

**EXHIBIT NO. \_\_\_(EMM-22HC)**  
**DOCKET NO. \_\_\_\_\_**  
**2005 POWER COST ONLY RATE CASE**  
**WITNESS: ERIC M. MARKELL**

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY, INC.,**

**Respondent.**

**Docket No. UE-\_\_\_\_\_**

**TWENTY-FIRST EXHIBIT TO THE PREFILED DIRECT TESTIMONY OF  
ERIC M. MARKELL (HIGHLY CONFIDENTIAL)  
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**REDACTED VERSION**

**JUNE 7, 2005**

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## Hydroelectric Licensing Update

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## Energy Production & Storage

April 29, 2003

Ed Schild - Director, Energy Production & Storage  
Joel Molander - Asset Manager, Hydroelectric Generation  
Lloyd Pemela - Asset Manager, Plant Licensing  
Kris Olin - Manager Plant Technical Services



## Snoqualmie Falls Project

FERC No. 2493

- Project Overview
- License Update
- Scenarios and Assumptions
- Financial Summary
- Refurbishment Schedule



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**Snoqualmie Falls: Project Overview**

➤ **Project Overview**

- Snoqualmie Falls Project consists of two powerhouses for a combined FERC Authorized capacity of 44,057 kW. It is a run of the river hydro project.
- Powerhouse One was constructed in 1898 and is located within a cavern with a tunnel-tailrace. It has five units yielding an Authorized capacity of 11,600 kW at 270 net feet of head.
- Powerhouse Two was constructed in 1910 with a single generating unit. A second unit was added in 1957, resulting in an Authorized capacity of 32,457 kW at 267 net feet of head.
- In 2001, the Snoqualmie Project produced 242,553 MWh.
- Snoqualmie Falls is a spectacular tourist attraction with an estimated 1.5 million visitors each year. PSE maintains two observation decks and picnic facilities. Current license has a minimum flow over the Falls of 100 cfs during daylight hours and 25 cfs at night.
- The FERC license for Snoqualmie Falls Project expired December 31, 1993. The project continues to operate under a FERC annual license each year since.
- Each year PSE withdraws its Washington Department of Ecology (DOE) request for 401 water quality certification and then reapplies. FERC has a one year time limit for WQC certification.



# Snoqualmie Falls: Licensing Update



## ➤ Licensing Update

- PSE filed a FERC license application for the Snoqualmie Falls Project in 1991, increasing capacity from 42 MW to 73 MW with a proposed additional 1,500 cfs water right.
- A "refurbished project" license application was filed in 1995, expanding the project from 42 MW to 47 MW based on efficiency gains and no change in water right.
- The FEIS was issued in September 1996.
- City of Snoqualmie and DOE declared the FEIS inadequate in 1998 and scoped out a supplemental EIS in 1999.
- In December 2001, FERC focuses upon the oldest 51 outstanding license applications and conducts public hearings. Snoqualmie Falls Project was the 11th oldest outstanding.
- Request to FERC for PSE to be non-Federal designee for Supplemental Biological Assessment.
- In 2002, City of Snoqualmie and DOE begin SEIS studies.
- [Redacted]
- Fall 2002, NMFS and USFW find no significant impact by project

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April 29, 2003

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PER WAC 480-07-160

# Snoqualmie Falls: Licensing Update



## > Licensing Update (continued)



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- Withdraw and resubmitted Request for WQC in April for 2003/4.
- DOE issues notice of Snoqualmie WQC May 2003
- PSE, City and County enter into Limited Use Permit
- City issues shoreline permit. PSE applies for Coastal Zone Management Act (CZMA) consistency determination.
- DOE issues CZMA Certification.
- Submit WQC and CZMA consistency to FERC, arrange meeting
- FERC considers all and issues License with WQC flows.
- Army Corps of Engineers 205 channelization project. Slowly getting finance and coordination agreements, project design needs to be finalized, relocations, real estate transactions slow. Work should commence next season.

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PER WAC 480-07-160



# Snoqualmie Falls: Licensing Update

## > Licensing Update (continued)

- Snoqualmie Falls Relicensing Costs: PDEA, application, settlement agreement, staff, overheads
- 2000 actual includes all pre-2000 CWIP

<u>Fiscal Year</u>	<u>Budget/Actual</u>
2000 (A)	\$11,672,000
2001 (A)	\$71,000
2002 (A)	\$401,000
2003 (B)	\$765,000
2004 (B)	\$400,000
2005 (B)	\$300,000
<b>Total Cost</b>	<b>\$13,609,000</b>

# Snoqualmie Falls: License Update



## > License Update (continued)

- Continue work with Snoqualmie Indian Tribe for sale/transfer of plant to Tribe in exchange for power contract or equivalent asset value.
- Anticipate FERC license by end of 2003 based on successful resolution of aesthetic flows and CZMA.

## > Present value of capital and operating costs:

- License-related
  - PV [redacted] million license-related capital
  - PV [redacted] million license-related O&M
- Plant-related
  - PV [redacted] million plant recurring capital
  - PV [redacted] million plant O&M

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# Snoqualmie Falls: Financial Summary

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
<b>33-year Analysis Horizon</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Economic Summary (Medium)</b>				
PV Market Revenue	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<u>PV Regulated Revenue Requirement</u> Variance	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Variance to Scenario 1				
<b>Plant Levelized Revenue Requirement</b>				
Annual Average Plant Output (MWh)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Plant Cost per MWh 33-year Levelized	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Replacement Power Purchases (MWh)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Levelized Revenue Requirement	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total Cost per MWh</b> <b>33-year Levelized</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

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# Snoqualmie Falls: Draft Schedule

## ➤ Project Schedule Assumptions

- FERC license issued by December 31, 2003
- Assumes no 2-year construction schedule extension
- Will be modified to reflect final scope of work currently under review by PSE

