

**EXHIBIT NO. ___(RG-17HC)
DOCKET NO. UE-11___/UG-11___
2011 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-11___
Docket No. UG-11___**

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

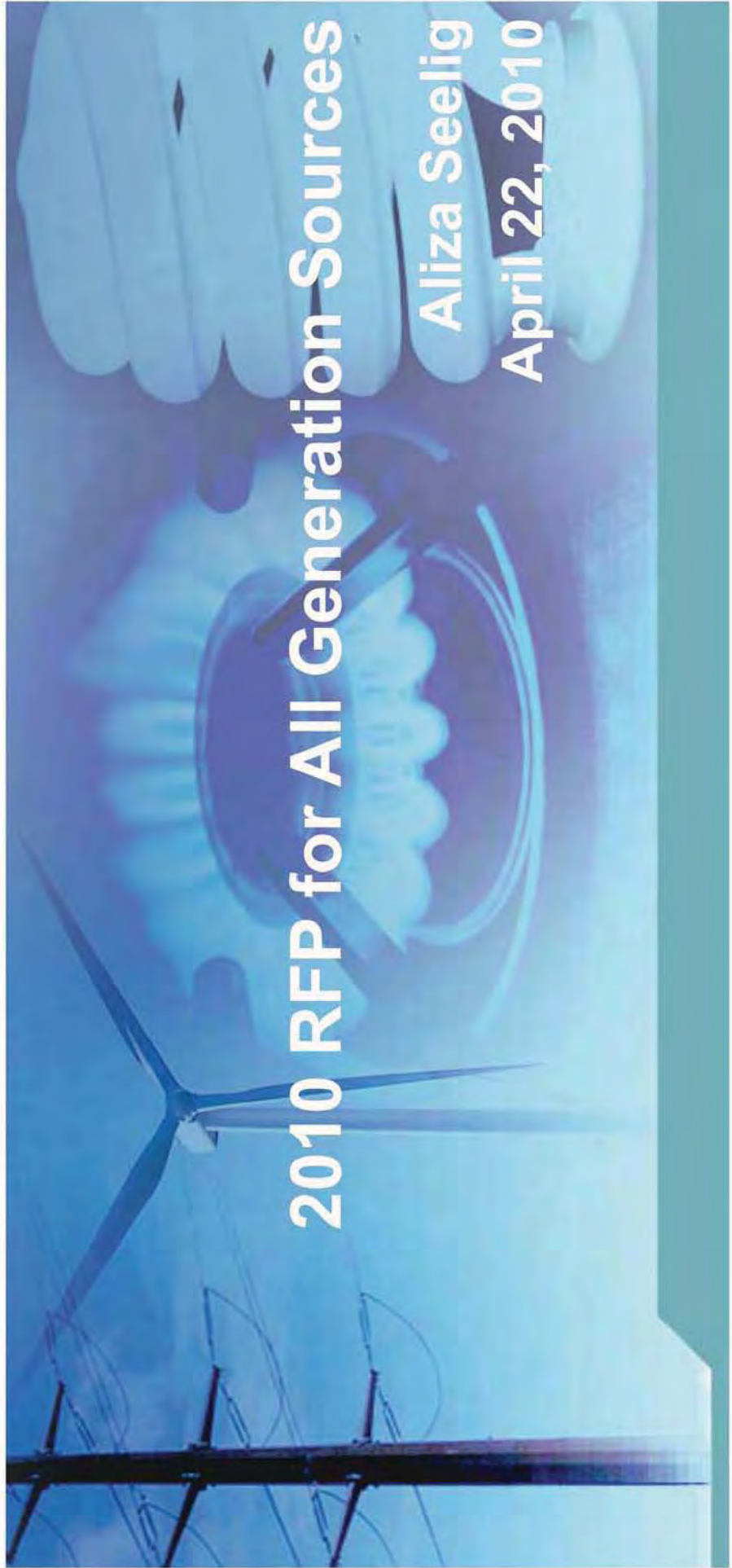
**REDACTED
VERSION**

JUNE 13, 2011

2010 RFP for All Generation Sources

Aliza Seelig

April 22, 2010



RFP schedule



March 2, 2010	Offers due to PSE
March 8, 2010	PSE sends design guidelines to bidders with ownership proposals
March 12, 2010	PSE sends ISDA and WSPP preferred language to Market PPA participants
Early March to Mid-April	Renewable evaluation (Phase 1 & Phase 2 analysis) to inform the LSR decision
June 2010 ¹	“Candidate” short list selected
July 2010 ²	Final short list selected, respondents notified
Summer 2010	PSE hosts live solicitation for market PPAs
Summer 2010	Negotiations with short-listed parties

¹ Revised date

² Due to large number of proposals received the schedule may slip past July

EMC Update // April 22, 2010

Phase I: Renewable proposal screening



- Three RFP wind proposals and two projects from outside of the RFP advanced to Phase II of the renewable resource evaluation.¹

Wind	Type	Result
[Bar]	Own	Project / Deal Risk
[Bar]	PPA	Phase II
[Bar]	Own	Phase II
[Bar]	Own	Phase II
[Bar]	PPA	Phase II
[Bar]	Own	Project / Deal Risk
[Bar]	PPA	Phase II
[Bar]	Own	Project / Deal Risk
[Bar]	PPA	Higher cost

Wind	Type	Result
[Bar]	Dev	Higher cost
[Bar]	PPA	Higher cost
[Bar]	PPA	Higher cost
[Bar]	PPA	Higher cost
[Bar]	PPA	Higher cost
[Bar]	PPA	Higher cost
[Bar]	Own	Higher cost
[Bar]	Own/PPA	Higher cost
[Bar]	PPA	Higher cost

Wind	Type	Result
[Bar]	PPA	Higher cost
[Bar]	PPA	Higher cost
[Bar]	Own	Higher cost
[Bar]	PPA	Higher cost
[Bar]	Wind	Outside of WECC
[Bar]	PPA	No offer defined
[Bar]	Wind	Conceptual

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¹ Detailed rationale for the evaluation results are explained in the appendix provided to the EMC. Many projects identified with higher cost have project and deal risks identified as well.

Phase I: Renewable proposal screening



- Three RFP biomass proposals and one REC-only proposal advanced to Phase II.
- [REDACTED] solar is not cost-effective when compared to alternatives.

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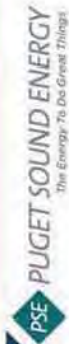
Biomass	Type	Result
[REDACTED]	PPA	Project / Deal Risk
[REDACTED]	PPA	Phase II
[REDACTED]	PPA	Phase II
[REDACTED]	PPA	Project / Deal Risk
[REDACTED]	PPA	Phase II
[REDACTED]	PPA	Project / Deal Risk
[REDACTED]	Own	Higher Cost
[REDACTED]	PPA	Conceptual Project
[REDACTED]	TBD	Conceptual Project

Renewable Energy Credits	Type	Result
[REDACTED]	REC	Phase II
[REDACTED]	REC	Higher cost
Solar	Type	Result
[REDACTED]	PPA	Higher cost

¹ Detailed rationale for the evaluation results are explained in the appendix provided to the EMC. Many projects identified with higher cost have project and deal risks identified as well.

EMC Update // April 22, 2010

Phase I: RFP observations



- Montana wind projects proposed do not have significantly better capacity factors than Washington or Oregon wind projects, but have much higher transmission costs.
 - MT net capacity factor range (30.7% to 37.8%)
 - WA/OR net capacity factor range (26.6% to 36.8%)
- Biomass proposals are early stage projects – projects probably need more time to mature

Phase II: Renewable proposal recommendations



2010 RFP Renewable Resource Acquisition Recommendations

Staff Recommendation ¹	RFP ID	Proposal ²	Structure	Fuel Type	Size (MW)	P50 Annual RECs ³⁻⁶	COD
Self-Build and Unsolicited Proposal							
Recommended to construct	N/A	Lower Snake River Phase 1	Ownership	Wind	343	██████████	2012
Candidate Shortlist	N/A	██████████	20-yr PPA	Wind	110	██████████	2012
RFP Proposals							
Candidate Shortlist	10059	██████████	20-yr contract	REC Only	NA	██████████	2012
Candidate Shortlist	10009	██████████	20-yr PPA	Biomass	24	██████████	2013
Candidate Shortlist	10025	██████████	20-yr PPA	Biomass	25	██████████	2013
Candidate Shortlist	10163	██████████	25-yr PPA	Biomass	56	██████████	2013
Not Selected	10075	██████████	Ownership	Wind	173	██████████	2011 ⁷
Not Selected	10117-a	██████████	20-yr PPA	Wind	100	██████████	2012
Not Selected	10117-b	██████████	20-yr PPA	Wind	100	██████████	2012
NOTES:							
1- EMC appendix provides a summary of quantitative, commercial, transmission, community, environmental and credit analysis.							
2- All projects on the list are expected to qualify for a 1.2 REC multiplier by using 15% apprenticeship labor for construction work.							
3- 2016 RPS requirement is estimated to be 2,115,775 RECs. PSE's existing resource currently supplies approximately 1,427,186 RECs.							
4- An additional 688,589 RECs are needed to meet the 2016 need.							
5- PSE's qualitative development plan analysis is determined that no more than an equivalent 600 MW of wind should be acquired at this time.							
6- 600 MW of wind is equivalent to 1,576,800 RECs per year.							
7- Quantitative evaluation based on COD in 2012.							

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EMC Update // April 22, 2010

Phase II: Renewable proposal recommendations



Staff Recommendation	RFP ID	Proposal ¹	Rationale ²	Portfolio Benefit Ratio	Portfolio Benefit (\$MM)	Levelized Cost \$/MWh ³	Scenario Selection ___ of 5
Self-Build and Unsolicited Proposal							
Recommended to construct	N/A	Lower Snake River Phase 1 343 MW Ownership	Comparison to RFP proposals confirms recommendation to construct. Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project is in advanced stage of development with key development items completed. PSE has confidence in the costs, mitigation of risks, and schedule execution associated with the project. Project is construction ready and is well-positioned to capture Treasury grant.	0.09	68.8	[REDACTED]	4
Candidate Shortlist	N/A	[REDACTED] MW 20-yr PPA	Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project holds firm transmission rights, but does not have permit or interconnection agreement. Further investigation is necessary to explore potential schedule and price risks.	0.14	35.5	[REDACTED]	5
RFP Proposals							
Candidate Shortlist	10059	[REDACTED] MW wind equivalent 20-yr contract	Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Proposal partially meets renewable need with a small volume of RECs. Further investigation is necessary to explore commercial terms and credit support issues.	2.26	14.2	N/A	1
NOTES:							
1- With the exception of the REC Only proposal, all quantitative evaluations rely on the assumption that the Treasury Grant 5% safe harbor provision will be met by 12/31/2010. Should a developer not meet this provision, there is risk that the price proposed will increase.							
2- EMC appendix provides a summary of quantitative, commercial, transmission, community, environmental and credit analysis.							
3- REC only projects cannot be evaluated using Levelized Cost as there is no energy component.							

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Phase II: Renewable proposal recommendations



Staff Recommendation	RFP ID	Proposal ¹	Rationale ²	Portfolio Benefit Ratio	Portfolio Benefit (\$MM)	Levelized Cost \$/MWh ³	Scenario Selection of 5
Candidate Shortlist	10009	[REDACTED] MW 20-yr PPA	Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project has secured a portion of the fuel supply. Further investigation is necessary to explore risks associated with fuel pricing, availability for stand-alone operation, and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity offers in the next phase of the RFP.	0.13	19.2	[REDACTED]	2
Candidate Shortlist	10025	[REDACTED] MW 20-yr PPA	Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Seller assumes fuel cost risk. Project has secured 100% of fuel supply through existing operations of project partners. Further investigation is necessary to explore risks associated with achievable capacity factor and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity offers in the next phase of the RFP.	0.11	19.7	[REDACTED]	2
Candidate Shortlist	10163	[REDACTED] MW 25-yr PPA	Project economics are not as favorable as alternatives in the Phase 2 evaluation; however, project developer is experienced and backed by known companies with resources to achieve successful execution. Thus, further exploration of the proposal is recommended. Further investigation is necessary to explore risks associated with fuel supply and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity offers in the next phase of the RFP.	0.05	20.2	[REDACTED]	1

NOTES:

- 1- With the exception of the REC Only proposal, all quantitative evaluations rely on the assumption that the Treasury Grant 5% safe harbor provision will be met by 12/31/2010. Should a developer not meet this provision, there is risk that the price proposed will increase.
- 2- EMC appendix provides a summary of quantitative, commercial, transmission, community, environmental and credit analysis.
- 3- REC only projects cannot be evaluated using Levelized Cost as there is no energy component.

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EMC Update // April 22, 2010

Phase II: Renewable proposal recommendations



Staff Recommendation	RFP ID	Proposal ¹	Rationale ²	Portfolio Benefit Ratio	Portfolio Benefit (\$MM)	Levelized Cost \$/MWh ³	Scenario Selection of 5
Not Selected	10075	[REDACTED] WTGs Ownership	Project economics are not as favorable as alternatives in the Phase 2 evaluation. Negotiation and execution of definitive agreements within required timeframe is aggressive. Commercial success at proposed price offer may be unrealistic given outstanding development items to be completed. Construction may not commence in time to capture Treasury grant. Winter construction schedule and interconnection facilities construction schedule places the proposed Commercial Operation Date at risk.	0.05	18.6	[REDACTED]	4
Not Selected	10117-a	[REDACTED] MW 20-yr PPA	Project economics are not as favorable as alternatives in the Phase 2 evaluation. Commercial success at proposed price offer may be unrealistic because the development schedule may not enable the project to capture Treasury grant. The proposed BPA interconnection construction schedule places the proposed Commercial Operation Date at risk, which also increases price risk if the project fails to achieve federal tax incentive dates. Transmission rights have not been secured.	0.01	3.2	[REDACTED]	1
Not Selected	10117-b	[REDACTED] MW 20-yr PPA	Project economics are not as favorable as alternatives in the Phase 2 evaluation. Future PPA costs are uncertain because the transmission provider to which the project interconnects has not established wind integration costs and/or protocols. Construction may not commence in time to capture Treasury grant.	(0.03)	(8.7)	[REDACTED]	2

NOTES:

- 1- With the exception of the REC, only proposal, all quantitative evaluations rely on the assumption that the Treasury Grant 5% safe harbor provision will be met by 12/31/2010. Should a developer not meet this provision, there is risk that the price proposed will increase.
- 2- EMC appendix provides a summary of quantitative, commercial, transmission, community, environmental and credit analysis.
- 3- REC only projects cannot be evaluated using Levelized Cost as there is no energy component.

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Execution Risk Evaluation of Wind Proposals



Wind Resource	Real Estate		Interconnection & Transmission				Permits		
	All land leases secured	Land leases valid for life of project	BPA ROD complete	LGIA signed	Transmission request submitted	Firm transmission secured	Environmental / SEPA / NEPA review complete	Construction permits in hand	Unappealable permit in hand
LSRWP, Phase I	✓	✓	✓	pending	✓	✓	✓	✓	✓
[REDACTED]	N	?	N	N	✓	✓	N	N	N
[REDACTED]	✓	✓	n/a	N	N	N	✓	N	✓
[REDACTED]	✓	✓	N	N	✓	N	N	N	N
[REDACTED]	✓	✓	n/a	✓	✓	N	✓	?	✓

Wind Turbines	Balance of Plant		Treasury Grant		WA RPS
	Road & turbine layout design complete	BOP contract executed	5% safe harbor provision will be met by 12/31/2010	Likely that project will reach COD by 12/31/2012	
LSRWP, Phase I	✓	pending	✓	✓	15% apprentice labor will be used during construction to meet WA RPS provision
[REDACTED]	✓	?	?	?	
[REDACTED]	✓	N	?	✓	
[REDACTED]	✓	N	?	✓	
[REDACTED]	✓	?	?	?	
[REDACTED]	✓	?	?	✓	

- Treasury Grant deadlines drive focus on project execution risk
- LSRWP Phase I is the only construction-ready project among RFP Phase II alternatives

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Phase II: Renewable resource conclusions



- LSR Phase I comparison to RFP proposals confirms wind development strategy and recommendation to construct based on readiness to capture U.S. Treasury cash grant¹.
- [REDACTED] appears to be an attractive offer, but due to the late submission more time is necessary to explore its feasibility.
- [REDACTED] (REC-only) requires further evaluation of commercial terms and project economics of a small volume of RECs.
- [REDACTED] biomass proposals will be further reviewed along with capacity proposals.
- [REDACTED] are challenged to meet the 2010 five percent safe harbor provision to capture U.S. Treasury cash grant and/or commercial on-line date in 2012.

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Appendix



PSE PUGET SOUND ENERGY
The Energy To Do Great Things!



Evaluation Criteria

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

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April 21, 2010

2010 RFP – Draft Phases I & II Qualitative and Quantitative Summary* – Renewable Resources

Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>PSE development Lower Snake River, Phase I PSE</p> <p>Garfield County, WA Owned asset Wind development 343 MW</p>	<p>Levelized cost: ████████ MWh</p> <p>Portfolio benefit ratio: 0.088</p> <p>Portfolio benefit: \$68.8 mil</p> <p>Selected in 4 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> • Fully meets renewable need for 2016 • Project economics are favorable when compared to alternatives in the Phase 2 evaluation; wind ownership proposal that scores the best according to the PSM Portfolio Benefit Ratio and levelized cost metrics • Project schedule allows project to meet safe harbor provisions of federal tax cash grant and Washington state sales tax exemption • Project has received an unappealable Conditional Use Permit • 3rd party wind resource assessment has been performed by two consultants estimating project NCF • PSE has completed a Facility Study, Feasibility Study, and System Impact Study as well as NEPA review. BPA Record of Decision has been received. • Has all major contracts (TSA, SMA, BOP, and LGIA) ready to for signature • All leases secured except for one. Pending lease is for public land owned by DNR and is awaiting signature • Has 200 MW of firm transmission at COD (April 15, 2012). Has another 50 MW of firm transmission 2 months after COD. • Positive presence within the local community 	<ul style="list-style-type: none"> • 92.7 MW of firm transmission will be available 15 months after COD (July 1, 2013). The project economics take curtailment into account. • There is limited experience with the 101 meter rotor being used on the SWT 101 2.3 MW wind turbine generator, which will be used for the project. • Potential cost increase to build BPA's Central Ferry substation or delay to construction schedule, which could delay PSE's WTC commissioning schedule 	<p>Seek BOD approval to construct project</p> <p>Comparison to RFP proposals confirms recommendation to construct. Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project is in advanced stage of development with key development items completed. PSE has confidence in the costs, mitigation of risks, and schedule execution associated with the project. Project is construction ready and is well-positioned to capture Treasury grant.</p>

*This summary is designed to be a high-level snapshot of key risks and advantages, and is intended to simulate working group discussion. For a more robust picture of PSE's summary evaluation findings, refer to the working group project memos.

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Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>Unsolicited Proposal</p> <p>[REDACTED]</p> <p>OR</p> <p>20-year PPA</p> <p>Wind development</p> <p>[REDACTED] MW</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: 0.143</p> <p>Portfolio benefit: \$35.5 mil</p> <p>Selected in 5 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Partially meets renewable need for 2016 Project economics are favorable when compared to alternatives in the Phase 2 evaluation; wind PPA proposal that scores the best according to the PSM Portfolio Benefit Ratio and levelized cost metrics (assuming Treasury grant qualification) Prior commercial success in negotiations with [REDACTED] [REDACTED] has procured [REDACTED] MW of firm point-to-point transmission to the Mid-C [REDACTED] is in final negotiations with [REDACTED] for Turbine Supply Agreement and expects to execute such agreement by end of April 2010. Turbine pricing used in [REDACTED] pricing are based on binding bids. [REDACTED] is a sophisticated developer with history of successful execution. 	<ul style="list-style-type: none"> Does not meet PSE preferred commercial terms; [REDACTED] would transfer cost risks to PSE by proposing that PSE be responsible for generation imbalance and wind integration charges PPA negotiation success riskier than prior ownership negotiations because previous PPA negotiation experience with Horizon resulted in late negotiation stage price increase The start of construction is proposed to begin in the second quarter of 2011, which may put the project in risk of missing the safe harbor provisions of the Treasury grant (It is PSE's understanding that 5% of construction work has to be completed in 2010 to satisfy the safe harbor provisions). Timely issuance of the EFSC Site Certificate is potentially at risk due to two factors: 1) organized community opposition may extend or delay the permitting process; 2) a golden eagle has been observed within the project area, and take permits are currently not available because USFWS is still developing guidance around issuance of take permits BPA interconnection schedule may put proposed Commercial Operation Date of December 2011 at risk and may cause project to miss federal tax incentive deadline of December 31, 2012. BPA has not issued a construction schedule. PSE estimates the schedule to be approximately 30 months after completion of the NEPA review and issuance of the Record of Decision. NEPA review is expected to take 90 days after the project obtains an EFSEC Site Certificate (estimated for December 2010). PSE will require additional information regarding the BPA construction scope of work and schedule, including the status of any long-lead procurement items such as large generation step-up transformer, which typically requires one year from placing order to delivery to site. Proposal was submitted on March 30, 2010 and outside of RFP process. PSE will require additional information to evaluate proposal fully. 	<p>Candidate short list</p> <p>Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project holds firm transmission rights, but does not have permit or interconnection agreement. Further investigation is necessary to explore potential schedule and price risks.</p>



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>10059</p> <p>[REDACTED]</p> <p>ID</p> <p>20-yr unbundled RECs Wind development [REDACTED] RECs/year</p>	<p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: 2.263</p> <p>Portfolio benefit: \$14.2 mil</p> <p>Selected in 1 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Partially meets renewable need for 2016 Project economics are favorable when compared to alternatives in the Phase 2 evaluation Flexible term: minimum of 10-years and as long as 20-years The project has executed [REDACTED] [REDACTED] Annual volume is relatively small, yet not insignificant. [REDACTED] has experience developing wind projects 	<ul style="list-style-type: none"> Credit terms are uncertain Proposal valid for only 60 days (beginning March 2, 2010). Definitive agreements must be completed and approved within 90 days. However, [REDACTED] is willing to extend this deadline. If selected, PSE would pursue such an extension. No wind study provided. [REDACTED] has indicated that the proposed wind energy production forecast of [REDACTED] MWh is based on the P50 ("as delivered" product) 	<p>Candidate short list</p> <p>Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Proposal partially meets renewable need with a small volume of RECs. Further investigation is necessary to explore commercial terms and credit support issues.</p>
<p>10059</p> <p>[REDACTED]</p> <p>WA</p> <p>20-year PPA Biomass development [REDACTED]</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: 0.132</p> <p>Portfolio benefit: \$19.2 mil</p> <p>Selected in 2 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Project economics are favorable when compared to alternatives in the Phase 2 evaluation Project is seeking to have a high proportion of project output qualify as renewable under Washington RPS. PSE will require written determination from state. Reliable power source to help meet capacity needs Project has strong support from local leaders; will save local jobs; [REDACTED] is active in community volunteer programs Project has filed for interconnection to PSE's transmission system Project provides heat-rate guarantee, which limits PSE's risk to fluctuations due to fuel quality. Project proposes an energy-only price and assumes risk for project availability and capacity factor. Project takes advantage of existing mill operation and resources for water supply, fuel supply, and wastewater treatment. Project represents a modest increase in total wood handling by facility. 	<ul style="list-style-type: none"> Project partners have not provided a defined partnership agreement. Early stage development will require significant progress to start construction in 2010 to capture Treasury grant; PSE believes developer may have underestimated time required to obtain air permit. Project operations are interdependent with [REDACTED] for fuel supply, water supply, wastewater treatment, and operations staff; it seems likely that interruption of one entities' operations would negatively affect the operations of the other. Counterparty has not supplied long-term plan for independent operation. Project must be run as a "must run" unit. No guarantees of minimum output. Project proposes all fuel price risk on PSE, though specific terms on how to index fuel price have not yet been discussed. [REDACTED] Multiple violations listed in EPA ECHO database regarding violations of wastewater permit in 2007. 	<p>Candidate short list</p> <p>Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Project has secured a portion of the fuel supply. Further investigation is necessary to explore risks associated with fuel pricing, availability for stand-alone operation, and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity offers in the next phase of the RFP.</p>

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Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>10025</p> <p>20-yr PPA Biomass development OR 25-yr PPA Biomass development</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.107 Portfolio benefit: \$19.7 mil Selected in 2 of 5 scenarios tested.</p>	<p>Project economics are favorable when compared to alternatives in the Phase 2 evaluation Provides firm power and partially meets renewable need for 2016 Seller assumes price risk on fuel supply Seller assumes risk for availability and capacity factor on project. Seller has fuel supply contracts for 100% of fuel required for plant for term of PPA from project partners' existing operations and project partners have significant biomass supply experience. Site under option. Local support has been excellent. Project presented to [REDACTED] several letters of support received</p>	<p>Developer is pursuing aggressive development schedule to capture Treasury grant. Failure to meet this schedule will likely affect pricing. Project has not secured permits, water supply, or wastewater treatment arrangements. Developer has not provided agreements for construction or term finance. No transmission requested; transmission possibly by 2014, but a conservative estimate would be 2016; possible non-firm service Point of Interconnection with an electric cooperative may increase transmission costs (PSE's quantitative analysis assumed a Point of Interconnection at the BPA [REDACTED] substation) Construction will result in a major source review. Proposed 180-day permitting period may be unrealistic; however, developer asserts that similar projects in Oregon have met similar schedules. Project finance anticipates use of State of Oregon loan, business energy tax credit, and contribution from the engineering and procurement contractor for construction finance. Developer has not provided agreements or anticipated requirements. Project assumes [REDACTED] capacity factor, which is higher than most biomass plants. Failure to meet this capacity factor may cause developer to adjust pricing. Project water system intertwined with [REDACTED] wastewater plant. Backup water supply for cooling tower unclear.</p>	<p>Candidate short list Project economics are favorable when compared to alternatives in the Phase 2 evaluation. Seller assumes fuel cost risk. Project has secured 100% of fuel supply through existing operations of project partners. Further investigation is necessary to explore risks associated with achievable capacity factor and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity offers in the next phase of the RFP.</p>
<p>10163</p> <p>25-year PPA Biomass development</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.047 Portfolio benefit: \$20.2 mil Selected in 1 of 5 scenarios tested.</p>	<p>Meets capacity need (after 2016) and partially meets renewable need for 2016 Willing to consider apprenticeship labor to qualify for 1.2 REC multiplier Community support in the media and economic development circles Counterparty is willing to provide a project lifetime availability guarantee and negotiate capacity factor guarantees Counterparty states that it will provide a letter of credit or reasonable guarantee Experienced developer and operator Reference plant design and fleet for owner/operator Minor air emissions source. Project is completing system impact study with BPA.</p>	<p>Project economics are not as favorable as biomass alternatives in the Phase 2 evaluation. The developer has not yet arranged long-term fuel supply contracts and has not provided PSE with supply studies. Pricing assumes capture of Treasury grant. Project is still in early stage development (e.g., no firm contracts for site, water, wastewater, permits, fuel supply and finance). Failure to move forward on anticipated schedule could impact pricing. Proposal indicates desire to pass through fuel costs with little risk to developer; specific terms have not yet been discussed. Developer is looking to PSE to help arrange transmission to PSE's system; it is unclear if developer has requested transmission from BPA.</p>	<p>Candidate short list Project economics are not as favorable as biomass alternatives in the Phase 2 evaluation; however, project developer is experienced and backed by known companies with resources to achieve successful execution. Thus, further exploration of the proposal is recommended. Further investigation is necessary to explore risks associated with fuel supply and development schedule to capture Treasury grant. PSE considers biomass to be a capacity resource and will continue to evaluate the proposal with alternative capacity</p>

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2010 RFP - CONFIDENTIAL
April 21, 2010



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>10075</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.047 Portfolio benefit: \$18.6 mil Selected in 4 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Partially meets renewable need for 2016 Wind ownership that scores the second best according to the FSM Portfolio Benefit Ratio and levelized cost metrics Project holds unappealable Site Certificate Agreement through EIS/SEC Interconnection Facilities Study has been completed for [REDACTED] MW REPower project Wind resource has been studied for many years Seller states that turbines (REPower or GE) are available for project Counterparty is a large developer with substantial experience in the wind industry No credit/counterparty issues identified 	<ul style="list-style-type: none"> Project economics are not as favorable as wind alternatives in the Phase 2 evaluation. Development schedule is designed to meet safe harbor provisions of Treasury grant, which would require execution of definitive agreements no later than July 31, 2010. This schedule is aggressive and would require completion of several development items before definitive agreements could be executed by PSE. PSE's history with [REDACTED] suggests that timely execution of definitive agreements may not be possible. Turkey construction proposal is not PSE's preferred contract structure. PSE's expectations for oversight and control of design details could negatively affect proposed schedule and proposed pricing. Real estate land leases require re-negotiation because five of six leases expire in 2032 with no renewal option, which would reduce life of 25-year project if not extended. DNV-GECC recommends rearranging the turbine layouts if possible, or removing up to 6 - 8 of the proposed turbine locations due to the close spacing. [REDACTED] does not have a turbine suitability report from the turbine manufacturers. Independent wind energy resource assessment report was prepared for an earlier version of the site layout. PSE would require the completion of a report for final layout design. No transmission has been requested on either PSE's or BPA transmission system. Interconnection Facilities Study assumes [REDACTED] MW using [REDACTED] turbines. If project uses other turbine technology or uses different capacity (current proposal assumes [REDACTED] MW), all interconnection studies must be redone; PSE's estimates up to 8 months delay for re-studies. The proposed commercial online date is potentially at risk due to the estimated schedule for PSE's interconnection facilities. PSE transmission states that procurement of long-lead time is the critical path for timely completion of the interconnection. Equipment procurement requires 9-12 months and procurement would not typically occur until a Large Generator Interconnection Agreement has been signed; however, the developer can begin the process earlier through an engineering and procurement agreement. The developer may also elect to build the station to PSE's specifications if they feel they can better meet their schedule. The project has encountered significant community 	<p>Not selected</p> <p>Project economics are not as favorable as wind alternatives in the Phase 2 evaluation. Negotiation and execution of definitive agreements within required timeframe is aggressive. Commercial success at proposed price offer may be unrealistic given outstanding development items to be completed. Construction may not commence in time to capture Treasury grant. Winter construction schedule and interconnection facilities construction schedule places the proposed Commercial Operation Date at risk.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>10117(a)</p> <p>WA 20-year PPA Wind development MW</p>	<p>Levelized cost: \$[REDACTED] MWh</p> <p>Portfolio benefit ratio: 0.014</p> <p>Portfolio benefit: \$3.2 mil</p> <p>Selected in 1 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Partially meets renewable need for 2016 Wind PPA that scores the second best according to the PSM Portfolio Benefit Ratio metric Prior commercial success in negotiations with [REDACTED] Favorable commercial terms: Fixed PPA price, as generated firm hourly energy, seller responsible for generation imbalance costs and shares wind integration costs. PSE has negotiated acceptable credit terms with this counterparty in the past [REDACTED] is a sophisticated developer with history of successful execution Low environmental and community impacts due to low population density and located in existing wind overlay zone 	<p>opposition, but such opposition has cooled since settlement between the county and applicant. Project runs risk of increased attention once construction begins.</p> <ul style="list-style-type: none"> Project economics are not as favorable as wind alternatives in the Phase 2 evaluation. Pricing assumes tax cash grant in lieu of investment tax credit; however, the project has not yet received required permits to begin construction. Price also assumes commercial online date in 2012, but BPA interconnection schedule may put this Commercial online date at risk and cause project to miss federal tax incentive deadline of December 31, 2012. BPA's System Impact Study (SIS) indicates that there will be 18 - 24 months of remaining time after completion of Facilities Study and NEPA to design and construct [REDACTED] Substation. PSE is unaware of any information that would indicate that BPA has started the NEPA process for the [REDACTED] Substation. The NEPA process could take up to a year, which puts the scheduled Commercial online date at risk. Transmission rights are not secured. Firm transmission will require completion of the West of McNary Project, which is projected to be complete in early 2013. Phase II still requires an Energy Overlay Zone permit. The Final Environmental Impact System, issued in January 2010, addressed conditions for both Phase I and II, although an Energy Overlay Zone permit was only issued for Phase I due to identification of a golden eagle nest outside the project area. Prior to submitting a permit application for Phase II, the Final Environmental Impact Statement will require resubmission as a result of comments issued by Washington State Department of Fish and Wildlife during the Draft Environmental Impact Statement period. Developers are in process of finalizing necessary studies under the guidance of Washington State Department of Fish and Wildlife to address these concerns. Developer has not selected a turbine technology, but the proposal but assumes [REDACTED] turbines. According to DNV-GEC, [REDACTED] turbines carry a risk of significant component failures and financial institutions have had reservations about the turbines. According to DNV-GEC, the effects of upwind turbines from nearby operating projects are unknown at this time and would be out of PSE's control. 	<p>Not selected</p> <p>Project economics are not as favorable as wind alternatives in the Phase 2 evaluation. Commercial success at proposed price offer may be unrealistic because the development schedule may not enable the project to capture Treasury grant. The proposed BPA interconnection construction schedule places the proposed Commercial Operation Date at risk, which also increases price risk if the project fails to achieve federal tax incentive dates. Transmission rights have not been secured.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection Recommendation & Rationale
<p>10117(b) [REDACTED] OR [REDACTED] 20-year PPA Wind development [REDACTED] MW</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.032) Portfolio benefit: (\$8.7 m) Selected in 2 of 5 scenarios tested.</p>	<ul style="list-style-type: none"> Partially meets renewable need for 2016 Prior commercial success in negotiations with [REDACTED] Favorable commercial terms: Fixed PPA price; as generated firm hourly energy, seller responsible for generation imbalance costs and shares wind integration costs, PSE has negotiated acceptable credit terms with this counterparty in the past [REDACTED] is a sophisticated developer with history of successful execution Has EFS&C site certificate; favorable permitting progress made to date Executed Large Generator Interconnection Agreement 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Pricing assumes Treasury grant, but construction is not scheduled to start until 2011, which may affect the ability to obtain Treasury grants. Future PPA costs are uncertain because the transmission provider to which the project interconnects has not established wind integration costs and/or protocols Developer has not selected a turbine technology. Final selection may involve a wind turbine with poor operational history or company financial instability (e.g., [REDACTED]) No mention of assignment of firm Point-to-Point transmission to PSE's system 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives in the Phase 2 evaluation. Future PPA costs are uncertain because the transmission provider to which the project interconnects has not established wind integration costs and/or protocols. Construction may not commence in time to capture Treasury grant. No transmission has been secured.</p>

REDACTED VERSION

REDACTED VERSION



The proposals below were not selected to proceed for Phase II evaluation. They are organized alphabetically by resource type.

Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
10109 20-year PPA Biomass development MW	Levelized cost: n/a Portfolio benefit ratio: n/a Portfolio benefit: n/a	<ul style="list-style-type: none"> Provides firm capacity and qualifies for Renewable Portfolio Standard Secured fuel supply 	<ul style="list-style-type: none"> Finance and construction predicated on pilot project that hasn't been performed yet (scheduled for 2012) No terms, commercial online date or timeline for commercial project provided Conceptual pricing indicated; however, project is too early in preliminary planning phases to evaluate quantitatively in a meaningful way 	Not selected Proposal is conceptual and requires pilot project before larger project is viable. No pricing or offer structure was submitted because of the very early stage development of the project.
10121 20-yr PPA with purchase option (yr 5) Biomass development MW	Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.011 Portfolio benefit: \$3.2 mil	<ul style="list-style-type: none"> Provides firm capacity and qualifies for Renewable Portfolio Standard Secured fuel supply 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Risk that counterparty would not honor its contractual obligations. (The counterparty recently defaulted on a long-term PPA with PSE.) The project has not secured a location or filed for permits, interconnection, water supply, or wastewater discharge. Project has not secured site, permits, water supply, or wastewater treatment arrangements. No agreements for construction or term finance provided. Project has not provided any engineering analyses beyond preliminary heat and mass flow and has not provided any evidence of engineer, EPC contractor, or equipment selection. The projected will be a major source emitter in a PM2.5 nonattainment area, so permitting to reach acceptable PM levels may be challenging. 	Not selected Project economics are not as favorable as alternatives. Project has secured fuel supply. The counterparty recently defaulted on a long-term PPA with PSE.
10063 20-year PPA Biomass development MW	Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.217 Portfolio benefit: \$4.2 mil	<ul style="list-style-type: none"> Project economics are favorable when compared to alternatives Distributed generation connected to PSE's system on the west side of the Cascade Range Project well-received by the [REDACTED] at initial meeting with developer 	<ul style="list-style-type: none"> It is unclear if this project qualifies for the RPS. If project does not qualify as an RPS resource, it should be evaluated with alternative capacity offers in the next phase of the RFP. Unclear how fuel supply will be secured/guaranteed No permitting scope proposed and limited information to evaluate operationally Developer is still seeking locations for project siting and may site outside PSE system 	Not selected Project is in early stage development and has not secured a site location. Fuel supply is not secured. Need determination of qualification for RPS.

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10161</p> <p>OR 20-yr PPA Biomass-developing MW</p>	<p>Levelized cost: [redacted] MWh Portfolio benefit ratio: 0.087 Portfolio benefit: \$16.0 mil</p>	<ul style="list-style-type: none"> Project economics are favorable when compared to alternatives Provides firm capacity and qualifies for Renewable Portfolio Standard Some fuel supply is secured from project partners' existing operations (15-yr terms) Project partners have significant biomass supply experience 	<p>Not selected</p> <p>Project unlikely to meet development schedule due to air permitting issues. Change in schedule likely to impact pricing. No transmission secured</p> <ul style="list-style-type: none"> The aggressive schedule is designed to capture Treasury grant but may not be possible to achieve because of a potential non-attainment area; major source review required (proposed 245-day permitting period may not be realistic); and potential for significant upgrades to pollution control equipment proposed. Failure to capture Treasury grant would likely affect pricing. Project has not secured sit, permits, water supply, or wastewater treatment arrangements. No agreements for construction or term finance provided. Status of the bond issue with the [redacted] is unclear No transmission requested on BPA's transmission system, and possible constraints could prevent firm capacity until 2016. However, conditional firm transmission service may be available. Possible interconnection costs with [redacted] [redacted] capacity factor, higher than most biomass plants. Failure to meet this may cause developer to adjust pricing. 	
<p>10086</p> <p>Ownership offer Biomass-operating MW</p>	<p>Levelized cost: [redacted] MWh Portfolio benefit ratio: (0.151) Portfolio benefit: (\$)4.6 mil</p>	<ul style="list-style-type: none"> Operating facility with no development risk Reliable energy source with ability to meet capacity need 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Project does not have demonstrated operational history as a biomass facility, and project equipment and site may not be sized properly for biomass. No fuel supply secured. Project built with used equipment with unknown warranties. History of community opposition.</p> <ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Unknown history of plant equipment and no guarantees provided. Fuel supply not secured. Plant has had limited operations as a biomass facility and some equipment may not be appropriately sized for biomass. Plant site may not be large enough to support stockpiling biomass without use of adjacent lumber mill. Transactions costs likely to be high for [redacted] MW facility. Local opposition to the project has resulted from coal use as fuel source for the project Transmission from Montana requires wheels on NorthWestern Energy's and BPA's transmission systems; may not be sufficient firm transmission for full resource capacity (only 10 of [redacted] MW secured on NorthWestern Energy transmission system for delivery to BPA transmission system) 	

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Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10058</p> <p>[REDACTED]</p> <p>TBD</p> <p>5-year PPA</p> <p>Biomass development</p> <p>[REDACTED] MW + [REDACTED] MW peak</p>	<p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: n/a</p> <p>Portfolio benefit: n/a</p>	<p>[REDACTED]</p> <p>RECs to be sourced from existing [REDACTED]</p> <p>Annual REC volume is relatively small but not insignificant</p> <p>Accomplished counterparty with significant experience/accomplishments: [REDACTED]</p>	<ul style="list-style-type: none"> Incomplete proposal. Early in conceptual stage; no site selected; unable to evaluate quantitatively, or from a transmission, environmental and permitting, community or real estate perspective. [REDACTED] requires a PPA prior to starting any development. 	<p>Not selected</p> <p>Proposal is conceptual and no pricing or offer structure was submitted because of the very early stage development of the project.</p>
<p>10053</p> <p>[REDACTED]</p> <p>ID</p> <p>Unbundled REC product</p> <p>6 of 8 facilities operating</p> <p>Offer volume varies for vintage yrs 2011-2018</p>	<p>Option 2 (best of Options 1-3):</p> <p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: (1.725)</p> <p>Portfolio benefit: (\$2.7 mil)</p>	<p>[REDACTED]</p> <p>Experienced development team with solid development plan</p> <p>Land for project and expansion under option</p>	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. [REDACTED] is listed in the supply matrix included with this proposal; proposal received from [REDACTED] is for the entire REC output of the [REDACTED] facility into the RFP as a stand-alone offer 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives.</p>
<p>10122</p> <p>[REDACTED]</p> <p>OR</p> <p>20-year PPA</p> <p>Solar-PV development</p> <p>[REDACTED] MW</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: (0.432)</p> <p>Portfolio benefit: (\$16.3 mil)</p>	<p>[REDACTED]</p> <p>Experienced development team with solid development plan</p> <p>Land for project and expansion under option</p>	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Transmission costs are unclear. No interconnection studies have been completed. Interconnection with BPA typically takes up to 2 years, putting the commercial online date at risk. No transmission service has been requested. Project has had short period of data collection for energy resource. Proposed equipment may be difficult to obtain to meet proposed commercial online date (model identified appears to be sold out through 2010). Proposed equipment is relatively new model of PV panel, but with reputable manufacturer. Permitting process appears to be behind schedule for completion by proposed commercial online date. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Project unlikely to achieve commercial online date due to BPA interconnection process. No transmission secured.</p>

REDACTED VERSION

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Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10080</p> <p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.216) Portfolio benefit: (\$8.4 mil)</p> <p>Counties, MT 20-year PPA Wind development MW</p>	<p>Positive local support for the project with no identified local opposition</p>	<p>Project economics are not as favorable as alternatives. High Montana to PSE transmission cost; two wheels required on NWE and BPA Transmission unsecured – unlikely to be secured by proposed commercial online date Unrealistic construction schedule (during winter 2010-2011) Poor wind resource data provided (only one met mast, short record of resource performance; no independent study); this creates significant price risk and may subject the project to financing risks. Sited outside WA RPS zone; must be shipped real time to PSE, requiring absorption into PSE's balancing authority and resulting in fewer alternatives for integration Counterparty is a small developer; questionable credit quality</p>	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. No transmission secured. Wind resource assessment may subject the project to financing risks.</p>	
<p>10100</p> <p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.040) Portfolio benefit: (\$7.1 mil)</p> <p>Ownership offer Wind development MW</p>	<p>No identified local opposition</p>	<p>Project economics are not as favorable as alternatives. Turbine technology is not yet in commercial operation. This turbine has not been vetted, certified by an independent firm. It has no proven track record and is an immature technology. Not financeable. PSE would not have full development flexibility and control of the value chain; Requires Turbine Supply Agreement for [REDACTED] wind turbines and development agreement with [REDACTED] turbine deliveries are required without certainty of development timing Development cost risks: BPA interconnection and transmission costs unknown; fed tax incentives expire 12/31/2012 Schedule risks: very early stage development with uncertain site control, permitting, interconnection and transmission; requires wind turbine deliveries by 6/1/2012 BPA transmission unsecured; preliminary flowgate analysis identified impacts to Cross Cascade South flowgate (55 MW) BPA interconnection request withdrawn; final system impact and facilities studies incomplete Insufficient wind data and resource assessment. Site control not completed; only 70% of wind turbine locations are currently under site control If [REDACTED] they may not have the financial strength to meet its obligations.</p>	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Turbine technology is unproven and may not be financeable. The offer of purchasing development rights requires PSE to enter into development agreement with [REDACTED] turbine supply agreement, and O&M agreement, which gives PSE little to no control over development or value chain. The schedule risks indicate that the project will not meet the federal tax incentives deadline. No transmission secured.</p>	

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Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10136</p> <p>20-year PPA Wind development 10136 MW</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.200) Portfolio benefit: (\$5.1 mil)</p>	<ul style="list-style-type: none"> Seller states it will provide a parent guarantee and possibly a letter of credit Site is in advanced stages of development; land is optioned and both major permits have been acquired; advanced stage of Turbine Supply Agreement negotiations Wind resource confirmed by a third party 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Transmission from MT Montana requires wheels on NorthWestern Energy's and BPA's transmission systems, which results in high overall costs. Project is outside Washington state PPS zone; would have to be shipped real time to PSE territory. PSE would have to bring project into its control area, which comes with additional cost and provides fewer integration alternatives Construction schedule designed for a commercial online date of December 1, 2012 may not be realistic. Moderate opposition from the community (177 oral and written comments from 21 people); concerns range from tourism impact to reduced property values; opposition has active legal representation 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives.</p>
<p>10152</p> <p>20-year PPA Wind development 10152 MW</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.124) Portfolio benefit: (\$7.4 mil)</p>		<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. PSE is not sure that the developer can deliver as proposed. The project is an early stage development with an inexperienced developer. The developer seems to consider Colstrip to be PSE's system. The proposal may require a third transmission wheel Significant network upgrade required under NorthWestern Energy Large Generator Interconnection Agreement Only one met tower used for wind resource assessment, which may not be reasonable to assess capacity factor. Interconnection Feasibility Study performed for only 200 MW Pricing subject to final Phase II development High presence of sensitive avian species and bats Siting may impact [REDACTED] - will require consultation with [REDACTED] No permits secured to date Area already impacted by existing wind facilities; cumulative effect on public perception; increasing concerns about views, impact on avian and other wildlife 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Price risk due to uncertainty of estimated costs and early stage development. Price assumes federal tax incentives, which expire in 2012, and development risks indicate that the proposed commercial online date of 2012 may not be feasible. Price is also subject to final Phase 2 development costs.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10049</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.0002) Portfolio benefit: (\$5.2 mil)</p>	<ul style="list-style-type: none"> Operating facility with no development risk Seller states it has an A3 rated parent company Ability to provide reactive power control 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Commercial terms with regard to availability guarantees and associated penalties are less favorable than other RFP alternatives. The proposal is unclear whether the counterparty would be the parent company or the subsidiary. Accordingly, it is unclear if the parent company will provide a parent guarantee if the counterparty is the subsidiary. No secured transmission from BPA to PSE for an estimated commercial online date of January 1, 2011; no service request submitted 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Proposed commercial terms are not as favorable as alternatives. No transmission secured. Lack of proposal data.</p>
<p>10148</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: 0.001 Portfolio benefit: \$0.3 mil</p>	<p>Project is burdened by significant pushback due to its location within the site line of the [REDACTED] community; two county permit processes may present challenges; going to EFSEC</p> <p>Turbine technology is not yet in commercial operation. This turbine has not been vetted and certified by an independent firm. It has no proven track record and is an immature technology and may not be financeable.</p> <p>Project economics are not as favorable as alternatives. Data quality is insufficient to have confidence in the results.</p> <p>PSE would not have full development flexibility and control of the value chain. Requires Turbine Supply Agreement for [REDACTED] wind turbines and development agreement with [REDACTED] turbine deliveries are required without certainty of development timing</p> <p>Development cost risks: BPA interconnection and transmission costs unknown; federal tax incentives expire on December 31, 2012.</p> <p>Schedule risks: very early stage development with uncertain site control, permitting, interconnection and transmission; requires wind turbine deliveries by June 1, 2012.</p> <p>No interconnection or transmission requests in the queue; transmission feasibility will require both the West of McNary and I-5 Corridor Reinforcements projects</p> <p>Insufficient wind data and wind resource assessment.</p> <p>Site control not completed; only 73% of turbine locations are under site control</p> <p>If [REDACTED] they may not have the financial strength to meet its obligations.</p>	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Turbine technology is unproven and may not be financeable. The offer of purchasing development rights requires PSE to enter into development agreement with [REDACTED] turbine supply agreement, and O&M agreement, which gives PSE little to no control over development or value chain. The schedule risks indicate that the project will not meet the federal tax incentives deadline. No transmission secured.</p>	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Turbine technology is unproven and may not be financeable. The offer of purchasing development rights requires PSE to enter into development agreement with [REDACTED] turbine supply agreement, and O&M agreement, which gives PSE little to no control over development or value chain. The schedule risks indicate that the project will not meet the federal tax incentives deadline. No transmission secured.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10096</p> <p>MT 20-year PPA Wind development MW</p>	<p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: n/a</p> <p>Portfolio benefit: n/a</p>		<ul style="list-style-type: none"> Project is located in the Midwest Reliability Organization. PSE is unable to move the power to the Western Electricity Coordination Council and PSE's territory. 	<p>Not selected</p> <p>Cannot deliver to PSE – outside of the Western Electricity Coordination Council.</p>
<p>10150</p> <p>Martinsdale Wind Farm ownership offer Wind development MW</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: (0.063)</p> <p>Portfolio benefit: (\$111,000)</p>	<ul style="list-style-type: none"> Prior commercial success in negotiations with [REDACTED] Assumed mature stage of development (land secured, DEIS complete, LGIA executed) Project generally has community support 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives High transmission cost from Montana Development risk due to preferences for [REDACTED] wind turbines that affect project capacity and layout, real estate control, no transmission requests filed, and the Large Generator Interconnection Agreement dates may be unrealistic. Proposed assumptions are based on [REDACTED] wind turbines, which PSE would not currently use. The developer is unlikely to meet the proposed commercial online date because of transmission issues. The developer is relying on completion of Colstrip transmission projects to obtain capacity, but Colstrip transmission projects are unlikely to be complete by the commercial online date. No wind resource data provided 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Small project located in remote Montana. Successful completion of development at proposed pricing is uncertain with information provided. No transmission secured. Lack of proposal data.</p>
<p>10014</p> <p>WA Joint ownership offer Wind development MW</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: 0.144</p> <p>Portfolio benefit: \$28.3 mil</p>	<ul style="list-style-type: none"> Project economics are favorable when compared to alternatives. The economics are based on a bid that provided very few details about cost and projected net capacity factor, which left most cost assumptions to PSE's judgment. Proposal states that counterparties will post warranties and performance guarantees and bonds but does not indicate the identities of the counterparties. 	<ul style="list-style-type: none"> Proposal did not provide project pro forma with cost details, which leaves significant pricing uncertainty. The proposal requires [REDACTED] turbines but provided no cost information associated with these turbines. Proposal assumes a turbine-availability inconsistent with past performance. Based on operating history, DNV-GEC believes that this turbine carries a higher risk of significant component failures caused by design and/or manufacturing errors. PSE would be majority owner of the project but would not have project control. Ownership structure is complex for a small project. Project finance may be difficult because the different parties may seek different financing vehicles. [REDACTED] interests between PSE and other potential owners may not be aligned. No progress made with regard to permitting (EFSEC or Conditional Use Permit) It is unclear how much of PSE's share of the project will be available in 2013. 	<p>Not selected</p> <p>Lack of proposal detail and cost data left most cost assumptions to PSE, creating significant economic uncertainty. The complexity of the commercial structure adds additional cost risk and makes execution uncertain. Turbine technology carries risk. No transmission secured.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10004</p> <p>Canada -50-year PPA Wind development MW</p>	<p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: n/a</p> <p>Portfolio benefit: n/a</p>		<ul style="list-style-type: none"> It is unclear if a valid proposal exists for this project. The developer included no pricing or deal structure for PSE to evaluate. Offer to PSE appears to be subject to the outcome of the [REDACTED] Call for Power. If nothing comes of that, then a deal may be offered to PSE. Developer does not have a track record of experience in the wind industry; most of the team came on board within the last couple of years. Complex and costly transmission upgrades to bring power from British Columbia to PSE's territory Permitting process for [REDACTED] O&M associated with the project presents unique challenges. PSE is unsure how to evaluate [REDACTED] Indicative pricing for similar offshore wind projects with transmission suggests high costs; thus, it appears that, even assuming potentially higher capacity factors, the project economics would be favorable when compared to alternatives. Equipment has 20-year design life (due to the harsh conditions in which the equipment would operate), but proposal calls for a roughly 50-year PPA. 	<p>Not selected</p> <p>Validity of offer in question due to developer's submission to [REDACTED] Call for Power. No offer or price submitted in proposal to evaluate.</p>
<p>10105</p> <p>Ownership Wind development MW MW</p>	<p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: (0.304)</p> <p>Portfolio benefit: (\$20.5 mil)</p> <p>Levelized cost: [REDACTED] MWh</p> <p>Portfolio benefit ratio: (0.191)</p> <p>Portfolio benefit: (\$14.2 mil)</p>	<ul style="list-style-type: none"> Advanced stage of development, which reduces development risk. Commercial terms are reasonable. Completed all necessary permitting and assessments to proceed. 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives The proposal would require transmission service on both BPA's and North Western Energy's transmission systems, which may pose constraints on two flow gates and result in curtailments. No transmission requests submitted. Small facility size (two sites an hour apart) and distant location would require a third-party operator with potentially high incremental costs. Turbine selected [REDACTED] may not be suitable for the site. Wind data is incomplete due to sensor failures. Some potential for local opposition from residents in [REDACTED] Some potential for local opposition related to roads in [REDACTED] 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. No transmission secured.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10120</p> <p>[REDACTED]</p> <p>WA</p> <p>2 - 20-year PPA offers Wind development [REDACTED] MW</p>	<p>Option 1:</p> <p>Levelized cost: \$ [REDACTED] /MWh</p> <p>Portfolio benefit ratio: (0.1) / (6)</p> <p>Portfolio benefit: (\$34.9 mil)</p> <p>Option 2:</p> <p>Levelized cost: \$ [REDACTED] /MWh</p> <p>Portfolio benefit ratio: (0.1) / (6)</p> <p>Portfolio benefit: (\$40.9 mil)</p>	<ul style="list-style-type: none"> Developer states it would offer standard terms letter of credit from an A rated or better bank. The project generally has good community support. 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives Price risk is greater than other alternatives, including the wind integration costs passed through to PSE at cost plus. The high capacity factor of [REDACTED] percent is likely to be a gross rather than net capacity factor. The commercial terms are less favorable than other alternatives. Development schedule may be unrealistic (e.g., short wind data collection time, no turbine agreements in place, lack of real estate rights). Risk of curtailment on BPA's transmission system due to constraints. Wind resource assessment does not appear to be fully vetted (only two met towers) Selected [REDACTED] turbine model is still in testing phase of development, which creates a risk that they may not perform as designed. This may call the development schedule into question. No permits obtained. The overlay passed by the county has been appealed by two separate appellants. No transmission secured. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Proposed commercial terms are not as favorable as alternatives. The PPA offer presents price risk, including the wind integration costs passed through to PSE at cost plus. The proposed development schedule may be unrealistic. No transmission secured.</p>
<p>10015</p> <p>Regenedyne 1GW [REDACTED]</p> <p>WA</p> <p>Ownership offer Wind development [REDACTED] MW</p>	<p>Levelized cost: n/a</p> <p>Portfolio benefit ratio: n/a</p> <p>Portfolio benefit: n/a</p>	<ul style="list-style-type: none"> Technology is commercially unproven. The proposal indicates that [REDACTED]. There are no examples of this technology in commercial operation. The estimated cost of facility is approximately [REDACTED]. The project development is conceptual. 	<ul style="list-style-type: none"> Technology is commercially unproven. The proposal indicates that [REDACTED]. There are no examples of this technology in commercial operation. The estimated cost of facility is approximately [REDACTED]. The project development is conceptual. 	<p>Not selected</p> <p>Prototype turbine technology with no demonstration of ability to deliver on either turbine technology or project development.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10147</p> <p>[REDACTED] counties, OR 20-year PPA Wind development</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.117) Portfolio benefit: (\$2.7 mil)</p>	<ul style="list-style-type: none"> PSE is not aware of any major community opposition. 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. The proposed commercial online date is third quarter of 2014, which will not qualify for the current federal tax incentives. The proposal would require PSE to acquire [REDACTED] MW of transmission, which may not be feasible. The proposal would require significant and costly upgrades to interconnect with the BPA transmission system (43 miles to connect to the BPA transmission system). The project is in early stages of development (e.g., no permits filed, no turbine supply agreements, no interconnection, in system impact study phase; no transmission requested). Project pricing would be affected by final turbine supply and construction agreements. The assumptions used by the developer to develop pricing are unclear. The commercial terms offered are inconsistent with PSE's preferred terms. The project has potential schedule risk due to BPA interconnection timing. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. Project carries price risk due to (i) uncertainty of estimated costs, (ii) early stage development, and (iii) the proposed commercial online date is third quarter of 2014, which will not qualify for the current federal tax incentives. The commercial terms offered are inconsistent with PSE's preferred terms.</p>
<p>10016</p> <p>[REDACTED] WA 20-year PPA Wind development MW</p>	<p>Levelized cost: [REDACTED] MWh Portfolio benefit ratio: (0.118) Portfolio benefit: (\$20.3)</p>	<ul style="list-style-type: none"> PSE has had prior-commercial success in negotiations with [REDACTED] The developer is sophisticated with a history of execution success. PSE has some confidence that the developer can meet its development schedule. The proposed commercial terms are competitive. The developer states that it will post a guarantee, letter of credit, or other credit support, as required. PSE is not aware of any major community opposition. 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. Prior PPA negotiations with [REDACTED] The proposal failed to provide sufficient information to determine schedule risks related to Conditional Use Permit status. The proposal would require transmission service on both BPA's and Avista's transmission systems, which may pose constraints on two flow gates and result in curtailments. PPA costs are uncertain because the transmission provider to which the project interconnects has not established wind integration costs and/or protocols. The developer has not secured transmission service or submitted service requests for full capacity. This exposes schedule risk for the proposed Commercial Operation Date of January 1, 2012. No third-party wind assessment Avian issues associated with the [REDACTED] which may present a potential community issue. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. PPA costs are uncertain because the transmission provider to which the project interconnects has not established wind integration costs and/or protocols. Price certainty also requires additional information on interconnection schedule.</p>

REDACTED VERSION

REDACTED VERSION



Project	Quantitative Findings	Qualitative Advantages (+)	Qualitative Risks (-)	Selection recommendation & Rationale
<p>10108</p> <p>2 PPA options 1. MW - 15 yrs 2. MW - 5 yrs Wind-operating</p>	<p>Option 1: Levelized cost: \$ [REDACTED] /MWh Portfolio benefit ratio: (0.3057) Portfolio benefit: (\$7.2 mil)</p> <p>Option 2: Levelized cost: \$ [REDACTED] /MWh Portfolio benefit ratio: (0.250) Portfolio benefit: (\$27.9 mil)</p>	<ul style="list-style-type: none"> The project is an operating facility with no development risk. 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. The projected does not qualify for the Renewable Energy Credit multiplier of 1.2 for apprenticeship labor. The counterparty does not yet have the right to market the power - negotiations for the right to market the power are ongoing. If counterparty does obtain the right to market the power, any deal with PSE would be limited by the underlying contract. No flexibility for PSE to negotiate terms. The proposal would require PSE to carry operating reserves The size [REDACTED] MW until 2022) and terms of the agreements are non-strategic for PSE. First offer would require full negotiations for only [REDACTED] MW. Second offer would not begin until 2022, which is outside scope of the RFP. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. The counterparty does not yet have the right to market the power.</p>
<p>10162</p> <p>15-20 year PPA or BOT Wind pre-construction MW</p>	<p>Levelized cost: \$ [REDACTED] /MWh Portfolio benefit ratio: (0.196) Portfolio benefit: (\$39.8 mil)</p>	<ul style="list-style-type: none"> The developer states that it will offer credit support. The project is at an advanced stage of development, which reduces development risk. The construction schedule appears to be achievable. All environmental studies (other than avian) are complete; with permits secured or in final stages 	<ul style="list-style-type: none"> Project economics are not as favorable as alternatives. The proposal provided insufficient detail to evaluate potential advantages and risks fully. For example, the proposal provided no capacity factor, no wind resource assessment, no layout, and no real estate information. The proposal would require transmission service on both BPA's and North Western Energy's transmission systems. The developer has not secured transmission service. A preliminary flowgate analysis indicates that there will be impacts to major flowgates. It is unclear if transmission can be secured by the commercial online date. 	<p>Not selected</p> <p>Project economics are not as favorable as alternatives. No transmission secured. The proposal provided insufficient detail to evaluate potential advantages and risks fully</p>

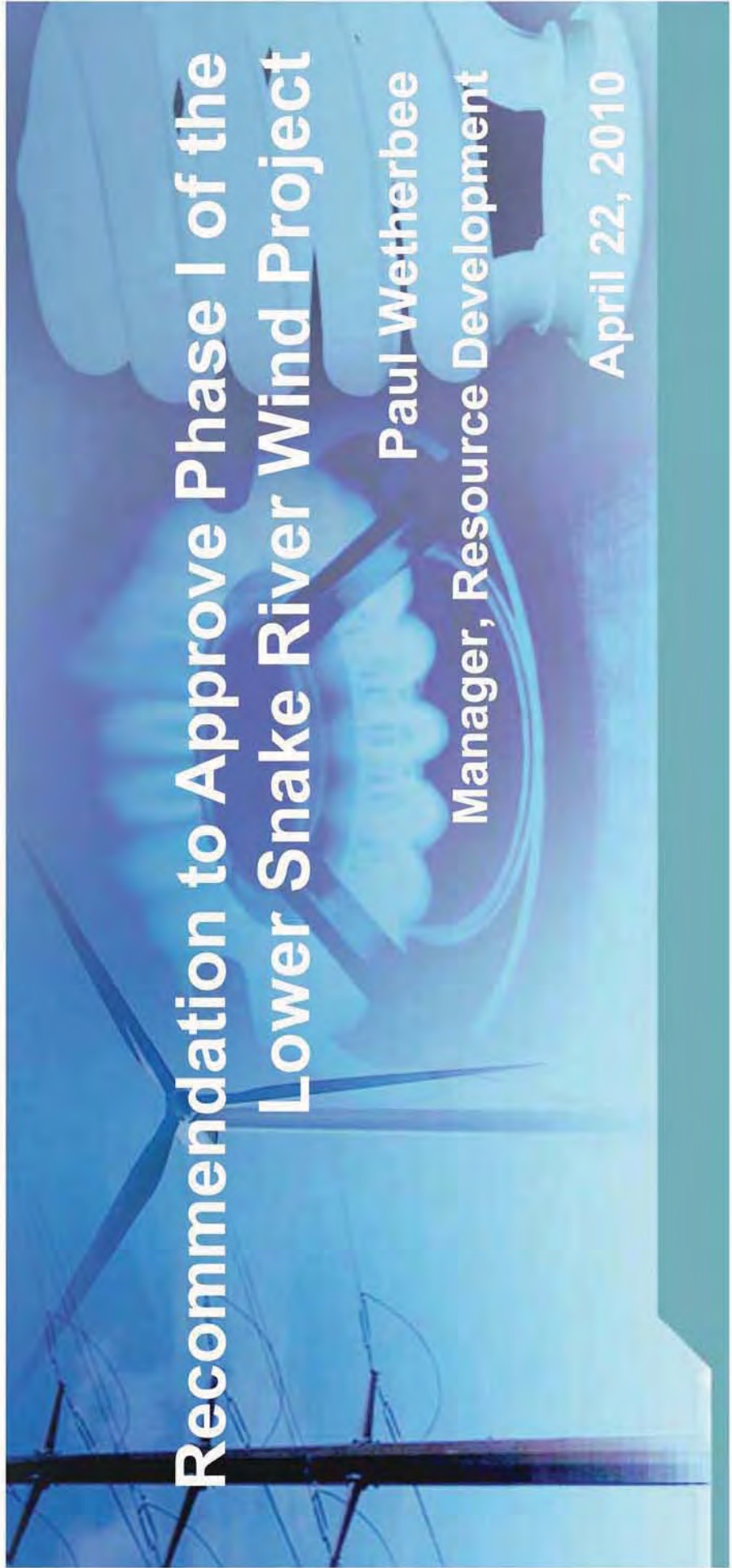
REDACTED VERSION

REDACTED VERSION

Recommendation to Approve Phase I of the Lower Snake River Wind Project

Paul Wetherbee
Manager, Resource Development

April 22, 2010



Agenda



- Approval of Phase I of the Lower Snake River Wind Project
 - Recommendation
 - Summary of the Project
 - Need for the Project
 - Alternatives and Analysis
 - Summary of Proposals Received from the RFP
 - Execution of the Project
 - Summary of Principal Agreements
 - Budget
 - Schedule
 - Recommendation



Recommendation



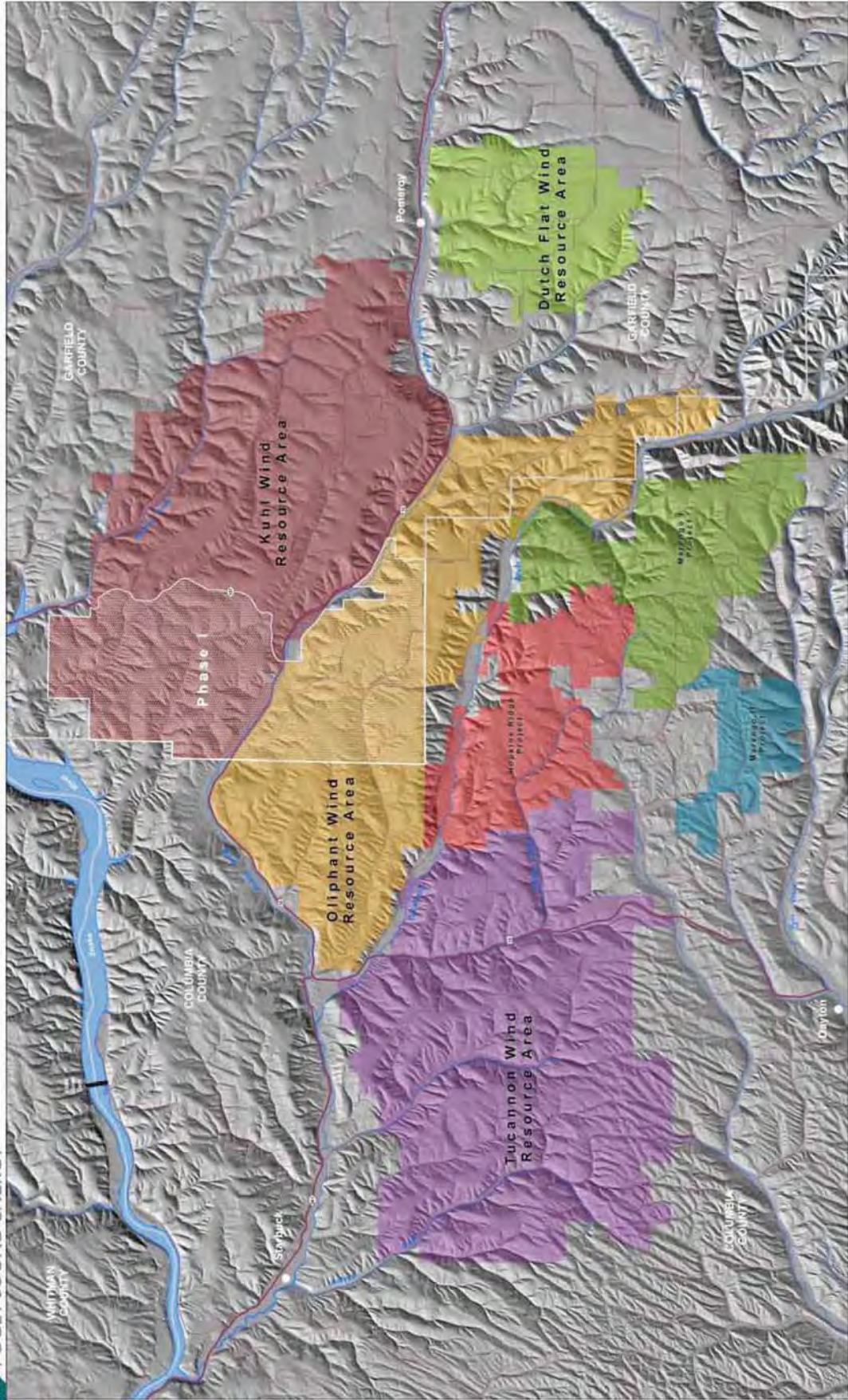
- Recommendation
 - Recommend the Board of Directors approve Phase I of the Lower Snake River Wind Project and the capital budget of \$848,041,000. Phase I will construct 149 Siemens SWT 101 wind turbine generators (342.7 MW total capacity), two project substations, and supporting infrastructure.

- Recommend the Board Approve Principal Project Contracts
 - Turbine Supply Agreement (“TSA”)
 - Service and Maintenance Agreement (“SMA”)
 - Balance of Plant (“BOP”)
 - Large Generator Interconnection Agreement (“LGIA”)

Project Description

Lower Snake River Wind Project

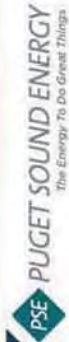
PSE PUGET SOUND ENERGY



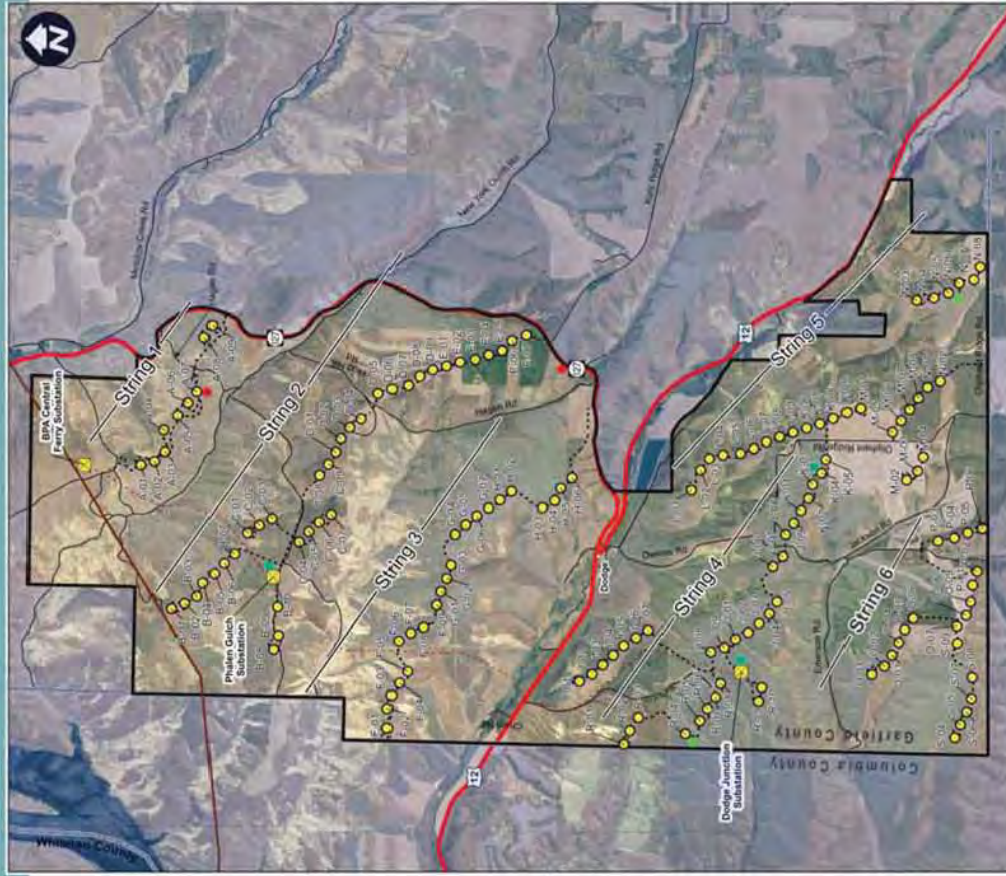
EMC Decision // April 22, 2010

Project Description

Phase I Project Features



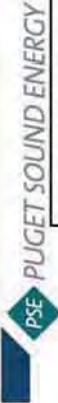
- Located on 39,600 acres of leased property within Garfield County
- 342.7 MW Capacity
- 149 Siemens SWT 101 2.3 MW Wind Turbine Generators
- Interconnects to BPA's new 230/500 kV Central Ferry Substation
- Two 34.5/230 kV Project Substations
- Field Emergency Satellite Building
- O&M Building in Pomeroy, Washington
- Operated by PSE's Hopkins Ridge Operations Staff



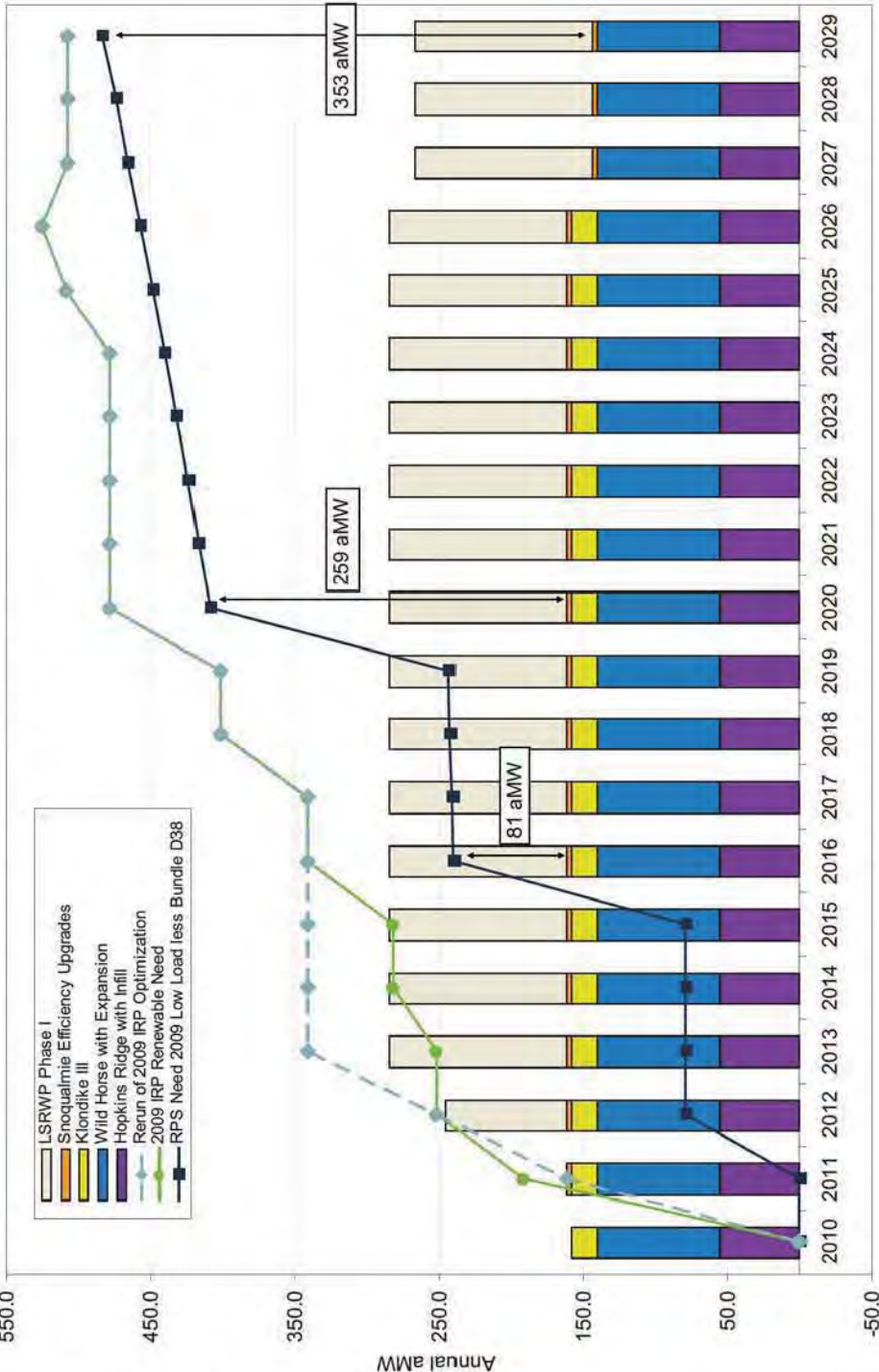
Project Features	
Lower Snake River Wind Project – Phase I	
PSEN0000-0186	4/1/2010
County Line	Phase I Project Boundary
Highway	Turbine (Rev G)
Local Road	Project Substation
Existing 500kV Line	Phase I - 230kV Line
	Project Road (Rev G)
	BPA Access Rd
	Laydown Yard
	Met Tower
	Quarry Site

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Renewable Portfolio Standard Progress



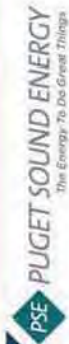
Treasury Grant incentive trumps "just-in-time" renewable additions



Renewable Resources Contributions toward meeting IRP and RPS Targets

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Alternatives and Analysis



- Phase I was compared to renewable resource proposals PSE received through the RFP process and unsolicited proposals¹
- Project economics of wind project alternatives assume utilization of the Treasury Grant program
- Treasury Grant program requires start of construction by December 31, 2010, and the project must be placed in service by December 31, 2012²
- Phase I is the most likely alternative to meet the Treasury Grant requirements¹

Notes

- 1) See RFP Update presentation to the EMC April 22, 2010. Also see Exhibit N of the Report to the Board
- 2) See Exhibit S of the Report to the Board



Wind Resource	Real Estate		Interconnection & Transmission				Permits		
	All land leases secured	Land leases valid for life of project	BPA ROD complete	LGIA signed	Transmission request submitted	Firm transmission secured	Environmental / SEPA / NEPA review complete	Construction permits in hand	Unappealable permit in hand
LSRWP, Phase I	✓	✓	✓	pending	✓	✓	✓	✓	✓
[REDACTED]	N	?	N	N	✓	✓	N	N	N
[REDACTED]	✓	✓	n/a	N	N	N	✓	N	✓
[REDACTED]	✓	✓	N	N	✓	N	N	N	N
[REDACTED]	✓	✓	n/a	✓	✓	N	✓	?	✓

Wind Turbines	Balance of Plant		Treasury Grant		WA RPS
	Road & turbine layout design complete	BOP contract executed	5% safe harbor provision will be met by 12/31/2010	Likely that project will reach COD by 12/31/2012	
LSRWP, Phase I	✓	pending	✓	✓	15% apprentice labor will be used during construction to meet WA RPS provision
[REDACTED]	✓	?	?	?	
[REDACTED]	✓	N	?	✓	
[REDACTED]	✓	N	?	✓	
[REDACTED]	✓	?	?	?	
[REDACTED]	✓	?	?	✓	

REDACTED VERSION

• Treasury Grant deadlines drive focus on project execution risk
 • LSRWP Phase I is the only construction-ready project among RFP Phase II alternatives

Alternatives and Analysis



- Phase I is the lowest reasonable cost alternative that meets the Company's need for renewable resources¹
- Evaluation considers economic metrics and project risks associated with each proposal in a qualitative summary
- The Phase 1 pro forma and RFP comparative analysis considers conservative financial assumptions. Realistic conditions may develop to substantially improve financial performance of the Project, including
 - BPA may complete Central Ferry Construction on, or ahead of, schedule
 - Revised guidance may not require normalization of the Treasury grant
 - Phase I may be constructed for less than the approved CapEx.

1 – See RFP Update presentation to the EMC April 22, 2010.



- EMC approved recommendation to enter exclusive negotiations with Siemens
- Siemens supply and erection of 149 SWT 101 2.3 MW WTG
- Key Terms And Conditions
 - Total fixed contract price: \$ [REDACTED]
 - Includes turbine erection
 - [REDACTED] due at signing with additional [REDACTED] due in 2010
 - Remaining payment schedule tied to production, delivery, and commissioning milestones
- Project Budget includes \$ [REDACTED] estimate for additional commissioning in 2012 and transportation
 - TSA options contemplate this extra work [REDACTED]
 - [REDACTED] Availability Guarantee
 - Provisions to ensure union labor and apprentices
- Ready to execute May 6, 2010

REDACTED
VERSION

Siemens Service & Maintenance Agreement



- Key Provisions
 - Payment
 - \$[REDACTED] per WTG per year for 2012 (including WA sales tax)
 - Escalating annually at [REDACTED]
 - Term
 - Five-year term
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - Ready to execute May 6, 2010

REDACTED
VERSION

BPA LGIA Agreement



- LGIA contract largely non-negotiable
- Anticipated Key Terms
 - \$102,200,000 pre-payment to BPA in 2010/2011, 97.5% reimbursable network upgrades repaid to PSE as transmission credits
 - PSE has already advanced \$38,200,000 to BPA under the Engineering and Procurement Agreement
 - HDR selected as design engineer
 - General contractor not yet selected
 - PSE does not have option to self-construct BPA network upgrades
 - PSE has limited contractual remedies in the case of BPA non-performance or ability to pursue other alternatives
- Ready to execute May 6, 2010

Capital Plan



	\$000's	\$/kW	Percent of Total
DEVELOPMENT BUDGET			
Development Rights			
PSE Allocated Development Costs			
Interconnection Costs			
Prepaid Transmission Expense			
TOTAL DEVELOPMENT BUDGET			
CONSTRUCTION BUDGET			
Wind Turbine Generators			
TSA Contract Price			
Anticipated TSA Options			
Balance Of Plant			
O&M Building			
Step-up Transformers			
RES Contract Price			
PSE Project Management, Engineering, Construction Permitting, Third-Party Services, Community Relations, and Overhead			
Project Communications			
Start-up Costs			
Sales Tax			
Contingency			
TOTAL CONSTRUCTION BUDGET			
AFUDC			
TOTAL ALL-IN CAPITAL COSTS	848,041	2,475	100.0%

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Capital Plan Compared to January 12, 2010 Plan



	2009	2010	2011	2012	2013	2014	2009-2014
(\$ in millions)							
Jan 12, 2010 Plan							
LSR CapEx Total	\$						
Current Proposed Plan							
LSR CapEx Total	\$						
LSR Phase 1 - 342.7 MW	\$						
Other LSR Phases	\$						
Change In LSR CapEx (Current Proposal less Jan 12 Plan)							
	\$						

Note:

1 - Does not include AFUDC, BPA pre-paid transmission expense, or 2008 expenditures

The Current Proposed LSR Capital plan is less than the January 12, 2010 Plan

- Reduction from 500 MW to 342.7 MW by 2012
- Shifting subsequent Phases of LSRWP to 2016 and later
- Favorable turbine pricing

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Lower Snake River Phase I Milestone Schedule*



Milestone	Date
Order Transformers (long lead item)	May 6, 2010
Execute Turbine Supply Agreement	May 6, 2010
BOP EPC, Notice to Proceed (NTP)	May 6, 2010
BOP EPC Final Design & Competitive Open Book Bid Closed	December 31, 2010
Initial Grant Application to US Treasury	September 30, 2011
Wind Turbine Generator (WTG) Substantial Completion – Phase I	November 22, 2011
Backfeed Power available from BPA Central Ferry Substation	December 15, 2011
Project Substantial Completion (Commercial Operation) – Phase I	April 15, 2012
Final Grant Application to US Treasury	May 30, 2012
Anticipated Date of Receipt of US Treasury Grant	August 6, 2012
Project Final Completion – Phase I	October 15, 2012

* Assumes May 2010 authorization EMC Decision // April 22, 2010

Recommendation



- Recommendation
 - Recommend the Board of Directors approve Phase I of the Lower Snake River Wind Project and the capital budget of \$848,041,000. Phase I will construct 149 Siemens SWT 101 wind turbine generators (342.7 MW total capacity), two project substations, and supporting infrastructure.

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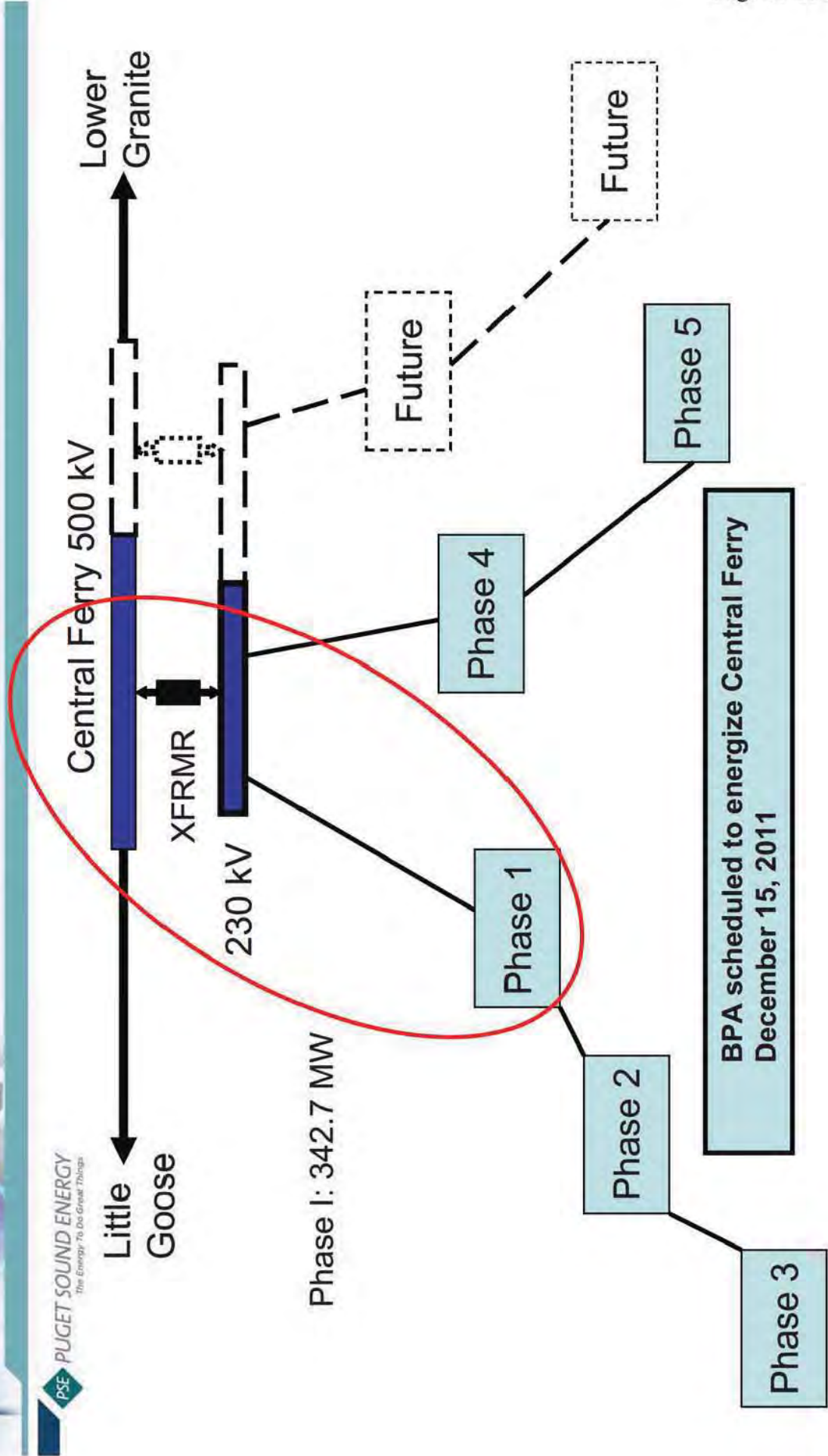


APPENDIX



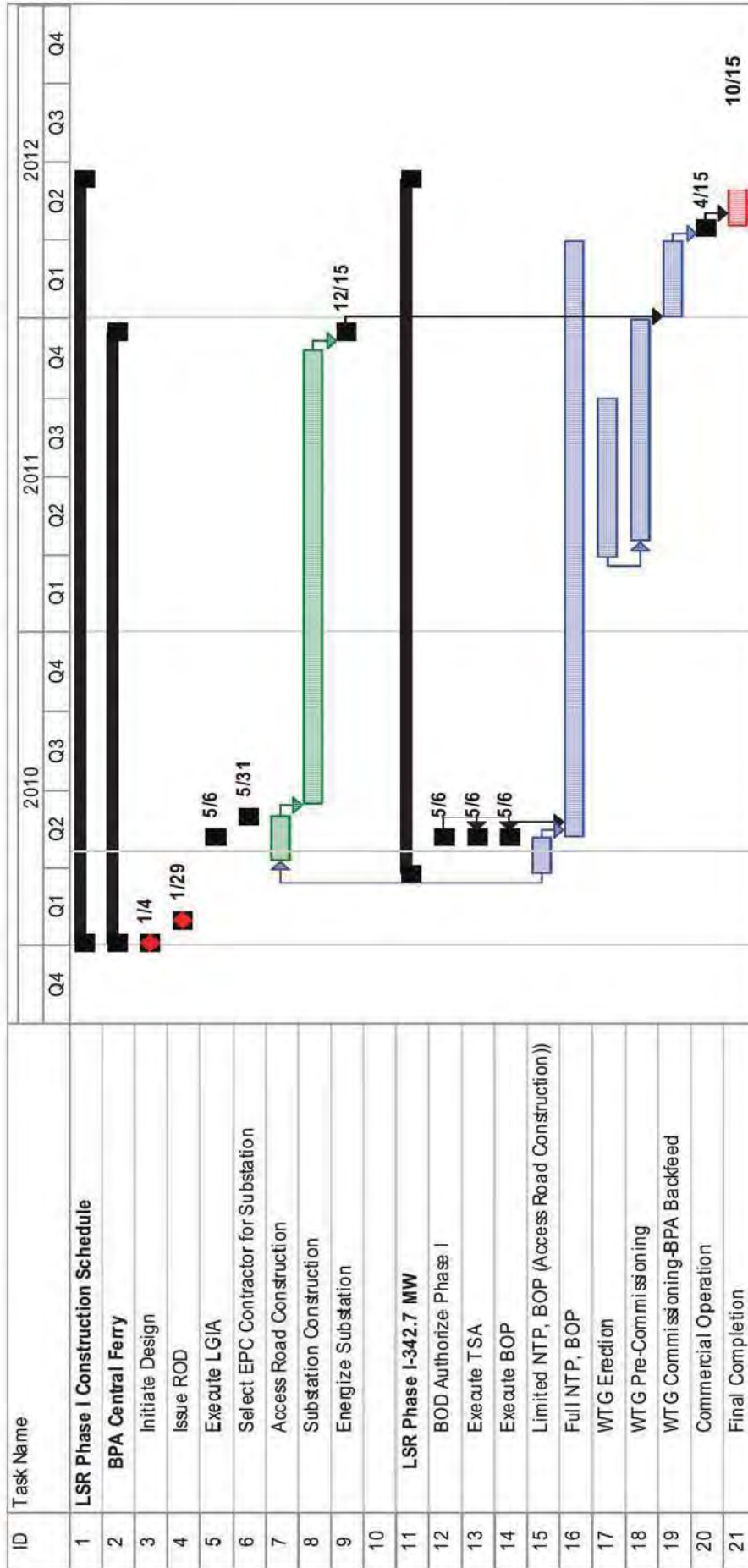
PUGET SOUND ENERGY
The Energy To Do Great Things

Simplified LSR Wind Project Interconnection



EMC Decision // April 22, 2010

LSR and Central Ferry Schedule



Stimulus Bill renewable incentives require COD by Dec 31, 2012

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PSE Project Management, Engineering, Construction Permitting, Third Party Services, Community Relations, and Overhead



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\$000's	2010	2011	2012	Total
PSE Project Management				
Labor, Expenses, Labor Overhead				
Construction OH				
Total				
Wind Resource				
Analysis				
Met Tower Maintenance				
Power Performance Testing				
Total				
Real Estate				
Land Lease Payments				
Construction Payments				
O&M Land Purchase				
Survey Costs				
Environmental Site Assessment				
Title Insurance				
Total				
Permitting				
Garfield County Cost Reimbursement				
Cultural Resource Monitoring				
Environmental Consultants				
Total				
Legal				
Dewey & LeBoeuf				
Total				
Engineering				
Construction Monitoring				
Owner's Engineer				
Total				
Community Relations				
Informational Events				
Publications				
Community Projects				
Project Documentation				
Total				
Insurance				
Construction Insurance				
Total				
Total *				

* Does not include Construction OH accrued prior to May 2010.

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Common Cost Allocation Percentages



- Prior to construction, all common development costs are allocated to each Project phase according to the following allocation percentages

LSR Cost Allocation Breakdown	
Phase 1	
Phase 2	
Phase 3	
Phase 4	
Phase 5	
Total	100%

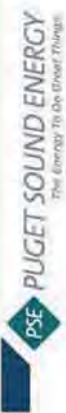
Development costs common to each Project phase and the allocation of these costs to Phase I:

Cost Category	Total Cost (\$000's)	Phase 1 Allocation (\$000's)
Development Rights		
PSE Allocated Development Costs		
Prepaid Transmission Expense		

* Development costs prior to Phase I NTP

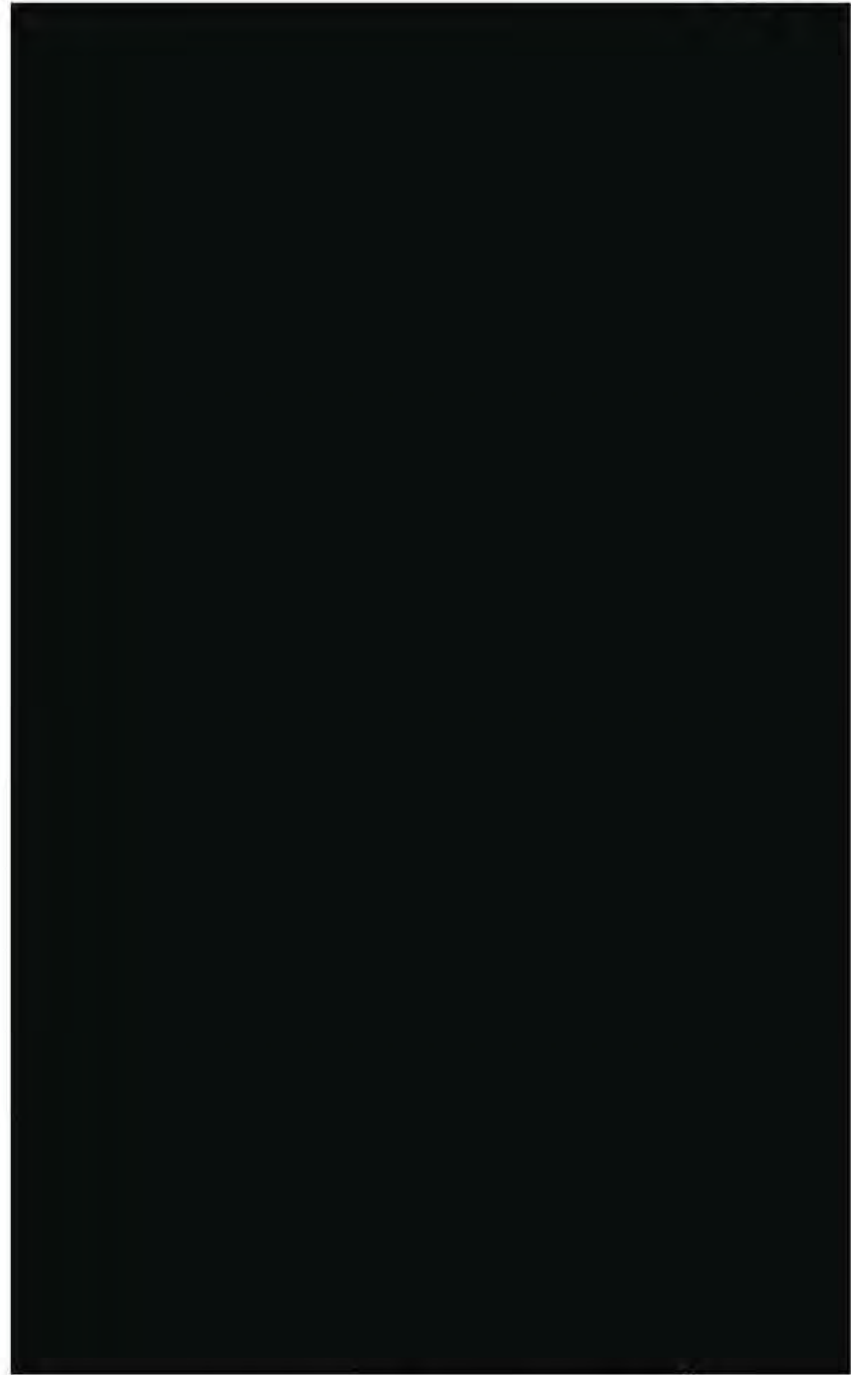
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ENSO¹ Impacts at Hopkins Ridge & Wild Horse



Typical Impacts to Pacific Northwest

- El Niño – warmer winter, less precipitation (less storms, less wind) -> lower NCF
- La Niña – colder winter, more precipitation (more storms, more wind) -> higher NCF



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¹ – El Nino Southern Oscillation

Risk Analysis Pre-Construction Stage

Risk Area	Risk Description	Mitigation
Permitting	Appeal of the Conditional Use Permit	This risk has been mitigated as the Conditional Use Permit was issued by the Garfield County Hearings Examiner on November 25, 2009. The 21 day appeal period following the Hearing Examiner's decision passed with no appeals filed.
NEPA Record of Decision	Schedule delays due to not acquiring the Record of Decision in time to begin construction work on Central Ferry substation	This risk has been mitigated as BPA issued its Record of Decision on January 28, 2010 allowing construction work on Central Ferry substation to commence.
Large Generator Interconnection Agreement	Inability to reach definitive agreement in acceptable form with BPA	This risk has been mitigated as LGIA negotiations are complete; the Agreement will be executed following Board approval.
Turbine Supply Agreement and Service & Maintenance Agreement	Inability to reach definitive agreement in acceptable form with Siemens	This risk has been mitigated as TSA and SMA negotiations are complete; the Agreements will be executed following Board approval.
Balance of Plant Agreement	Inability to reach definitive agreements in an acceptable form, and unwillingness for RES Construction to provide flexibility surrounding the NTP date	This risk has been mitigated as BOP negotiations are complete; the Agreement will be executed following Board approval.

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Risk Analysis Pre-Construction Stage



Risk Area	Risk Description	Mitigation
Transmission	Delays in transmission improvements curtail Project output	PSE has 250 MW of firm transmission rights as of date certain. With respect to the remaining 93 MW, BPA must construct West of McNary and Central Ferry-Lower Monumental upgrades. BPA is highly incented to complete transmission projects that will facilitate more renewable power in the region and has Stimulus Bill funding.
Project Economics	Stranded cost due to changes in development plan	PSE would seek recovery of stranded costs if and when they occur via accounting petitions or rate filings.
Renewable Incentives	Uncertainty around implementation of Stimulus Bill provisions limit financing options	<ul style="list-style-type: none"> •Five-year plan economics assume normalization of grant with 10-year amortization. •Treasury has issued clarifying rules related to start of construction and definition of qualified property. PSE has shifted more qualifying work from 2011 to 2010 in order to insure that the grant remains an option for the Project for the benefit of customers. •PSE is working with Congress on a legislative fix to eliminate the normalization requirement, which would further benefit Project economics for customers.
Change in Law •Repeal RPS •Tax law changes	Federal legislation repeals State RPS or Stimulus Bill provisions	<ul style="list-style-type: none"> •Active lobbying efforts at state and federal level •Likelihood of future green house gas ("GHG") legislation and federal RPS should increase value of renewables in portfolio

Risk Analysis Construction Stage



Risk Area	Risk Description	Mitigation
Capital Budget	BOP price escalation	Once the BOP Agreement is signed, \$ million of the total BOP budget will be fixed. The remaining BOP budget is subject to price escalation due to an open book contract process. PSE and RES have developed detailed and thorough BOP cost estimates. This risk is limited due to the relatively short construction timeframe in which prices could escalate.
Construction Schedule	Delayed project start or early winter	RES is mobilized onsite and has begun construction work on the Central Ferry substation access road under a Limited Notice to Proceed ("LNTP"). Construction work on the remainder of Phase I is set to proceed upon Board approval. Additionally, PSE Project Management has been actively involved in the construction planning and scheduling process.
Construction Schedule	Delays in BPA Construction and Energization of Central Ferry substation	<ul style="list-style-type: none"> ▪PSE plans to proceed with turbine pre-commissioning before Central Ferry substation energization using portable generators. ▪PSE is funding BPA in advance for Central Ferry work to support an on-time schedule. Provisions that could enable acceleration of the Central Ferry construction schedule, such as providing additional funds for early completion, are set forth in a letter agreement with BPA with the intent of reducing the risk of schedule slippage. ▪PSE and BPA have agreed in principal that, upon selection by BPA of its construction contractor, status reports and meetings will be scheduled on a regular basis.

REDACTED VERSION

Risk Analysis Construction Stage



Risk Area	Risk Description	Mitigation
Construction Schedule	Turbine supplier fails to deliver in a timely fashion	Siemens has more than 25 years of continuous presence in the wind industry and is a leading provider of wind turbines worldwide, with more than 7,800 turbines currently in operation. Given the company's track record, PSE expects turbines to be delivered in a timely fashion. [REDACTED]
Construction Schedule	Transportation accidents	[REDACTED]
Construction Schedule	BOP contractor fails to complete construction	[REDACTED]
Construction Schedule	Construction accidents	[REDACTED]
Construction Schedule	Erection delay	[REDACTED]

REDACTED
VERSION

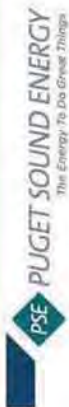
Risk Analysis Construction Stage



Risk Area	Risk Description	Mitigation
Construction Schedule	Tax implications of a delayed COD	Current law requires that the Project achieve commercial operation by December 31, 2012 in order for PSE to qualify for the Treasury grant or other renewable incentives. In the event of unforeseen conditions or circumstances prohibiting COD by that date (which would require 7-1/2 months of delay) PSE would energize individual turbine strings to achieve operational status for incentive purposes.
Capital Budget	Cost overruns exceeds budget estimate	Once the TSA is signed, [REDACTED] of the project budget will be fixed. To ensure BOP costs do not exceed the budgeted amount, PSE has included contract provisions that put the risk of construction overruns on the contractor.

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VERSION

Risk Analysis Operations Stage



Risk Area	Risk Description	Mitigation
Rate Recovery	Failure to obtain favorable rate treatment from WUTC of PSE's investment in the Project.	As part of a recommendation to the Board of Directors to proceed with Phase I, rigorous financial analysis documentation has been included which demonstrates that the Project is a least cost resource.
Project Under-Performance	Poor initial long-term wind projection	Independent energy estimate by an industry expert DNV-GEC. Note: In the event of wind resource projection error, it could take several years to identify such error based on inter-annual wind variability.
Project Under-Performance	Upwind conditions change	Phases II and III, if built-out, will be upwind of Phase I. DNV-GEC, in its March 2010 Wind Resource Energy Assessment Report, analyzed the potential energy affects on Phase I if either Phase II, Phase III, or both are built out in addition to Phase I. The capacity factor for Phase I is 29.9%. DNV-GEC's report indicates that the net capacity factor for Phase I would decrease to 28% if only Phase II was built-out, 29.6% if only Phase III was built-out, and 27.8% if both Phases II and III were built out.
Resource Change	Site wind resource change; climate change	Unable to mitigate. However, it is possible climate change could have the effect of making all wind resources more valuable than presently envisioned.

Risk Analysis Operations Stage



Risk Area	Risk Description	Mitigation
Turbine Availability	Low availability from any cause	PSE has negotiated an availability guarantee of [REDACTED] for [REDACTED] of the Service and Maintenance Agreement. Siemens will [REDACTED]
Turbine Performance	WTG serial failure	Under the Service and Maintenance Agreement there are detailed preventative maintenance programs in place. Siemens [REDACTED]
Turbine Failure	WTG failures during warranty period	PSE is protected by the [REDACTED] with Siemens.
Turbine Failure	WTG failures after warranty period	Siemens has secured Det Norske Veritas certification affirming that the Siemens SWT 2.3 MW WTG is designed and manufactured for a 20-year life in Class I wind conditions, the harshest wind class.
Lightning Strikes	Multiple causes, such as dirty blades, controller performance	Under the Service and Maintenance Agreement there are detailed preventative maintenance programs in place.
Intellectual Property	Claim by patent holder of infringement due to technology embodied in certain components of the SWT 2.3 MW turbine	[REDACTED]

REDACTED
VERSION

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Puget Sound Energy, Inc.
Minutes of the
Energy Management Committee
Meeting on April 22, 2010

Attendees

The following voting members of the Energy Management Committee (EMC) attended the meeting: Kimberly Harris, Eric Markell, Sue McLain, Jennifer O'Connor, and Bert Valdman.

The following non-voting members of the EMC attended the meeting: Salman Aladin, Chris Bevil, Jim Eldredge, Roger Garratt, Chris Janak, George Marshall, Lisa Rice, Clay Riding, Wayman Robinett, and John Story.

Guests included: Bill Donahue, Brian Doughty, Anne Etter, Martha Monfried, Michael Mullally, Rob Neate, Ed Odom (proxy for Paul Wiegand), Sam Osborne, Aaron Panzer, Cara Peterman, Steve Reynolds, Jim Sammet, Aliza Seelig, Larry Tornberg, Chris Walford, and Paul Wetherbee.

Call to Order

The meeting was called to order in the Wild Horse conference room at 9:05 a.m.

Approval of Previous Meeting Minutes

Minutes from the March 18, 2010 EMC meeting were distributed for review via email on April 7, 2010 and final approval was received on April 15, 2010.

Standards of Conduct Requirements and Guidelines

A reminder of the Standards of Conduct was contained in the agenda that was distributed to attendees and a verbal reminder was provided by Chris Bevil.

New Matters

2010 RFP for All Generation Sources:

Aliza Seelig presented an update of the evaluation process of the 2010 Request for Proposals (RFP), including the Phase I and II evaluation results for the renewable proposals. Aliza provided an overview of the Phase I renewable evaluation and

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identified the renewable proposals that advanced to the more in-depth Phase II evaluation.

Selected for the Phase II evaluation were three proposals submitted in the RFP, one unsolicited wind PPA proposal that was submitted outside the RFP, and the Lower Snake River (LSR) Phase I wind project being developed by PSE.

A handout was provided to the EMC showing a summary of the evaluation results of each proposal.

Aliza then described PSE's renewable need and how the IRP plan, other analytical modeling, and assessment by the PSM III tool demonstrate that accelerating the acquisition of a certain amount of renewables is cost effective for PSE's customers. She explained that additional benefits can accrue to customers with somewhat larger, earlier acquisition of renewables if PSE can act to capture the Federal Treasury Grant that expires in 2012. Such action and benefits presume that not less than five percent of the construction budget is expended by the end of 2010.

Aliza then reviewed the results of the Phase II proposal evaluation and summarized the conclusions for each of the proposals. Aliza summarized data that demonstrated that LSR Phase 1 is this lowest reasonable cost, lowest risk wind project of the candidate short-listed projects because LSR Phase I is in the most advanced stage of development with the least execution risk and is best positioned to meet the stringent requirements of the Treasury Grant. Aliza explained that the unsolicited wind PPA proposal required additional evaluation because it was submitted late into the RFP process. She further explained that the biomass proposals are considered to be a capacity resource and will continue to be evaluated with the alternative capacity offers in the next phase of the RFP. It was explained that three wind proposals in the Phase II analysis were not selected for further consideration due to execution and price risk, in particular the risk that the bidder could not timely accomplish the amount of remaining development work in order to meet the Treasury Grant deadlines.

Jennifer O'Connor asked if we had the staff and professional resources required to negotiate any of the other projects if LSR Phase I did go forward. Roger Garratt responded that we would probably have the resources to negotiate a PPA, but it is unlikely we would have the resources to negotiate a complex ownership transaction that requires significant additional development work in the timeframe to capture the Treasury Grant.

Bert Valdman asked whether we have changed our view of the value of RECs given our insights to the marketplace. Aliza responded that we value sales of RECs in our valuation models based only on the value of the voluntary REC market. PSE staff believes this is a sensible and conservative approach to REC valuation that does not tend overstate the value of any renewable resource.

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The EMC then had active discussions on the current market environment and the proposal evaluations. A copy of the materials presented is filed with the records of this meeting.

Lower Snake River Wind Project Phase I: Paul Wetherbee presented a report on LSR Phase I ("Phase I") and recommended that the EMC recommend to the Board of Directors that it approve Phase I for final development and construction.

He then described the four wind resource areas associated with LSR currently under development by PSE and explained that the recommended decision is limited to Phase I sited in Garfield County where the project holds an non-appealable permit.

He described the project features and discussed the project's transmission needs including BPA's required network system upgrade investment and its interconnection to the new BPA Central Ferry substation. Paul then demonstrated how Phase I serves to meet the Company's renewable portfolio standard requirements, how Phase I aligns well with the 2009 Integrated Resource Plan renewable development acquisition schedule, and how three other separate analyses document the cost benefits to customers of accelerating renewable additions in advance of the 2016 Renewable Portfolio Standard milestones. He stressed that timely project commencement and execution was essential in order to meet the Treasury Grant deadline and how LSR Phase I was best positioned to meet the deadline compared to other renewable alternatives Aliza Seelig presented in the previous presentation.

Paul then presented a summary of the key commercial terms for each of the major project agreements.

A discussion followed on the balancing control area for the project. Paul stated that Phase I will be in BPA's balancing authority ("BA") with a future option to place the Phase I into PSE's BA. Roger Garratt noted that based on information available today, the economic difference between placing Phase I in BPA's BA and PSE's BA is small and that PSE has initially elected to keep Phase I in BPA's BA because it provides PSE with the flexibility to move the project into PSE's BA should economics shift in the future to make that more economically advantageous to the customer.

Paul then described the major elements of the Phase I capital budget. Paul noted that compared to the January 12, 2010 draft version of the capital budget plan for LSR, which projected two phases being built by 2012 of 250 MW each, the current development plan for the project through 2012 has been significantly scaled back to 343 MW. The EMC then discussed the current development plan analysis that evaluates an option to accelerate up to an equivalent of 600 MW of wind by 2012, and the risks attendant to such an ambitious plan of construction.

Following the discussion, the EMC unanimously approved a recommendation that the Board of directors be asked to approve LSR Phase I in accordance with the plan of

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development being recommended. A copy of the materials presented to the EMC is filed with the records of this meeting.

Firm Pipeline Capacity for Kittitas: Bill Donahue presented an update on options being considered for long-term firm gas pipeline capacity to serve the Kittitas service area. He described how the area is being served currently and the numerous options that are under consideration. He explained how several of the options being considered have lost momentum due to increased cost pressures. He described preliminary discussions with Cascade has indicated interest in providing a firm capacity release to PSE for Kittitas in exchange for PSE's release of some Jackson Prairie storage capacity to Cascade. Following a discussion of the proposed plan, the EMC suggested continuing discussions, but requested additional analysis before any further action or guidance can be provided. Bill agreed to update the EMC after additional information has been gathered. A copy of the material presented is filed with the records of this meeting.

Power and Gas Position: Salman Aladin presented the Power and Core Gas positions and exposures. Salman explained that the position was balanced and within limits. A copy of the material presented is filed with the records of this meeting.

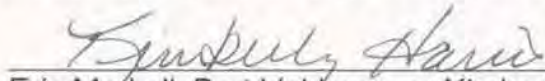
There being no further business, the meeting was adjourned at 10:58 a.m.

Next Meeting

The next meeting of the Energy Management Committee is scheduled for 9:00 A.M. on Thursday, May 20, in the Wild Horse Conference Room (PSE-12).

Respectfully submitted:

Chris Bevil or David Mills, Secretary

Accepted by the Energy Management Committee:

Eric Markell, Bert Valdman, or Kimberly Harris, EMC Co-Chairs

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Energy Management Committee

Attendance Record

Meeting Date: 22-Apr-10

Voting members	Title / Organization	Present
Harris, Kimberly	Executive Vice President and Chief Financial Officer (Co-Chair)	X
Markell, Eric	Executive Vice President and Chief Operating Officer (Co-Chair)	X
McLain, Sue	Senior Vice President Operations	X
O'Connor, Jennifer	Senior Vice President, General Counsel, Corporate Secretary and Chief Ethics and Compliance Officer	X
Valdman, Bert	Executive Vice President and Chief Resource Officer (Co-Chair)	X
Wiegand, Paul	Sr. Vice President Power Generation	
Non-Voting Members		Present
Aladin, Salman	Director Structuring Asset Optimization & Analytics	X
Bevil, Chris	Manager, Resource Acquisitions	X
DeBoer, Tom	Director Rates & Regulatory Affairs	
Eldredge, Jim	Vice President Controller & Chief Accounting Officer	X
Elsea, Jim	Energy Resource Financial Analysis Mgr	
Gaines, Don	Vice President Finance & Treasurer	
Garratt, Roger	Director of Resource Acquisition & Emerging Technologies	X
Janak, Christopher D	Manager Risk Control & Credit	X
Marshall, George	Director Transmission	X
Mills, David E	Director Energy Supply and Planning	
Rice, Elizabeth J - Lisa	Director Financial Planning & Analysis	X
Riding, Clay	Director Natural Gas Resources	X
Robinett, Wayman	Director Resource Strategy	X
Story, John	Director Cost & Regulation	X
Stranik, Mike	Director Assistant Controller	
Guests		Present
Donahue, Bill	Mgr, Natural Gas Resources	X
Doughty, Brian	Consulting Project Manager	X
Etter, Anne	Dir Internal Audit	X
Monfried, Martha	Director Corporate Communications	X
Mullally, Michael	Sr. Egy Resc Planning Acquisition Anlst	X
Neate, Rob	Dir Asst General Counsel	X
Odom, Ed	Dir Thermal and Wind Resources (Proxy for Paul Wiegand)	X
Osborne, Sam	Dir Sr Corporate Counsel	X
Panzer, Aaron	Project Manager	X
Peterman, Cara	Energy Resource Png Acquisition Anlst	X
Reynolds, Steve	President & CEO	X
Sammert, Jim	Sr Project Manager	X
Seelig, Aliza	Sr Resource Acquisition Analyst	X
Tomberg, Larry	Sr Siting Project Manager	X
Walford, Chris	Consulting Engineer	X
Wetherbee, Paul	Manager Resource Development	X

Called to Order: 9:05 AM

Adjourned: 10:58 AM