the electric company under the pilot program, consistent with OAR 860-084-0130(3).

(kl) Disclosure that payments under the volumetric incentive rate bid option may be taxable as income under Oregon and Federal Tax law and that an eligible system may be subject to property tax in the State of Oregon;

(lm) Name and business address of solar installer or contractor, name and business address of system financier, and description of the photovoltaic equipment package;

(mn) For net metered systems, participants must certify that the system is sized such that their qualifying system complies with OAR 860-084-0100(2)(e).

(3) A retail electricity consumer found by the Commission to have made a false certification is no longer eligible for the Volumetric Incentive Rate Pilot Programs and any contract entered under the Volumetric Incentive Rate Pilot Programs is void.

Stat Auth: ORS 757.360 - 757.380

Stats. Implemented: ORS 757.360 - 757.380

Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

~~860-084-0250~~

### **Billing and Payment Requirements**

~~(1) Volumetric incentive payments for payable energy must be paid no later than 45 days from the last day of the retail electricity consumer's billing period. Retail electricity consumers may request that:~~

~~(a) Payments be paid directly to the consumer; the consumer will continue to receive a standard monthly bill for electricity purchased under the tariff; or~~

~~(b) Payments for energy generated be netted against the retail electricity consumer's standard monthly bill and the retail electricity consumer receive or pay the resulting amount; or~~

~~(c) The qualified assignee identified on the standard contract be paid 100 percent of the volumetric incentive rate payment and the retail electricity consumer be billed separately for the retail electricity consumer's monthly bill.~~

~~(2) The retail electricity consumer is responsible for the minimum monthly charge and other non-volumetric charges on the standard monthly bill.~~

[Moved to section -0140 Assignment of Payments and revised.]

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 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 is compatible with the equipment package,

(B) Testing and listing of the solar photovoltaic generator being utilized, 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 eligible system to an electric company's distribution system without 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. 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.

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

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

(b) The type and specifications of the complete equipment package of the 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 the solar photovoltaic energy system;

(e) Equipment certifications;

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

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

(5) Within three business days after receiving an application for Level 1, Level 2, or Level 3 interconnection review, the electric company must provide written or electronic mail notice to the applicant that it received the application and whether the application meets 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 week exceeds 20, the electric company may notify customers by electronic mail that the company will respond within ten business days.

(6) Each electric company must designate an employee or office from which an applicant can obtain basic application forms and information through an informal process; this process must be outlined and posted on the electric company's website. On 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 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 information, except to the extent that providing such 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

### **860-084-0280**

#### **Interconnection Cost Responsibility**

- (1) For a Level 1 interconnection review, the electric company may not charge an application, or other fee, unless otherwise directed by the Commission. However, if an application for Level 1 interconnection review is denied because it does not meet the requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure, the electric company may impose a fee for the resubmitted application.
- (2) For a Level 2 interconnection review, the electric company may charge fees of up to \$50.00 plus \$1.00 per kilowatt of the qualifying system's capacity, plus the reasonable cost of any required minor modifications to the electric distribution system or additional review. Costs for such minor modifications or additional review will be based on the electric company's non-binding, good faith estimates and the ultimate actual installed costs. Costs for engineering work done as part of any additional review will not exceed \$100.00 per hour. An electric company may adjust the \$100.00 hourly rate once in January of each year to account for inflation and deflation as measured by the Consumer Price Index.
- (3) For a Level 3 interconnection review, the electric company may charge fees of up to \$100.00 plus \$2.00 per kilowatt of the qualifying system's capacity, as well as charges for actual time spent on any required impact or facilities studies. Costs for engineering work done as part of an impact study or interconnection facilities study will not exceed \$100.00 per hour. An electric company may adjust the \$100.00 hourly rate once in January of each year to account for inflation and deflation as measured by the Consumer Price Index. If the electric company must install facilities in order to accommodate the interconnection of the qualifying system, the cost of such facilities will be the responsibility of the applicant.
- (4) Interconnected net metered systems must be equipped with two meters: metering equipment that can measure the flow of electricity in both directions (complying with ANSI C12.1 standards and OAR 860-023-0015) to replace the existing customer meter, and a second meter that can measure the total output of the qualifying system. Interconnected stand-alone systems using the bidding process must be equipped with metering equipment that can measure the flow of electricity in both directions (complying with ANSI C12.1 standards and OAR 860-023-0015). The electric company will install the required metering equipment at the electric company's expense for both the net metered and stand-alone system.

(a) The electric company constructs, owns, operates, and maintains all meters and applicable interconnection facilities on the company side of the retail electric consumer's meter, including, the second meter installed to measure the total output of the qualifying system.

(b) The electric company must charge an additional monthly service charge to the retail electricity customer for the additional meter used to measure the total output of the qualifying system, as established by Commission order.

(5) An eligible participant who is reinstalling a contracted system and is eligible to continue in the solar photovoltaic pilot program under an existing standard contract must pay the expense of interconnection facilities, required additions or modifications to the electric distribution system, interconnection review, or system upgrades in the new location as applicable.

Stat Auth: ORS 757.360 - 757.380

Stats. Implemented: ORS 757.360 - 757.380

Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

#### **860-084-0300**

##### **Insurance**

A contracted system must obtain liability insurance in order to interconnect with the electric company's distribution system.

Stat Auth: ORS 757.360 - 757.380

Stats. Implemented: ORS 757.360 - 757.380

Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

#### **860-084-0310**

##### **Level 1 System Interconnection Review**

(1) An eligible system is eligible for Level 1 interconnection review if:

(a) The facility is inverter-based; and

(b) The facility has a capacity of 25 kilowatts or less.

(2) The electric company must approve interconnection under the Level 1 interconnection review procedure if:

(a) The aggregate generation capacity on the distribution circuit to which the eligible system will interconnect, including the capacity of the eligible system, may not contribute more than 10 percent to the distribution circuit's maximum fault current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling;

(b) An eligible system's point of common coupling may not be on a transmission line, a spot network, or an area network;

(c) If an eligible system is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the circuit, including that of the eligible system, may not exceed 15 percent of the circuit's total annual peak load, as most recently measured at the substation;

(d) If an eligible system is to be connected to a single-phase shared secondary, the aggregate generation capacity connected to the shared secondary, including the eligible system, may not exceed 20 kilovolt-amperes; and

(e) If a single-phase eligible system is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the eligible system may not create a current imbalance between the two sides of the 240 volt service of more than 20 percent of nameplate rating of the service transformer.

(3) Within 10 business days after the electric company notifies a Level 1 applicant that the application is complete, the electric company must notify the applicant that:

(a) The eligible system meets all applicable criteria and the interconnection is approved upon installation of any required meter upgrade, completion of any required inspection of the facility, and execution of an interconnection agreement; or

(b) The eligible system has failed to meet one or more of the applicable criteria and the interconnection application is denied.

(4) If an electric company does not notify a Level 1 applicant in writing or by electronic mail whether the interconnection is approved or denied within 20 business days after the receipt of an application, the interconnection will be deemed approved. Interconnections approved under this section remain subject to section (7) of this rule.

(5) Within three business days after sending the notice to an applicant that the proposed interconnection meets the Level 1 requirements, an electric company must notify the applicant:

(a) Whether an inspection of the eligible system for compliance with these interconnection rules is required prior to the operation of the system; and

(b) That an interconnection agreement is required for the eligible system. The electric company must also execute and send to the applicant a Level 1 interconnection agreement, unless the applicant has already submitted such an agreement with its application for interconnection.

(6) On receipt of an executed interconnection agreement from the applicant and satisfactory completion of any required inspection, the electric company must approve the interconnection, conditioned on compliance with all applicable building codes.

(7) The retail electric customer must notify the electric company of the anticipated start date for operation of the eligible system at least five business days prior to starting operation, either through the submittal of the interconnection agreement or in a separate notice. If the electric company requires an inspection of the eligible system, the applicant may not begin operating the facility until satisfactory completion of the inspection.

(8) If an application for Level 1 interconnection review is denied because it does not meet one or more of the applicable requirements in this rule, an applicant may resubmit the application under the Level 2 or Level 3 interconnection review procedure, as appropriate.

Stat Auth: ORS 757.360 - 757.380

Stats. Implemented: ORS 757.360 - 757.380

Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

### **860-084-0320**

#### **Level 2 System Interconnection Review**

(1) An electric company must apply the following Level 2 interconnection review procedure for an application to interconnect an eligible system that meets the following criteria:

(a) The facility has a capacity of 500 kilowatts or less; and

(b) The facility does not qualify for or failed to meet applicable Level 1 interconnection review procedures.

(2) The electric company must approve interconnection under the Level 2 interconnection review procedure if:

(a) The aggregate generation capacity on the distribution circuit to which the eligible system will interconnect, including the capacity of the eligible system, will not cause any distribution protective equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or customer equipment on the electric distribution system, to exceed 90 percent of the short circuit interrupting capability of the equipment. In addition, an eligible system may not be connected to a circuit that already exceeds 90 percent of the short circuit interrupting capability, prior to interconnection of the facility;

(b) If there are posted transient stability limits to generating units located in the general electrical vicinity of the proposed point of common coupling, including, but not limited to within three or four transmission voltage level busses, the aggregate generation capacity, including the eligible system, connected to the distribution low voltage side of the substation transformer feeding the distribution circuit containing the point of common coupling may not exceed 10 megawatts;

(c) The aggregate generation capacity connected to the distribution circuit, including the eligible system, may not contribute more than 10 percent to the distribution circuit's maximum fault

current at the point on the high voltage (primary) level nearest the proposed point of common coupling;

(d) If an eligible system is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the electric distribution system by non-electric company sources, including the eligible system, may not exceed 15 percent of the total circuit annual peak load. For the purposes of this subsection, annual peak load will be based on measurements taken over the 12 months previous to the submittal of the application, measured for the circuit at the substation nearest to the eligible system;

(e) If an eligible system is to be connected to three-phase, three wire primary electric company distribution lines, a three-phase or single-phase generator must be connected phase-to-phase;

(f) If an eligible system is to be connected to three-phase, four wire primary electric company distribution lines, a three-phase or single-phase generator must be connected line-to-neutral and must be effectively grounded;

(g) If an eligible system is to be connected to a single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the eligible system, may not exceed 20 kilovolt-amperes;

(h) If an eligible system is single-phase and is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the eligible system may not create a current imbalance between the two sides of the 240 volt service that is greater than 20 percent of the nameplate rating of the service transformer;

(i) An eligible system's point of common coupling may not be on a transmission line; and

(j) If an eligible system's proposed point of common coupling is on a spot or area network, the interconnection must meet the following additional requirements:

(A) For an eligible system that will be connected to a spot network circuit, the aggregate generation capacity connected to that spot network from the eligible system, and any generating facilities, may not exceed five percent of the spot network's maximum load;

(B) For an eligible system that utilizes inverter-based protective functions, which will be connected to an area network, the eligible system, combined with any other generating facilities on the load side of network protective devices, may not exceed 10 percent of the minimum annual load on the network, or 500 kilowatts, whichever is less. The percent of minimum load must be calculated based on the minimum load occurring during an off-peak daylight period; and

(C) For an eligible system that will be connected to a spot or an area network that does not utilize inverter-based protective functions, or for an inverter-based eligible system that does not meet the requirements of paragraphs (A) or (B) of this subsection, the eligible system must utilize low forward power relays or other protection devices that ensure no export of power from the eligible

system, including inadvertent export (under fault conditions) that could adversely affect protective devices on the network.

(3) Within 15 business days after notifying a Level 2 applicant that the application is complete, the electric company must perform an initial review of the proposed interconnection to determine whether the interconnection meets the applicable criteria. During this initial review, the electric company may, at its own expense, conduct any studies or tests it deems necessary to evaluate the proposed interconnection and provide notice to the applicant of one of the following determinations:

(a) The eligible system meets the applicable requirements and that interconnection will be approved following any required inspection of the facility and fully executed interconnection agreement. Within three business days after this notice, the electric company must provide the applicant with an executable interconnection agreement;

(b) The eligible system failed to meet one or more of the applicable requirements, but the electric company determined that the eligible system may be interconnected consistent with safety, reliability, and power quality. In this case, the electric company must notify the applicant that the interconnection will be approved following any required inspection of the facility and fully executed interconnection agreement. Within five business days after this notice, the electric company must provide the applicant with an executable interconnection agreement; or

(c) The eligible system failed to meet one or more of the applicable requirements, and that additional review would not enable the electric company to determine that the eligible system could be interconnected consistent with safety, reliability, and power quality. In such a case, the electric company must notify the applicant that the interconnection application has been denied and must provide an explanation of the reason(s) for the denial, including a list of additional information, or modifications to the eligible system, or both, which would be required in order to obtain an approval under Level 2 interconnection procedures.

(4) An applicant that receives an interconnection agreement under subsection (3)(a) or (3)(b) of this rule must:

(a) Execute the agreement and return it to the electric company at least 10 business days prior to starting operation of the eligible system (unless the electric company does not so require); and

(b) Indicate to the electric company the anticipated start date for operation of the eligible system.

(5) The electric company may require an electric company inspection of an eligible system for compliance with these solar photovoltaic rules prior to operation, and may require and arrange for witness of commissioning tests as set forth in IEEE standards. The electric company must schedule any inspections or tests under this section promptly and within a reasonable time after submittal of the application. The applicant may not begin operating the eligible system until after the inspection and testing is completed.

(6) Approval of interconnected operation of any Level 2 eligible system must be conditioned on all of the following occurring:

(a) Approval of the interconnection by the electrical code official with jurisdiction over the interconnection;

(b) Successful completion of any electric company inspection or witnessing of commissioning tests, or both, requested by the electric company; and

(c) Passing of the planned start date provided by the applicant.

(7) If an application for Level 2 interconnection review is denied because it does not meet one or more of the requirements of this rule, the applicant may resubmit the application under the Level 3 interconnection review procedure.

Stat Auth: ORS 757.360 - 757.380

Stats. Implemented: ORS 757.360 - 757.380

Hist.: PUC 2-2010, f. & cert. ef. 6-1-10

**860-084-0330**

### **Level 3 System Interconnection Review**

(1) The electric company must apply the Level 3 review procedure for an application to interconnect an eligible system that meets the following criteria:

(a) The facility has a capacity of 500 kilowatts or less; and

(b) The facility does not qualify or failed to meet Level 2 interconnection review procedures.

(2) Following receipt of a Level 3 application and within three business days of a request from the applicant, the electric company must provide pertinent information to the applicant, such as the available fault current at the proposed interconnection location, the existing peak loading on the lines in the general vicinity of the eligible system, and the configuration of the distribution lines at the proposed point of common coupling.

(3) Within seven business days after receiving a complete application for Level 3 interconnection review, the electric company must conduct an impact study which will include a non-binding, good faith cost estimate. The impact study must be conducted in accordance with good utility practice and must:

(a) Detail the impacts to the electric distribution system that would result if the eligible system were interconnected without modifications to either the eligible system or to the electric distribution system;

(b) Identify any modifications to the electric company's electric distribution system that would be necessary to accommodate the proposed interconnection; and

(c) Focus on power flows and utility protective devices, including control requirements; and

(d) Include the following elements, as applicable:

(A) A load flow study;

(B) A short-circuit study;

(C) A circuit protection and coordination study;

(D) The impact on the operation of the electric distribution system;

(E) A stability study, along with the conditions that would justify including this element in the impact study;

(F) A voltage collapse study, along with the conditions that would justify including this element in the impact study.

(4) The electric company must complete the impact study and must notify the applicant within 30 calendar days of one of the following results:

(a) Only minor modifications to the electric company's electric distribution system are necessary to accommodate interconnection. In such a case, the electric company will send the applicant an interconnection agreement that details the scope of the necessary modifications and a non-binding, good faith estimate of its cost; or

(b) Substantial modifications to the electric company's electric distribution system are necessary to accommodate the proposed interconnection. In such a case, the electric company must provide a non-binding, good faith estimate of the cost of the modifications, which must be accurate to within plus or minus 25 percent. In addition, the electric company must offer to conduct, at the applicant's expense, an interconnection facilities study that must identify the types and cost of equipment needed to safely interconnect the applicant's eligible system.

(5) If the proposed interconnection may affect electric transmission or delivery systems other than those controlled by the electric company, operators of those other systems may require additional studies to determine the potential impact of the interconnection on those systems. If such additional studies are required, the electric company must coordinate the studies but is not responsible for their timing.

(6) If an applicant requests a facilities study under subsection (4)(b), the electric company must provide an interconnection facilities study agreement. The interconnection facilities study agreement must describe the work to be undertaken in the interconnection facilities study and must include a non-binding, good faith estimate of the cost to the applicant for completion of the

study. Upon the execution by the applicant of the interconnection facilities study agreement, the electric company will conduct an interconnection facilities study to identify the facilities necessary to safely interconnect the eligible system with the electric company's electric distribution system, and to propose a non-binding, good faith estimate of the cost of those facilities and the time required to build and install those facilities.

(7) Upon completion of an interconnection facilities study, the electric company must provide the applicant with the results of the study and an executable interconnection agreement. The agreement must list the conditions and facilities necessary for the eligible system to safely interconnect with the electric company's electric distribution system, and must include a non-binding, good faith estimate of the cost of those facilities and the estimated time required to build and install those facilities.

(8) If the applicant wishes to interconnect, it must execute the interconnection agreement and return it to the electric company at least 10 business days prior to starting operation of the eligible system (unless the electric company does not so require), pay a deposit of not more than 50 percent of the estimated cost of the facilities identified in the interconnection facilities study, complete installation of the eligible system, and agree to pay the public utility the actual installed cost of the facilities needed to interconnect as identified in the interconnection facilities study.

(9) Within 15 business days after notice from the applicant that the eligible system has been installed, the electric company must inspect the eligible system and must arrange to witness any commissioning tests required under IEEE standards. The electric company and the applicant must select a date by mutual agreement for the electric company to witness commissioning tests.

(10) If the eligible system satisfactorily passes required commissioning tests, if any, the electric company must notify the applicant in writing, within three business days after the tests, of one of the following:

(a) The interconnection is approved and the eligible system may begin operation; or

(b) The interconnection facilities study identified necessary construction that has not been completed, the date upon which the construction must be completed, and the date when the eligible system may begin operation.

(11) If the commissioning tests are not satisfactory, the applicant must repair or replace the unsatisfactory equipment to reschedule a commissioning test.

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 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

**860-084-0350**

### **Requirements after Approval of a Solar Photovoltaic Interconnection**

- (1) Once a contracted system has been approved under these solar photovoltaic interconnection rules, the electric company may not require a retail electricity consumer to test or perform maintenance on its facility except for:
  - (a) An annual test in which the contracted system is disconnected from the electric company's equipment to ensure that the inverter stops delivering power to the grid;
  - (b) Any manufacturer-recommended testing or maintenance;

(c) Any post-installation testing necessary to ensure compliance with IEEE standards or to ensure safety; and

(d) Testing required if the retail electricity customer replaces a major equipment component that is different from the originally installed model.

(2) When a contracted system undergoes maintenance or testing in accordance with the requirements of these solar photovoltaic interconnection rules, the retail electricity consumer must retain written records for seven years documenting the maintenance and the results of testing.

(3) An electric company has the right to inspect a contracted system after interconnection approval is granted, at reasonable hours and with reasonable prior notice to the retail electricity consumer. If the electric company discovers that the contracted system is not in compliance with the requirements of these solar photovoltaic interconnection rules, the electric company may require the retail electricity consumer to disconnect the contracted system until compliance is achieved.

(4) The retail electricity customers' electric service may be disconnected by the public utility entirely if the contracted system must be physically disconnected for any reason.

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 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 1 to March 31. The default generation year for a retail electricity consumer on a seasonal adjusted billing period (e.g., agricultural pumping) agricultural, pumping, or irrigation tariff schedule is November 1 to October 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.

*Explanation: Customers on a seasonal billing period such as irrigation customers' take the risk of losing excess kWh's that have been banked due to no usage during the months of November through April.*

(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 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 generation of electricity 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.

*Explanation: Change language to use defined term.*

~~(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 Request for Proposal process approved by the Commission.~~

*Explanation: Included in 860-084-0195(4).*

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

#### 860-084-0370

##### **Resource Value**

(1) On November 1 of 2010, 2012, and 2014, each electric company must file, for review in a Commission proceeding, its estimate of the 15-year levelized resource value for the company, along with supporting work papers.

(2) For the purpose of determining payments to retail electricity consumers at the end of the 15-year contract term, each electric utility must file, beginning January 1, 2025, and every January 1 thereafter, its estimates of the annual resource value for the company for each of the next five years.

(3) A resource value may be established for small-scale, medium-scale, and large-scale systems and may be differentiated by remote location or location central to the system load, as directed 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

#### **860-084-0380**

##### **Cost Recovery and Rate Impacts**

(1) An electric company may recover in rates all costs prudently incurred to offer the pilot program established under these rules, including, but not limited to, costs not otherwise reflected in rates for electricity usage related to:

(a) Payments for the output of contracted systems, and

(b) Data collection and analysis for assessment of the company's pilot program.

(2) On November 1 of 2010, 2012, and 2014, and as otherwise directed by the Commission, each electric company must file for review, in a Commission proceeding, its estimates of the rate impact of pilot program participation, for each customer class, along with supporting work papers.

(3) The Commission may establish total generator nameplate capacity limits for an electric company so that the rate impact of the pilot program for any customer class does not exceed 0.25 percent of the company's revenue requirement for the class in any year.

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

#### **860-084-0390**

##### **Cost Recovery Mechanism**

An electric company may request recovery of prudently incurred costs associated with compliance with the solar photovoltaic pilot program requirements. Mechanisms for recovery of cost associated with compliance will be established 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

##### **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 required to execute an 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 information concerning:

(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; and

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

*Explanation: Clean up combining 860-084-0210(3) regarding data collection in this section.*

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 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 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 listing 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) Nameplate capacity of installed system;
- (e) Name, business name and business address of contractor installing system;
- (f) ~~Financer of system;~~
- (g) In-service date; and
- (h) Date of certification of Compliance.

*Explanation: Confidentiality needs to be broadly reexamined based on public records disclosure decision.*

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) Each electric company must provide the data collected pursuant to 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, bi-annually~~quarterly~~, 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 use of solar photovoltaic energy systems, making solar photovoltaic systems more affordable, reducing the cost of incentives to utility customers, and promoting 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.