

**EXHIBIT NO. \_\_\_(RG-4HC)**  
**DOCKET NO. \_\_\_\_\_**  
**2005 POWER COST ONLY 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-\_\_\_\_\_**

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

**REDACTED VERSION**

**JUNE 7, 2005**

# **All-Source RFP Stages 1 Evaluation Process & Review**

Puget Sound Energy  
Resource Planning and Acquisition

May 13, 2004 DRAFT

**TABLE OF CONTENTS**

- I. Overview**
  - A. All-Source RFP**
  - B. Proposals**
  - C. All-Source RFP and Wind RFP Merge**
  - D. Evaluation Stages**
- II. Stage 1**
  - A. Evaluation Criteria**
  - B. Process Review**
  - C. Constrained List**
  - D. Selection of Most Favorable Proposals**
  - E. Continuing Investigation List**
  - F. Selection of Short List**
- III. Next Steps**
  - A. Stage 2 Evaluation**
- IV. Attachments**

**All-Source RFP  
Stages 1 Evaluation**

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**I. OVERVIEW**

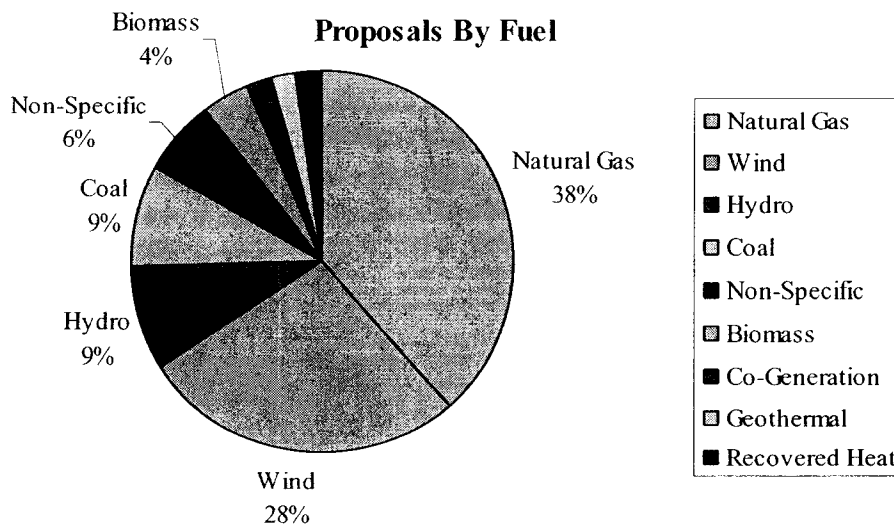
**A. All-Source RFP**

PSE issued a request for proposal (RFP) for All Generation Sources (“All-Source RFP”) on February 4, 2004. The RFP sought proposals for a wide variety of generation projects that provide for approximately 355 average megawatts of energy and sought contracting scenarios of long-term purchase power agreements or PSE ownership of power projects. The Washington Utilities and Transportation Commission (WUTC) approved the All-Source RFP on January 28, 2004. A pre-proposal conference was held on February 11, 2004. Proposals in response to the RFP were due on March 12, 2004.

[See Attachment 1 - All-Source RFP & Exhibits]

**B. Proposals**

Final bids were received on Friday March 12, 2004. There were 47 project proposals with 39 different owners/developers submitting proposals. Many of the 47 proposals contained multiple offer options such as PPA, asset ownership and hybrid options. The below chart (fig 1.1) illustrates the relative proportions of the fuel source backing the various proposal projects by the number of project proposals.



**Fig 1.1**

[See Attachment 02b – 03-17-2004 Summary of Proposals for All-Source RFP March 17 Update.doc]

All-Source RFP  
 Stages 1 Evaluation

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Table 1.1 lists the proposals that PSE received in response to the All-Source RFP:

Table 1.1

Code	Project Name	Owner / Developer	Code	Project Name	Owner / Developer
A01			A25		
A02	W		A26		
A03	Hopkins Ridge	RES	A27		
A04			A28		
A05			A29		
A06			A30		
A07			A31		
A08			A32		
A09			A33		
A10			A34		
A11			A35		
A12			A36		
A13	REDACTED		A37		
A14			A38		
A15			A39		
A16			A40		
A17			A41		
A18			A42		
A19			A43		
A20			A44		
A21			A45		
A22			A46		
A23			A47		

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[See Attachment 02 - 03-12-2004 All-Source RFP Proposal List.xls]

**C. All-Source RFP and Wind RFP Merge**

All but two proposals submitted in the Wind RFP were officially resubmitted in the All-Source RFP. Because all short-listed proposals from the Wind RFP were resubmitted into the All-Source RFP, the continuing evaluation process for the Wind RFP proposals merged with the All-Source RFP evaluation process.

Building on the analysis and knowledge base from the Wind RFP evaluation process, the merge helped create even more of an extensive evaluation and analysis of the short-listed wind proposals.

**D. Evaluation Stages**

PSE evaluated the proposals in a two-stage process. Stage 1 screened the proposals on a stand-alone basis against certain criteria for selection to a short list. Stage 2 further evaluated the short-listed proposals in a more detailed level. A primary focus in Stage 2 examined the interaction of the most promising resources and combinations of resources within PSE’s existing portfolio of generation.

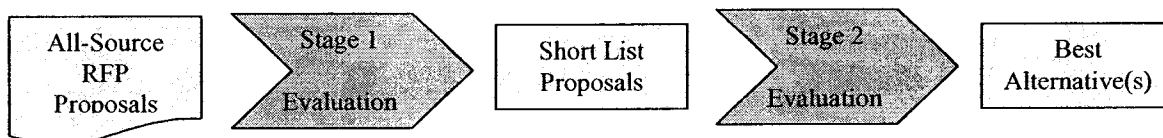


Fig 1.2

The proposals were reviewed and evaluated by the Resource Acquisition team as well as many others across departmental and organization lines in the company. PSE also utilized external consultants in the evaluation process. A list of the internal departments and external consultants are shown below:

Table 1.2

PSE Internal Resources	External Consultants
<ul style="list-style-type: none"> <li>• Energy Services</li> <li>• Energy Portfolio Management</li> <li>• Finance</li> <li>• Legal</li> <li>• Regional &amp; Public Affairs</li> <li>• Regulatory &amp; Government Affairs</li> <li>• Energy Efficiency &amp; Customer Service</li> <li>• Operations</li> <li>• HR &amp; Labor Relations</li> </ul>	<p><u>Technical</u></p> <ul style="list-style-type: none"> <li>• Garrad Hassan</li> <li>• 3Tier</li> <li>• Sargent &amp; Lundy</li> </ul> <p><u>Environmental</u></p> <ul style="list-style-type: none"> <li>• CH2M Hill</li> <li>• URS Corp.</li> </ul> <p><u>Legal Services</u></p> <ul style="list-style-type: none"> <li>• Buck and Gordon</li> <li>• Perkins Coie</li> <li>• LeBoeuf Lamb</li> </ul>

**All-Source RFP  
Stages 1 Evaluation**

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**II. STAGE 1**

**A. Evaluation Criteria**

PSE screened the proposals in Stage 1 using qualitative and quantitative analysis. PSE applied five primary criteria and several secondary criteria to narrow the proposals to a short list. The criteria were:

- A. Compatibility with PSE Resource Need
  - 1. Timing
  - 2. Resource match to monthly need
  - 3. Match to monthly need through contract
  - 4. Operational Flexibility
- B. Cost Minimization
  - 1. Resource price
  - 2. Transmission
- C. Risk Management
  - 1. Status & Schedule
  - 2. Price Volatility
  - 3. Resource Flexibility and Stability
  - 4. Resource Technology
  - 5. Long-term Flexibility
  - 6. Project Risk
- D. Public Benefits
  - 1. Environmental Impacts
  - 2. Resource Location
  - 3. Community Impacts
- E. Strategic & Financial
  - 1. Capital Structure Impacts
  - 2. Future exposure to environmental regulations and/or taxes

[See [Attachment 03 - All-Source RFP Stage I Criteria.doc](#)]

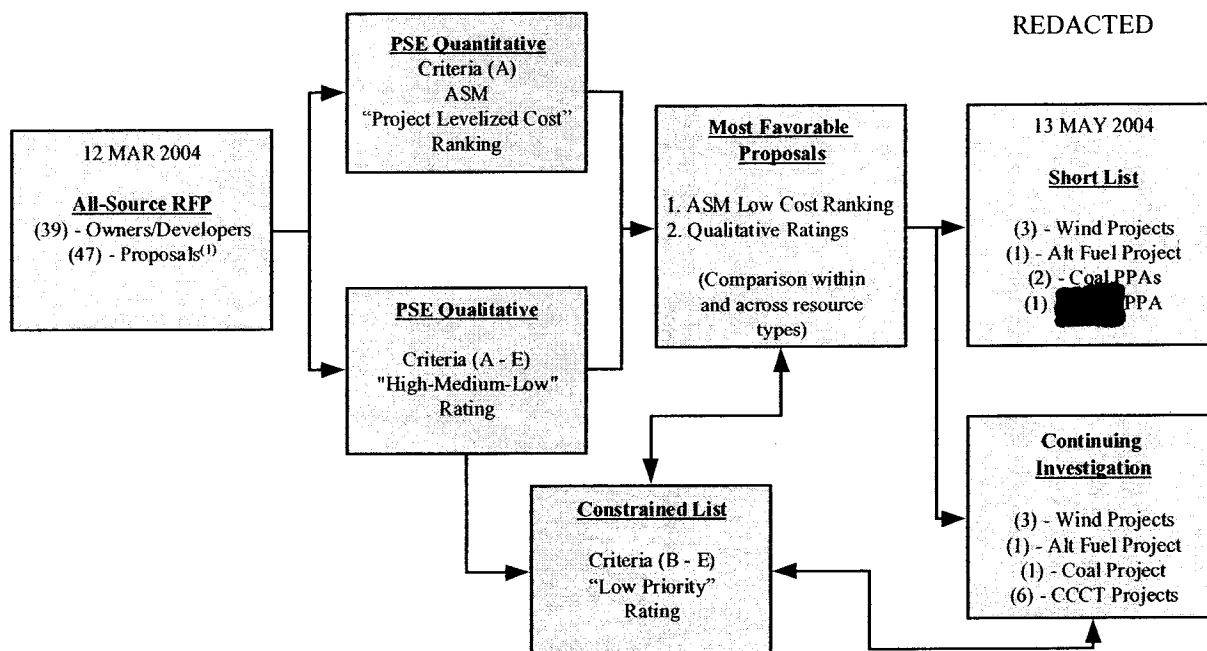
**B. Process Review**

The below flow chart (fig 2.1) describes the process of screening the proposals using the quantitative and qualitative criteria which produced the most favorable projects and then ultimately the selection of a short list.

**All-Source RFP  
Stages 1 Evaluation**

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

**Fig 2.1**

An initial screening during the Stage 1 evaluation identified thirteen low priority projects and moved them to a "Constrained" list.

The quantitative analysis in the Stage 1 was based the respondents data provided in the proposals. A spreadsheet model (Acquisition Screening Model) was used to summarize and compare quantitative factors on an equivalent basis. Those factors include:

- Pro Forma w/ Dispatch
- 20-yr Levelized Cost
- Revenue Requirements
- Mark-to-Model
- PPA Imputed Debt
- Transmission Costs, including ancillary services
- Integration Costs
- End-effects

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The 2003 Least Cost Plan (LCP) indicated that a balanced mix of diversified resources has the lowest expected cost and the least risk. In Stage 2, the selected short-listed proposals would be evaluated using the Portfolio Screening Model (PSM), which calculates the portfolio impacts for a given set of resources. These portfolio analyses will also be compared to updated generic portfolios similar to those evaluated in the 2003 LCP. Therefore, a selection of the best proposals, which met all the acceptable evaluation criteria, from each resource type (i.e. wind, gas, coal, & PPAs) was considered when evaluating the appropriate diversified resource mix into the PSM.

The Acquisition Screening Model (ASM) provided for a cost ranking of each proposal that passed the initial screening process. The ASM calculated the proposals' levelized cost, whether an acquisition or a PPA, over twenty years of length. The ASM calculation is based upon the following inputs:



Table 2.1

PLANT CHARACTERISTICS:	PLANT COST DATA:
<ul style="list-style-type: none"> <li>• Capacity</li> <li>• Heat rate</li> <li>• Maintenance outage schedule</li> <li>• Forced outage rate</li> <li>• Sample 8760 hour generation profile for wind projects</li> <li>• Book and tax depreciation rates</li> <li>• Emission rates for SO<sub>2</sub>, NO<sub>X</sub>, and CO<sub>2</sub></li> </ul>	<ul style="list-style-type: none"> <li>• Capital cost including AFUDC and deal transaction costs</li> <li>• Fixed O&amp;M per kw of capacity</li> <li>• Fixed A&amp;G costs per kw of capacity (this will include property taxes and insurance)</li> <li>• Variable O&amp;M per MWh</li> <li>• Fuel transportation costs including fixed pipeline and lateral charges as well as pipeline commodity charges plus fuel use (losses) and Washington State use tax</li> <li>• Fixed and variable transmission costs including wheeling, ancillary services and imbalance or integration costs</li> </ul>
PPA COST DATA:	OTHER ASSUMPTIONS:
<ul style="list-style-type: none"> <li>• PPA fixed prices and escalation</li> <li>• PPA variable prices, and or variable adders</li> <li>• Transmission costs fixed and variable</li> <li>• Tolling: fixed and variable gas transportation, variable O&amp;M strike price, seasonal and maintenance outage forecast, forced outage rate</li> </ul>	<ul style="list-style-type: none"> <li>• Costs of borrowing debt and equity capital. Uses the weighted average cost of capital for levelizing costs</li> <li>• Natural gas price = input to AURORA5</li> <li>• Power price = hourly output from AURORA5</li> <li>• Trading values of emissions</li> <li>• Imputed debt risk percentage</li> <li>• Production tax credits for qualifying renewable projects</li> </ul>

The evaluation teams and the weekly evaluation meetings provided for the qualitative evaluation ratings for each of the proposals. PSE rated the short-listed proposals based on the defined criteria using a rating system of LOW-MEDIUM-HIGH, with “HIGH” being considered more favorable and “LOW” being considered less favorable. The proposals were reviewed by resource type by combining the ASM cost rankings and qualitative evaluation ratings. A determination of the “Most Favorable” proposals was made which narrowed the proposal list down to projects that offered reasonable cost or reasonable risks. A further review and discussion of each proposal on the most favorable list presented which proposals would be placed on a ‘Continuing Investigation’ list and which proposals would be selected to the short list.

The short-listed proposals were ranked as “Low Cost” and evaluated as “Low Risk” through the integrated assessment of qualitative criteria that led to natural groupings. Seven proposals were selected to the short list for the Stage 2 evaluation.

**C. Constrained List**

Fifteen proposals were placed on the constrained list during the initial screening of the 47 submitted bids. The fifteen proposals were considered low priority during the evaluation process and the justification kept the proposals from making the short list.

Note that A20: [REDACTED] coal project was further analyzed in the PSM during Stage 2 in order to evaluate the impacts of coal projects in PSE’s portfolio.

Since May 13 two proposals, A31: [REDACTED] and A33: [REDACTED] were removed from the constrained list due to BPA indicating an increased interest in the McNary - John Day line construction.

REDACTED

Table 2.2

CONSTRAINED LIST			
Code	Project Name	Owner / Developer	"Constrained" Justification
A13			<ul style="list-style-type: none"> <li>Relies on nonfirm transmission through [REDACTED]</li> <li>Quality of the developer/proposer and overall commercial feasibility of the deal.</li> </ul>
A14			<ul style="list-style-type: none"> <li>Little technical information is provided for each of the 5 projects that will be aggregated to form the basis of this proposal.</li> <li>This project does not appear to have permits, and the source and longevity of the water right is unclear.</li> </ul>
A17			<ul style="list-style-type: none"> <li>This proposal is for equipment only. While the basic technology appears solid, there is considerable permitting, operational, and completion risk.</li> </ul>
A18			<ul style="list-style-type: none"> <li>Quality of the developer/proposer and overall commercial feasibility of the deal</li> </ul>
A20			<ul style="list-style-type: none"> <li>Transmission solution is not mature.</li> </ul>
A27			<ul style="list-style-type: none"> <li>No transmission across BPA, scant mention of exchange option</li> <li>[REDACTED] in Bankruptcy.</li> </ul>
A34			<ul style="list-style-type: none"> <li>Only 2 routes for connection to grid: [REDACTED]</li> </ul>
A37			<ul style="list-style-type: none"> <li>The proposed equipment is currently installed at [REDACTED] facility and leased from [REDACTED]</li> <li>The units are [REDACTED] and have engine controls and emission controls of that vintage. Retrofit of modern engine controls would cost approximately \$500K per unit, and emission controls (if required) could cost approximately \$5M per unit.</li> <li>In addition, these simple-cycle units have a heat rate more than 70% higher than current combined cycle equipment.</li> </ul>
A40			<ul style="list-style-type: none"> <li>Incomplete information provided [REDACTED]</li> </ul>
A41			<ul style="list-style-type: none"> <li>Recommended 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. EPM</li> </ul>
A44			<ul style="list-style-type: none"> <li>West of McNary; No firm transmission available at this time</li> </ul>
A45			<ul style="list-style-type: none"> <li>Supply and purchase of fuel and sale of steam to host no longer viable. Timing and results of permitting cannot be guaranteed.</li> </ul>
A47			<ul style="list-style-type: none"> <li>Transmission solution is not mature</li> </ul>

[See Attachment 05 – 05-13-2004 All-Source RFP Stage 1 Summary.xls - 'Constrained List' worksheet]

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**D. Selection of Most Favorable Proposals**

Through weekly evaluation meetings the evaluation teams built a consensus of the most favorable proposals. Proposals were reviewed by resource type and by combining the evaluation criteria ratings and sorting on the ASM leveled cost rankings. Eighteen proposals were selected to the most favorable list by eliminating proposals that had high costs, unacceptable high risks or feasibility constraints.

**Table 2.3**

MOST FAVORABLE PROPOSALS		
Code	Project Name	Owner / Developer
<b>Alternate Fuel Sources</b>		
A15	[REDACTED]	
A39		
<b>Power Purchase</b>		
A19	[REDACTED]	
A24b		
A30		
<b>Thermal (Natural Gas, Coal, Cogen) Projects</b>		
A20	[REDACTED]	
A29		
A26		
A35		
A24a		
A28		
A32a		
<b>Wind Projects</b>		
A03	Hopkins Ridge	RES
A07	[REDACTED]	
A02b		
A06		
A08		
A01		

[See Attachment 05 – 05-13-2004 All-Source RFP Stage 1 Summary.xls - 'Favorable List' worksheet]

These proposals were further discussed highlighting the most significant risks. While reviewing these projects in the weekly evaluation meetings the decision was made on which proposals would be placed on the continuing investigation list and which would be short-listed.

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**E. Continuing Investigation List**

The continuing investigation list consisted of proposals that were evaluated as attractive, but currently face obstacles such as transmission constraints, high fuel costs, premature development, permitting obstacles, etc... PSE has continued to monitor the status of these projects as Stage 2 progressed. An important note with the continuing investigation list was the current and forward high natural gas prices rendered the natural gas proposals uneconomical as compared to other resource alternatives identified in the short list.

Table 2.4

CONTINUING INVESTIGATION LIST		
Code	Project Name	Owner / Developer
Alternate Fuel Sources		
A15		
Thermal (Natural Gas, Coal, Cogen) Projects		
A20		
A29		
A26		
A35		
A24a		
A28		
A32a		
Wind Projects		
A07		
A08		
A01		

[See Attachment 05 – 05-13-2004 All-Source RFP Stage 1 Summary.xls - ‘Investigation List’ worksheet]

**F. Selection of Short List**

The short-listed proposals were found to be both low cost based on the ASM 20-year levelized cost and evaluated as an acceptable low risk from the qualitative criteria. The 20-year levelized cost of proposals selected to short list ranged from \$42/MWh to \$48/MWh excluding the non-standard Powerex Seasonal On-Peak PPA.

The ASM used to quantify costs of the proposals does not fully address the value of the [redacted] non-standard PPA offer. [redacted] offered on-peak power during September through March. On-Peak market prices during September through March were compared to the [redacted] PPA proposed contract prices. On a present value basis the Powerex contract was lower than assumed market prices; therefore, the [redacted] PPA merited further consideration in the Stage 2 evaluation. The [redacted] PPA was selected the short list in order to be evaluated in the PSM.

Given the current and forecasted high natural gas prices, no natural gas-fired proposals were selected to the short list. In order to evaluate the impacts of natural gas projects in PSE’s portfolio, representative natural gas proposals from the continuing investigation list were further analyzed in the PSM during Stage 2.

Table 2.5

SHORT LIST		
Code	Project Name	Owner / Developer
Alternate Fuel Sources		
A39	[REDACTED]	
Power Purchase Agreement (PPA)		
A19	[REDACTED]	
A24b	[REDACTED]	
A30	[REDACTED]	
Wind Projects		
A03	Hopkins Ridge	RES
A02b	[REDACTED]	
A06	[REDACTED]	

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[See Attachment 05 – 05-13-2004 All-Source RFP Stage 1 Summary.xls - ‘Short List’ worksheet]

**III. NEXT STEPS**

**A. Stage 2 Evaluation**

The short list will continue through a more detailed qualitative evaluation in Stage 2 using the primary evaluation criteria below:

- Compatibility with PSE Resource Need
- Cost Minimization
- Risk Management
- Public Benefits
- Strategic & Financial

Additional information requests will be made for any of the short-listed proposals needed for Stage 2 evaluations.

The APS 2-year PPA proposal will be submitted for review and approval to the Risk Management Committee (RMC).

Due diligence will be performed on proposals for further evaluation and analysis.

Negotiations with the counterparties will begin on the short-listed proposals.

The quantitative analysis of the short list will begin after the LCP 2003 Generic Resource Strategy is revisited. The PSM will be updated and portfolio combinations of the short-listed proposals will be analyzed in the model.

**All-Source RFP  
Stages 1 Evaluation**

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**May 13, 2004**

**ATTACHMENTS:**

Attachment 00 – Selection of Short List Presentation Review.ppt

Attachment 01 - All-Source RFP & Exhibits

Attachment 02 - 03-12-2004 All-Source RFP Proposal List.xls

Attachment 02b - 03-17-2004 Summary of Proposals for All-Source RFP March17 Update.doc

Attachment 03 - All-Source RFP Stage I Criteria.doc

Attachment 04 - Stage 1 Process Flow Chart.ppt

Attachment 05 - 05-13-2004 All-Source RFP Stage 1 Summary.xls

Attachment 06 - 05-13-2004 Quantitative Stage 1 Summary.xls

Attachment 07 – Business/Commercial Stage 1 Summary

Attachment 08 - Fuel Supply Stage 1 Summary Ratings.xls

Attachment 09 - Coal Supply Stage 1 Summary Ratings.doc

Attachment 09b - Coal Supply Stage 1 Summary.doc

Attachment 10 - Transmission Stage 1 Summary.xls

Attachment 11 - Technology Stage 1 Summary.xls

Attachment 11b - Technology Stage 1 Project Specifics.xls

Attachment 12 - Real Estate Stage 1 Summary.doc

Attachment 12b - Real Estate Stage 1 Summary Status.doc

Attachment 13 - Environmental Stage 1 Summary.xls

Attachment 14 - Community Stage 1 Summary.xls

Attachment 15 - Evaluation Meetings & Notes (Separate Binder)

See Attachment 15 - Evaluation Meetings & Notes\Attachment 15 - Evaluation Meetings & Notes TOC.doc