



Public Service Commission

-M-E-M-O-R-A-N-D-U-M-

DATE: September 24, 2001
TO: Bill Berg
 Joann Chase
 Ignacio Ortiz
 Katrina Tew
FROM: Chris Moore *CM*
RE: Docket No. 010982-EU, Proposed Rule 25-6.065, Interconnection of Small Photovoltaic Systems

Attached is a copy of a letter from a consumer, LaVerne Conway, to Chairman Jacobs providing a copy of the Washington law on net metering and the Washington Utilities and Transportation Commission order and staff recommendation on that subject. In short, Washington law provides for a single meter that is capable of reversing directions, unless the Commission determines an additional meter is necessary and determines how the cost of the additional equipment shall be allocated. Staff's proposal in the above docket is to allow utilities to install additional metering equipment at their own expense; otherwise, a single meter and net metering is provided for.

The photovoltaic interconnection rule proposal is Item 3 on the Commission's agenda for October 2, 2001, and I am certain that the issue of net metering and whether to allow the utilities the option of installing a second meter will be one discussed by participants. Please let me know if you have any questions.

cc: Lee Colson
 Jim Dean
 Melinda Butler (w/o attachment)
 Records Section

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FPSC-COMMISSION CLERK

September 6, 2001
01-0253 SEP 19

Chairman E. Leon Jacobs, Jr.
Florida Public Service Commission
Tallahassee, FL.

RECEIVED

SEP 10 2001

FLORIDA PUBLIC SERVICE COMMISSION
Chairman Jacobs

Dear Mr. Jacobs:

It is my understanding that the Commission will soon consider a proposed rule regarding the interconnection of small photovoltaic systems. (Docket No. 016982-EI). I hope the Commission will move without further delay in this important matter.

As I noted in my earlier letter, my daughter will soon be ready to install her photovoltaic roof, and would like to hook up to the grid as soon as possible.

I have attached some documents that I received from the Chairwoman of the State of Washington Commission, which you may find useful.

Surely, it is time for the Sunshine State to encourage in every way, the full use of our abundant natural resources.

Sincerely,

Subern Conway

528 E. Verona Ave
Tallahassee, FL 32301

Net Metering of Electricity

Chapter 80.60

Chapter 80.60

NET METERING OF ELECTRICITY

Sections	
80.60.005	Findings.
80.60.010	Definitions.
80.60.020	Available on first-come, first-served basis—Interconnected metering systems allowed—Charges to customer-generator.
80.60.030	Net energy measurement—Required calculation—Unused credit.
80.60.040	Safety, power quality, and interconnection requirements—Customer-generator's expense—Commission may adopt additional requirements.

80.60.005 Findings. The legislature finds that it is in the public interest to:

- (1) Encourage private investment in renewable energy resources;
- (2) Stimulate the economic growth of this state; and
- (3) Enhance the continued diversification of the energy resources used in this state. [1998 c 318 § 1.]

80.60.010 Definitions. The definitions in this section apply throughout this chapter unless the context clearly indicates otherwise.

- (1) "Commission" means the utilities and transportation commission.
- (2) "Customer-generator" means a user of a net metering system.
- (3) "Electrical company" means a company owned by investors that meets the definition of RCW 80.04.010.
- (4) "Electric cooperative" means a cooperative or association organized under chapter 23.86 or 24.06 RCW.
- (5) "Electric utility" means any electrical company, public utility district, irrigation district, port district, electric cooperative, or municipal electric utility that is engaged in the business of distributing electricity to retail electric customers in the state.
- (6) "Irrigation district" means an irrigation district under chapter 87.03 RCW.
- (7) "Municipal electric utility" means a city or town that owns or operates an electric utility authorized by chapter 35.92 RCW.
- (8) "Net metering" means measuring the difference between the electricity supplied by an electric utility and the electricity generated by a customer-generator that is fed back to the electric utility over the applicable billing period.
- (9) "Net metering system" means a fuel cell or a facility for the production of electrical energy that:
 - (a) Uses as its fuel either solar, wind, or hydropower;
 - (b) Has a generating capacity of not more than twenty-five kilowatts;
 - (c) Is located on the customer-generator's premises;
 - (d) Operates in parallel with the electric utility's transmission and distribution facilities; and
 - (e) Is intended primarily to offset part or all of the customer-generator's requirements for electricity.
- (10) "Port district" means a port district within which an industrial development district has been established as authorized by Title 53 RCW.
- (11) "Public utility district" means a district authorized by chapter 54.04 RCW. [2000 c 158 § 1; 1998 c 318 § 2.]

80.60.020 Available on first-come, first-served basis—Interconnected metering systems allowed—Charges to customer-generator. An electric utility:

(1) Shall offer to make net metering available to eligible customers-generators on a first-come, first-served basis until the cumulative generating capacity of net metering systems equals 0.1 percent of the utility's peak demand during 1996, of which not less than 0.05 percent shall be attributable to net metering systems that use as its fuel either solar, wind, or hydropower;

(2) Shall allow net metering systems to be interconnected using a standard kilowatt-hour meter capable of registering the flow of electricity in two directions, unless the commission, in the case of an electrical company, or the appropriate governing body, in the case of other electric utilities, determines, after appropriate notice and opportunity for comment:

- (a) That the use of additional metering equipment to monitor the flow of electricity in each direction is necessary and appropriate for the interconnection of net metering systems, after taking into account the benefits and costs of purchasing and installing additional metering equipment; and
- (b) How the cost of purchasing and installing an additional meter is to be allocated between the customer-generator and the utility;

(3) Shall charge the customer-generator a minimum monthly fee that is the same as other customers of the electric utility in the same rate class, but shall not charge the customer-generator any additional standby, capacity, interconnection, or other fee or charge unless the commission, in the case of an electrical company, or the appropriate governing body, in the case of other electric utilities, determines, after appropriate notice and opportunity for comment that:

- (a) The electric utility will incur direct costs associated with interconnecting or administering net metering systems that exceed any offsetting benefits associated with these systems; and
- (b) Public policy is best served by imposing these costs on the customer-generator rather than allocating these costs among the utility's entire customer base. [2000 c 158 § 2; 1998 c 318 § 3.]

80.60.030 Net energy measurement—Required calculation—Unused credit. Consistent with the other provisions of this chapter, the net energy measurement must be calculated in the following manner:

- (1) The electric utility shall measure the net electricity produced or consumed during the billing period, in accordance with normal metering practices.
- (2) If the electricity supplied by the electric utility exceeds the electricity generated by the customer-generator and fed back to the electric utility during the billing period, the customer-generator shall be billed for the net electricity supplied by the electric utility, in accordance with normal metering practices.
- (3) If electricity generated by the customer-generator exceeds the electricity supplied by the electric utility, the customer-generator:

- (a) Shall be billed for the appropriate customer charges for that billing period, in accordance with RCW 80.60.020; and

80.60.030

Title 80 RCW: Public Utilities

(b) Shall be credited for the excess kilowatt-hours generated during the billing period, with this kilowatt-hour credit appearing on the bill for the following billing period.

At the beginning of each calendar year, any remaining unused kilowatt-hour credit accumulated during the previous year shall be granted to the electric utility, without any compensation to the customer-generator. [1998 c 318 § 4.]

80.60.040 Safety, power quality, and interconnection requirements—Customer-generator's expense—Commission may adopt additional requirements. (1) A net metering system used by a customer-generator shall include, at the customer-generator's own expense, all equipment necessary to meet applicable safety, power quality, and interconnection requirements established by the national electrical code, national electrical safety code, the institute of electrical and electronics engineers, and underwriters laboratories.

(2) The commission, in the case of an electrical company, or the appropriate governing body, in the case of other electric utilities, after appropriate notice and opportunity for comment, may adopt by regulation additional safety, power quality, and interconnection requirements for customer-generators that the commission or governing body determines are necessary to protect public safety and system reliability.

(3) An electric utility may not require a customer-generator whose net metering system meets the standards in subsections (1) and (2) of this section to comply with additional safety or performance standards, perform or pay for additional tests, or purchase additional liability insurance. However, an electric utility shall not be liable directly or indirectly for permitting or continuing to allow an attachment of a net metering system, or for the acts or omissions of the customer-generator that cause loss or injury, including death, to any third party. [2000 c 158 § 3; 1998 c 318 § 5.]

Chapter 80.66

RADIO COMMUNICATIONS SERVICE COMPANIES

Sections

80.66.010 Scope of regulation—Filing of certain agreements.

80.66.010 Scope of regulation—Filing of certain agreements. The commission shall not regulate radio communications service companies, except that:

(1) The commission may regulate the rates, services, facilities, and practices of radio communications service companies, within a geographic service area or a portion of a geographic service area in which it is authorized to operate by the federal communications commission if it is the only provider of basic telecommunications service within such geographic service area or such portion of a geographic service area. For purposes of this section, "basic telecommunications service" means voice grade, local exchange telecommunications service.

(2) Actions or transactions of radio communications service companies that are not regulated pursuant to subsection (1) of this section shall not be deemed actions or

transactions otherwise permitted, prohibited, or regulated by the commission for purposes of RCW 19.86.170.

(3) Radio communications service companies shall file with the commission copies of all agreements with any of their affiliated interests as defined in RCW 80.16.010, showing the rates, tolls, rentals, contracts, and charges of such affiliated interest for services rendered and equipment and facilities supplied to the radio communications service company, except that such agreements need not be filed where the services rendered and equipment and facilities supplied are provided by the affiliated interest under a tariff or price list filed with the commission. [1985 c 167 § 2.]

Chapter 80.98
CONSTRUCTION

Sections

80.98.010 Continuation of existing law.
80.98.020 Title, chapter, section headings not part of law.
80.98.030 Invalidity of part of title not to affect remainder.
80.98.040 Repeals and saving.
80.98.050 Emergency—1961 c 14.

80.98.010 Continuation of existing law. The provisions of this title insofar as they are substantially the same as statutory provisions repealed by this chapter, and relating to the same subject matter, shall be construed as restatements and continuations, and not as new enactments. [1961 c 14 § 80.98.010.]

80.98.020 Title, chapter, section headings not part of law. Title headings, chapter headings, and section or subsection headings, as used in this title do not constitute any part of the law. [1961 c 14 § 80.98.020.]

80.98.030 Invalidity of part of title not to affect remainder. If any provision of this title, or its application to any person or circumstance is held invalid, the remainder of the title, or the application of the provision to other persons or circumstances is not affected. [1961 c 14 § 80.98.030.]

80.98.040 Repeals and saving. See 1961 c 14 § 80.98.040.

80.98.050 Emergency—1961 c 14. This act is necessary for the immediate preservation of the public peace, health and safety, the support of the state government and its existing public institutions, and shall take effect immediately. [1961 c 14 § 80.98.050.]

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Online Document

▼ General Info

Document Name: 99/02/10 UE 990015 PUGET SOUND ENERGY (E012) Tariff
Revision

Description: Revises tariff to promote net metering.

▼ Body

Agenda Date: February 10, 1999

Item Number:

Dockets: UE-990015 and UE-990016

Company Name: Puget Sound Energy

Staff: Doug Kilpatrick, Electric Program Coordinator

Heather Laughlin, Utilities Rate Research Specialist

Graciela Etchart, Utilities Rate Research Specialist

Recommendation:

Permit the tariff sheets for Puget Sound Energy's Schedule 150, Net Metering Services for Renewable Energy Systems, to become effective February 11, 1999, as filed in Docket UE-990015 and approve the deferral of program expenditures as requested in Docket UE-990016.

Background:

On June 11, 1998, Substitute House Bill 2773 "Net metering for certain renewable energy systems" became effective. This bill directed electric utilities to make net metering available to customer generators on a first come, first served basis until the cumulative generating capacity of net metering systems equals 0.1 percent of the utilities peak demand during 1996. This filing by Puget Sound Energy ("Company" or "PSE") seeks to comply with that mandate.

Discussion:

The Legislature very specifically established the requirements for utilities' net metering programs. The customer-generator systems eligible for net metering are fueled by either

solar, wind, or hydropower; have a generating capacity of not more than 25 kW; are located on the customer's premises; operate in parallel with the electric utilities' transmission and distribution facilities; and are intended primarily to offset part or all of the customer-generator's requirements for electricity. The companies were not allowed to assess customer charges for customer-generators that were different than those charged to other customers in the same rate class (with some exceptions) and should not require special metering equipment.

Customer-generators are required, at their own expense, to acquire all equipment necessary to meet applicable safety, power quality, and interconnection requirements established by the national electric code, national electrical safety code, the institute of electrical and electronics engineers, and underwriters laboratories.

The net energy measurement will be calculated by measuring the amount of electricity produced or consumed in the metering period in accordance with normal metering practices. If the electricity consumed is more than the customer-generator produces, the customer will be billed for the net electricity consumed. If the electricity consumed is less than the customer-generator produces, the customer will be billed for the appropriate customer charges and shall be credited for the excess kWh generated in their next billing period. At the beginning of each calendar year, any unused kWh credit accumulated during the previous year will be granted to the utility with Dockets UE-990015 and UE-990016
February 10, 1999

Page 1

no compensation owed to the customer-generator.

Considerations and Recommendations:

PSE's tariff establishes that the basic, demand, energy, and reactive power charges assess on net metering accounts for customer-generators is equal to the charge in the schedule under which the customer-generator would otherwise be normally served.

Initially, PSE had included a requirement of a \$2,000,000 liability insurance policy as a pre-condition to installing net metering to customer-generators. The Company's rationale behind this request was that there are additional risks to Company employees and third parties because of power generation on the consumer side of the meter. They claimed that their standard contracts for entities connected to their system require minimum insurance by such entities in the event of a claim relating to injuries and damages against the utility. The utility is self-insured for injuries and damages and carries a \$2,000,000 deductibility clause. To date, the power generators interconnected to the Companies have been of sufficient size that an additional insurance requirement for such amount has not been an issue. Commission staff analyzed this request in the context of the technical and cost requirements imposed by Bill 2773. Additionally, Staff consulted with experts in the topic. Details of the research conducted by Staff are contained in a Staff Report on Net Metering that is available on the Commission's website. Staff agree with the Company that customer-generators should carry some form of liability insurance and note that the

\$200,000 the Company now requires falls within the normal range of most homeowners' policies. If the Company incurs financial losses resulting from injuries or damages relating to the uncovered deductible portion of its self-insurance policy, it may file an accounting petition with the Commission for recovery of those costs from the general body of ratepayers as a legitimate expense on a deferred liability basis at the time of such loss.

PSE has identified certain program costs it expects to incur in association with offering this Net Metering Program. Those costs include program management costs, incremental customer metering costs, unbilled distribution system costs, and costs associated with tracking, record keeping, billing, and accounting for the net metering program. PSE proposes to defer the costs associated with the program by recording them in FERC Account 182.3, Other Regulatory Assets. Monthly entries will be made to reflect the Company's actual costs of running the Net Metering Program. The Company proposes to subsequently recover those deferred costs through Schedule 120, which amortizes to FERC Account 908, Customer Assistance Expenses. This tariff schedule currently imposes a surcharge applied to each kWh of electricity sales under each of the Company's electricity sales tariffs. The rates currently set in Schedule 120, recover the conservation program expenditures which are projected to be incurred for each program year, subject to annual true-up. The Company is scheduled to submit a filing on or before March 1, 1999, stating the predicted amounts to be spent on conservation programs in calendar year 1999. The Company proposes to include estimated amounts to be spent on the Net Metering Program in that report. Staff will review the costs submitted for the Net Metering Program before they are included in rates.

Staff has reviewed the projected program costs associated with the proposed Net Metering Program and found them to be reasonable estimates. Because the development of new renewable resources within PSE's system could be considered a benefit to all ratepayers, and because the language of HB 2773 suggests that benefits and costs should be considered as they apply to all ratepayers, Staff recommends the Commission issue an order approving the Company's proposed accounting treatment of its Net Metering Program.

Staff believes all aspects of the filing in Schedule 150 are consistent with the mandates of HB 2773. Therefore, Staff recommends that the tariff sheets for Schedule 150, Net Metering Services for Renewable Energy Systems, be permitted to become effective February 11, 1999, as filed. Staff also recommends that the Commission issue an order approving the Company's proposed accounting treatment for Net Metering Program costs as outlined above.

► **Creation Info**

Jeffrey Showman was the last to edit this document, on 12/13/99.

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Online Document

▼ General Info

Document Name: 99/02/10 UG 990116 PSE Tariff Revision

Description: LSN request to implement net metering

▼ Body

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Petition of PUGET SOUND ENERGY, INC. For an Order (1) Authorizing Deferral of Expenditures Incurred Under Schedule 150, Net Metering Services for Renewable Energy Systems, and (2) Authorizing Recovery in Electric Rates of Such Deferred Expenditures in Accordance with Schedule 120, Electricity Conservation Tariff Rider.	Docket No. UE-990016 ORDER
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On January 7, 1999, Puget Sound Energy, Inc., ("PSE" or "the Company") filed a petition for an order regarding the accounting and ratemaking treatment of the Company's Net Metering Services for Renewable Energy Systems Tariff ("Net Metering Program"). According to the Petition, the Net Metering Program is in the public interest and utility costs to implement and manage the program should not exceed public benefits. The Petition also states that such program costs should be recovered from all PSE customers rather than solely from the customer-generators and that Schedule 120 is an appropriate mechanism to recover such costs.

BACKGROUND

1. Washington State Substitute House Bill 2773 requires utilities to offer to make net metering available to eligible customer-generators, stating that it is in the public interest to do so.
2. Net metering means measuring the difference between the electricity supplied by an electric utility and the electricity generated by a customer-

generator that is fed back to the electric utility over the applicable billing period.

3. Concurrently with the Company's Petition, the Company filed its proposed Schedule 150, Net Metering Services for Renewable Energy Systems, which governs the Net Metering Program. The intent of the proposed Net Metering Program is to encourage the development of small-scale renewable resources.

4. On May 16, 1997, in Docket No. UE-970686, the Commission approved the Company's Schedule 120, Electricity Conservation Service. This rider provides for concurrent recovery in rates of deferred electricity conservation expenditures.

PROPOSED NET METERING PROGRAM

5. The Company's proposed Net Metering Program will allow customers who own hydroelectric, solar, or wind powered generators with a total capacity of no more than 25 kW per customer, to operate these systems in parallel with the Company's electricity facilities and measure the flow of energy in two directions. Energy production in excess of consumption on a monthly basis will be credited to the customer-generator, with this kWh credit appearing on the bill for the following billing period. On an annual basis, any remaining unused kWh credit accumulated during the previous year shall be granted to the Company, without any compensation to the customer-generator.

6. The proposed Net Metering Program will require the Company to incur certain expenses, including:

- (a) program management costs;
- (b) incremental customer metering costs necessary to implement the Net Metering Program;
- (c) unbilled distribution system costs associated with distribution services used by the customer-generator but not paid for the by the customer-generator. Unbilled distribution system costs are defined as costs associated with the use of the distribution system by the customer to "store" generation output. The cost for using this system is the amount of kWh credits stored and recovered times the functionalized distribution system cost for the customer-generator's rate classification as identified in PSE's cost unbundling report in Docket No. UE-980181;
- (d) costs associated with tracking, record keeping, billing, and accounting for the Net Metering Program.

7. The Company proposes to defer the program costs associated with the proposed Net Metering Program by recording them in FERC Account No. 182.3, Other Regulatory Assets. Monthly entries will be made to reflect the

Company's actual costs of running the Net Metering Program. On an annual basis, the generation value of any remaining unused kWh credits granted to the Company shall be used to offset program costs so deferred.

8. The Company proposes to subsequently recover those deferred costs through Schedule 120, which amortizes to FERC Account No. 908, Customer Assistance Expenses. This tariff schedule currently imposes a surcharge applied to each kWh of electricity sales under each of the Company's electricity sales tariffs. The Company anticipates including Net Metering Program costs as part of its general O&M expenses in its next general rate case, anticipated after December 31, 2001.

9. Currently the rates set forth in the Schedule 120 rider are calculated to recover the conservation expenditures which are projected to be incurred for each program year, subject to true-up during a subsequent twelve-month period based on actual conservation expenditures during the program years and the actual recoveries during the relevant recovery period.

10. The Company is scheduled to submit a filing on or before March 1, 1999, stating the prediction of amounts to be spent in calendar year 1999. The Company proposes including estimated expense amounts for the Net Metering Program in that filing.

FINDINGS

THE COMMISSION FINDS:

1. Puget Sound Energy, Inc. is engaged in the business of furnishing electric and gas service within the state of Washington as a public service company, and is subject to the jurisdiction of this Commission.
2. On January 7, 1999, Puget Sound Energy, Inc. filed a petition for an Accounting Order regarding the accounting and ratemaking treatment of the Company's Net Metering Program.
3. The proposed Net Metering Program will encourage the development of small-scale renewable resources, which is in the public interest.
4. As the Net Metering Program is in the public interest, utility costs to implement and manage the program should not exceed public benefits.
5. As the Net Metering Program is in the public interest, the Company should be allowed to recover the costs of implementing the program from all electric customers, rather than solely from customer-generators.
6. Following the existing Rate Plan Period, the Company is expected to include Net Metering Program costs in general O&M expenses to be filed in its next

general rate case, anticipated after December 31, 2001.

7. The Company's proposed accounting treatment is reasonable and the Company should be allowed to:

(a) Record monthly, as a Deferred Regulatory Asset, in FERC Account No. 182.3, the Company's cost of providing the Net Metering Program through December 31, 2001, and

(b) Recover the deferred Net Metering Program expenditures, as any other electric conservation program expenditure, in electric rates under the provisions of Schedule 120, which amortizes to FERC Account No. 908, Customer Assistance Expenses.

(c) On an annual basis, the generation value of any remaining unused kWh credits granted to the Company shall be used to offset the program costs so deferred.

ORDER

WHEREFORE, THE COMMISSION HEREBY ORDERS:

1. The proposed accounting treatment in the Company's Petition dated January 7, 1999, is hereby approved with respect to the Company's Net Metering Program.

2. The Company is hereby authorized to:

(a) Record monthly, as a Deferred Regulatory Asset, in FERC Account No. 182.3, coincident with the revised Schedule 120 effective date, the Company's cost of providing the Net Metering Program through December 31, 2001, and

(b) Recover the deferred Net Metering Program expenditures, as any other electric conservation program expenditure, concurrently in electric rates under the provisions of Schedule 120, subject to annual review and true-up with actual costs.

3. This order shall in no way affect the authority of this Commission over rates, service, accounts, valuations, estimates or determination of costs, or any matters whatsoever that may come before it, nor shall anything herein be construed as an acquiescence in any estimate or determination of costs, or any valuation of property claimed or asserted.

DATED at Olympia, Washington, and effective this th day of February, 1999.
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

ANNE LEVINSON, Chairwoman

RICHARD HEMSTAD, Commissioner

WILLIAM R. GILLIS, Commissioner

► **Creation Info**

Jeffrey Showman was the last to edit this document, on 09/13/2000.

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