

EXHIBIT NO. ____ (RG-8HC)
DOCKET NO. UE-07 ____
2007 PSE PCORC
WITNESS: ROGER GARRATT

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

Docket No. UE-07 ____

**SEVENTH EXHIBIT (HIGHLY CONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF
ROGER GARRATT
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**REDACTED
VERSION**

MARCH 20, 2007

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2005 RFP
Phase II Project Ratings

Project Code	Project Name	Capacity MW	Phase II Quantitative Analysis \$/MWh	Unit Metric	B&C	Trans	Tech	Fuel Supply	Enviro	Legal	Real Estate	Insurance	Plant Ops	Power Supply Community	Credit	Accounting
HYDRO																
536-539																
GEOTHERMAL																
547(a)				8.139	0.177											
WIND																
502-b																
Other needed.																
524(a-c)																
Permitting issues; earliest COD is 2005.																
530a				95.499	0.187											
530b				106.282	0.216											
553 (a&b)																
Other needed.																
NATURAL GAS																
501 (a-d)				133.084	0.225											
504 capacity				40	0.0082											
516				54.928	0.063											
525a				116.959	0.119											
552	Goldendale Energy Center (partnership)	277		179.820	0.159											
COAL																
506a				101.961	0.061											
520c																

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2005 RFP
Phase II Project Ratings

NON-SPECIFIC PPAs									
Project Code	Project Name	MW	Levelized Cost (\$/MWh)	Ratio	B/C	Power Supply Ops	Credit	Accounting	
Ending before 2009									
522-C			NA - Selected most attractive option for quantitative analysis						
522-D			NA - Selected most attractive option for qualitative analysis						
Ending after 2009									
511-a			NA - Selected most attractive option for quantitative analysis						
511-b			NA - Selected most attractive option for qualitative analysis						
511-c				0.318					
511-d			NA - Selected most attractive option for qualitative analysis						
522-A				0.421					
522-B				0.290					
554a				0.282					

(1) From an accounting perspective, it is impossible to provide a ranking without seeing an actual contract. The specific terms of a contract and the net position when it is signed will have a large impact on the accounting. Refer to the accounting tab for details/comments about each project.

High =	More Favorable / Less Risks
Mid =	Favorable
Low =	Less Favorable / More Risks

- = proposed shortlist selection
- = proposed continuing investigation selection

Business Commercial

Code	Unit Type	Project Name	Contract Development	Construction	MW	COB	B/C Rating	Business/Commercial Evaluation Criteria
536-539								
547(a-c)								
502-b								
530a								
530b								

Redacted

Business Commercial

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	COD	B/C Rating	Business/Commercial Evaluation Criteria
553	Wind	Calpine Jupiter (ownership: PSE)	Calpine Energy, Inc.	Jupiter, FL	103.5	8/2006		Other restricted
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	+ Due diligence completed in November 2003 - Calpine filed for bankruptcy in early December 2006 PSE is still working with Calpine to be established as stalking horse bid; conference call set for 7/13 to provide counteroffer to Calpine; Q4, 2006 close is estimated
506	Coal							
520(a-c)	Coal							
NS PPA's Ending								
522-C	PPA							
522-D	PPA							
NS PPA's Ending								

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Business Commercial

Code	Fund Type	Project Name	Owner	Project	Phase	B/C Rating	Business/Commercial Evaluation Criteria
511-a	PPA						
511-b	PPA						
511-c	PPA						
511-d	PPA						
522-A	PPA						
522-B	PPA						
554a	PPA						

KEY
HIGH /orable / Less Risks
MED Favorable
LOW /orable / More Risks

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Transmission

Code	Energy Type	Trans Rating	Transmission Evaluation Criteria
536-539	Hydro		
547(a-c)	Geo		
502-b	Wind		
524	Wind		
530	Wind		
553	Wind		
501(a-d)	NG		
504	NG		
516	NG		
525(a-c)	NG		
552	CCCT	Goldendale Energy Center (ownership)	Capline
		Goldendale, WA	277
		Sep-04	High-Med
		The same as High but needs confirmation on the COD	
506	Coal		
520(a-c)	Coal		

KEY	= More Favorable / Less Risks
HIGH	= Favorable
MED	= Less Favorable / More Risks
LOW	

Transmission Evaluation Criteria:

High Transmission available. No major problems, doable, Mature & Ready

High-Med The same as High but needs confirmation on the COD

Med The same as High but with possible multiple wheels or one or more factors uncertain

Med-Low Regional issues unknown. Possible some transmission limitations, trans. technology unknown

Low Risk & Not doable. Major problems. No transmission available, trans. technology unknown, & regional issues unknown

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Technical

[illegible]

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Technical

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	COD	Tech Rating	Tech Comments	Timing	Operational Flexibility	Fit with PSE's Existing Portfolio	Resource Mix / Diversity	Resource Cost	Status and Schedule	Resource Flexibility and Stability	Resource Technology	Project Risk	Environmental Risk	Ability to Deliver
501	NG	[Redacted]																	
504	NG																		
516	NG																		
525	NG																		
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	See prudence documentation compiled prior to RFP process											

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Technical

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	CO2	Tech Rating	Technical Comments	Timing	Operational Flexibility	Resource Technology Risk	Res Mix/Diversity	Fit with PSE's Existing Portfolio	Resource Cost	Status and Schedule	Resource Flexibility and Stability	Project Risk	Environmental Risk	Ability to Deliver
506	Coal									Med	High	Med	Med	Med	Med	Med	Low	Med - Low	Med - Low
520(a-c)	Coal																		

KEY

HIGH = More Favorable / Less Risks

MED = Favorable

LOW = Less Favorable / More Risks

Redacted

Fuel Supply

Fuel Code	Fuel Type	Project Name	Owner/Developer	Location	MW	GDB	Dispatchability	Hydro Variation (purely relative)	Fuel Supply Rating	Fuel Supply Evaluation Criteria
536-639	Hydro									Thomas Bay has about 3000 acre feet of storage

Hydro Key	
Dispatchability	Hydro Variation (purely relative)
High (5) Reservoir - Allows seasonal energy storage	A long period / little annual hydro variation
Med (3) Pondage - Diurnal energy	Moderate Seasonal Variation
Low (1) No storage - run of river	Little Seasonal Variation

Fuel Code	Fuel Type	Project Name	Owner/Developer	Location	MW	GDB	Proven Resource	Impurities / By-Products	Fuel Supply Rating	Fuel Supply Evaluation Criteria
547(a-c)	Geo									

Geothermal Key	
Proven Resource	Impurities / By-Products
High (5) Resource proven by existing production wells. 3rd party assessment has proven 20-yr viability.	Impurities are fully known and easily mitigated
Med (3) Resource has nearby production wells. 3rd party assessment has not been	Impurities are somewhat unknown but a mitigation plan is in place
Low (1) Test wells are inconclusive and / or have not been drilled	Hazardous impurities are or may be present, where mitigation would prove a significant hurdle

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Fuel Supply

Code	Fuel Type	Project Name	Owner/Developer	Location	COB	Quantity of Wind Data	Appropriateness and completeness of evaluation methodology	Expected long-term most-likely case energy production relative to the stated estimate	Numeric Rank	Fuel Supply Rating
502-b	Wind									
524	Wind									
530	Wind					5	4	4	4	Med-High
553	Wind									

Wind Key	
High	5
Med-High	4
Med	3
Med-Low	2
Low	1

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	COB	Fuel Supply Rating	Fuel Supply Evaluation Criteria
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
526(a-c)	NG							
552	CCGT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	Med-High	Project can be served by a variation on the plan developed for providing gas transport to Goldendale during previous due diligence effort.
506	Coal							
520(a-c)	Coal							

Gas and Coal Key
HIGH = More Favorable / Less Risks
MED = Favorable
LOW = Less Favorable / More Risks

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Hydro Variability

Annual Hydro Variability

Year	Annual (MWh)
1	
2	
3	
4	
5	
6	
7	
8	
Avg	
StDev	
Min/Avg	
StDev / Avg	

Year	Annual (aMW)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
Avg	
StDev	
Min/Avg	
StDev / Avg	

YEAR	Total
1950	
1951	
1952	
1953	
1954	
1955	
1956	
1957	
1958	
1959	
1960	
1961	
1962	
1963	
1964	
1965	
1966	
1967	
1968	
1969	
1970	
1971	
1972	
1973	
1974	
1975	
1976	
1977	
1978	
1979	
1980	
2002	
2003	
2004	
2005	
Avg	
StDev	
Min/Avg	
StDev / Avg	

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Environmental

Code	Fuel Type	Project Name	Owner/Developer	Location	Size (MW)	Prob.	Enviro Rating	Environmental Evaluation Criteria
536-539	Hydro							
547(a-c)	Geo							
502-b	Wind							
524	Wind							
530	Wind							
553	Wind							
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	Plant is currently operating and there are no apparent compliance issues. Due diligence has been completed.
506	Coal							
520(a-c)	Coal							

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HIGH	= Favorable
MED	= Less Favorable / More Risks
LOW	

Redacted

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Legal

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	COD	Legal Team	Legal Evaluation Criteria
536-539	Hydro							
547(a-c)	Geo							
502-b	Wind							
524	Wind							
530	Wind							
533	Wind							
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	No construction risk. Bkryptoy auction process risk.
506	Coal							
520(a-c)	Coal							

KEY	= More Favorable / Less Risks
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MED	= Less Favorable / More Risks
LOW	

Redacted

Real Estate

Code	Real Type	Project Name	Owner/Developer	Location	MM	GOB	Real Estate Rating	Real Estate Evaluation Criteria
536-539	Hydro							
547(a-c)	Geo							
502-b	Wind							
524	Wind							
530	Wind							
553								
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Capline	Goldendale, WA	277	Sep-04	Med-High	Previously evaluated

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Real Estate

Code	Fire Type	Project Name	Owner/Developer	Location	MW	Scob	Real Estate Rating	Real Estate Evaluation Criteria
506	Coal							
520(a-c)	Coal							

KEY
HIGH = More Favorable / Less Risks
MED = Favorable
LOW = Less Favorable / More Risks

Redacted

Insurance

Code	Fuel Type	Ins Rating	Insurance Evaluation Criteria
536-539	Hydro		
547(a-c)	Geo		
502-b	Wind		
524	Wind		
530	Wind		
553	Wind		
501(a-d)	NG		
504	NG		
516	NG		
525(a-c)	NG		
552	CCCT	Med-High	Plant can be easily folded into PSE's property insurance program. \$485,000 est. max. in insurer loss control recommendations will result in \$60,000 reduction in annual property insurance premium.
506	Coal	Sep-04	277
520(a-c)	Coal	Goldendale, WA	Calpine
		Goldendale Energy Center (ownership)	

KEY
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Redacted

Plant Operations

Code	Plant Type	Plant Ops Rating	Plant Operations Evaluation Criteria
536-539	Hydro		
547(a-c)	Geo		
502-b	Wind		
521	Wind		
530	Wind		
553	Wind		
501(a-d)	NG		
504	NG		
516	NG		
525(a-c)	NG		
552	CCCT	Med - Low	Modern technology that is familiar to PSE plant operations staff. Isolated from PSE service territory. Moderately difficult location to coordinate heavy maintenance activities.
506	Coal		
520(a-c)	Coal		
KEY HIGH = More Favorable / Less Risks MED = Favorable LOW = Less Favorable / More Risks			

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Power Supply Operations

Code	Fuel Type	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	Base loaded with low heat rate	Power Supply Operations Evaluation Criteria
536-539	Hydro								
547(a-c)	Geo								
502-b	Wind								
524(a-c)	Wind								
530	Wind								
553	Wind								
501(a-d)	NG								
504	NG								
516	NG								
525(a-c)	NG								
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	Base loaded with low heat rate	
506	Coal								
520(a-c)	Coal								

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Power Supply Operations

Code	Entity	Project Name	Owner/Developer	Location	IT MW	IT G08	PSO Rating	Power Supply Operations Evaluation Criteria
PPAs Ending before 2008								
522-C	PPA							
522-D	PPA							
Ending after 2008								
511-a	PPA							
511-b	PPA							
511-c	PPA							
511-d	PPA							
522-A	PPA							
522-B	PPA							
554a	PPA							

KEY	
HIGH	avorable / Less Risks
MED	Favorable
LOW	avorable / More Risks

Redacted

Community Relations

Code	Fuel Type	Project Name	County	Location	City	DOB	Community Rating	Community Relations Comments
536-539	Hydro							
547(a-c)	Geo							
502-b	Wind							
524(a-d)	Wind							
530	Wind							
563	Wind							
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	High	Discussions with the Mayor and City Manager of Goldendale demonstrate a high desire to keep this project active and viable. PSE would be welcomed into the community if it chose to pursue the project. Tax impacts to the city budget was the only concern.
506	Coal							
520(a-c)	Coal							

KEY
 HIGH Favorable / Less Risks
 MED Favorable
 LOW Favorable / More Risks

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Credit

Code	File Type	File Name	COB	Credit Rating	Credit Comments
536-539	Hydro				
547(a-c)	Geo				
502-b	Wind				
524(a-c)	Wind				
530	Wind				
530	Wind				
553					
501(a-d)	NG				
504	NG				
516	NG				
525(a-c)	NG				
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277
			Sep-04	Med	Rating could change depending on structure of transaction
506	Coal				
520(a-c)	Coal				

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Credit

Code	Final Type	Project Name	Owner/Developer	Delivered To	Delivered (MW)	COB/Term	Credit Rating	Credit Comments
Ending before 2009								
522-C	PPA							
522-D	PPA							
Ending after 2009								
511-a	PPA							
511-b	PPA							
511-c	PPA							
511-d	PPA							
522-A	PPA							
522-B	PPA							
554a	PPA							

KEY	Favorable / Less Risks
HIGH	Favorable
MED	Favorable / More Risks
LOW	

Redacted

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Accounting

Code	Fuel Type	Project Name	Owner/Developer	Location	MW	GOO	Accounting Rating	Accounting Comments
536-539	Hydro							
547(a-c)	Geo							
502-b	Wind							
524(a-c)	Wind							
530	Wind							
563	Wind							
501(a-d)	NG							
504	NG							
516	NG							
525(a-c)	NG							
552	CCCT	Goldendale Energy Center (ownership)	Calpine	Goldendale, WA	277	Sep-04	*	No issues identified.
506	Coal							
520(a-c)	Coal							

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Accounting

Code	Project Name	Contract Development	Delivered to (MW)	Contract	Accounting Rating	Accounting Comments
Ending before 2009						
522-C	PPA					
522-D	PPA					
Ending after 2009						
511-a	PPA					
511-b	PPA					
511-c	PPA					
511-d	PPA					
522-A	PPA					
522-B	PPA					
554a	PPA					
★ It is impossible to make a determination such as a ranking without seeing an actual contract. I have used terms such as "probable", "expected" and "potential" because there are many variables. The specific terms of a contract and the net position when it is signed will have a large impact on the accounting. Accounting will not dictate which bids will be moved to the final stage. This will be an executive decision based on all respective merits.						

KEY
HIGH /orable / Less Risks
MED Favorable
LOW /orable / More Risks

Redacted