

**EXHIBIT NO. \_\_\_(RG-11HC)  
DOCKET NO. UE-06\_\_\_/UG-06\_\_\_  
2006 PSE GENERAL RATE CASE  
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-06\_\_\_  
Docket No. UG-06\_\_\_**

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

**REDACTED  
VERSION**

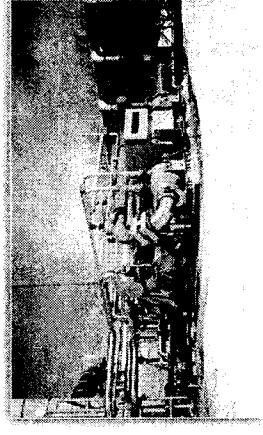
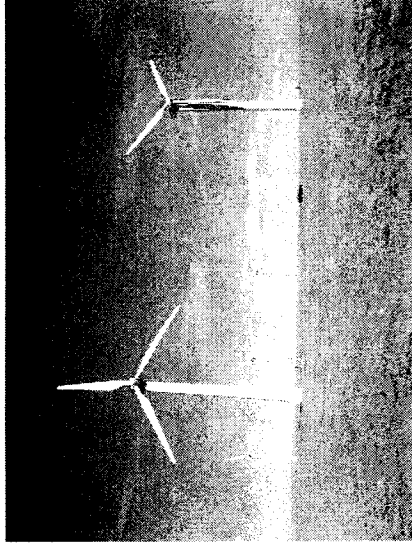
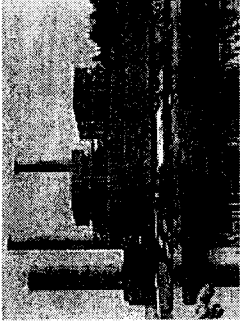
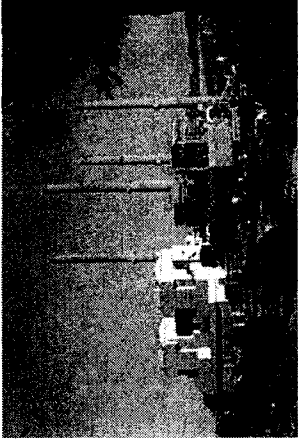
**FEBRUARY 15, 2006**

Resource Acquisition  
2004 All-Source RFP  
WUTC Staff Review Meeting  
Stage 1 Evaluation Process & Review  
June 4, 2004

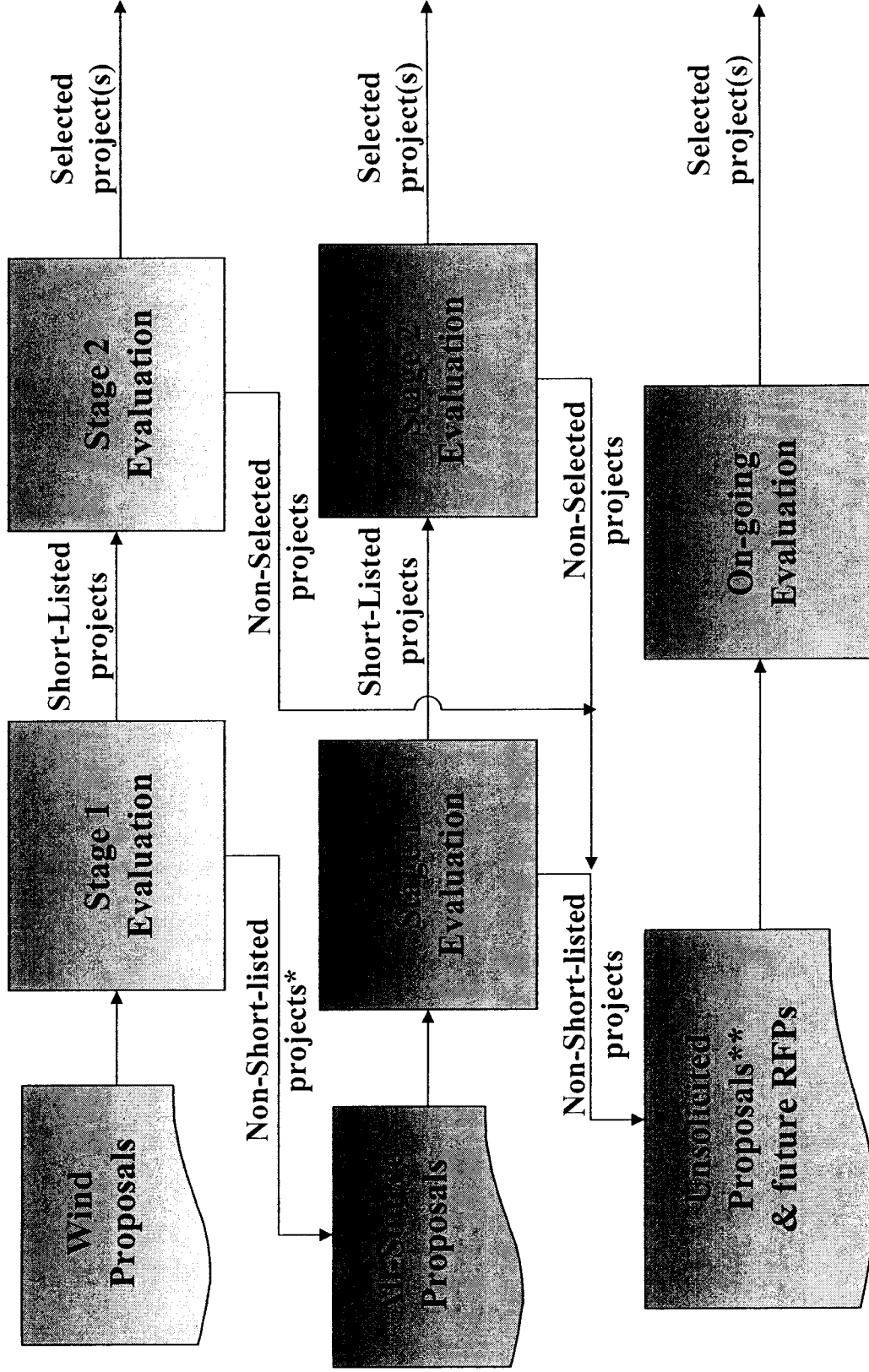
# All-Source RFP

## *Evaluation Review*

- Resource Acquisition Process
- RFP - Goals & Products Requested
- Evaluation Process & Criteria
- Responses to RFP & Summary
- Stage 1 Evaluation
  - ◆ Short-List Selection Process
  - ◆ Constrained List
  - ◆ ASM Summary of Costs & Ranking
  - ◆ Evaluation Summary Matrices by Type
  - ◆ Most Favorable Summary Matrix
  - ◆ Significant Comments & Decision
  - ◆ Ratings vs. Cost Distribution
  - ◆ Continual Investigating Selection
  - ◆ Short-List Selection
  - ◆ Post Stage 1 Status & Update
- Stage 2 Evaluation Process
- PSE Self-Build Options
- RFP Schedule



# Resource Acquisition Process



**Notes:**

\* - All but two Non-Short-listed as well as all of the Short-listed projects wind projects were officially resubmitted in the All-Source, some with revisions.

\*\* - Non-Short-Listed all-source projects and Non-Selected projects may be revised on an on-going basis to better meet PSE's

# All-Source RFP

## *RFP Evaluation Goals*

- Prudent selection of energy resources
  - ◆ Consistent with PSE planning & strategies
- Apply evaluation criteria consistently
  - ◆ Across range of 47 projects (89 proposal options) submitted
  - ◆ In comparison to projects submitted in response to Wind RFP
- Document evaluation process and decision

# **All-Source RFP**

## *Request for All Generation Resources*

- Issued RFP on February 4, 2004
  - ◆ Consistent with PSE Least Cost Plan; identified need up to ≈355 aMW of winter energy from 2005 through 2008
  - ◆ Contracting Scenarios
    - ◆ PPA
    - ◆ PSE Ownership
- Expect RFP to result in one or more projects
  - ◆ Anticipates meeting ≈50 aMW of 355 aMW through Wind RFP
  - ◆ COD by end of 2005
- Responses arrived on March 12, 2004

# All-Source RFP Evaluation Process

## First Stage Evaluation

Mar 12 - May 13, 2004

**1ST SCREENING & RATING**

- Based on criteria listed in the All-Source RFP
- Use respondents data
- Use spreadsheet model to summarize & compare quantitative factors on equivalent basis.
  - > Pro Forma w/ Dispatch
  - > 20 yr Levelized Cost
  - > Revenue Requirements
  - > Mark to Model
  - > PPA Imputed Debt
  - > End-effects
- Key qualitative criteria:
  - > Compatibility with PSE Resource Need
  - > Cost Minimization
  - > Risk Management
  - > Public Benefits
  - > Strategic & Financial

**PROPOSALS**

- 39-Owners/Developers
- 47-Proposals Options



## Second Stage Evaluation

May 13 - Jun 25, 2004

**SHORT-LIST**

- Evaluate Specific Proposals within PSE Portfolio
- Use Portfolio Screening Model to determine & compare cost variability and risk.
- Separate analysis for Transmission and Integration alternatives.
- Appropriate comparison of PPA's and ownership alternatives.
  - > Compatibility with PSE Resource Need
  - > Cost Minimization
  - > Risk Management
  - > Public Benefits
  - > Strategic & Financial



## Post-Proposal Negotiation

**BEST ALTERNATIVE**

Target:  
September 2004



# All-Source RFP

## Evaluation Criteria

Cost-Effective with Need	Minimization	Risk Management	Public Benefits	Strategic & Financial
<ul style="list-style-type: none"> <li>• Meet short and long term energy and capacity requirements</li> <li>• Balance capacity and energy needs without risk of excess capacity</li> <li>• Provide shaped resource to balance seasonality of load</li> </ul>	<ul style="list-style-type: none"> <li>• Provide lowest cost alternative to meet energy and capacity needs</li> <li>• Includes costs of               <ul style="list-style-type: none"> <li>• transmission</li> <li>• upgrades and</li> <li>• firming</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Balance potential future exposure to power purchase risk</li> <li>• Balance potential future exposure to power sales risk</li> <li>• Reasonable exposure to counterparty risk</li> </ul>	<ul style="list-style-type: none"> <li>• Lower portfolio emission levels</li> <li>• Contribute to regional energy adequacy</li> <li>• Support renewable energy development objectives</li> <li>• Promote energy efficiency (conservation and demand response)</li> </ul>	<ul style="list-style-type: none"> <li>• Reasonable exposure to future environmental regulations</li> <li>• Reasonable exposure to future state wholesale market restructuring trends</li> <li>• Contribute to regional energy needs</li> <li>• Limits balance sheet impact of imputed debt from PPAs</li> </ul>



# All-Source RFP: Stage 1

## Evaluation Criteria & Teams

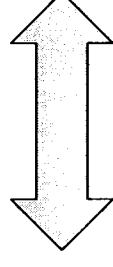
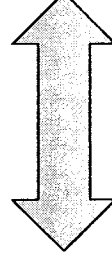
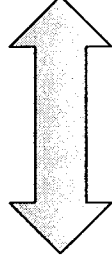
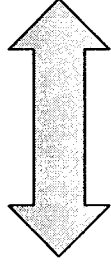
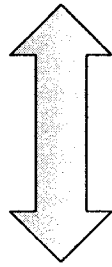
**A. Compatibility with PSE Resource Need**  
 A1. Timing  
 A2. Resource match to monthly need  
 A3. Match to monthly need through contract  
 A4. Operational Flexibility

**B. Cost Minimization**  
 B1. Resource price  
 B2. Transmission

**C. Risk Management**  
 C1. Status & Schedule  
 C2. Price Volatility  
 C3. Resource Flexibility and Stability  
 C4. Resource Technology  
 C5. Long-term Flexibility  
 C6. Project Risk

**D. Public Benefits**  
 D1. Environmental Impacts  
 D2. Resource Location  
 D3. Community Impacts

**E. Strategic & Financial**  
 E1. Capital Structure Impacts  
 E2. Future exposure to environmental regulations and/or taxes



Quantitative

Business /  
Commercial Issues

Environmental

Transmission

Real Estate

Fuel Supply

Credit

Community Impacts

# All-Source RFP: Stage 1

## Evaluation Criteria Detail

Evaluation Criteria	Explanation of Criteria	Evaluation Teams
<b>Compatibility with PSE Resource Need</b> <b>A</b>		
1. Timing	<ul style="list-style-type: none"> <li>Proposals which are available early in the acquisition time period (2005 through winter '07/'08) are preferred.</li> <li>Proposals that provide substantial assurances of being commercially available in 2005 are preferred.</li> </ul>	Tom MacLean - Resource Planner Jim Eisea - Financial Analysis Aliza Seelig - Resource Modeling Salman Aladin - Energy Risk Mgmt
2. Resource match to monthly need	<ul style="list-style-type: none"> <li>Proposals where generation from the underlying generation asset closely match PSE's monthly energy requirements or whose output can be controlled by PSE are preferred over those which rely on shaping through short- or long-term arrangements.</li> </ul>	Darrin Morgan - Financial Analyst Christine Philipps - Acquisition Manager Tom Hiestler - Acquisition Manager
3. Match to monthly need through contract	<ul style="list-style-type: none"> <li>Proposals that provide a fixed annual price to shape the underlying generation asset output to PSE monthly energy requirements are preferred.</li> <li>PSE will not consider proposals for contractual shaping that are tied to an energy price index. Contracts for a term of 3 or more years are preferred.</li> </ul>	Roger Garratt - Project Development Dennis Parrish - Energy Supply Chris Bevil - Energy Resources Bill Donahue - Gas Resource Planning Phillip Popoff - Gas Resource Planning
4. Operational Flexibility	<ul style="list-style-type: none"> <li>Proposals that provide PSE control of project output acceptable to PSE to respond to seasonal &amp; real-time fluctuations in load/resource balance and system reliability events are preferred.</li> <li>This includes, for example, dispatch or displacement of the project in real-time and, for jointly-owned projects, the ability for PSE to elect to use for reliability purposes generation output that would otherwise have been displaced by the other owner.</li> </ul>	

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# All-Source RFP: Stage 1

## Evaluation Criteria Detail (continued)

Evaluation Criteria	Explanation of Criteria	Evaluation Teams
<b>B</b> 1. Resource price  2. Transmission	<ul style="list-style-type: none"> <li>• PSE prefers those proposals that satisfy its other evaluation criteria at the lowest cost throughout the project life.</li> <li>• PSE prefers firm delivery of energy to its service area (particularly at points on its system at which the deliveries may be effected and used to serve load with no or limited transmission congestion).</li> <li>• In the absence of assurance at the time of proposal of such firm delivery, PSE prefers proposals that provide a high likelihood of acquiring adequate transmission rights to such points.</li> <li>• Proposals that do not include firm transmission to such points, that would produce congestion or that would increase PSE's transmission costs will be compared unfavorably with other proposals and/or will be assessed the additional cost to PSE.</li> </ul>	Tom MacLean - Resource Planner Jim Elsea - Financial Analysis Aliza Seelig - Resource Modeling Darrin Morgan - Financial Analyst Salman Aladin - Energy Risk Mgmt Christine Philipps - Acquisition Manager Tom Hiester - Acquisition Manager Doug Faulkner - Resource Integration Wayman Robinett - Resource Planning Steve Johnson - Integration Analyst Bill Donahue - Gas Resource Planning Phillip Popoff - Gas Resource Planning

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# All-Source RFP: Stage 1

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## Evaluation Criteria Detail (continued)

Evaluation Criteria Risk Management	Explanation of Criteria	Evaluation Teams
<p>C</p> <p>1. Status &amp; Schedule</p> <p>2. Price Volatility</p> <p>3. Resource Flexibility and Stability</p> <p>4. Resource Technology</p> <p>5. Long-term Flexibility</p> <p>6. Project Risk</p>	<ul style="list-style-type: none"> <li>All other things being equal, PSE prefers operating projects first, projects under construction second, and development projects third. With respect to development projects, respondent proposals that are able to demonstrate they have the experience and financial resources to complete the project and have made significant progress in securing necessary permits, property rights, equipment, regulatory approvals, water rights, wastewater and disposal rights, project agreements and all other rights or arrangements necessary for a completely commercially operational project within the time proposed for commercial operation are preferred.</li> <li>Proposals that provide significant long-term control of fixed and variable costs are preferred.</li> <li>Proposals that provide flexibility to expand to meet PSE's growing needs or to be deferred as required are preferred.</li> <li>Proposals that include project agreements and all other rights and arrangements coterminous with power purchase delivery periods or project life are preferred.</li> <li>Proposals that are based on commercially proven technology with demonstrated long-term reliability and performance history are preferred.</li> <li>Proposals that are based on technologies whose output may be controlled are preferred.</li> <li>Proposals that provide PSE the flexibility to adjust its position in a resource long-term up to and including termination are preferred.</li> <li>Proposals that involve minimal risk for timely plant completion within cost projections are preferred.</li> <li>Proposals that minimize exposure to environmental risk or other potential liability are preferred.</li> </ul>	<p>Tom MacLean - Resource Planner</p> <p>Jim Elsea - Financial Analysis</p> <p>Aliza Seelig - Resource Modeling</p> <p>Salman Aladin - Energy Risk Mgmt</p> <p>Darrin Morgan - Financial Analyst</p> <p>Christine Philipps - Acquisition Manager</p> <p>Tom Hiestler - Acquisition Manager</p> <p>Roger Garratt - Project Development</p> <p>Dennis Parrish - Energy Supply</p> <p>Chris Bevil - Energy Resources</p> <p>Bill Donahue - Gas Resource Planning</p> <p>Phillip Popoff - Gas Resource Planning</p> <p>Lorna Luebbe - General Counsel</p> <p>Steve Secrist - Legal &amp; Environmental</p> <p>Michele McGrady - Environmental</p> <p>Rachel Davis - Environmental</p> <p>Nick Floros - Real Estate</p> <p>Kurt Krebs - Real Estate</p> <p>Steve St. Clair - Technical Services</p> <p>Michael Jones - Energy Supply</p> <p>Salvador Avalos - Energy Trading</p> <p>Tom Barnhart - Risk Management</p>

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# All-Source RFP: Stage 1

## Evaluation Criteria Detail (continued)

Evaluation Criteria	Explanation of Criteria	Evaluation Teams
<b>D</b> Public Benefits 1. Environmental Impacts  2. Resource Location  3. Community Impacts	<ul style="list-style-type: none"> <li>• Proposals with lower environmental impacts are preferred. Environmental impacts refer to the full range of issues evaluated in an environmental impact statement (EIS) or environmental assessment (EA).</li> <li>• Proposals that are located such that they provide benefits to the regional and PSE transmission system or require minimal or no transmission upgrades are preferred.</li> <li>• Proposals that are not dependent upon constrained transmission or fuel transportation paths are preferred.</li> <li>• Proposals that are located such that they are within PSE's control area are preferred.</li> <li>• Proposals that demonstrate support from public, local, state and federal government entities and Native American nations, if applicable, are preferred.</li> </ul>	Lorna Luebbe - General Counsel Steve Secrist - Legal & Environmental Michele McGrady - Environmental Rachel Davis - Environmental Nick Floros - Real Estate Kurt Krebs - Real Estate Larry Tomberg - Land Planner Scott Williams - Land Planner Doug Faulkner - Resource Integration Wayman Robinett - Resource Planning Steve Johnson - Integration Analyst Brian Lenz - Community Relations Bill Donahue - Gas Resource Planning Phillip Popoff - Gas Resource Planning

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# All-Source RFP: Stage 1

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## Evaluation Criteria Detail (continued)

Evaluation Criteria Strategic & Financial	Explanation of Criteria	Evaluation Team
<p>E</p> <ol style="list-style-type: none"> <li>1. Capital Structure Impacts</li> <li>2. Future exposure to environmental regulations and/or taxes.</li> </ol>	<ul style="list-style-type: none"> <li>• Proposals are preferred that do not increase PSE's exposure to adverse impact on its financial position (e.g., by requiring PSE to impute debt, by otherwise adversely affecting PSE's financial leverage, operating leverage, credit rating, cash flow, income statement or balance sheet, or by imposing credit requirements).</li> <li>• Proposals for resources with lower potential exposure to future environmental regulations and/or taxes are preferred.</li> </ul>	<p>Roger Gairatt - Project Development Jim Elsea - Financial Analysis Darrin Morgan - Financial Analyst Christine Philipps - Acquisition Manager Tom Hiester - Acquisition Manager Lorna Luebbe - General Counsel Steve Secrist - Legal &amp; Environmental Michele McGrady - Environmental Rachel Davis - Environmental Bev Ikeda - Risk Control</p>

# All-Source RFP

## Responses to RFP (March 12, 2004)

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WAC 480-07-160

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Code	Project Name	Owner / Developer	Location	Resource	New or Existing	Capacity (MW)	COB	Offers
A01				Wind	New		Dec-05	20-yr PPA or 100% Ownership
A02				Wind	New		Dec-05	20-yr PPA or 50% Ownership
A03				Wind	New		Dec-05	20-yr PPA or 100% Ownership
A04				Wind	New		Jul-05	PPA + Ownership
A05				Wind	New		Aug-05	20-yr PPA or 20-yr PPA + 50% Ownership or 100% Ownership
A06				Wind	New		Feb-06	PPA or 50% PPA + 50% Ownership
A07				Wind	New		Oct-05	20-yr PPA or 100% Ownership
A08				Wind	New		Dec-05	30-yr PPA + 50% Ownership
A09				Wind	New		Dec-06	30-yr PPA + 50% Ownership
A10				Wind	New		Dec-05	30-yr PPA + 50% Ownership
A11				Wind	New		Nov-05	20-yr PPA
A12				Wind	New		Nov-05	20-yr PPA
A13				Hydro	New		May-06	25-yr PPA
A14				Hydro	New		Oct-07	100% Ownership
A15				Biomass (wood)	New		May-06	JV w/ PSE
A16				n/a	Existing		n/a	5-yr PPA
A17				Natural Gas	New		n/a	Equipment Purchase of 3-GE7FA CC Power Islands
A18				Coal	New		Dec-06	100% Ownership
A19				Coal	Existing		n/a	1-yr PPA
A20				Coal	New		late 2008	Up to 100% Ownership
A21				Natural Gas	New		Jul-07	20-yr PPA + 50% Ownership
A22				Natural Gas	New		late 2007	20-yr PPA or 100% Ownership
A23				Natural Gas	New		late 2007	20-yr PPA or 100% Ownership

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REDACTED

# All-Source RFP

## Responses to RFP (continued)

Exhibit No. (RG-11HC)   
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WAC 480-07-160

Code	Project Name	Owner / Developer	Location	Resource	New or Existing	Capacity (MW)	COD	Offers
A24				Natural Gas (PPA Coal)	Existing		Aug-02	10-yr PPA of 100% Ownership of Plant +
A25				Natural Gas	Existing		n/a	5-yr PPA
A26				Natural Gas	Suspended		Nov-05	100% Ownership
A27				Natural Gas	New		Late 2005	20-yr PPA or 100% Ownership
A28				Natural Gas	New		Sep-07	25% or 50% or 70% Ownership (PPA option available)
A29				Natural Gas	New		Dec-05	50% Ownership
A30				Hydro	Existing		late 2006	22-yr PPA
A31				Natural Gas	New		May-07	20-yr PPA + Partial Ownership or 50% Ownership
A32				Natural Gas	Existing		Oct-03	1-yr PPA or 3-yr PPA or 100% Ownership
A33				Natural Gas	New		Nov-06	20-yr PPA or 20-yr PPA + Ownership or 100% Ownership
A34				Natural Gas	New		Apr-08	20-yr PPA or 100% Ownership
A35				Natural Gas	Suspended		late 2005	100% Ownership
A36				Natural Gas	Existing		n/a	5-yr PPA (25 MWh)
A37				Natural Gas	Existing		Feb-09	100% Ownership or 7.5-yr Lease Renewal
A38				Cogen	New		Jan-07	100% Ownership
A39				Recovered Heat	New		De 2005	20-yr PPA or 100% Ownership
A40				Hydro	New		Mar-05	25-yr PPA
A41				n/a	Existing		n/a	1-yr PPA (100 MWh)
A42				Geothermal	New		Sep-07	20-yr PPA (potential partial ownership)
A43				Natural Gas	Existing		n/a	PPA assignments
A44				Wind	New		Nov-05	20-yr PPA
A45				Biomass (wood)	New		Jun-06	20-yr PPA or 100% Ownership
A46				n/a	Existing		n/a	3 Tolling-based Proposals
A47				Coal	Existing		n/a	Capacity w/ associated energy from

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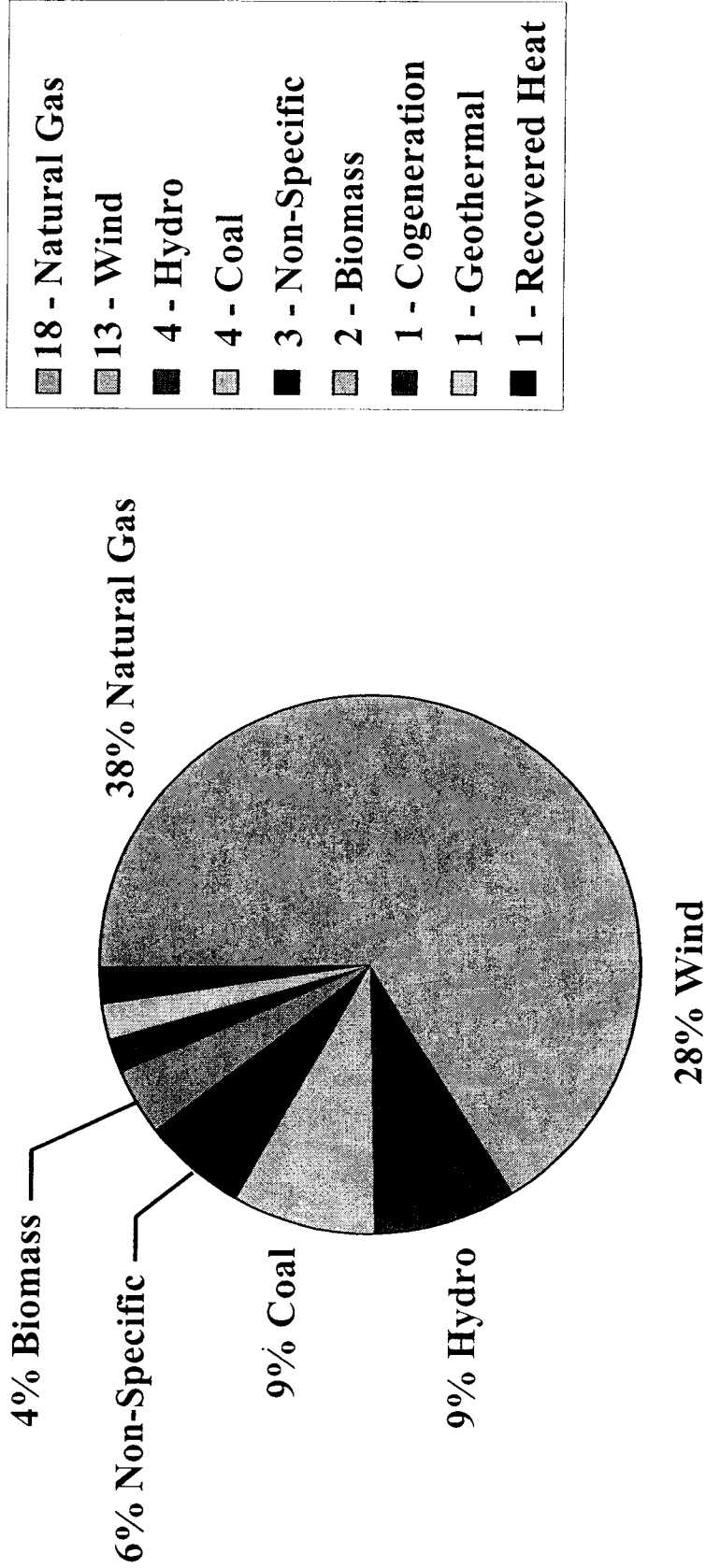
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# All-Source RFP

## Summary of Proposals

47 - Proposals with options for PPA, Ownership and/or Hybrid  
39 - Owners/Developers



*Summary is based on initial draft figures from bid opening.  
All figures are not final and subject to change and revision at any future date.*

# All-Source RFP

## Summary of Proposals

47	- Total Proposals with options for PPA, Ownership and/or Hybrid		
39	- Different Owners/Developers		
89	- Total Proposal Options		
■	33 - New Projects	■	18 - Natural Gas Projects
■	12 - Existing Projects	◆	10 -New
■	2 - Suspended Projects	◆	6 -Existing
		◆	2 -Suspended
■	12 - Wind Projects Re-Submitted from '2004 Wind RFP'	■	13 - Wind Projects
■	1 - New Wind Project	◆	13-New
		■	4 - Hydro Projects
		◆	3 -New
		◆	1 -Existing
		■	4 - Coal Projects
		◆	2 -New
		◆	2 -Existing
		■	3 - Non-specific Power Purchases
		■	2 - Biomass (wood) Projects
		◆	2 -New
		■	1 - Cogeneration Project
		◆	1 -New
		■	1 - Geothermal Project
		◆	1 -New
		■	1 - Recovered Heat Project
		◆	1 -New

### Options Breakdown

■	24 - PPA and/or Ownership
■	13 - PPA only
■	9 - Ownership only

# All-Source RFP: Stage 1

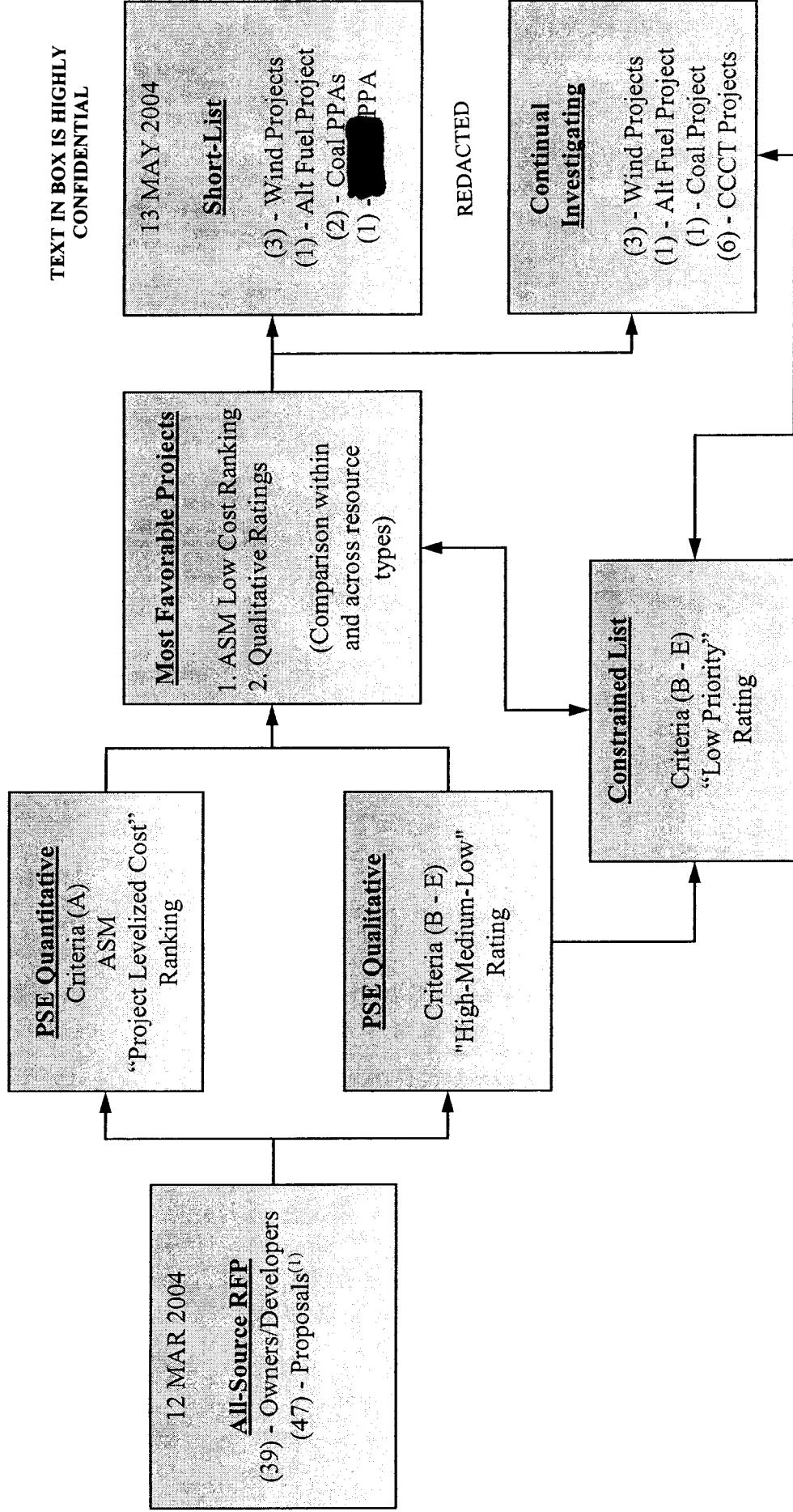
## *Short-List Selection Process*

- Level 1 Screening “Constrained” List
- Acquisition Screening Model (ASM) Cost Ranking
- Qualitative Evaluation Ratings
- Combined the review and ratings of each:
  - ◆ ASM Cost Ranking
  - ◆ Qualitative Evaluation Ratings
- Review of “Most Favorable” Projects
- Selection to “Short-List” vs. “Continual Investigating” List
- 7 Projects selected for Stage 2 Evaluation

**HIGHLY CONFIDENTIAL**  
 PER WAC 480-07-160

**TEXT IN BOX IS HIGHLY  
 CONFIDENTIAL**

# All-Source RFP: Stage 1 Selection Process Flow Chart



Notes:

1. Proposals Options included (48) - PPAs, (23) - Asset Ownerships, (18) - Hybrids = (89) - Total Proposal Options.

# All-Source RFP: Stage 1 Level 1 Screen "Constrained" List

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WAC 480-07-160

Code	Type	Project Name	Owner / Developer	Criteria	"Constrained" Justification	Recommendation
A13	H			B2 C1	Relies on nonfirm transmission through Quality of the developer/proposer and overall commercial feasibility of the deal.	Low Priority
A14	H			C4 C6	Little technical information is provided for projects This project does not appear to have permits, and the source and longevity of the water right is unclear.	Low Priority
A17	G			C4	This proposal is for equipment only. While the basic technology appears solid, there is considerable permitting, operational, and completion risk.	Low Priority
A18	IG			C1	Quality of the developer/proposer and overall commercial feasibility of the deal	Low Priority
A20	C			B2	Transmission solution is not mature.	HOLD - Pending resolution of Transmission
A27	G			B2 C E1	No transmission across BPA, scant mention of exchange option in Bankruptcy.	HOLD - Pending resolution of Transmission and resolution of Bankruptcy filing
A31	G			B2	West of McNary; No firm transmission available at this time	HOLD - Pending resolution of Transmission
A33	G			B2	West of McNary; No firm transmission available at this time	HOLD - Pending resolution of Transmission *Review Fuel Supply Offer
A34	G			B2	Only 2 routes for connection to grid; 1 rejected and other is not a viable option	Low Priority
A37	G			C4	The proposed equipment is currently installed The units are 23 years old and have engine controls and emission controls of that vintage. Retrofit of modern engine controls would cost approximate Incomplete information provided; and the FERC License appears to have already expired or will expire in late April	Low Priority
A40	H			C1	Review by EPM; 2 year product within purview of EPM; product not expected to provide value to PSE's portfolio as it does not conform to PSE's need; option products generally suited for winter reliability. Option premiums significantly above KW3000 value	Low Priority
A44	W			B2	West of McNary; No firm transmission available at this time	HOLD - Pending resolution of Transmission
A45	BG			C1 C6	Supply and purchase of fuel and sale of steam to host no longer viable. Timing and results of permitting cannot be guaranteed.	HOLD - Pending resolution of host and fuel supply
A47	C			B2	Transmission solution is not mature	HOLD - Pending resolution of Transmission

TEXT IN BOX IS HIGHLY CONFIDENTIAL

NOTES:  
1 Removed A16: from list. The PPA will not be evaluated by the EPM group.  
2 Removed A19: APS 1-year Centralia Coal PPA for 85MW. The EPM has completed their review and find the proposal exceptional.

# All-Source RFP: Stage 1

## ASM Summary of Proposal Costs

	ASM Resource Project Cost			ASM Cost to Serve Load <sup>(2)</sup>		
	Levelized 20-yr \$/MWh			Levelized 20-yr \$/MWh		
	Low	High	Avg <sup>(1)</sup>	Low	High	Avg <sup>(1)</sup>
Natural Gas Ownership	60	85	69	55	82	60
Natural Gas Ownership and PPA	63	79	68	55	70	60
Wind	44	96	56	46	91	57
Wood Waste	46	65	58	45	60	55
Geothermal	67	78	73	61	70	65
PPA <sup>(*)</sup> Gas	52	99	66	52	63	57
PPA <sup>(*)</sup> existing Coal <sup>(3)</sup>	42	70	56	51	65	57
PPA <sup>(*)</sup> new Hydro <sup>(4)</sup>	64	64	64	53	53	53
Heat Recovery	47	66	56	47	63	55
Coal Ownership	53	53	53	49	49	49
Total	42	99	62	45	91	58

- (1) If only one bid evaluated so far, then that bid put in the average column
- (2) Assumes PSE retail load shape and volume of load equal to plant capacity times availability.
- (3) For first 10 years cost to serve load is \$48, remaining 10 years at market
- (4) Project cost is higher because energy of PPA supplied during 6x16 on-peak hours
- (\*) All PPAs included imputed debt cost assuming S&P risk factor of 30%

# All-Source RFP: Stage 1

Exhibit No. \_\_\_\_ (RG-11HC) □  
Page 22 of 53

## Acquisition Screening Model (ASM) Definitions

### ASM Resource Project Cost:

- Levelized cost of acquisition or PPA over twenty years of length of proposal / project which is based upon the following inputs:
  - Plant characteristics:
    - ◆ Capacity
    - ◆ Heat rate
    - ◆ Maintenance outage schedule
    - ◆ Forced outage rate
    - ◆ Sample 8760 hour generation profile for wind projects
    - ◆ Book and tax depreciation rates
    - ◆ Emission rates for SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub>
  - Plant Cost Data:
    - ◆ Capital cost including AFUDC and deal transaction costs
    - ◆ Fixed O&M per kw of capacity.
    - ◆ Fixed A&G costs per kw of capacity (this will include property taxes and insurance)
    - ◆ Variable O&M per MWh
    - ◆ Fuel transportation costs including fixed pipeline and lateral charges as well as pipeline commodity charges plus fuel use (losses) and Washington State use tax.
    - ◆ Fixed and variable transmission costs including wheeling, ancillary services and imbalance or integration costs.
  - PPA Cost Data
    - ◆ PPA fixed prices and escalation
    - ◆ PPA variable prices, and or variable adders
    - ◆ Transmission costs fixed and variable
    - ◆ Tolling: fixed and variable gas transportation, variable O&M strike price, seasonal and maintenance outage forecast, forced outage rate.
  - Other Assumptions:
    - ◆ Costs of borrowing debt and equity capital. Uses the weighted average cost of capital for levelizing costs.
    - ◆ Natural gas price = same as input to AURORA5
    - ◆ Power price = hourly output from AURORA5
    - ◆ Trading values of emissions
    - ◆ Imputed debt risk percentage
    - ◆ Production tax credits for qualifying renewable projects

# All-Source RFP: Stage 1

## Acquisition Screening Model (ASM) Definitions

### ASM Cost to Serve Load:

- Surrogate for Portfolio Cost to help compare dissimilar products.
- It includes the cost of the acquisition or PPA and market sales and purchases of energy to match PSE's load shape exclusive of other PSE resources.
- The 5-year levelized cost is used to look at short-term PPAs.



# All-Source RFP: Stage 1

## ASM Project Levelized Cost Ranking

Highly Confidential per  
WAC 480-07-160

Rank	Code	Type	Project Name	Owner/ Developer	Proposal Option	Location	Status	Capacity (MW)	COD	Project Levelized Cost (\$ / MWh)	20-yr Expected Cost (\$ / MWh)	Levelized Capacity Factor
1	A19	C			2-yr PPA		Operating		n/a			
2	A03	W			100% Ownership		Development		Dec-05			
3	A07	W			20-yr PPA or 100% Ownership		Development		Oct-05			
4	A02b	W			100% Ownership		Development		Dec-05			
5	A24b	C			10-yr PPA 100 to 200 MW Plant		Operating		n/a			
6	A15	BG			JV w/ PSE		Development		May-06			
7	A06	W			50% PPA + 50% Ownership		Development		Feb-06			
8	A39	HR			100% Ownership		Development		Dec-05			
9	A08	W			30-yr PPA + 50% Ownership		Development		Dec-05			
10	A01	W			100% Ownership		Development		Dec-05			
	A10	W			30-yr PPA + 50% Ownership		Development		Dec-05			
	A09	W			30-yr PPA + 50% Ownership		Development		Dec-06			
	A32c	G			3-yr Tolling PPA Shaping		Operating		Oct-03			
	A16	O			6-yr Seasonal Shaped PPA		Operating		n/a			
	A32b	G			1-yr Tolling PPA Shaping		Operating		Oct-03			
	A20	C			100% Ownership		Development		late 2008			
	A05	W			20-yr PPA or 20-yr PPA + 50% Ownership or 100%		Development		Nov-05			
	A02a	W			50% Ownership		Development		Dec-05			
	A04	W			PPA1 Busbar		Development		Jul-05			
	A25b	G			5-yr PPA October - March		Operating		n/a			

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# All-Source RFP: Stage 1

## ASM Project Levelized Cost Ranking

Exhibit No. (RG-11HC) □  
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Highly Confidential per  
WAC 480-07-160

Code	Type	Project Name	Owner / Developer	Proposal Option	Location	Status	Capacity (MW)	COD	Project Levelized Cost (\$ / MWh)	20-yr Expected Cost (\$ / MWh)	Levelized Capacity Factor
A25a	G			5-yr PPA Sept - March		Operating		n/a			
A45	BG			20-yr PPA Energy Pricing		Development		Jun-06			
A46	O			Jan05 - Mar08 Baseload tolling		Operating		n/a			
A29	G			50.2% Ownership w BPA Transmission		Development		Dec-05			
A26	G			100% Ownership		Suspended		Nov-05			
A44	W			20-yr PPA		Development		Nov-05			
A35	G			100% Ownership		Suspended		late 2005			
A24a	G			100% Ownership of [REDACTED] and 10-yr PPA 100		Operating		Aug-02			
A28	G			70% Ownership		Development		Sep-07			
A30	H			2-yr Bridge + 20-yr Seasonal On-Peak PPA		Operating / Development		late 2006			
A32a	G			100% Ownership		Operating		Oct-03			
A47	C			Sept-Mar 5-yr Unit Contingent		Operating		n/a			
A42	GT			20-yr PPA + potential partial ownership		Development		Sep-07			
A43	G			PPA assignments		Operating		n/a			
A22	G			100% Ownership		Development		late 2007			
A36	G			5-yr Tolling PPA (25 MWh)		Operating		Jan-05			
A21	G			20-yr PPA + 50% Ownership		Development		Jul-07			
A23	G			100% Ownership		Development		late 2007			
A38	O			100% Ownership		Development		Jan-07			
A12	W			20-yr PPA		Development		Nov-05			
A11	W			20-yr PPA		Development		Nov-05			

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# All-Source RFP: Stage 1

## *Selection of Projects by Type*

- Portfolio Screening Model (PSM) used in Stage 2 as principal quantitative evaluation tool
  - ◆ Calculates portfolio impacts for given set of resources
- Balanced mix of diversified resources has lowest cost and least risk per 2003 Least Cost Plan (LCP)
- When considering Stage 1 “short list” selection, important to preserve opportunity to acquire a diversified resource mix
  - ◆ Selection of best projects, meeting all acceptable evaluation criteria from each resource type, should be considered
  - ◆ Given current high gas prices and long-term forecasts, no gas projects selected for Stage 2 evaluation
  - ◆ In Stage 2 evaluation, data from the most favorable gas projects will be run through PSM
  - ◆ Should PSM runs indicate that gas projects would comprise all or a portion of the least cost PSE portfolio in near term, gas projects would be reconsidered for Stage 2.
- PSM analyses will also be compared to updated generic portfolios similar to those evaluated in 2003 LCP.

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# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

- Ranked by ASM 'Project Levelized Cost'
- Stage 1 Evaluation Criteria Ratings

PROPOSALS		STAGE 1 EVALUATION SUMMARY by TEAM										
Code	Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
ALTERNATE FUEL												
A15	BG					LOW	LOW	LOW-MEDIUM	MEDIUM	LOW	LOW	HIGH
A39	HR					MEDIUM	HIGH	LOW-MEDIUM	HIGH	LOW	HIGH	HIGH
A45	BG					LOW	LOW	MEDIUM	LOW	LOW	LOW-MEDIUM	MEDIUM
A42	GT					MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH	N/A
A14	H					LOW	N/A	LOW	LOW	LOW	LOW	N/A

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# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

Costs Very Attractive

Rating mainly reflects undeveloped status of the proposal

STAGE 1 EVALUATION SUMMARY by TEAM											
PROPOSALS	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
<b>ALTERNATE FUEL</b>											
A15	BG	<b>REDACTED</b>			LOW	LOW	LOW-MEDIUM	MEDIUM	LOW	LOW	HIGH
A39	HR				MEDIUM	HIGH	LOW-MEDIUM	HIGH	LOW	HIGH	HIGH
A45	BC				LOW	LOW	MEDIUM	LOW	LOW	LOW-MEDIUM	MEDIUM
A42	GT							MEDIUM	MEDIUM	HIGH	N/A
A44	H							LOW	LOW	LOW	N/A

Higher Costs and/or on "Constrained" List

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# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

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PROPOSALS		STAGE 1 EVALUATION SUMMARY by TEAM										
Code	Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
<b>POWER PURCHASE - Long-Term (&gt;10yrs)</b>												
A24b	C	REDACTED										HIGH
A30	H	REDACTED										N/A
A43	G	REDACTED										MEDIUM
A13	H	REDACTED										LOW
A40	H	REDACTED										LOW
<b>POWER PURCHASE - Short-Term (&lt;10yrs)</b>												
A19	C	REDACTED										HIGH
A32c	G	REDACTED										MEDIUM
A16	O	REDACTED										N/A
A32b	G	REDACTED										MEDIUM
A25b	G	REDACTED										MEDIUM-HIGH
A25a	G	REDACTED										MEDIUM-HIGH
A46	O	REDACTED										LOW
A47	C	REDACTED										HIGH
A36	G	REDACTED										VERY LOW
A41	O	REDACTED										LOW

Highly Confidential per  
WAC 480-07-160

# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

On-Peak Product  
(See Next Slide)

Costs Very Attractive and  
Ratings are Highly Favorable

STAGE 1 EVALUATION SUMMARY by TEAM												
PROPOSALS	Project Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
<b>POWER PURCHASE - Long-Term (&gt;10yrs)</b>												
A24b	C		REDACTED	REDACTED		HIGH	HIGH	VERY HIGH	N/A	N/A	MEDIUM-HIGH	HIGH
A30	H		REDACTED	REDACTED		HIGH	N/A	MEDIUM	N/A	N/A	MEDIUM-HIGH	N/A
A43	C		REDACTED	REDACTED		MEDIUM	MEDIUM	LOW-MEDIUM	N/A	N/A	MEDIUM-HIGH	HIGH
A43	H		REDACTED	REDACTED		Higher Costs and/or on "Constrained" List						N/A
A46	H		REDACTED	REDACTED		Higher Costs and/or on "Constrained" List						N/A
<b>POWER PURCHASE - Short-Term (&lt;10yrs)</b>												
A19	C		REDACTED	REDACTED		HIGH	HIGH	VERY HIGH	HIGH	N/A	MEDIUM-HIGH	HIGH
A23c	C		REDACTED	REDACTED		HIGH	MEDIUM	MEDIUM	HIGH	N/A	HIGH	HIGH
A46	C		REDACTED	REDACTED		Higher Costs and/or on "Constrained" List						N/A
A24b	C		REDACTED	REDACTED		Higher Costs and/or on "Constrained" List						N/A
A25b	C		REDACTED	REDACTED		MEDIUM	MEDIUM-HIGH	LOW	N/A	N/A	MEDIUM	HIGH
A25c	C		REDACTED	REDACTED		MEDIUM	MEDIUM-HIGH	LOW	N/A	N/A	MEDIUM	HIGH
A46	C		REDACTED	REDACTED		MEDIUM	LOW	N/A	N/A	N/A	HIGH	N/A
A47	C		REDACTED	REDACTED		HIGH	HIGH	VERY-LOW	N/A	N/A	LOW-MEDIUM	N/A
A26	C		REDACTED	REDACTED		MEDIUM	LOW	MEDIUM	LOW	N/A	HIGH	N/A
A47	C		REDACTED	REDACTED		LOW	N/A	N/A	N/A	N/A	MEDIUM	N/A

# All-Source RFP: Stage 1

## Selection of A30: [REDACTED] 22-yr PPA

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- Acquisition Screening Model (ASM) used to quantify costs of All-Source proposals does not seem adequate to address value of some non-standard offers (e.g., [REDACTED] PPA).
- [REDACTED] offered On-Peak power during September through March.
- Recommendation to take this offer through to “Short-List” to be evaluated by Portfolio Screening Model (PSM).
- In support of recommendation, On-Peak market prices during September - March were compared to the [REDACTED] PPA proposed contract prices.
  - ◆ On a PV basis the [REDACTED] contract is about \$ [REDACTED] /MWh lower than assumed market prices.
  - ◆ Given this, [REDACTED] PPA merits further consideration in Stage 2 evaluation; therefore, selected for “Short-List”.

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WAC 480-07-160

# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

TEXT IN BOX IS HIGHLY  
CONFIDENTIAL

PROPOSALS		STAGE 1 EVALUATION SUMMARY by TEAM										
Code	Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
THERMAL (Natural Gas, Coal, Cogen)												
A20	C					MEDIUM	LOW	VERY LOW	LOW	LOW	HIGH	N/A
A29	G					MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	LOW	MEDIUM	MEDIUM-HIGH	N/A
A26	G					LOW	MEDIUM-HIGH	LOW	MEDIUM	N/A	MEDIUM	HIGH
A35	G					MEDIUM	MEDIUM	LOW	HIGH	N/A	MEDIUM	MEDIUM
A24a	G					HIGH	MEDIUM	VERY HIGH	MEDIUM	N/A	LOW-MEDIUM	HIGH
A28	G					MEDIUM	HIGH	MEDIUM-HIGH	MEDIUM	LOW	MEDIUM-HIGH	LOW
A32a	G					HIGH	MEDIUM	MEDIUM	HIGH	N/A	HIGH	HIGH
A22	G					MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
A21	G					MEDIUM	MEDIUM	HIGH	HIGH	HIGH	MEDIUM-HIGH	HIGH
A23	G					MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	LOW	MEDIUM	MEDIUM	HIGH
A38	O					MEDIUM	LOW	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM
A17	G					LOW	N/A	N/A	LOW	N/A	MEDIUM	MEDIUM
A18	IG					LOW	LOW	HIGH	LOW	MEDIUM	LOW	LOW
A27	G					LOW	LOW	VERY LOW	LOW	MEDIUM	LOW	N/A
A31	G					MEDIUM	HIGH	VERY LOW	N/A	LOW	HIGH	N/A
A33	G					MEDIUM	MEDIUM-HIGH	VERY LOW	MEDIUM	LOW	MEDIUM	N/A
A34	G					LOW	HIGH	LOW	MEDIUM	MEDIUM	MEDIUM-HIGH	LOW
A37	G					LOW	HIGH	HIGH	LOW	N/A	HIGH	HIGH

REDACTED

Gray Shade = Constrained EIS

Gray Shade

# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

Highly Confidential per  
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Cost Attractive but  
Transmission is Constrained

Natural Gas Projects  
Ratings are Favorable  
but Costs Range \$ to \$

Higher Costs and/or  
on "Constrained" List

PROPOSALS	STAGE 1 EVALUATION												
	Code	Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2-C1-D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
THERMAL (Natural Gas, Coal, Cogen)													
A20	C						MEDIUM	LOW	VERY LOW	LOW	LOW	HIGH	N/A
A29	G						MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	LOW	MEDIUM	MEDIUM-HIGH	N/A
A26	G						LOW	MEDIUM-HIGH	LOW	N/A	MEDIUM	MEDIUM	HIGH
A35	G						MEDIUM	MEDIUM-HIGH	LOW	N/A	MEDIUM	MEDIUM	MEDIUM
A24a	G						HIGH	MEDIUM-HIGH	LOW	N/A	MEDIUM	LOW-MEDIUM	HIGH
A28	G						MEDIUM	MEDIUM	MEDIUM	N/A	MEDIUM-HIGH	MEDIUM-HIGH	LOW
A32a	G						HIGH	MEDIUM	MEDIUM	N/A	HIGH	HIGH	HIGH
A22	C						MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
A24	C						MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	MEDIUM	MEDIUM	MEDIUM-HIGH	HIGH
A23	G						MEDIUM	MEDIUM-HIGH	LOW-MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
A20	G						MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
A47	G						LOW	N/A	N/A	LOW	N/A	MEDIUM	MEDIUM
A18	IC						LOW	LOW	HIGH	LOW	MEDIUM	LOW	LOW
A27	G						LOW	LOW	VERY LOW	LOW	MEDIUM	LOW	N/A
A24	C						MEDIUM	HIGH	VERY LOW	N/A	LOW	HIGH	N/A
A22	C						MEDIUM	MEDIUM-HIGH	VERY LOW	MEDIUM	LOW	MEDIUM	N/A
A24	C						LOW	HIGH	LOW	MEDIUM	MEDIUM-HIGH	MEDIUM-HIGH	LOW
A27	C						LOW	HIGH	LOW	N/A	HIGH	MEDIUM	HIGH

REDACTED

Highly Confidential per  
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# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

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STAGE 1 EVALUATION SUMMARY by TEAM											
PROPOSALS	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2 - C1 - D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
<b>WIND</b>											
A03	W				HIGH	MEDIUM	LOW	HIGH	MEDIUM	HIGH	HIGH
A07	W				MEDIUM	LOW	LOW	LOW	LOW	MEDIUM-HIGH	MEDIUM
A02b	W				MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	HIGH	HIGH
A06	W				HIGH	MEDIUM	MEDIUM-HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM
A08	W				MEDIUM	LOW	MEDIUM-HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM
A01	W				LOW	MEDIUM	HIGH	MEDIUM	MEDIUM	MEDIUM	LOW
A10	W				MEDIUM	LOW	MEDIUM-HIGH	MEDIUM	HIGH	MEDIUM	LOW
A09	W				MEDIUM	LOW	MEDIUM-HIGH	MEDIUM	MEDIUM	HIGH	HIGH
A05	W				MEDIUM	LOW	LOW	LOW	HIGH	MEDIUM	HIGH
A02a	W				MEDIUM	MEDIUM	HIGH	HIGH	MEDIUM	HIGH	HIGH
A04	W				MEDIUM	LOW	LOW	LOW	MEDIUM	LOW-MEDIUM	HIGH
A44	W				MEDIUM	N/A	MEDIUM	N/A	HIGH	MEDIUM-HIGH	HIGH
A12	W				LOW	LOW	LOW	LOW	LOW	LOW-MEDIUM	N/A
A11	W				LOW	LOW	LOW	LOW	LOW	LOW-MEDIUM	N/A

REDACTED

Highly Confidential per  
WAC 480-07-160

# All-Source RFP: Stage 1 Evaluation Summary Matrix by Type

Costs Attractive but  
Wind Energy Assessment  
Rates as "Non-Financable"

Costs Attractive and  
Ratings are Highly Favorable

TEXT IN BOX IS HIGHLY  
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STAGE 1 EVALUATION SUMMARY by TEAM													
PROPOSALS	Code	Type	Project Name	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor	Business / Commercial [A-B-C-D-E]	Fuel Supply [C1-C2-D2]	Transmission [B2-C1-D2]	Technical [C4]	Real Estate [C1-C6-D2]	Environmental [C1-C6-D1-E2]	Community [D3]
<b>WIND</b>													
	A03	W					HIGH	MEDIUM	LOW	HIGH	MEDIUM	HIGH	HIGH
	A07	W				MEDIUM	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM-HIGH	MEDIUM
	A02b	W				MEDIUM	MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	HIGH	HIGH
	A06	W				HIGH	MEDIUM	MEDIUM-HIGH	MEDIUM-HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM
	A08	W				MEDIUM	MEDIUM	MEDIUM-HIGH	MEDIUM-HIGH	MEDIUM	MEDIUM	HIGH	MEDIUM
	A01	W				LOW	MEDIUM	MEDIUM	HIGH	MEDIUM	MEDIUM	MEDIUM	LOW
	A46	W				MEDIUM	MEDIUM	LOW	MEDIUM-HIGH	MEDIUM	HIGH	MEDIUM	LOW
	A00	W											
	A05	W											
	A02e	W											
	A04	W											
	A44	W											
	A42	W											

Higher Costs and/or  
on "Constrained" List

REDACTED

High Permitting Risk due to

# All-Source RFP: Stage 1

Exhibit No. (RG-11HC) □  
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## "Most Favorable" Projects Summary Matrix

Code	Type	Project Name	Owner/Developer	Proposal Option	Location	Status	Capacity (MW)	COD	Project Levelized Cost (\$/MWh)	20-yr Expected Cost (\$/MWh)	Levelized Capacity Factor
<b>ALTERNATE FUEL</b>											
A15	BG			JV w/ PSE		Development		May-06			
A39	HR			100% Ownership		Development		Dec-05			
<b>POWER PURCHASE</b>											
A19	C			2-yr PPA		Operating		n/a			
A24b	C			10-yr PPA 100 to 200 MW		Operating		n/a			
A30	H			2-yr Bridge + 20-yr Seasonal On-Peak PPA		Operating / Development		late 2006			
<b>THERMAL (Natural Gas, Coal, Cogen)</b>											
A20	C			100% Ownership		Development		late 2008			
A29	G			50.2% Ownership w BPA Transmission		Development		Dec-05			
A26	G			100% Ownership		Suspended		Nov-05			
A35	G			100% Ownership		Suspended		late 2005			
A24a	G			100% Ownership o [REDACTED] and 10-yr PPA 100		Operating		Aug-02			
A28	G			70% Ownership		Development		Sep-07			
A32a	G			100% Ownership		Operating		Oct-03			
<b>WIND</b>											
A03	W			100% Ownership		Development		Dec-05			
A07	W			20-yr PPA or 100% Ownership		Development		Oct-05			
A02b	W			100% Ownership		Development		Dec-05			
A06	W			50% PPA + 50% Ownership		Development		Feb-06			
A08	W			30-yr PPA + 50% Ownership		Development		Dec-05			
A01	W			100% Ownership		Development		Dec-05			

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# All-Source RFP: Stage 1

## Significant Comments & Decision

Code	Type	Project Name	Owner / Developer	Project Levelized Cost (\$ / MWh)	Significant Comments	DECISION
<b>ALTERNATE FUEL</b>						
A15	BG	REDACTED			*Very early stages of development *Fuel Supply Plan not fully developed *Very little emissions data. Assumes that only cleanup will be particulates. *BFB supposed to cut NOx and convert CO to CO2.	"Continual Investigating"
A39	HR	Sumas Recovered Heat	ORMAT		*Need to decide if PSE Ownership is a feasible option *PPA is not attractively priced	"SHORT-LIST"

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# All-Source RFP: Stage 1

## Significant Comments & Decision

Code	Type	Project Name	Owner / Developer	Project Levelized Cost (\$ / MWh)	Significant Comments	DECISION
<b>POWER PURCHASE</b>						
A19	C	APS - Centralia 2-yr PPA	Arizona Public Service (APS)		*Reviewed & Evaluated by EPM *Recommendation is to Pursue *Product has many benefits: provides reliability, good exchange value, and loss savings *Price is DJ Mid-C Index minus \$ [REDACTED] MWh	"SHORT-LIST"
A24b	C	[REDACTED] 10-yr PPA	[REDACTED]	[REDACTED]	*Low Cost & Low Risk PPA	"SHORT-LIST"
A30	H	[REDACTED] - 22-yr Seasonal On-Peak PPA	[REDACTED]	[REDACTED]	*On Peak PPA is worth evaluating in the Portfolio Model *May be about \$ [REDACTED] lower than assumed market prices	"SHORT-LIST"

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# All-Source RFP: Stage 1 Significant Comments & Decision

Code	Type	Project Name	Owner / Developer	Project Levelized Cost (\$/MWh)	Significant Comments	DECISION
THERMAL (Natural Gas, Coal, Cogen)						
A20	C				<p>*Not expected to get service agreement without improvements through West of Hawaii.</p> <p>*Must assume that PSE can live with non-firm transmission or wait for more Cross Cascades transmission</p> <p>*Contains a coal supply proposal from [REDACTED] out [REDACTED]. The extent of reserves are known but may require the plant owner(s) to operate the mine as well</p>	"Continual Investigating"
A29	G				<p>[REDACTED] involvement (optional) makes transaction look like a tolling deal.</p> <p>*The [REDACTED] turbine represents a major development effort on the part of [REDACTED] to resolve combustion and cooling issues; this turbine may present significant risks to long-term operation.</p>	"Continual Investigating"
A26	G				<p>*[REDACTED] filed [REDACTED] Bankruptcy.</p> <p>*No transmission request in BPA queue; Cross Cascades path is expected to sell out before contract is offered</p>	"Continual Investigating"
A35	G				<p>*Project attractively priced</p> <p>*Fixed fuel charges of approx. \$ [REDACTED] month</p> <p>*No transmission request in; two constraints on I-5, others in queue will use capacity</p>	"Continual Investigating"
A24a	G				<p>*LM6000 units with quickstart capability may have optionality and/or capacity value</p> <p>*Concern with [REDACTED] permit and wastewater [REDACTED]</p>	"Continual Investigating"
A28	G				<p>*PSE interconnection will be extremely expensive</p> <p>*BP very high in queue, should receive a transmission offer shortly. Their path to John Day has higher impacts than delivering the power to PSE</p> <p>*CT technology is a concern; Users are just getting to the first combustion inspections and only one has reached the hot gas path interval. None have reached the 48k hour major inspection yet</p>	"Continual Investigating"
A32a	G				<p>*Attractive plant</p>	"Continual Investigating"

REDACTED



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# All-Source RFP: Stage 1 Significant Comments & Decision

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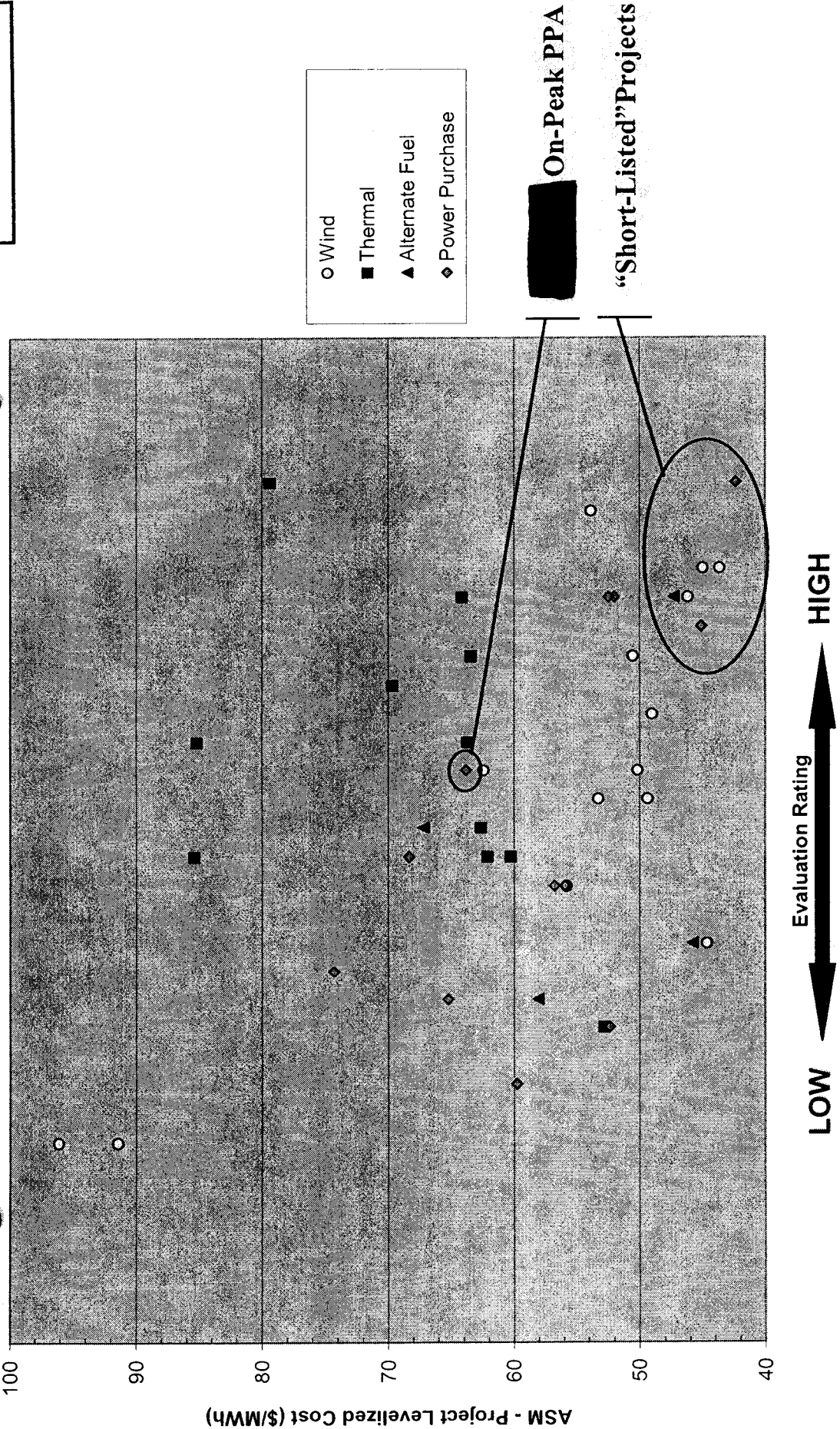
Code	Type	Project Name	Owner / Developer	Project Levelized Cost (\$/MWh)	Significant Comments	DECISION
<b>WIND</b>						
A03	W	Hopkins Ridge	RES		<p>Transmission Constraints:                      *Wrong side of the 'West of McNary' cutplane; Not expected to get service agreement without completion of McN - JDA.                      *The project is too low in the transmission queue to have any certainty of receiving firm transmission.                      *Must assume that PSE can live with nonfirm transmission</p>	"SHORT-LIST"
A07	W	REDACTED			<p>*Non-Financable; Rated "LOW" in the Wind Data and Energy Assessment evaluation                      *No transmission requested on BPA, way down in queue; Cross Cascades path is expected to sell out before contract is offered                      *No formal easements or leases in place for [REDACTED]</p>	"Continual Investigating"
A02b	W	Wild Horse	Zilkha		<p>*Second Ranked Project in Wind REP                      *Most significant issue is [REDACTED]</p>	"SHORT-LIST"
A06	W			REDACTED	<p>*First Ranked Project in Wind RFP                      *Currently pursuing through due diligence                      *Began commercial discussions</p>	"SHORT-LIST"
A08	W			REDACTED	<p>*Non-Financable; Rated "LOW" in the Wind Data and Energy Assessment evaluation</p>	"Continual Investigating"
A01	W				<p>Permit Obstacles:                      * [REDACTED] strong negative reaction to the project                      * [REDACTED]</p>	"Continual Investigating"

# All-Source RFP: Stage 1

Exhibit No. \_\_\_ (RG-11HC) □  
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## Rating vs. Cost Distribution of Projects

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Note: This chart is for graphical illustration purposes. Evaluation Ratings for this chart

# All-Source RFP: Stage 1

## *Continual Investigating Selection*

- “Continue Investigating” list defined as those projects that PSE’s Stage 1 evaluation has shown as being attractive, but currently face obstacles such as transmission constraints.
- PSE will continue to monitor status of these projects as Stage 2 progresses and depending on negotiations with those “Short-listed”.
- It is possible these projects could advance.
- Current and forward gas prices render the natural gas projects uneconomical as compared to other resource alternatives identified in “Short-List”.
- PSE will continue investigating these projects with ongoing discussions with developers/owners.

# All-Source RFP: Stage 1

Exhibit No. (RG-11HC) □  
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## Continual Investigating Selection Summary

Code	Type	Project Name	Owner / Developer	Proposal Option	Location	Status	Capacity (MW)	COD	Project Levelized Cost (\$ / MWh)
<b>ALTERNATE FUEL</b>									
A15	BG			JV w/ PSE		Development		May-06	
<b>THERMAL</b>									
A20	C			100% Ownership		Development		late 2008	
A29	G			50.2% Ownership w BPA Transmission		Development		Dec-05	
A26	G			100% Ownership		Suspended		Nov-05	
A35	G			100% Ownership		Suspended		late 2005	
A24a	G			100% Ownership of [REDACTED] and 10-yr PPA		Operating		Aug-02	
A28	G			70% Ownership		Development		Sep-07	
A32a	G			100% Ownership		Operating		Oct-03	
<b>WIND</b>									
A08	W			30-yr PPA + 50% Ownership		Development		Dec-05	
A07	W			20-yr PPA or 100% Ownership		Development		Oct-05	
A01	W			100% Ownership		Development		Dec-05	

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# All-Source RFP: Stage 1

## Short-List Selection for Stage 2 Evaluation

- “Short-Listed” projects were both “Low Cost” and evaluated as “Low Risk” through the integrated assessment of qualitative criteria that led to natural groupings.
- The cost of projects selected to “Short-List” ranged from \$42 to \$48 excluding the non-standard [REDACTED] On-Peak PPA which after further analysis may prove to be below assumed market prices.
- The diversified mix of projects selected to the “Short-List” include:
  - ◆ (1) Alternate fuel (recovered heat from gas compressors)
  - ◆ (2) Coal PPAs (10-yr & 2-yr terms)
  - ◆ (1) [REDACTED] PPA (22-yr On-Peak)
  - ◆ (3) Wind projects (3 of 4 from Wind RFP)
- Given current forecasted high gas prices, no gas projects selected for Stage 2 evaluation.

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# All-Source RFP: Stage 1

## Short-List Selection Summary

- (1) Alternate fuel (gas compressor recovered heat)
- (2) Coal PPAs (10-yr & 2-yr terms)
- (1) [REDACTED] PPA (22-yr On-Peak)
- (3) Wind project (3 of 4 from Wind RFP)

Code	Type	Project Name	Owner / Developer	Proposal Option	Location	Status	Capacity (MW)	COD	Project Levelized Cost (\$ / MWh)
<b>ALTERNATE FUEL</b>									
A39	HR	Sumas Recovered Heat	ORMAT	100% Ownership	Sumas, WA	Development	[REDACTED]	Dec-05	[REDACTED]
<b>POWER PURCHASE</b>									
A19	C	APS - Centralia 2-yr PPA	Arizona Public Service (APS)	2-yr PPA	Centralia, WA	Operating	85	n/a	[REDACTED]
A24b	C	[REDACTED] 10-yr PPA	[REDACTED]	10-yr PPA 100 to 200 MW	[REDACTED]	Operating	[REDACTED]	n/a	[REDACTED]
A30	H	[REDACTED] 22-yr Seasonal On-Peak PPA	[REDACTED]	2-yr Bridge + 20-yr Seasonal On-Peak PPA	[REDACTED]	Operating / Development	[REDACTED]	late 2006	[REDACTED]
<b>WIND</b>									
A03	W	Hopkins Ridge	RES	100% Ownership	Columbia Co, WA	Development	150	Dec-05	[REDACTED]
A02b	W	Wild Horse	Zilkha	100% Ownership	Kittitas Co, WA	Development	150	Dec-05	[REDACTED]
A06	W	[REDACTED]	[REDACTED]	50% PPA + 50% Ownership	[REDACTED]	Development	[REDACTED]	Feb-06	[REDACTED]

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# All-Source RFP

## Post Stage 1 Status Update

- A19: APS 2-yr PPA
  - ◆ Anticipate close by June 4; contract to be completed by June 11
  
- A06: [REDACTED]
  - ◆ Leading candidate from Wind RFP
  - ◆ Negotiations have resulted in PSE 100% Ownership with flat royalty fee
  - ◆ ASM Levelized Cost = \$ [REDACTED] /MWh
  - ◆ PSE drafting LOI to send to [REDACTED] by June 4
  
- A24: [REDACTED]
  - ◆ Revised inputs to ASM shows levelized cost = \$ [REDACTED] /MWh
  - ◆ Ranking moves to 2nd in Thermal & 1st in Natural Gas, but remains on "Continual Investigating" List

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# All-Source RFP

## Post Stage 1 Status Update

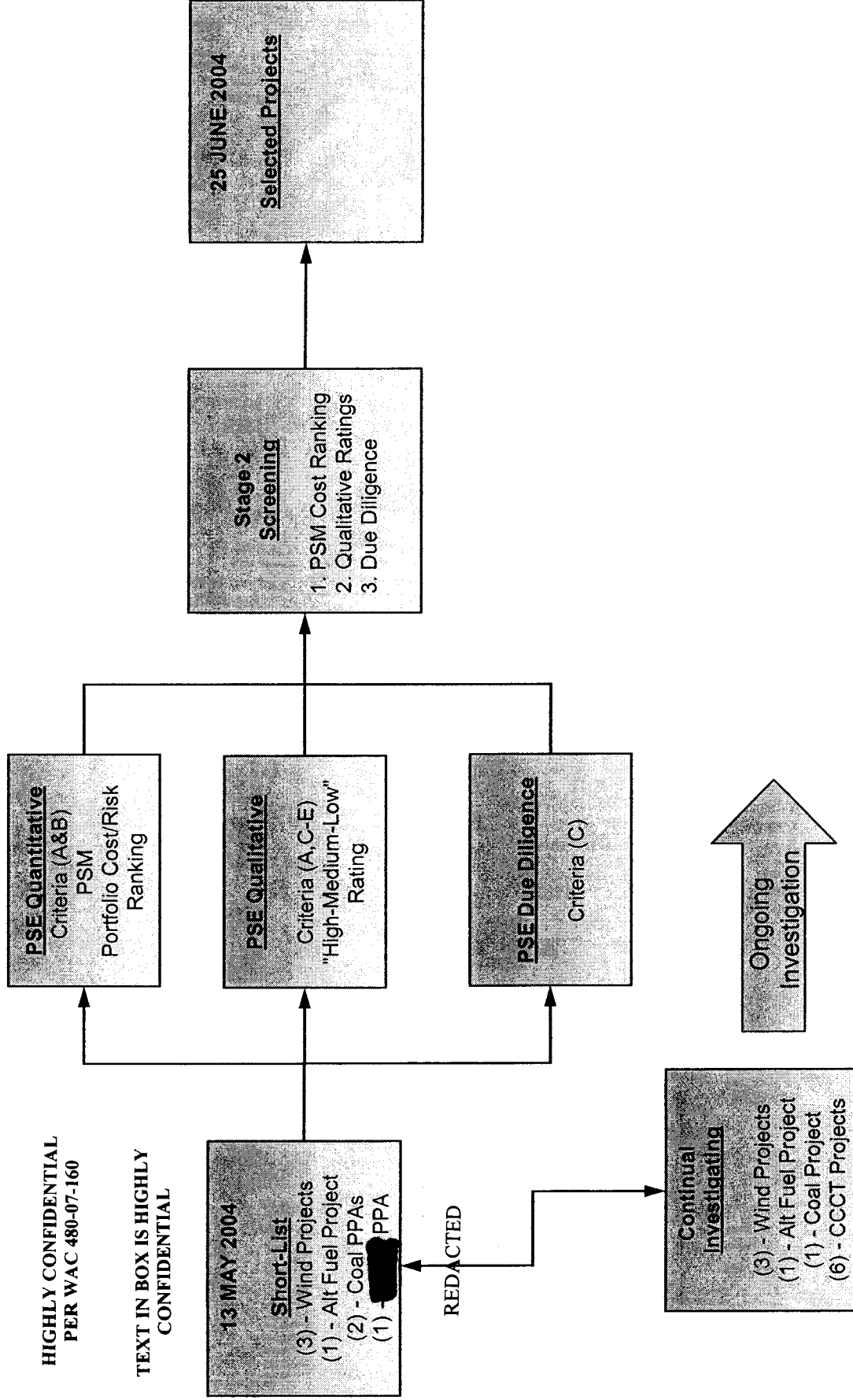
- A31: [REDACTED]
  - ◆ Removed from “Constrained” List; BPA has indicated an increased interest in the McNary - John Day line construction
  
- A33: [REDACTED]
  - ◆ Removed from “Constrained” List; BPA has indicated an increased interest in the McNary - John Day line construction
  
- A40: [REDACTED]
  - ◆ ASM Project Levelized Cost ≈ \$[REDACTED]/MWh
  - ◆ No change to proposal ranking or ratings; remains on “Constrained” List

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# All-Source RFP: Stage 2

## Process Flow Chart



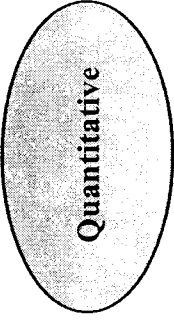
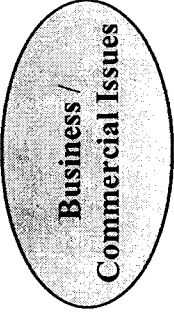
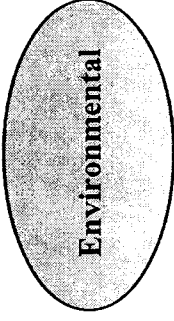
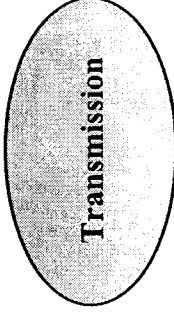
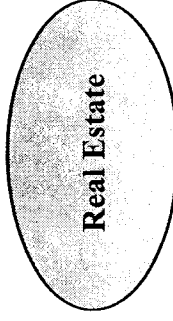

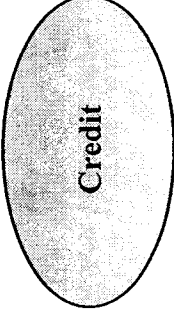
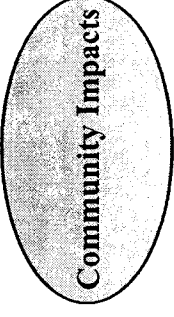
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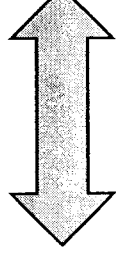
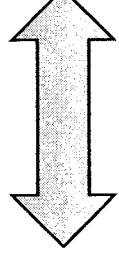
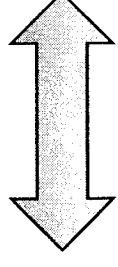
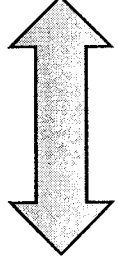
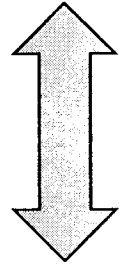
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# All-Source RFP: Stage 2

## Evaluation Criteria & Teams

<p><b>A. Compatibility with PSE Resource Need</b>          A1. Performance Within Existing PSE Generation Portfolio          A2. Timing          A3. Resource Mix/Diversity</p>	
<p><b>B. Cost Minimization</b>          B1. Cost Impact</p>	
<p><b>C. Risk Management</b>          C1. Impact on PSE Overall Risk Position          C2. Environmental and Permitting Risk          C3. Respondent Risk          C4. Ability to Deliver As Proposed (Development Status &amp; Schedule)          C5. Ability to Deliver As Proposed (Experience &amp; Qualification of the Project Team)          C6. Status of Transmission Rights          C7. Security &amp; Control</p>	
<p><b>D. Public Benefits</b>          D1. Environmental Impacts</p>	
<p><b>E. Strategic &amp; Financial</b>          E1. Guarantees &amp; Security</p>	
	
	
	



# All-Source RFP: Stage 2

Exhibit No. \_\_\_\_ (RG-11HC) □  
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## *Quantitative Analysis - Process & Strategy*

- Revisit LCP 2003 Generic Resource Strategy
- Step 1
  - ◆ Update supply tester to create representative scenarios of generic portfolios for testing in PSM
  - ◆ Update PSM model
    - ◆ Add wind variability logic (similar to Stage II of wind evaluations)
    - ◆ Update generic plant assumptions (all-in cost, O&M, FOR, heat rate, etc.)
    - ◆ Update variability of power price and gas price
    - ◆ Update coal market prices
- Step 2
  - ◆ Run Aurora optimization with new generic plant assumptions
- Step 3
  - ◆ Run PSM with new commodity prices, generic assumptions and price and wind variability for the generic portfolios to update LCP 2003 strategy
- Determine optimum combination of all-source short-list projects
- Documentation of models and process

# All-Source RFP

## PSE Self-Build Options

- Tenaska Report
  - ◆ Evaluation of 2 potential sites
    - ◆ Dieringer / White River
    - ◆ Frederickson
  - ◆ Estimated Project Cost
    - ◆ \$230M for 294 MW (\$784/KW)
    - ◆ Conventional 7FA combined cycle w/ duct firing
    - ◆ Includes \$31M for offsite infrastructure (gas, water, wastewater, transmission)
    - ◆ Includes \$46M for finance and insurance
    - ◆ Not clear if permitting and real estate are included.
  - ◆ Schedule
    - ◆ 23 months from start of site work
    - ◆ 26 months overall

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# All-Source RFP

## PSE Self-Build Options

- A17 [REDACTED]
  - ◆ Equipment-only proposal
    - ◆ Gas turbine, steam turbine, HRSG
    - ◆ "...in the low \$ [REDACTED] M range..." for each power island
- [REDACTED]
  - ◆ New General Electric LMS100 SCCT
    - ◆ Intercooled turbine cycle
    - ◆ [REDACTED] MW @ [REDACTED] Btu/kWh
    - ◆ Power island capital cost
    - ◆ \$ [REDACTED] M for 204 MW (\$ [REDACTED] /KW)
    - ◆ Offsite infrastructure, permitting, real estate not included
    - ◆ Schedule
    - ◆ Production schedule supports June 2006 COD

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# All-Source RFP

## Milestone Schedule

- WUTC Approval of RFP January 28, 2004
  - Final RFP Issued February 4, 2004
  - Pre-Proposal Conference February 11, 2004
  - Proposal Responses Due March 12, 2004
  - Stage 1 Evaluation March 12 - May 13, 2004
  - Short-List Selection May 13, 2004
  - Stage 2 Evaluation May 13 - June 24, 2004
  - WUTC Staff Review Meeting June 4, 2004
  - Identification of Selected Project(s) June 24, 2004
- PPA Proposal(s)**
- Due Diligence Begins June 7, 2004
  - Execute Power Purchase Agreement(s) June 11 - July 16, 2004
- Ownership Proposal(s)**
- Due Diligence Begins June 28, 2004
  - Execute Letter of Intent(s) July 9, 2004
  - Execute Definitive Agreement(s) September 1, 2004