

Chelan County PUD PURPA Hearing

Net metering
Interconnection
Time based rates

Chelan County PUD
November 13, 2006



Hearing Process Overview

- Presiding Officer
- Meeting is recorded
- Order of testimony
- Formal adoption today
- Presentation and exhibits will be made available



Overview

- Hearing process
- What is PURPA?
- Communication efforts
- Staff testimony on the 3 standards being considered - Recommendation
- Public comments
- Next steps

History and Purpose

- Public Utility Regulatory Policies Act (PURPA) of 1978 – Reform aimed at:
 - *Conservation* of energy supplied by electric utilities;
 - *Optimal efficiency* of electric utility facilities and resources; and
 - *Equitable rates* for electric consumers
- Required utilities to buy back power from qualified customer-generators



Prior PURPA Standards

PURPA 1978 – 6 Standards

- Cost of service
- Declining block rates
- Time of day rates
- Seasonal rates
- Interruptible rates
- Load management techniques

Energy Policy Act of 1992 – 4 Standards

- Integrated Resource Planning
- Conservation
- Demand Management
- Efficiency investments in power generation & supply

2005 EPAct PURPA Standards

□ **Five new standards were added in 2005's Energy Policy Act**

1. **Net metering**
2. **Interconnection**
3. **Time-based metering and communications**
4. Fuel diversity
5. Fossil fuel generation efficiency

Today's hearing is on the first three standards



Board action required

- PURPA requires electric utilities to “consider” each standard and then “make a determination” about whether or not it is appropriate to implement
 - Consideration and determination is required, but the decision to implement is discretionary
 - For public power utilities, the Board of Commissioners must “consider and determine” the standards



Communication efforts

- Board presentation July 24th 2006
- Notice of proceedings advertised with both legal and display ads
- PURPA section on our website
- Hearing date and process advertised with both legal and display ads
- Legal affidavits are submitted

Prior State Actions – Consideration Waiver

Requirement for utilities to consider a standard may be waived if the state has taken prior action:

- Net metering standard 11 – RCW 80.60
- Interconnection standard 15 – RCW 80.16 as amended by SSB 5101

Net Metering - Standard 11

PURPA language:

- Make available upon request
- Any electric consumer
- Connect generation to utility distribution
- Offsets against utility delivered energy

Net Metering - What Chelan PUD offers

Schedule 20 adopted in 2001

- Allows for “netting” customer generation against energy charges
- Limited to 25 kW sized customer generator
- RCW 80.60 outlines availability

Net Metering - Considerations

2006 – Legislative session modified RCW 80.60

- Generator size increased to 100kW from 25kW
- Availability was increased to .25% of 1996 system peak, up from .1%
- System availability reserves 1/2 for renewable energy

Net Metering Standard 11 – Staff Recommendation

- ❑ Do not adopt PURPA Standard 11
- ❑ Continue to follow RCW 80.60
- ❑ Update Rate Schedule 20 to reflect recent language changes to the RCW



Net Metering Standard 11 – Public Comments or Questions?

Interconnection - Standard 15

PURPA language:

- ❑ Make available on request
- ❑ On-site generation connected to local distribution
- ❑ Based on Institute of Electrical and Electronics Engineers (IEEE) standards 1547
- ❑ Promote current best practices
- ❑ Agreements shall be just and reasonable
- ❑ Allows up to 20 MW generators

Interconnection - What Chelan PUD offers

Interconnection standards were put in place back in the 2001 energy crisis – up to 10 MW

- 2005 Jim White worked on the Washington PUD association Public Power Ad-hoc Interconnection Standards Committee (PPAISC)
- Developed standards for up to 25 kW – compliant with PURPA
- January 2006 – Chelan PUD adopted those standards as part of SSB 5101



Interconnection - Considerations

For large generators up to 10 MW the District requires standards and also:

- System impact studies
- Power delivery agreements
- Insurance

PPAISC continues to look at developing intermediate sized standards, up to 300 kW

Interconnection Standard 15 – Staff Recommendation

- ❑ Do not adopt PURPA Standard 15
- ❑ Formally adopt existing interconnection standards
- ❑ Continue to consider interconnection standards as developed by the PPAISC



Interconnection Standard 15 – Public Comments or Questions?

Smart Metering - Standard 14

PURPA language:

- Time-based Metering and Communications
- Offer each customer class and individuals a time-based rate schedule
- Reflects the utility's variance in generation and purchasing electricity
- Time-based rates shall enable consumer to manage use and cost through advanced metering and communications technology “smart metering”

Smart Metering Standard

Time-based rates defined:

- **Time-of-Use (TOU)** - typically 2 or 3 price periods per day, rates set in advance
- **Critical Peak Pricing (CCP)** – similar to TOU where certain times of the year there are increased rates or discounts
- **Real-Time Pricing (RTP)** – based on market prices with frequent, sometimes hourly changes
- **Load Management Credit (LMC)** – pre-established load reduction credits

Smart Metering Standard – What Chelan PUD Offers

Class\ Rate	TOU	CPP	RTP	LMC
Residential				Conservation
Comm.				Conservation Resource\$mart
Industrial	Schd 30			Conservation Resource\$mart Load curtailment



Smart Metering – Future Option

Chelan PUD is evaluating technology that supports smart metering for the entire service territory as part of the automated meter reading (AMR)

What is Smart Metering?

- Two way communication
- Meters provide interval data
- Collected at least daily



Smart Metering – Costs

- Estimated project cost: \$10M - \$15M
- Five-year implementation



Smart Metering – District Benefits

- System operations
- Engineering and analysis
- Customer Service
- Management and rate design

*Benefits are estimated to be \$1.5M
annually*

Smart Metering – PURPA Benefits

Utilities should consider the following:

- **Reduced total demand**
- **Reduced peak load**
- **Mitigate price spikes**
- **Increase reliability**
- **Efficient capacity utilization**
- **Lower consumer bills**
- **Reduce emissions**

Smart Metering – Staff Testimony

- Reduced total demand - All electric County?
- Reduced peak load – What is a relevant shift for a recognized system benefits?
- Mitigate price spikes – Curtailment option in place
- Increase reliability – Winter peaking system / outage support
- Efficient capacity utilization – Hydro impact
- Lower consumer bills – Future consideration?
- Reduce emissions – Hydro impact

Smart Metering Standard 14 – Staff Conclusions

- Preferred approach is still being evaluated
- Chelan offers time-based rates to our largest customers
- Unclear whether time-based rates would be cost effective for most customers at this time

Smart Metering Standard 14 – Staff Recommendation

- Do not adopt PURPA Standard 14
- Continue to study and evaluate the benefits, technology and costs of smart metering in conjunction with automated meter reading



Smart Metering Standard 14 – Public Comments or Questions?



Next Steps

- Formally update Net Metering schedule 20
- Formally adopt interconnection standards
- Begin to address the last two PURPA standards in 2007
 - Fuel diversity
 - Fossil fuel generation efficiency

