

**EXHIBIT NO. \_\_ (EMM-15HC)**  
**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-\_\_\_\_\_**

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

**REDACTED VERSION**

**JUNE 7, 2005**

**PUGET SOUND ENERGY, INC.**

**RECORD OF THE  
BOARD AND OFFICERS' STRATEGIC PLANNING RETREAT  
SEPTEMBER 14, 2004**

---

A strategic business planning retreat of the Puget Sound Energy (PSE) Board and Officers was held at Alderbrook Resort in Union, Washington beginning at 8:30 a.m. on Tuesday, September 14, 2004. In advance of the meeting, members of the Board and officers were furnished materials reviewed at the retreat, a copy of which is filed with this record of the meeting.

The following Directors were present:

- D. P. Beighle
- C. W. Bingham
- P. J. Campbell
- R. L. Dryden
- S. E. Frank
- T. Moriguchi
- K. P. Mortimer
- S. G. Narodick
- S. P. Reynolds

The following PSE management employees were present:

- D. P. Brady, Vice President Customer Service
- P. K. Bussey, Vice President Regional and Public Affairs
- M. Clements, Vice President Human Resources and Labor Relations
- T. A. DeBoer, Director Federal and Regional Affairs
- D. E. Gaines, Vice President Finance and Treasurer
- K. J. Harris, Vice President Regulatory and Government Affairs
- J. L. Henry, Senior Vice President Energy Efficiency and Customer Services
- E. M. Markell, Senior Vice President Energy Resources
- J. L. O'Connor, Vice President and General Counsel
- H. G. Ringel, Director Corporate Communications
- J. M. Ryan, Vice President Risk Management and Strategic Planning
- C. E. Shirley, Director of Conservation
- B. A. Valdman, Senior Vice President Finance and CFO
- P. M. Wiegand, Vice President Project Development Contract Management
- D. Waite, Director Investor Relations

**PSE BASE CASE**

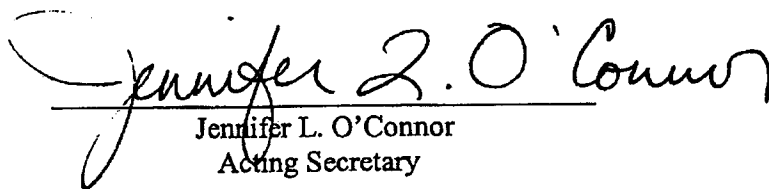
Mr. Reynolds then asked Mr. Valdman to give an overview of the process PSE had undertaken to develop capital and operating budgets for 2005. Mr. Valdman explained PSE considered the need to continue to invest in the safety and reliability of the electric and gas systems, and to follow through on the resource acquisition strategy laid out in the Least Cost Plan. The plan was described as a balanced plan, intended to support continued investment in the gas and electric distribution and transmission system, and resource acquisition, while keeping rates low. Mr. Valdman concluded by giving an overview of the financial community's expectations of the Company.

**STRATEGIC INVESTMENT OPPORTUNITIES DISCUSSION**

Mr. Valdman then provided the Board with an overview of certain possible strategic merger and acquisition matters.

**WRAP UP AND CLOSING REMARKS**

Mr. Reynolds concluded the meeting by reviewing PSE's long term regulatory strategy, long term resource plan and financial issues and opportunities. Mr. Reynolds advised the Board that PSE must continue to invest in its infrastructure and ensure the safety and reliability of the system, as well as low cost, quality service.

  
Jennifer L. O'Connor  
Acting Secretary

# **Report to Puget Sound Energy Board of Directors**

**Eric M. Markell  
Senior Vice President,  
Energy Resources**

**September 14, 2004**

# Topic List

- Update of RFP Short List
  - ◆ Wind Projects
  - ◆ ORMAT
  - ◆ Power Purchase Agreements
- Near Term Resource Acquisition Issues
- Long Term Resource Issues
- 2005 Plans
- Exhibits

# Wind

- Wild Horse ([REDACTED] MW; \$[REDACTED] million - \$[REDACTED] million)
- ◆ LOI signed September 2004
- ◆ Growing regional support
- ◆ Timing of PSE transmission upgrade (IP Line)
- RES ([REDACTED] MW; \$[REDACTED] million for 150 MW)
- ◆ BPA Firm Transmission problems; possible solution [REDACTED]
- ◆ Least cost proposal excluding transmission [REDACTED]
- [REDACTED] ([REDACTED] MW; \$[REDACTED] million for 150 MW)
- ◆ Due diligence shows less wind output than bid
- ◆ Rising costs REDACTED
- ◆ No longer the leading wind resource, but perhaps still competitive

TEXT IN BOX IS HIGHLY CONFIDENTIAL

Highly Confidential per WAC 480-07-160

# ORMAT

- 4.5 megawatt Heat Recovery steam generator
- Based on a compressor on Northwest Pipeline at Sumas (~ [REDACTED] HP average)
- Capital Cost is \$ [REDACTED] million (\$ [REDACTED] /MWH levelized)
- Build and Transfer

Highly Confidential per  
WAC 480-07-160

TEXT IN BOX IS HIGHLY  
CONFIDENTIAL

# Power Purchase Agreements

- [REDACTED] Coal Project
  - ◆ Low evaluated cost with some imputed debt
  - ◆ Counterparty risk and PSE's inability to post credit
  - ◆ Additional imputed debt costs related to credit requirements are under study
  - ◆ Ownership option also to be explored
- [REDACTED] No. 1
  - ◆ Seasonally shaped, on-peak & system-delivered product
  - ◆ [REDACTED] fully funded and under construction
- [REDACTED] No. 2
  - ◆ [REDACTED] projects planned but not financed and constructed

Highly Confidential per  
WAC 480-07-160

TEXT IN BOX IS HIGHLY  
CONFIDENTIAL

REDACTED



# Near Term Resource Acquisition Issues

- Wind
  - ◆ Transmission constraints
  - ◆ Timely permitting
  - ◆ Production Tax Credits
- PPAs
  - ◆ Credit requirements/ Counterparty risks
  - ◆ Rate making for recovery of imputed debt costs
  - ◆ No earnings support
  - ◆ Few long-term, fixed-cost choices
- Coal
  - ◆ Low cost fuel (\$0.55/mmBtu) / Stable revenue requirement
  - ◆ Capital intensive / Transmission constraints
  - ◆ Long permitting and construction schedule
  - ◆ Partnering / Consortium building
  - ◆ Environmental tax risk and sharing mechanisms
- Gas
  - ◆ High cost fuel (\$5/mmBtu) and volatile
  - ◆ Summer heat rate risk
  - ◆ Credit intensive
  - ◆ Regulatory Risk

# Long Term Resource Issues

- Mid-C Contracts and NUGs expire by 2012 (976 aMW) creating both a need and an opportunity
- Constrained Hydro
  - ◆ PSE may not be able to renew all the Mid-C contracts at current levels
- Expiring PURPA Contracts
  - ◆ The NUGs are very expensive
  - ◆ They should be available for renewal negotiations
  - ◆ Address impact on transmission system reliability

# 2005 Plans

- The 2005 Least Cost Plan (due April 30, 2005) will re-examine PSE's resource needs and planning standards
- PSE will still have significant long run resource needs
- More attention to constrained transmission scenarios and adverse gas conditions
- PSE will issue a draft RFP for new resources 90 days after the LCP

# Exhibits

- Short List Summary
- Energy from Rate Based Resources
- Long Run Loads and Resource Balance
- 5-Year Base Scenario
- 5-Year Scenario with Coal Project
- Imputed Credit Cost Analysis
- Watch List Resources
- Potential Gas-fired Resources

# Summary of Evaluated Costs

## Short List

Highly Confidential per  
WAC 480-07-160

Exhibit No. \_\_\_\_ (EMM-15HC)  
Page 12 of 19

PROPOSAL		Owner/Developer Project Name	Proposal Option	Location	Status	MW	COD	ASM8 Levelized Cost (1) (\$/MWh)
<b>WIND</b>								
A03	W	RES - Hopkins Ridge	100% Ownership	Columbia Co, WA	Development	[REDACTED]	Dec-05	[REDACTED]
A02b	W	Zikha - Wild Horse	100% Ownership	Kittitas Co, WA	Development	[REDACTED]	Dec-05	[REDACTED]
A06	W	[REDACTED]	100% Ownership w/ Royalty	[REDACTED]	Development	[REDACTED]	Feb-06	[REDACTED]
<b>ALTERNATE FUEL</b>								
A39	A	ORMAT - Sumas Recovered Heat	100% Ownership	Sumas, WA	Development	[REDACTED]	Dec-05	[REDACTED]
<b>POWER PURCHASE AGREEMENTS (4)</b>								
A19	C	APS PPA	2-yr Centralia PPA	Centralia, WA	Operating	85	Jan-05	[REDACTED]
A24b	C	[REDACTED]	10-yr [REDACTED] PPA	[REDACTED]	Operating	[REDACTED]	Jan-05	[REDACTED]
A30	H	[REDACTED]	22-yr Seasonal On-Peak PPA	[REDACTED]	Operating / Development	[REDACTED]	Jan-05	[REDACTED]

**Notes:**

- (1) Using mid-year MACRS instead of 1st quarter MACRS to compare with non-wind bids.
- (2) In addition to mid-year MACRS, corrected a PTC error in year 10 that moved the price down.
- (3) Based on \$59 flat price
- (4) Does not include credit impacts or costs

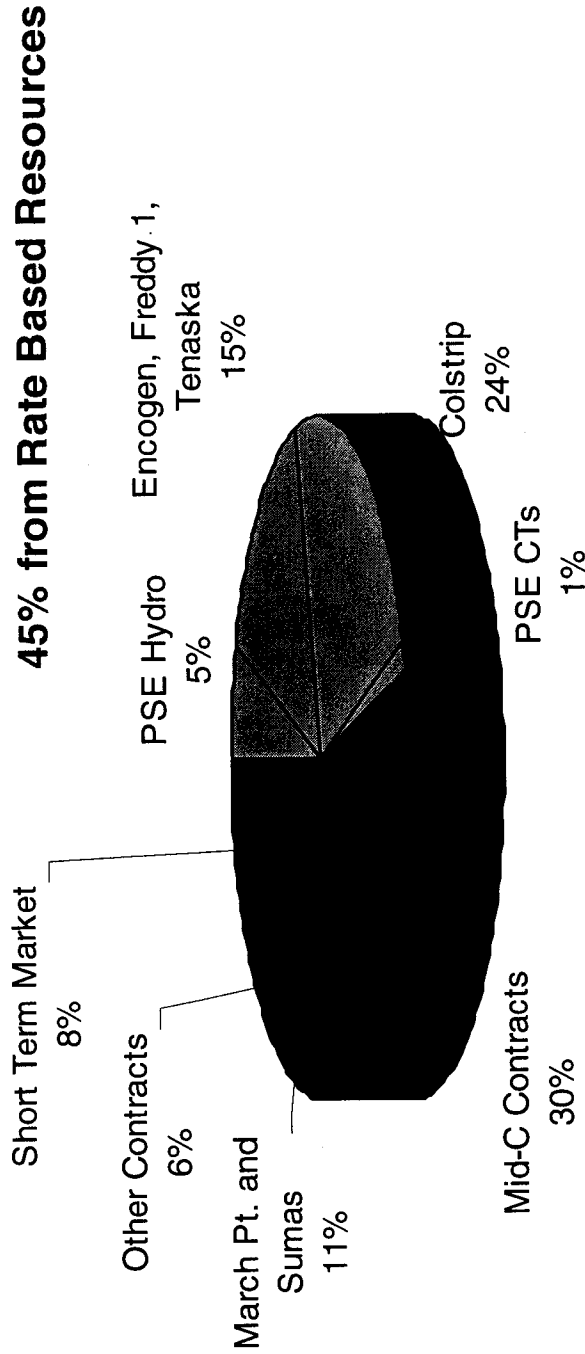
**REDACTED**

TEXT IN BOX IS HIGHLY  
CONFIDENTIAL



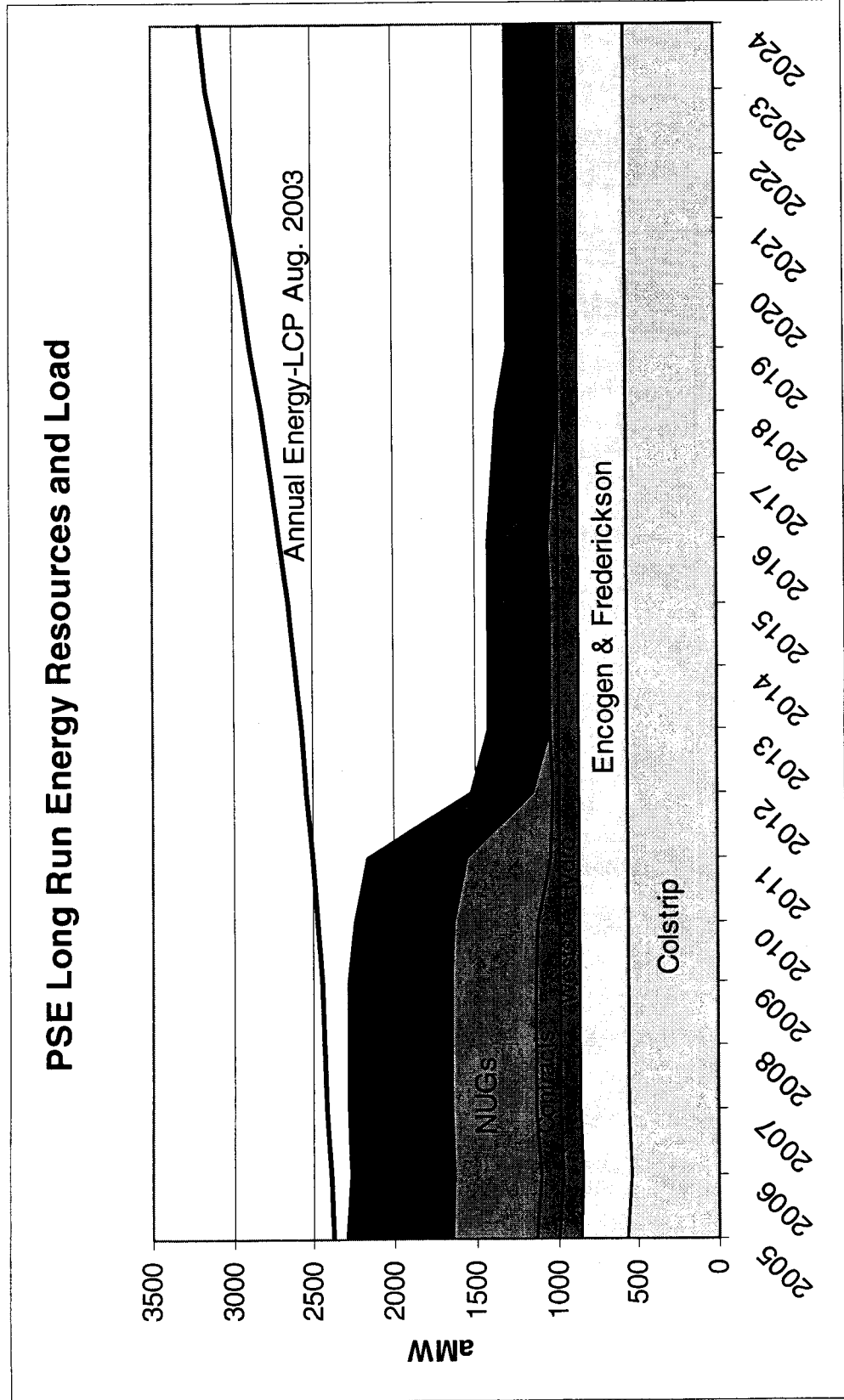
# Energy Resources: Rate Based vs. Contracted

2005 Annual Average Energy by Dispatch



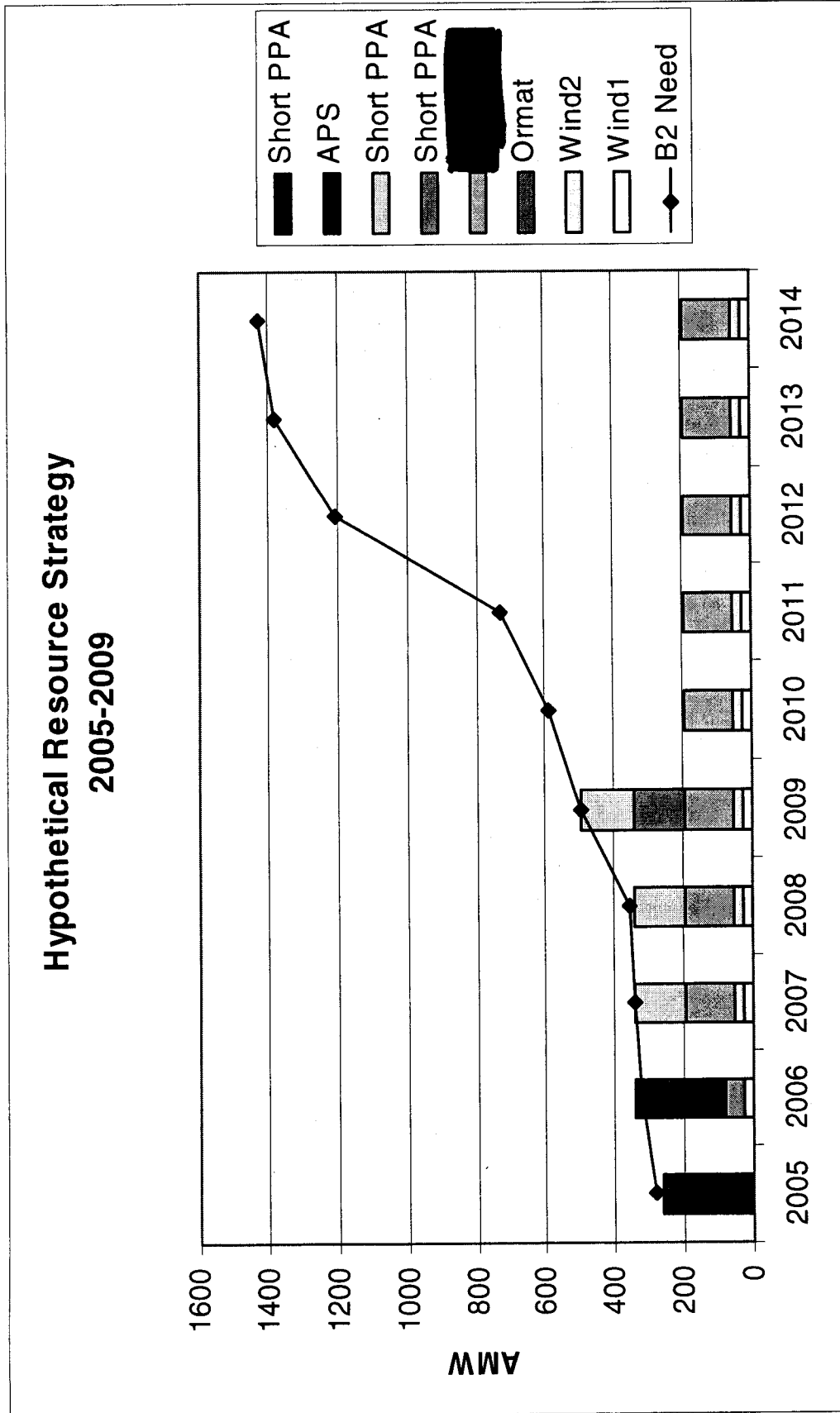
Tenaska (about 7% of Total) is shown as a Rate Based regulated asset although some return may be reduced

# Long Run Balance of Loads and Resources



# 5-Year Hypothetical Resource Strategy

Highly Confidential per  
WAC 480-07-160



TEXT IN BOX IS HIGHLY  
CONFIDENTIAL

REDACTED





# Credit Cost - [REDACTED] 10-yr PPA preliminary analysis

REDACTED

	Nominal \$000	NPV \$000	Levelized \$/MWh
A Contract Payments (no transmission)	633,446	414,510	43.50
B Transmission	11,348	7,353	0.77
C Imputed Debt Equity Offset	41,831	32,276	\$3.39
SUBTOTAL			\$47.66
D LoC Interest - PSE	14,375	9,718	\$1.02
E LoC Interest - TEMUS includes in PPA	14,375	9,718	\$1.02
F LoC Imputed Debt Equity Offset	190,385	124,156	\$13.03
SUBTOTAL Credit			\$15.07
TOTAL Levelized Cost			\$62.73

- LOC Assumptions:
- ◆ Rate = 1.15%
  - ◆ Amount = \$125 million
  - ◆ S&P = 100% risk
  - ◆ S&P imputes debt first year

Highly Confidential per WAC 480-07-160

given:	2005 Debt start year S&P Assigned Risk			given:	100% S&P Risk		
	25%	50%	100%		Start Year	S&P	Imputed LoC Debt
\$65,000	\$2.75	\$4.45	\$7.84	\$65,000	\$7.84	\$6.93	\$6.10
\$85,000	\$3.60	\$5.82	\$10.25	\$85,000	\$10.25	\$9.06	\$7.97
\$105,000	\$4.45	\$7.19	\$12.66	\$105,000	\$12.66	\$11.19	\$9.85
\$125,000	\$5.30	\$8.55	\$15.07	\$125,000	\$15.07	\$13.33	\$11.73
\$145,000	\$6.14	\$9.92	\$17.48	\$145,000	\$17.48	\$15.46	\$13.60
TOTAL Levelized Cost				TOTAL Levelized Cost			
\$65,000	\$50.41	\$52.11	\$55.49	\$65,000	\$55.49	\$54.59	\$53.76
\$85,000	\$51.26	\$53.48	\$57.91	\$85,000	\$57.91	\$56.72	\$55.63
\$105,000	\$52.11	\$54.84	\$60.32	\$105,000	\$60.32	\$58.85	\$57.51
\$125,000	\$52.96	\$56.21	\$62.73	\$125,000	\$62.73	\$60.99	\$59.38
\$145,000	\$53.80	\$57.58	\$65.14	\$145,000	\$65.14	\$63.12	\$61.26

Sensitivity  
Of credit cost →

TEXT IN BOX IS HIGHLY  
CONFIDENTIAL



# Watch List

## Continuing Investigation

REDACTED

Highly Confidential per  
WAC 480-07-160

PROPOSAL			Proposal/Option	Location	Status	MW	COD	ASM8 Levelized Cost (1) (\$/MWh)
Code	Type	Owner/Developer Project Name						
<b>WIND</b>								
A07	W	[REDACTED]	100% Ownership	[REDACTED]	Development	[REDACTED]	Oct-05	[REDACTED]
A08	W	[REDACTED]	30-yr PPA + 50% Ownership	[REDACTED]	Development	[REDACTED]	Dec-05	[REDACTED]
A01	W	[REDACTED]	100% Ownership	[REDACTED]	Development	[REDACTED]	Dec-05	[REDACTED]
A20	C	[REDACTED]	100% Ownership	[REDACTED]	Development	[REDACTED]	late 2008	[REDACTED]
<b>CCGT</b>								
A24a	G	[REDACTED]	100% Ownership + 100MW PPA	[REDACTED]	Operating	[REDACTED]	Aug-02	[REDACTED]
A29	G	[REDACTED]	50.2% Ownership	[REDACTED]	Development	[REDACTED]	Dec-05	[REDACTED]
A26	G	[REDACTED]	100% Ownership	[REDACTED]	Suspended	[REDACTED]	Nov-05	[REDACTED]
A35	G	[REDACTED]	100% Ownership	[REDACTED]	Suspended	[REDACTED]	late 2005	[REDACTED]
A28	G	[REDACTED]	70% Ownership	[REDACTED]	Development	[REDACTED]	Sep-07	[REDACTED]
A32a	G	[REDACTED]	100% Ownership	[REDACTED]	Operating	[REDACTED]	Oct-03	[REDACTED]
<b>ALTERNATE FUEL</b>								
A15	A	[REDACTED]	Joint Venture w/ PSE	[REDACTED]	Development	[REDACTED]	May-06	[REDACTED]

- Notes:
- (1) Using mid-year MACRS instead of 1st quarter MACRS to compare with non-wind bids.
  - (2) In addition to mid-year MACRS, corrected a PTC error in year 10 that moved the price down.
  - (3) Does not include PTC



TEXT IN BOX IS HIGHLY  
CONFIDENTIAL

# Natural Gas Generation - Summary

Highly Confidential per  
WAC 480-07-160

Project Name	Counterparty	Ownership	Capacity (MW)	Heat Rate (Btu/KWh)	Purchase Price (\$/MWh)	Cost (\$/MWh)	Capacity Factor
		50.2%					
		100%					
		100%					
		70%					
		100%					
		100%					
		100%					
		50% + 20yr Tolling PPA					
		100%					
		100%					
		Equipment Purchase					
		100%					
		50%					
		100%					
		100%					
		100%					

**Notes:**  
 1. Cost is the 20-year Project Levelized Cost from ASM8. ASM8 does not include new AUROA6 electric price forecast. All else being equal, AUROA6 prices would increase costs and reduce capacity factors.  
 2. Proposals that show no "Cost" data were considered low priority due to constraints to project development.  
 3. "Cost" does not include the 10yr PPA associated with [REDACTED] Plant as proposed in [REDACTED] bid [REDACTED] did not stand alone 100% ownership asset purchase [REDACTED]

