EXHIBIT NO. ___(RG-6HC)
DOCKET NO. UE-12____
WITNESS: ROGER GARRATT

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Petition of **PUGET SOUND ENERGY, INC.** **for Approval of a Power Purchase Agreement for Acquisition of Coal Transition Power, as Defined in RCW 80.80.010, and the Recovery of Related Acquisition Costs**	**Docket No. UE-12____**

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

REDACTED VERSION

AUGUST 20, 2012

2011 RFP for All Generation Sources

PUGET SOUND ENERGY

Aliza Seelig

Consulting Resource Acquisition Analyst

August 18, 2011

Agenda

- *Schedule*
- *Resource need*
- *2011 RFP solicitation updates*
- *Improved evaluation process*

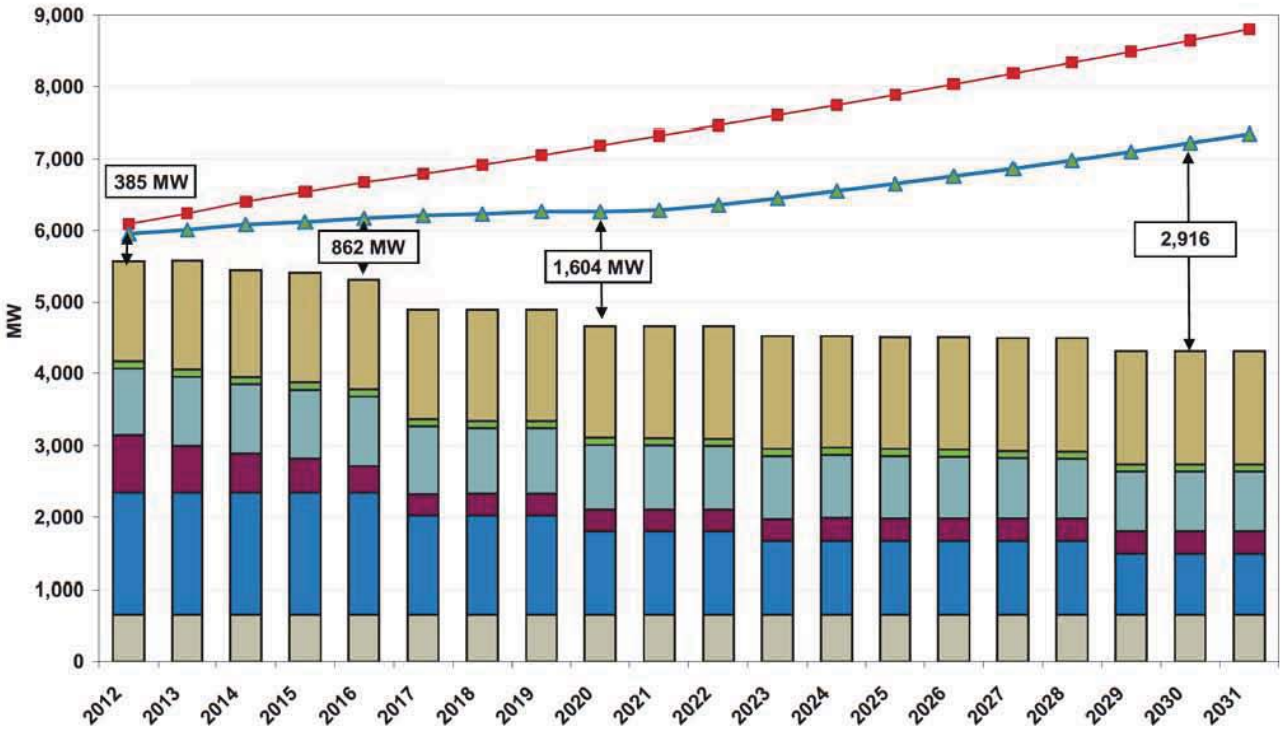
RFP schedule calls for proposals by Nov. 1*

August 1, 2011	Draft RFP filed with WUTC
August 16, 2011	PSE hosts proposal conference
September 30, 2011**	Public comments due
October 13, 2011**	WUTC approval expected
October 18, 2011**	PSE releases final RFP solicitation
October 24, 2011**	Mutual Confidentiality Agreements due to PSE
November 1, 2011	Offers due to PSE
Q1 2012	Final short list selected, respondents notified
To follow	Post-proposal negotiations

*This schedule is subject to adjustment based on WUTC review and the actual pace of PSE's evaluation process. Any updates will be posted online at http://www.pse.com/RFP.

**Milestones in teal have been revised since the draft RFP was filed on Aug. 1, 2011 to reflect changes requested by the WUTC.

PSE seeks 385 MW of capacity by end of 2012*



Capacity need**

2012	385
2013	434
2014	636
2015	713

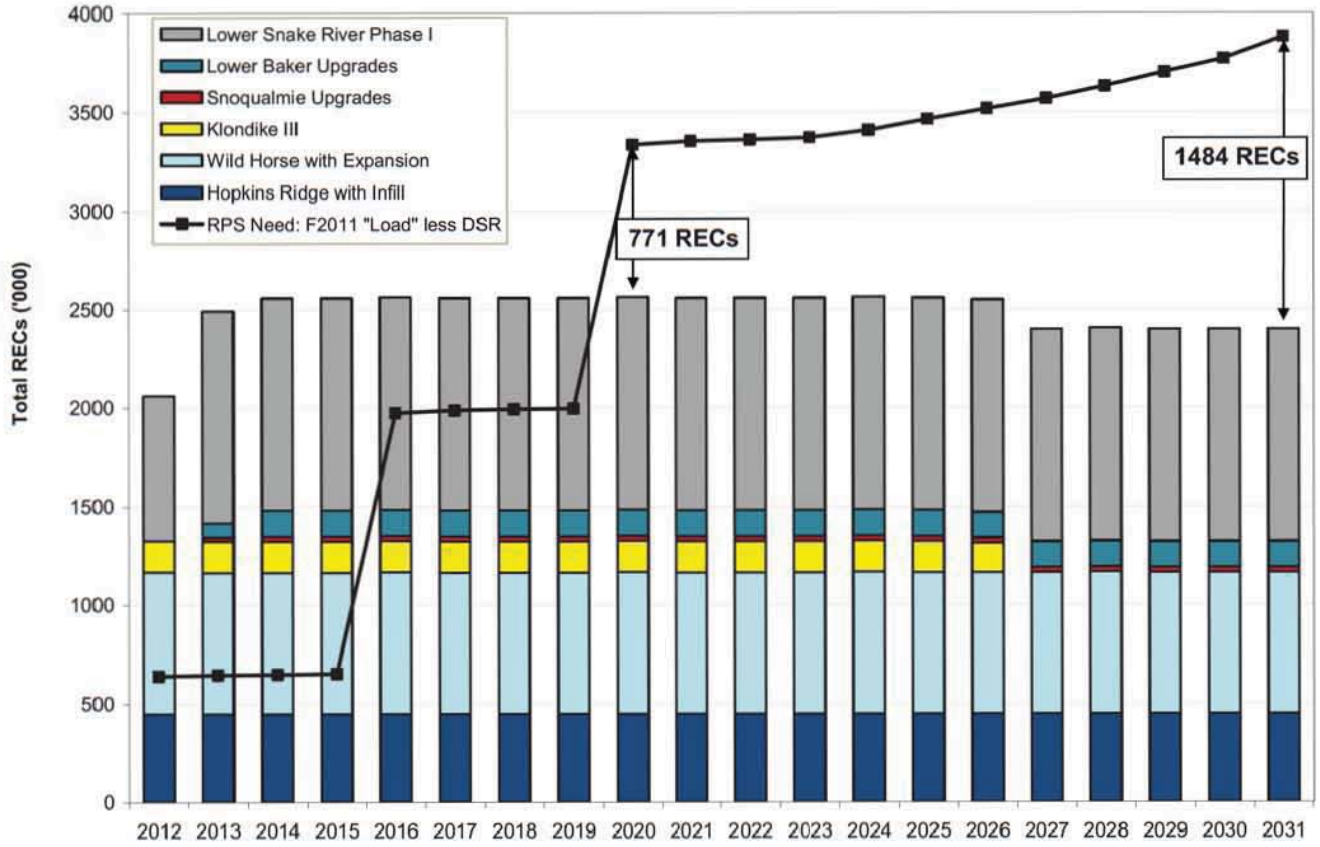
- Colstrip
- Contracts
- Wind
- Mid-C Transmission Available
- Dec Peak Load + 15.7% PM - 2011 IRP DSR + Op Reserves
- PSE Gas-fired Units
- Hydro
- NUGs
- Dec Peak Load + 15.7% PM + Op Reserves

*Revised capacity need information will be posted online at http://www.pse.com/RFP.

**Capacity need quantities assume that PSE will need additional operating reserves.

EMC Update // August 18, 2011

Near-term RPS targets achieved

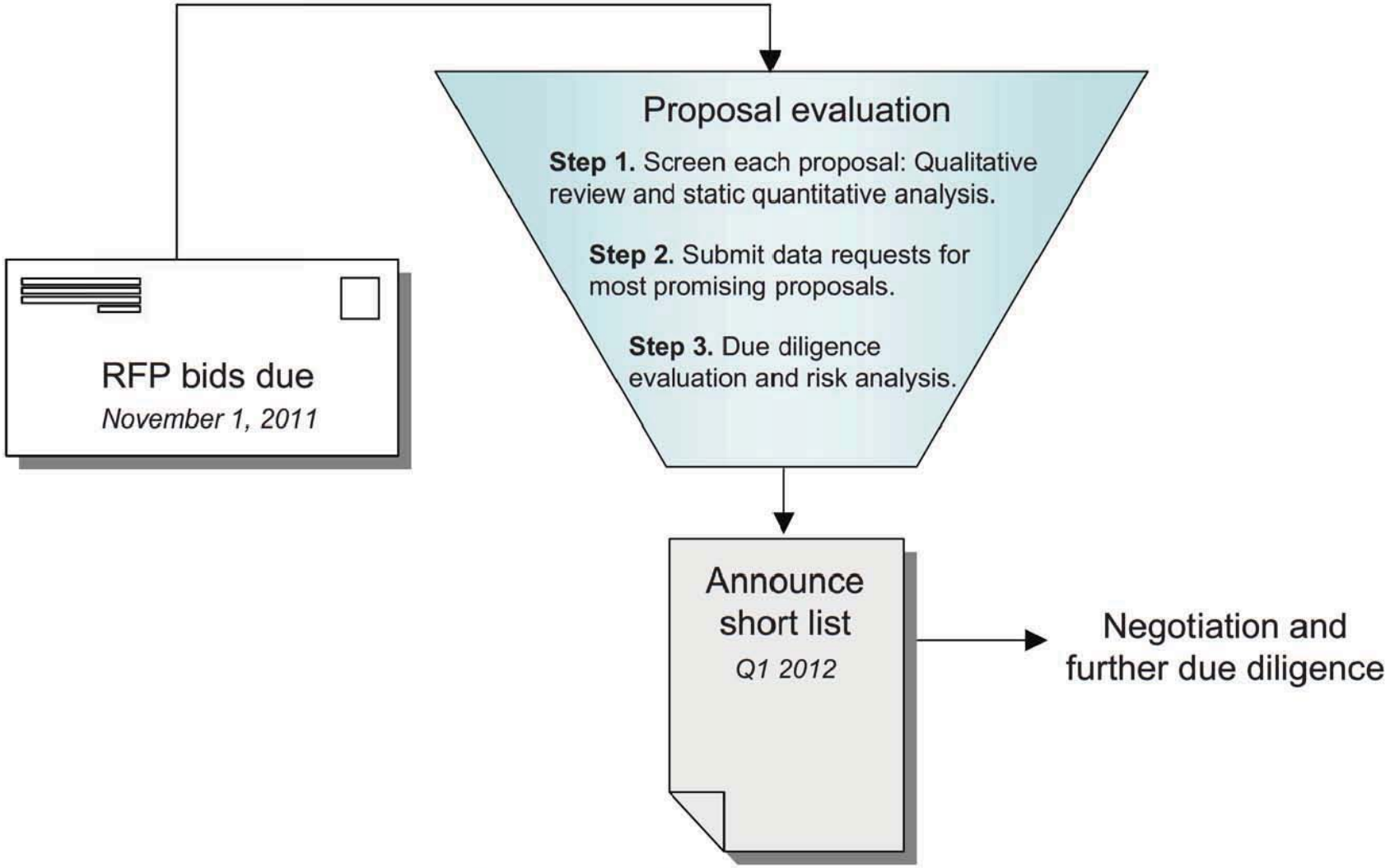


* If proposing a qualifying renewable resource that is located outside the Pacific Northwest as defined for the Bonneville Power Administration in Section 3 of the Pacific Northwest Electric Power Planning and Conservation Act (94 Stat. 2698; 16 U.S.C. Sec. 839a), describe how the electricity from the facility will be delivered into Washington state on a real-time basis without shaping, storage, or integration services.

So…what's different about this RFP?

- PSE has no near-term need for renewable energy credits - renewables must be competitive with capacity resources or market
- This RFP is not seeking non-unit-contingent PPAs delivered to Mid-C
  - This RFP will consider non-unit-contingent PPAs delivered to BPAT.PSEI
- Demand side resources offers are being referred to the energy efficiency RFP
  - An energy efficiency RFP will be issued at a later date
- PSE is requesting commercial term sheets for all proposals
- Streamlined proposal requirements and summary data form
- Fluid and flexible evaluation process and team

Similar RFP process with targeted improvements



More efficient resource deployment

	Evaluation team	Scope of review
Screening	Resource Acquisition ▪ Commercial & Development ▪ Quantitative Transmission & Integration ▪ Merchant ▪ PSE (as needed) Technical / Plant Operations Fuel Supply Permitting (as needed)	▪ Fatal flaw screening of key qualitative attributes, such as: ▪ Commercial viability as proposed? ▪ Acceptable offer terms? ▪ Timing / Likely to meet COD? ▪ Development status? ▪ Transmission solution? ▪ Static quantitative analysis screening by resource type
	Formal data requests submitted for most favorable resources	
Due Diligence	*Phase 1 team, plus:* Environmental Real Estate Power Supply Operations (Trade Floor) Credit Other (as needed) ▪ Regulatory / Legal ▪ Accounting / Finance / Tax ▪ Community / Government Relations ▪ Insurance ▪ Etc.	▪ Thorough evaluation of qualitative attributes based on evaluation criteria set forth in RFP ▪ Quantitative portfolio optimization and risk analysis ▪ Scenario analysis

RFP for All Generation Sources Update

Presented to PSE's Energy Management Committee ("EMC")

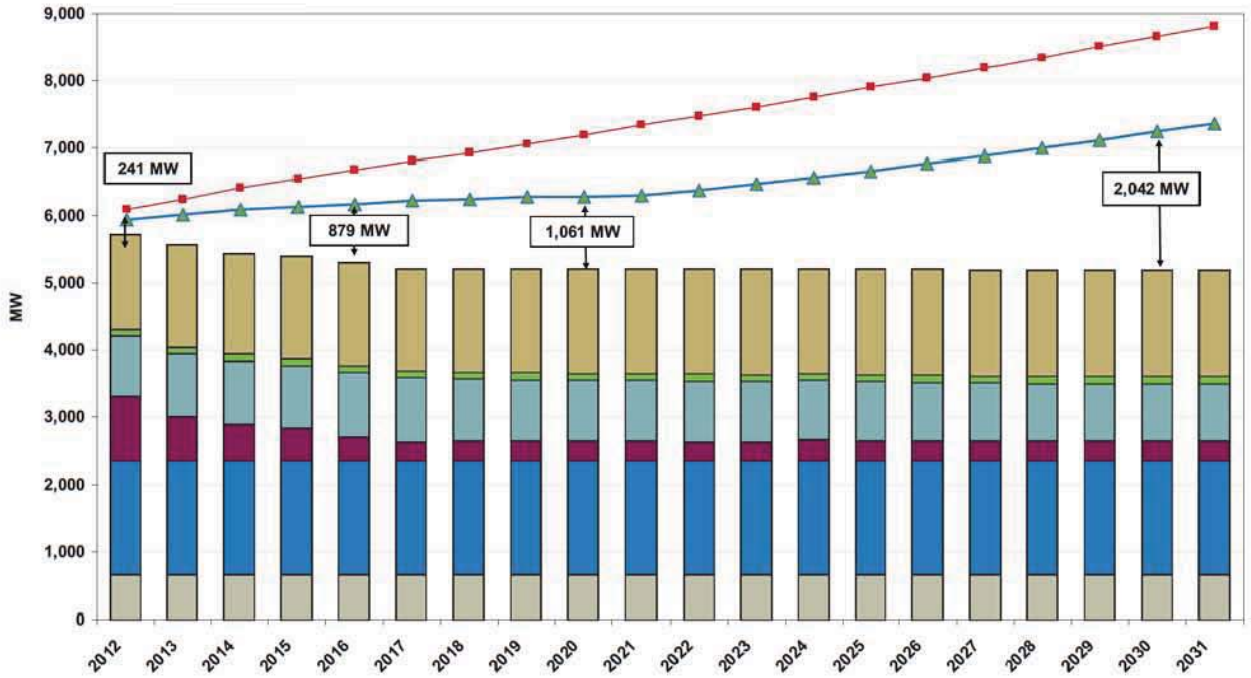
PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

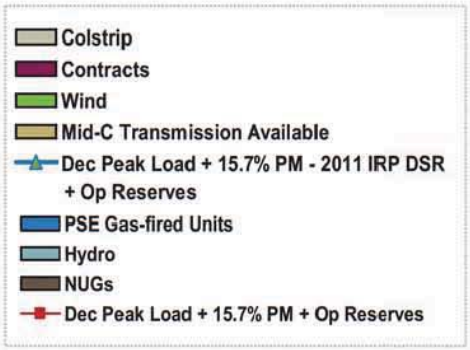
December 15, 2011

PSE needs 241 MW of capacity by the end of 2012*



Capacity need**

2012	241
2013	451
2014	653
2015	730



* The forecast above was produced on Nov. 9, 2011. This is an update to the forecast show in the All Source RFP solicitation released on October 17, which forecast a need of 385 MW by the end of 2012 growing to 2,916 MW by 2030.

** The capacity need quantities assume that PSE will need additional operating reserves.

PSE PUGET SOUND ENERGY

Summary of RFP proposals

Resource Type	Bids[1]	MW[2]	Operating	Development	PPA	Ownership	Notes
Renewable							
Wind	4	369	1	3	3	2	(3)
Biomass	3	61	0	3	3	1	(4)
Solar - PV	2	24	0	2	2	1	
Renewable Sub-total	9	454	1	8	8	4	
Thermal							
Coal	1	500	1	0	1	1	(5)
CCGT	6	2,006	4	2	6	2	
SCGT	1	179	0	1	0	1	
CHP	1	29	0	1	1	0	
GT	1	300	0	1	0	1	(6)
Recip	1	110	0	1	1	0	
Thermal Sub-total	11	3,124	5	6	9	5	
Other							
PPA-Market	4	400	4	0	4	0	
Hydro	1	77	0	1	0	1	
Waste-to-Energy	1	23	1	0	1	0	
Energy Storage	2	251	0	2	1	1	
Cold Fusion	1	1,880	0	1	0	1	
Other Sub-total	9	2,631	5	4	6	3	
TOTAL	**29**	**6,209**	**11**	**18**	**23**	**12**	

(1) Project/Counterparty specific bid (some bids may contain multiple options)
(2) Capacity offered
(3) One wind bid offered options for REC-only, energy only, energy + RECs, and capacity via battery storage
(4) One biomass bid offerd options for REC-only and asset sale
(5) An option included with the Coal PPA is asset sale of existing Centralia CCGT
(6) Equipment only sale for [redacted]

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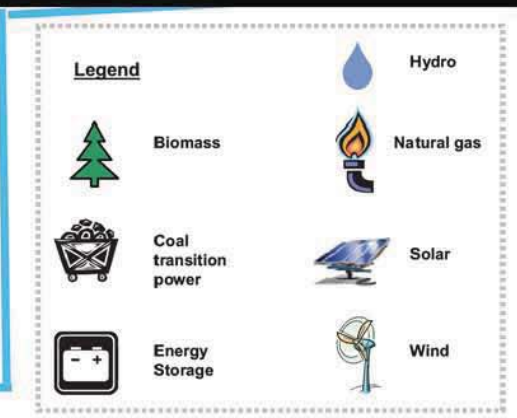
RFP resource proposals by location

[redacted]



REDACTED VERSION

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The map does not include:

(1) the following RFP proposals: two resources to be sited at unspecified locations within Washington state, the [redacted] and the [redacted] and four market PPAs;

(2) two unsolicited resources that PSE is screening alongside the RFP proposals: the [redacted] located in Lake County, Oregon and the [redacted] located in eastern Washington.

DRAFT - PRELIMINARY

PSE PUGET SOUND ENERGY

Screening schedule and [redacted]

	ID	Project	Owner/Developer	State	Type	MW Nameplate	Status	DRAFT selection status* (12/13/11)
WEEK 1 (Nov 9 - 15)								
1	11102	Centralia	TransAlta	WA	Coal	[redacted]	Operating	Selected for further evaluation
2	11118	[redacted]		[redacted]	[redacted]		[redacted]	Selected for further evaluation
3	11103						Operating	Selected for further evaluation
4	11124						Operating	Selected for further evaluation
WEEK 2 (Nov 16 - 22)								
5	11110	[redacted]		n/a	[redacted]		Operating	Selected for further evaluation
6	11112			n/a			Operating	Selection contingent upon transmission solution
7	11126			n/a			Operating	No transmission; ranks low among short-term PPAs
8	Unsolicited			[redacted]			Operating	Ranks low among short-term PPA products
9	11127			n/a			Operating	Selected for further evaluation
				Nov 23 - 29 -- No screening team meeting				
WEEK 3 (Nov 30 - Dec 6)								
10	11117	[redacted]		[redacted]			Operating	Selected for futher evaluation
11	11116						Development	Confirming quantitative results
12	11105						Development	Not selected: High cost
13	11120						Development	Previous experience w/ owner; risk of default
WEEK 4 (Dec 7 - 13)								
14	11101	[redacted]					Development	Not selected: High cost; development risk
15	11106						Development	Not selected: High cost; development risk
16	11115						Development	Not selected: High cost; development risk
17	11121						Development	Not selected: High cost; development risk
18	11108						Development	Not selected: High cost; development risk
				Dec 14 - Jan 3 -- No screening team meetings				
WEEK 5 (Jan 4 - Jan 10)								
19	11113	[redacted]		[redacted]			Operating	Not yet screened
20	11114						Development	Not yet screened
21	11111						Development	Not yet screened
22	11104						Development	Not yet screened
23	11122						Development	Not yet screened
24	Unsolicited						Development	Not yet screened
25	11125						Development	Not yet screened
WEEK 6 (Jan 11 - Jan 17)								
26	11107	[redacted]		n/a	[redacted]		n/a	Not yet screened
27	11109			[redacted]			Development	Not yet screened
28	11119						Development	Not yet screened
29	11123						Development	Not yet screened

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** PSE has not finished screening all proposals. The DRAFT selection status shown above is subject to change based upon the final screening results.*

PSE PUGET SOUND ENERGY

Selected proposal highlights

- [redacted] wind project (currently in operations) is priced at [redacted] MWh flat for a [redacted] PPA or [redacted] kW for an asset sale; while their [redacted] wind project (currently in development) is priced at $[redacted] MWh flat for a [redacted] PPA
- [redacted] existing [redacted] is priced at $[redacted] kW for an asset sale or a [redacted] with a capacity price of $[redacted] kW-mo flat
- [redacted] existing [redacted] is priced starting at $[redacted] kW-mo escalating over a [redacted] (the first 5 yrs is winter-only and the last 5 yrs is year-round)
- [redacted] is priced at [redacted] MWh flat for [redacted] MW firm for 4 yrs
- [redacted] priced at [redacted] MWh flat (delivered) for 100 MW for 4 yrs 3 mos
- [redacted]

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Preliminary findings

- Existing thermal resources appear to be priced much more competitively and have lower risk profile than new greenfield development; furthermore, resources that avoid a BPA transmission wheel should have an economic advantage

- Short-term PPAs (5 yrs or less) appear to be priced competitively and in-line with short-term market forecasts; however, all may not have firm transmission to PSE system

- PSE does not have a renewable need until 2020 or later and the renewable proposals are not expected to be competitive with the non-renewable proposals from a "capacity need" basis

RFP for All Generation Sources Update

Presented to PSE's Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

March 15, 2012

PSE PUGET SOUND ENERGY

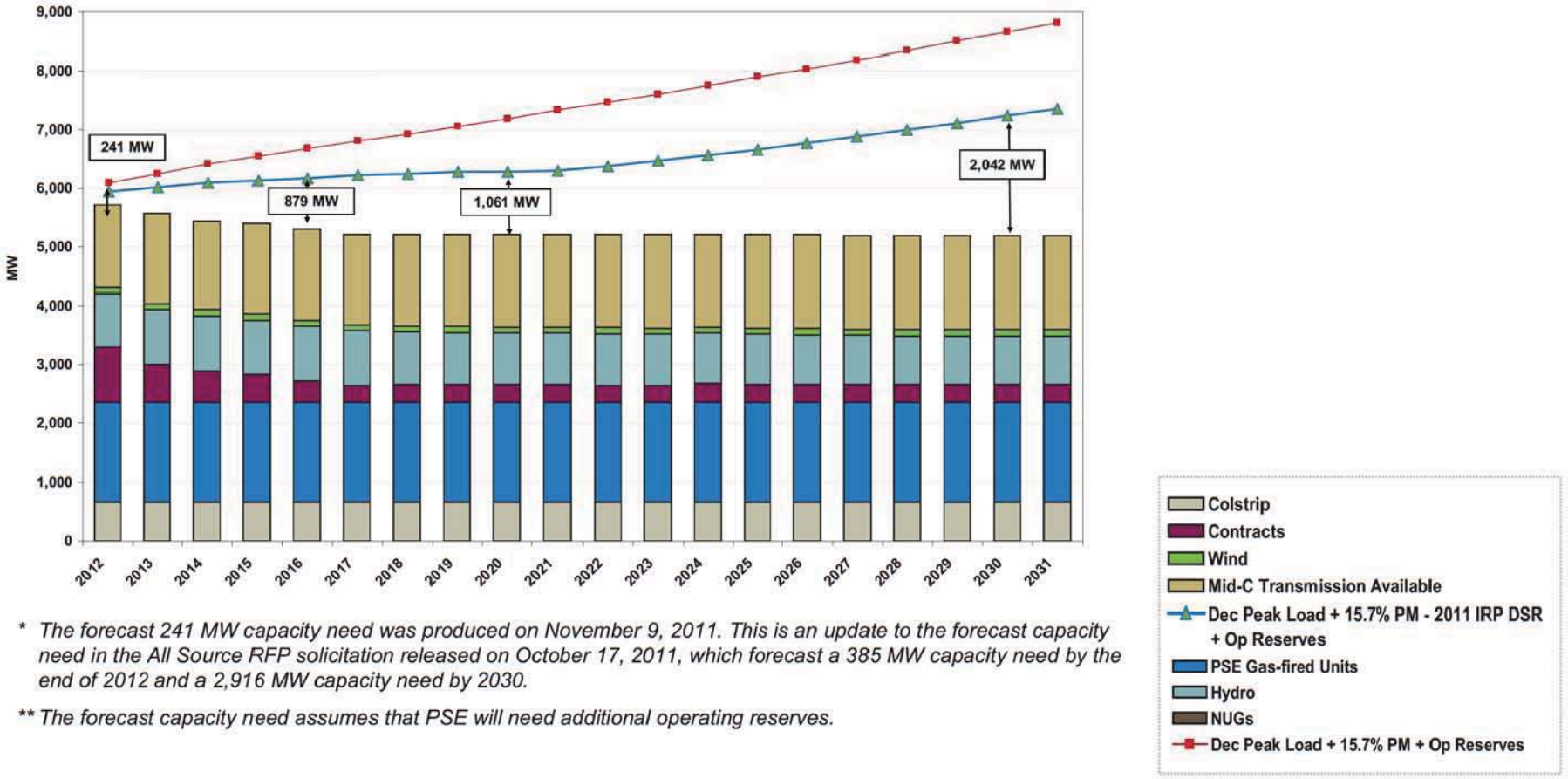
RFP schedule

August 1, 2011	Draft RFP filed with WUTC
October 13, 2011	WUTC approval
October 17, 2011	Final RFP issued
November 1, 2011	Offers due to PSE
March 15, 2012	"Candidate" short list selected
Late April 2012*	Final short list selected
To follow	Commercial negotiations

**Expected date.*

Capacity need forecast*

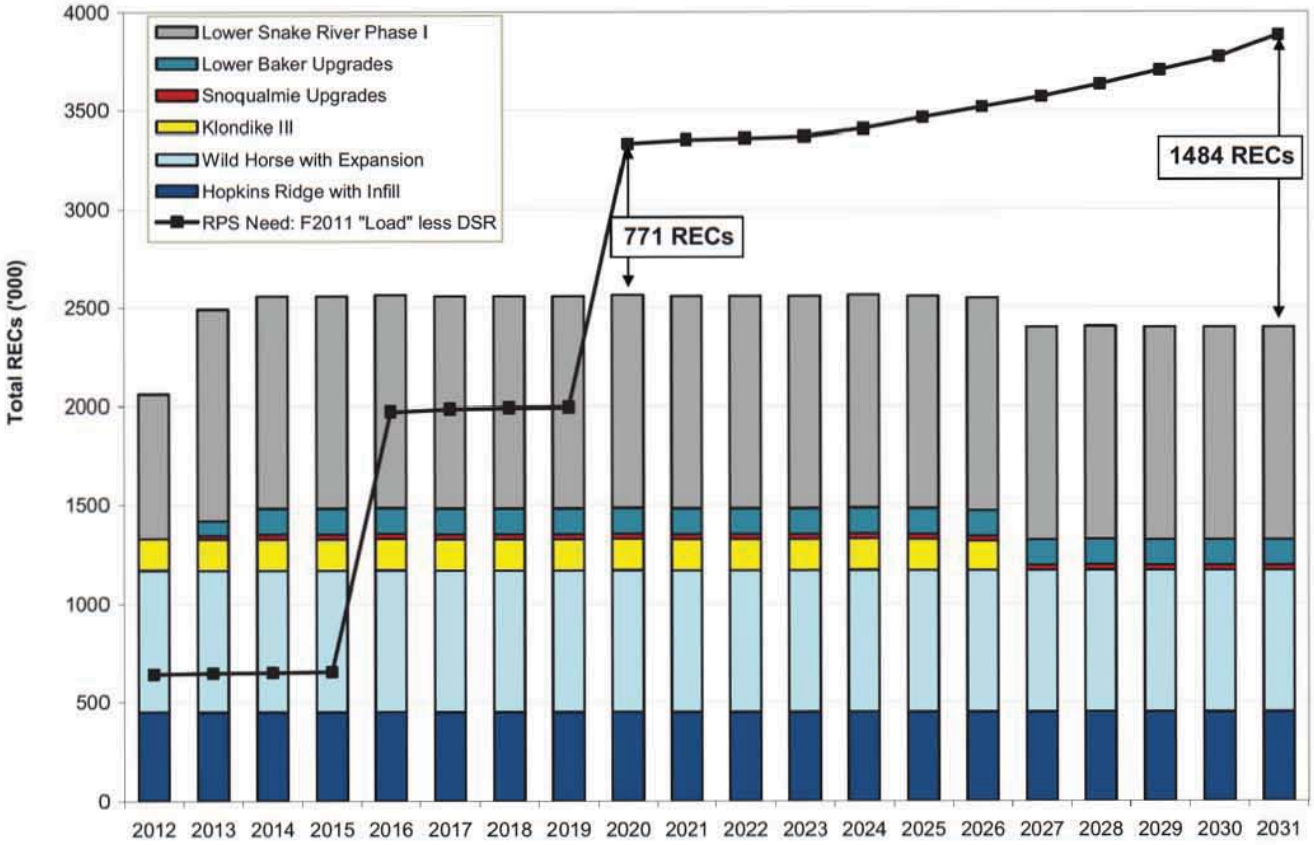
Unfilled Peak 1-hour Need (December MW) - Net of DSR					
	2012	**2013**	**2014**	**2015**	**2016**
Base F2011	241	451	653	730	879
Low F2011	212	403	586	642	770



* *The forecast 241 MW capacity need was produced on November 9, 2011. This is an update to the forecast capacity need in the All Source RFP solicitation released on October 17, 2011, which forecast a 385 MW capacity need by the end of 2012 and a 2,916 MW capacity need by 2030.*

** *The forecast capacity need assumes that PSE will need additional operating reserves.*

Near-term renewable targets on track to be achieved*



** Renewable energy credit ("REC") banking and sales are not reflected in the chart.*

Screening results observations

(Detailed results in appendix)

Capacity Resources

- Over 2,200 MW of operating capacity resources provide positive portfolio benefits.
- Generally <5-year and 10-year fixed price PPAs and non-unit contingent market based PPAs/exchanges have lower net costs and higher portfolio benefits as defined by the quantitative metrics used in the economic evaluation.

Renewable Resources

- An operating wind project and a biomass development project appear competitive from a quantitative basis, but qualitative risks exist.

Proposal offers identified for further evaluation

(Detailed summary in appendix)

- 12 of 29 proposals received evaluate favorably from qualitative and quantitative perspective.

Counterparty	Project Name	Offer	Term (yrs)	MW
[redacted]	[redacted]	Firm energy	4	[redacted]
[redacted]	[redacted]	Firm energy	10	
[redacted]	[redacted]	PPA Extension	5	
[redacted]	[redacted]	Firm energy	4	
[redacted]	[redacted]	Firm / Peak / Exchange	10	
[redacted]	[redacted]	Project PPA	25	
[redacted]	[redacted]	[redacted]	[redacted]	
TransAlta	Centralia	PPA	14	up to 500
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	Own / Tolling	15	
[redacted]	[redacted]	Firm / Peak / Call / Exchange	5 / 10	
[redacted]	[redacted]	Own / PPA	15 / 20 / 25	
[redacted]				

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Next steps

- Perform due diligence and scenario optimization & risk analysis
- Submit additional data requests as needed
- Continue qualitative due diligence
- Continue discussions of preferred commercial terms with counterparties

Key issues to be considered

- Short-term vs. long-term resources
- Transmission solutions
- RCW 80.80 emissions performance standard

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RFP evaluation schedule

March 16	Data requests due from working groups
April 3	Evaluation team meeting
April 17	Recommended short list selection meeting
April 20	EMC meeting
April 30	Final due diligence memos due for all proposals

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Appendix

Screening Results and Proposal Summary

Quantitative screening metrics definitions

- **Portfolio Benefit** ($): difference between the net present value portfolio revenue requirement of a proposed project, and the net present value portfolio revenue requirement of the generic portfolio strategy. (Higher is better.)

- **Levelized Cost** ($/MWh): level annual revenue requirement equivalent to the net present value revenue requirement based on a 20-year analytic period including end effects divided by the level annual generation equivalent to the net present value of generation for the 20 year period. (Lower is better.)

- **Portfolio Benefit Ratio:** *portfolio benefit* divided by the present value of the proposed project revenue requirement. (Higher is better.)

- **Net cost per unit of contribution to need** ($/kW-yr): difference between the project revenue requirement and the market revenue of the project's net generation divided by the capacity contribution. If a renewable project is being considered, then the numerator is divided by its annual contribution to PSE's renewable energy target. (Lower is better.)

- **Levelized *portfolio benefit* per unit of contribution to need** ($PB/kW-yr): a project's *portfolio benefit* divided by the present value of the project's capacity contribution. If a renewable project is being considered, then the numerator is divided by its annual contribution to PSE's renewable energy target. (Higher is better.)

Proposal status from screening*

ID	Project	Owner/Developer	State	Type	MW Nameplate	Status	DRAFT selection status* (3/7/12)
11102	Centralia	TransAlta	WA	[redacted] 14-yr PPA, [redacted]	[redacted]	Operating	Selected for further evaluation
11112	[redacted]		n/a			Operating	Selected for further evaluation
11118			[redacted]			[redacted]	Selected for further evaluation
11103						Operating	Selected for further evaluation
11113						Operating	Selected for futher evaluation
11117						Operating	Selected for futher evaluation
11126			n/a			Operating	Selected for further evaluation
11116			[redacted]			Development	Selected for further evaluation
11127			n/a			Operating	Selected for further evaluation
11110			n/a			Operating	Selected for further evaluation
11124			[redacted]			Operating	Selected for further evaluation
11123						Development	Not selected for further evaluation
11114						Development	Not selected for further evaluation
11107			n/a			n/a	Not selected for further evaluation
11125						Development	Not selected for further evaluation
11115						Development	Not selected for further evaluation
11121						Development	Not selected for further evaluation
11105						Development	Not selected for further evaluation
11122						Development	Not selected for further evaluation
11101						Development	Not selected for further evaluation
11106						Development	Not selected for further evaluation
11111						Development	Not selected for further evaluation
11104						Development	Not selected for further evaluation
11120						Development	Not selected for further evaluation
Unsolicited						Development	Not selected for further evaluation
11108						Development	Not selected for further evaluation
11109						Development	Not selected for further evaluation
Unsolicited						Operating	Not selected for further evaluation
11119						Development	Not selected for further evaluation

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* *PSE has not completed the RFP evaluation process. The selection status above represents screening results only, and does not represent a final short list. Such short list will be selected after PSE completes its qualitative review and optimization analyses of the selected resources.*

Proposal offers identified for further evaluation

Proposal / Counterparty	Size (MW)	Term	Offer(s) selected	Portfolio Benefit / kW-yr	Key Risks and Benefits
[redacted] (#11112)	[redacted]	[redacted]	[redacted]	$135 / kW-yr	▪ Positive economic benefits ▪ No current transmission solution to PSE system due to congested [redacted] paths; further evaluation required
[redacted] (#11124)	[redacted]	[redacted]	[redacted]	$91 / kW-yr	▪ Positive economic benefits and no development risk ▪ Firm capacity [redacted] may help maintain grid stability [redacted] ▪ Known counterparty; low execution risk ▪ Terms related to operation of plant require further discussion with counterparty ▪ As proposed, replacement power due to unplanned outages will be supplied a [redacted] Further negotiations required to mitigate cost/risk.
[redacted] (#11117)	[redacted]	[redacted]	[redacted]	$85 / kW-yr	▪ Positive economic benefits and no development risk ▪ Extension of existing contract; counterparty experience has been positive; terms consistent with existing contract ▪ Transmission solution to PSE's system appears likely
[redacted] (#11110)	[redacted]	[redacted]	[redacted]	$80 / kW-yr	▪ Positive economic benefits ▪ Proposed terms very similar to previously negotiated terms; known counterparty and low execution risk ▪ Firm transmission to PSE's system
[redacted] (#11123)	[redacted]	[redacted]	[redacted]	$54 / kW-yr	▪ Positive economic benefits; 10-yr exchange offers the greatest economic benefit ▪ Transmission solution uncertain due to [redacted] further evaluation required ▪ Potential benefits associated with operational flexibility

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Many of the RFP proposals contained multiple offers. The evaluation summary tables show results for the best-ranked offer from each proposal selected for further evaluation.

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Proposal offers identified for further evaluation

Proposal / Counterparty	Size (MW)	Term	Offer(s) selected	Portfolio Benefit / kW-yr	Key Risks and Benefits
[redacted] (#11116)				[redacted] kW-yr	▪ Positive economic benefits ▪ The [redacted] and substantial infrastructure already in place; existing air and wastewater permits ▪ Execution risk; counterparty has many development projects but few existing resources with contracts ▪ Transmission costs uncertain [redacted] ▪ Renewable risk due to [redacted] ▪ Fuel cost variability passed on to PSE
[redacted] (#11117)				[redacted] kW-yr	▪ Positive economic benefits and no development risk ▪ Positive experience with counterparty; low execution risk ▪ No firm transmission solution at this time; requires further consideration
Centralia TransAlta (#11102)	Up to 500	1/1/12 – 12/31/25	▪ 14-yr coal PPA ▪ [redacted]	[redacted] kW-yr	▪ Long-term flat firm power delivered to PSE's system ▪ Positive economic benefits and no development risk ▪ Coal transition power qualifies for WUTC pre-approval and equity return on PPA ▪ Proposed contract terms are inconsistent with PSE's standard terms; counterparty seems willing to negotiate
[redacted] (#11118)				[redacted] kW-yr	[redacted]

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REDACTED VERSION

Many of the RFP proposals contained multiple offers. The evaluation summary tables show results for the best-ranked offer from each proposal selected for further evaluation.

PSE PUGET SOUND ENERGY

Proposal offers identified for further evaluation

Proposal / Counterparty	Size (MW)	Term	Offer(s) selected	Portfolio Benefit / kW-yr	Key Risks and Benefits
[redacted] (#11103)	[redacted]	[redacted]	[redacted]	[redacted] kW-yr	▪ Positive economic benefits. [redacted] ▪ Helps PSE meet a large and growing capacity need. ▪ Condition of equipmen[redacted] unknown; past site visit suggests upgrades necessary to meet PSE's operational standards ▪ Not offered with firm transmission, but solution appears likely
[redacted] (#11127)				TBD[1]	▪ No price originally proposed; but will offer a price in response to guidance from PSE on preferred structures ▪ [redacted] can offer many options and provide resource flexibility to meet PSE's needs ▪ Transmission uncertain ▪ Offer states power is delivered to PSE's system; solution uncertain; requires further evaluation
[redacted] (#11113)				n/a[2]	▪ Top ranked among renewable resources by portfolio benefit ▪ Positive economic benefits and no development risk ▪ Appears to have a transmission solution ▪ Community reaction to project requires further evaluation ▪ Technology risk associated with [redacted] turbines requires further due diligence ▪ PSE has met near-term renewable requirements; potential regulatory risk

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[1] *No price proposed.* [redacted] *will propose a price once PSE identifies its preferred offer structure(s).*

[2] *The Portfolio Benefit/kW-yr is a less informative metric for PPA offers with both a REC contribution and a capacity contribution. The Portfolio Benefit/kW-yr value shown for the* [redacted] *(previous slide) is for a capacity-only option. The evaluation summary tables do not include a Portfolio Benefit/kW-yr value for either the* [redacted] *or the* [redacted] *offer that includes RECs. More detailed quantitative findings for these and all other proposals are included in the quantitative results tables provided in the appendix.*

PSE PUGET SOUND ENERGY

Capacity resources quantitative results

Project Name	PPA or Ownership	Project Start	Bool Life / Contract Term	Levelized Cost ($/MWh)	Portfolio Benefit ($000's)	PB / kW-yr ($/kW-yr)	PB / kW-yr Ranking	Net Cost / kW-yr ($/kW-yr)	Net Cost / kW-yr Ranking
[redacted]	Fixed Price	2013	4	[redacted]	42,979	[redacted]	1	[redacted]	1
	Fixed Price	2012	10		49,986		2		4
	Tolling	2016	1		25,707		3		2
	Fixed Price	2013	4		25,329		4		8
	Fixed Price	2015	11		31,678		5		6
	Fixed Price	2014	25		10,510		6		15
	Tolling	2013	5		14,377		7		3
	Fixed Price	2013	10		24,595		8		5
	Tolling	2013	10		18,957		9		9
	Fixed Price	2013	5		10,007		10		10
	Fixed Price	2012	14		65,310		11		12
	[redacted]	[redacted]	11		44,462		12		7
	Ownership	2014	29		129,569		13		14
	Ownership	2015	35		(55,414)		14		16
	Fixed Price	2012	13		(202)		15		13
	Ownership	2016	35		(110,872)		16		18
	Fixed Price	2012	5		(4,062)		17		11
	Tolling	2015	21		(238,117)		18		17
	Ownership	2016	35		(131,802)		19		19
	Tolling	2016	30		(340,910)		20		20
	Tolling	2015	21		(146,685)		21		21
	Tolling	2014	21		(51,213)		22		22
	Fixed Price	2014	20		(45,232)		23		25
	Tolling	2014	21		(142,039)		24		23
	Ownership	2014	18		(120,596)		25		24
	Ownership	2020	35		(95,885)		26		26

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Metrics Key:

- A lower number is better for "Net Cost/kW-yr" or "Net Cost/REC-yr", and "Levelized Cost".
- A higher number is better for "Portfolio Benefit", "PB/kW-yr" or "PB/REC-yr", and "Portfolio Benefit Ratio".
- It is difficult to compare different technologies by "Portfolio Benefit Ratio" and "Levelized Cost".

Capacity resources ranked by portfolio benefit ratio

- Portfolio benefit ratio is best comparing similar technology/offer structures

Benefit Ratio Ranking - Fixed Price PPA/Must Take

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking
[redacted]	0.36	3
	0.20	5
	0.18	6
	0.87	1
	0.08	7
	0.58	2
	0.31	4
	0.05	8
	(0.05)	9
	(0.12)	10
	(0.23)	11
	(0.38)	12

Benefit Ratio Ranking - Baseload Tolling / Ownership

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking
[redacted]	0.30	1
	0.17	2
	0.05	3
	(0.06)	4
	(0.27)	5
	(0.53)	7
	(0.33)	6

Benefit Ratio Ranking - Peaking Toll / Ownership

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking
[redacted]	2.17	1
	(0.11)	3
	(0.06)	2
	(0.36)	5
	(0.32)	4
	(0.72)	6
	(0.77)	7

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Metrics Key:
- A lower number is better for "Net Cost/kW-yr" or "Net Cost/REC-yr", and "Levelized Cost".
- A higher number is better for "Portfolio Benefit", "PB/kW-yr" or "PB/REC-yr", and "Portfolio Benefit Ratio".
- It is difficult to compare different technologies by "Portfolio Benefit Ratio" and "Levelized Cost".

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PSE PUGET SOUND ENERGY

Renewable resources quantitative results

Project Name	PPA or Ownership	Project Start	Bool Life / Contract Term	Levelized Cost ($/MWh)	Portfolio Benefit ($000's)	PB / REC-yr ($/REC-yr)	PB / REC-yr Ranking	Net Cost / REC-yr ($/REC-yr)	Net Cost / REC-yr Ranking
[redacted]	Renewable PPA	2013	25	[redacted]	37,755	[redacted]	1	[redacted]	5
	Renewable PPA	2013	20		28,871		2		4
	Ownership	2013	23		28,487		3		6
	Ownership	2015	25		26,601		4		7
	Renewable PPA	2013	15		16,042		5		3
	Fixed Price	2016	25		39,326		6		2
	Renewable PPA	2014	20		25,705		7		1
	Renewable PPA	2015	20		(12,408)		8		9
	Renewable PPA	2014	20		(13,487)		9		8
	Renewable PPA	2013	21		(17,555)		10		10
	Ownership	2013	20		(14,983)		11		12
	Renewable PPA	2013	20		(19,369)		12		11

REDACTED VERSION

Benefit Ratio Ranking - Renewable Proposals

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking
[redacted]	0.16	3
	0.14	4
	0.12	5
	0.07	7
	0.10	6
	0.96	1
	0.73	2
	(0.05)	8
	(0.07)	9
	(0.42)	11
	(0.41)	10

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Metrics Key:

- A lower number is better for "Net Cost/kW-yr" or "Net Cost/REC-yr", and "Levelized Cost".
- A higher number is better for "Portfolio Benefit", "PB/kW-yr" or "PB/REC-yr", and "Portfolio Benefit Ratio".
- It is difficult to compare different technologies by "Portfolio Benefit Ratio" and "Levelized Cost".

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PSE PUGET SOUND ENERGY

RPS compliant capacity resources

Project Name	PPA or Ownership	Project Start	Bool Life / Contract Term	Levelized Cost ($/MWh)	Portfolio Benefit ($000's)	Portfolio Benefit Ratio	Benefit Ratio Ranking
[redacted]	Fixed Price	2014	25	[redacted]	68,886	0.45	1
	Fixed Price	2014	25		39,007	0.27	2
	Fixed Price	2012	13		4	0.00	3
	Fixed Price	2014	25		(23,534)	(0.08)	4
	Fixed Price	2014	20		(27,371)	(0.11)	5
	Ownership	2014	25		(47,274)	(0.15)	6

Note: The Net Cost per kW-yr (or per REC-yr) and the Portfolio Benefit per kW-yr (or per REC-yr) are less informative metrics when a project or PPA has both a REC contribution and capacity contribution.

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REDACTED VERSION

Metrics Key:

- A lower number is better for "Net Cost/kW-yr" or "Net Cost/REC-yr", and "Levelized Cost".
- A higher number is better for "Portfolio Benefit", "PB/kW-yr" or "PB/REC-yr", and "Portfolio Benefit Ratio".
- It is difficult to compare different technologies by "Portfolio Benefit Ratio" and "Levelized Cost".

Comparison of price scenarios

2011 IRP Price Scenarios	20-yr Levelized
Base	$57.46
Low Growth	$41.30
High Growth	$71.42

2011 RFP Phase I Price Scenarios	20-yr Levelized
Base	$52.29

Current Price Forecast

2011 RFP Phase II Price Scenarios	20-yr Levelized
Base	$48.41
Low Growth	$36.43
High Growth	$61.80

RFP for All Generation Sources Update

Presented to PSE's Energy Management Committee ("EMC")

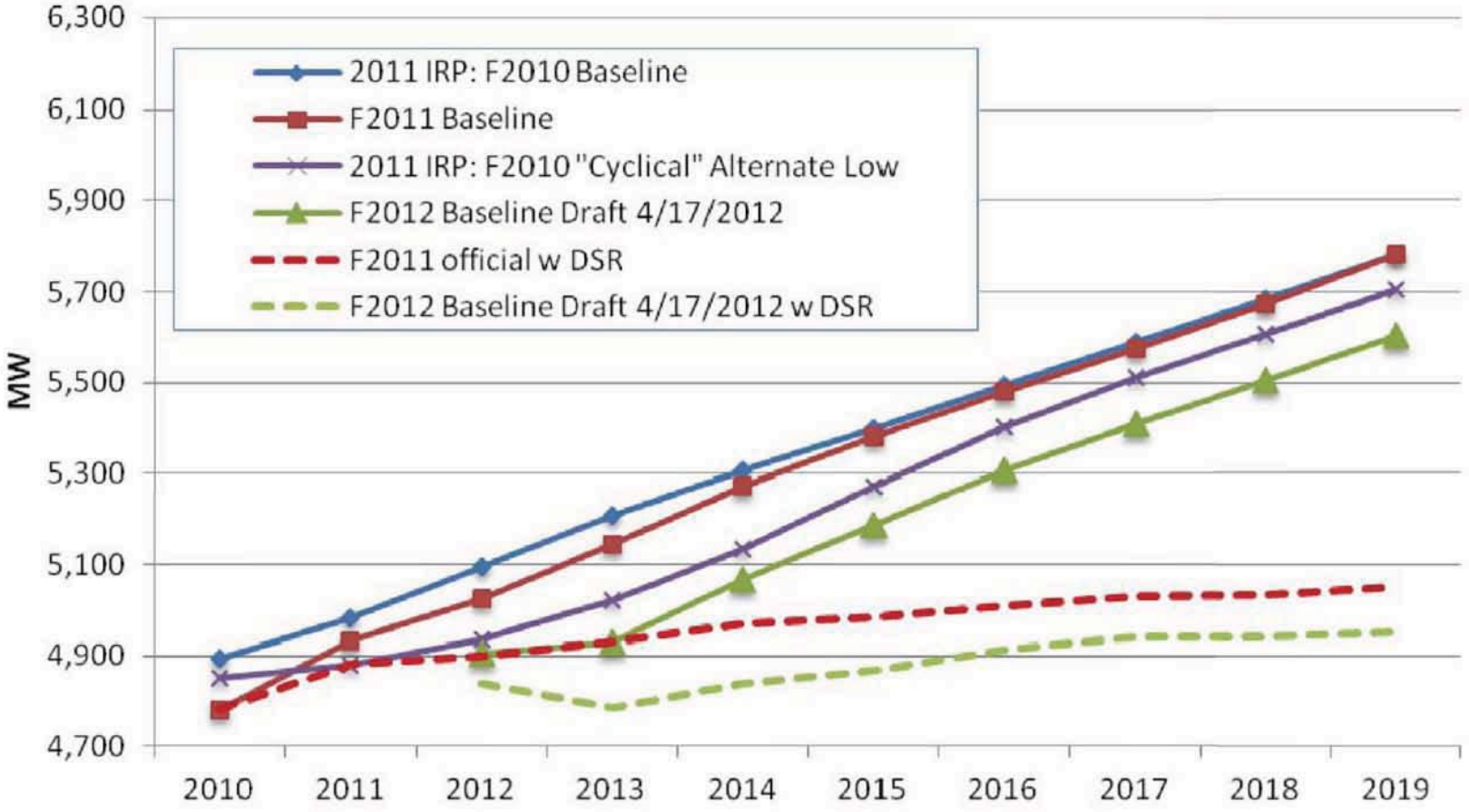
PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

April 20, 2012

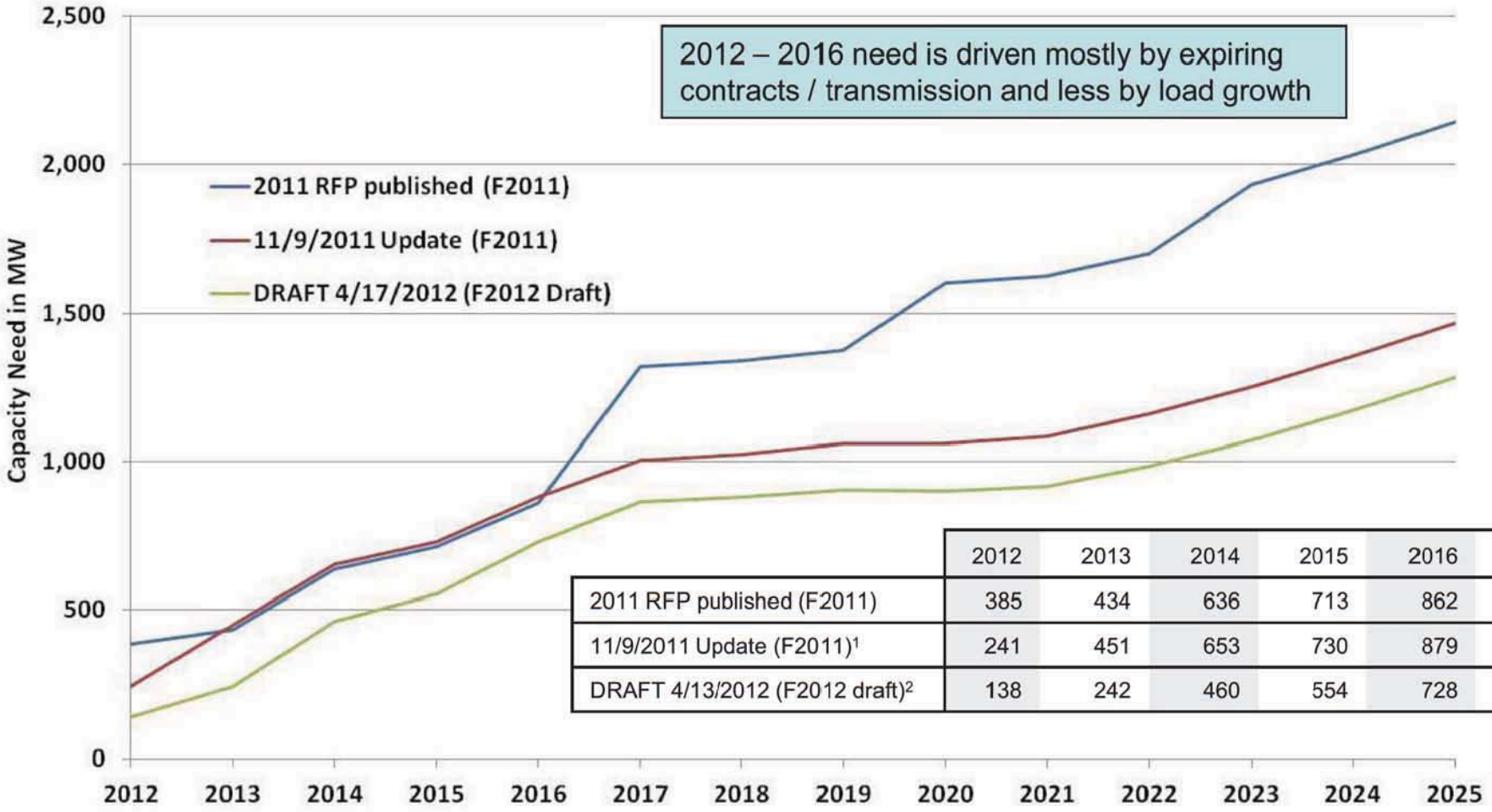
Comparison of December Peak Load Forecasts



WUTC staff comments 2011 IRP acceptance letter: *"Due to the prolonged recession, we find the 2010-2016 portion of the Low Cyclical forecast as plausible, and urge the Company to give adequate weight to this forecast as it acquires additional resources during this time period."*

Note: F2012 baseline reflects loss of Jefferson County April 2013

2011 RFP Updates to Capacity Need

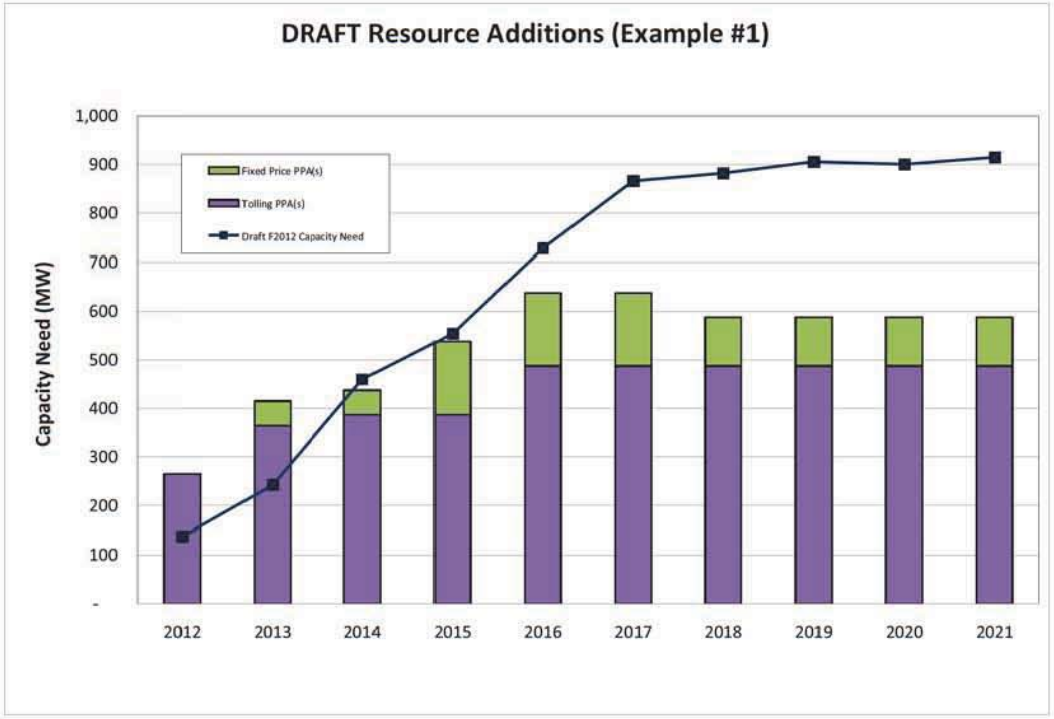


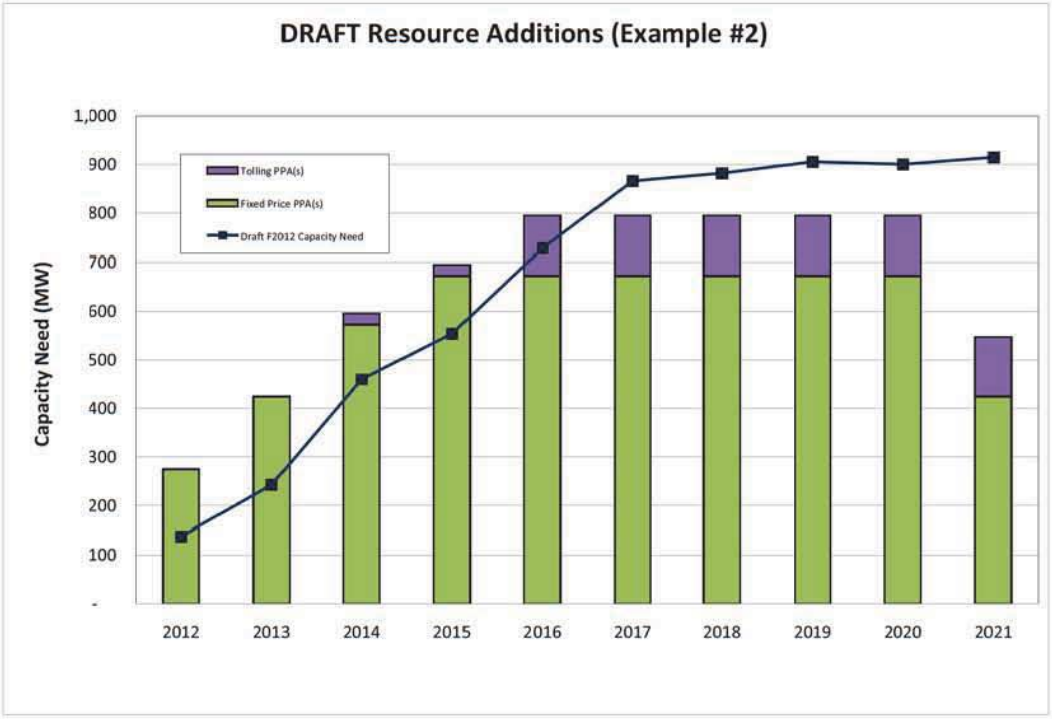
	2012	2013	2014	2015	2016	2017
2011 RFP published (F2011)	385	434	636	713	862	1,317
11/9/2011 Update (F2011)[1]	241	451	653	730	879	1,005
DRAFT 4/13/2012 (F2012 draft)[2]	138	242	460	554	728	866

Notes:

1. *Update to need reflects addition of short-term hedges, no existing gas plant retirements, line loss update (presented to EMC on 12/15/2011 and 3/15/2012)*
2. *F2012 reflects loss of Jefferson County on 4/2013, updates of existing gas plant contribution to peak*

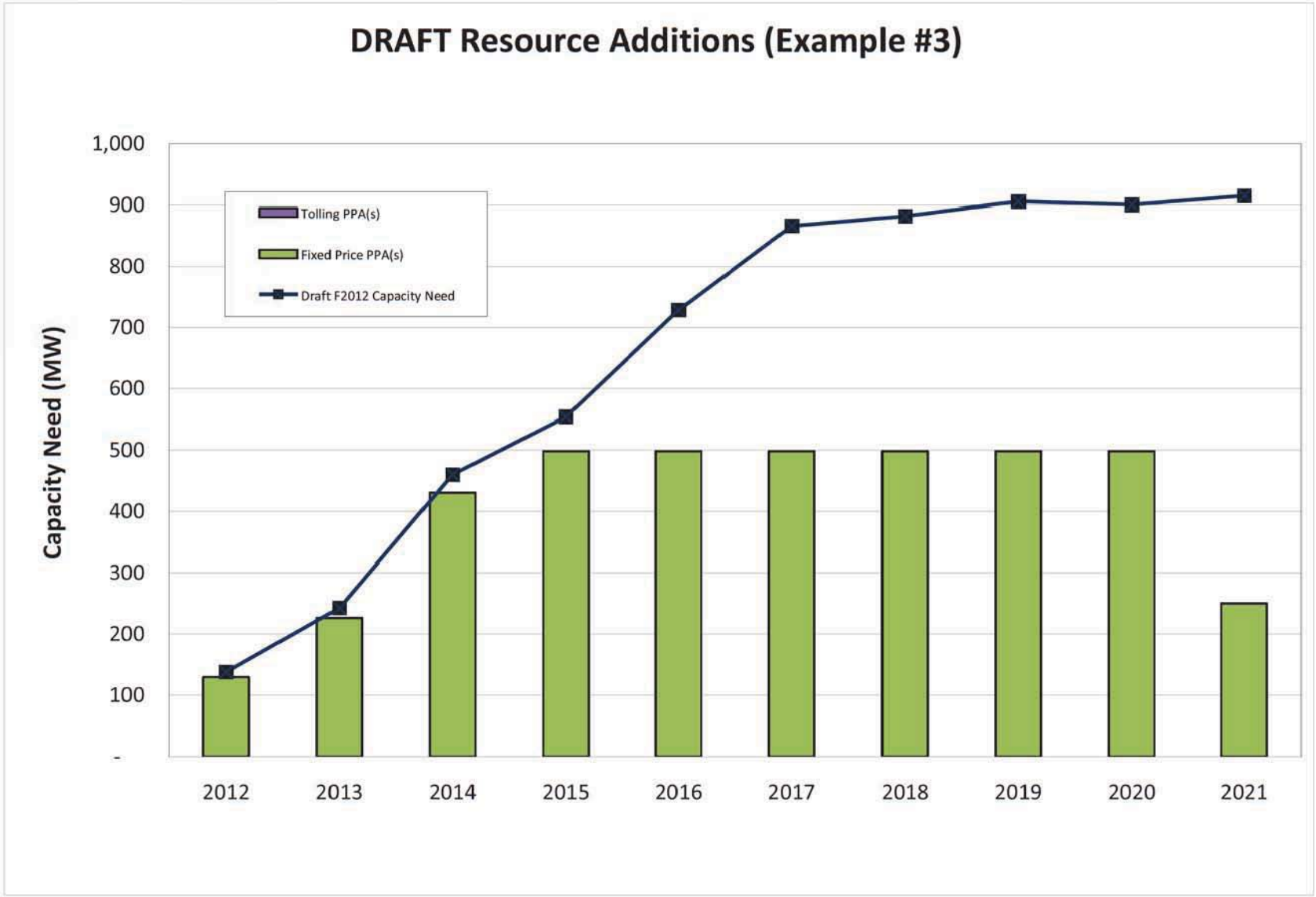
Example of Resource Additions





- Testing shows the resources being considered are relatively close to each other in terms of economics
- Small changes to price, size, or capacity need will impact the combination of resources being selected
- Some resources being selected have qualitative risks, which may lead to their dismissal from consideration
- In all cases, resources are being selected in surplus of our capacity need in the early years

Example of Resource Additions *(continued)*



PSE PUGET SOUND ENERGY

DRAFT Qualitative Assessment

DRAFT for discussions purposes; subject to change upon final findings

Candidate Short List Proposals	Cost Minimization	Compatibility with Resource Need	Risk Management	Public Benefits	Strategic & Financial	Key Advantage (+) or Disadvantage (-)
Centralia, PPA **(#11102)** *TransAlta*	+	+	o	+	+	+ Ability to fit need exactly; Long-term supply; Supports State policy; Enhances company value
[redacted] **(#11112)**	+	-	-	o	o	- No firm transmission; short-term supply
[redacted] **(#11118)**	+	+	o	o	o	+ [redacted]
[redacted] **(#11103)**	-	-	o	o	+	- High cost; capacity need (2016)
[redacted] **(#11113)**	o	-	o	-	o	- Renewable need (2020); Community issues
[redacted] **(#11117)**	+	o	-	o	o	- Change in control risk; Y2016 resource
[redacted] **(#11117)**	o	-	-	o	o	- Change in control risk; Transmission does not match operational flexibility
[redacted] **(#11126)**	+	+	?	o	o	+/- Flexible products; however, uncertain of value for long-term; Ties up transmission at [redacted]
[redacted] **(#11116)**	-	o	-	o	o	- High cost for capacity; Development, counterparty & fuel risk
[redacted] **(#11127)**	?	+	?	o	o	- Price unknown
[redacted] **(#11110)**	+	o	-	o	o	-Short-term supply
[redacted] **(#11124)**	+	+	o	+	o	+ Asset-backed fixed price; Long-term Supply; System benefits; QF

KEY:

+	A key advantage relative to other candidate short list proposals
-	A key disadvantage relative to other candidate short list proposals
o	Neither a key advantage or disadvantage relative to other candidate short list proposals

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PSE PUGET SOUND ENERGY

2011 RFP Evaluation Schedule

- April 25* — PSM III scenario optimizations completed
  - shows the resource selections in multiple future price and load scenarios
- May 4* — Quantitative and qualitative risk analysis completed
  - measures price and volume risks of resources in alternative portfolios
  - discusses potential risks and mitigations of resources

  Updated PSM I rankings for candidate short list
  - ranks resources in updated Phase II base scenario

  Qualitative criteria matrix completed
  - shows qualitative comparison of resources relative to the RFP criteria
- May 14* — Short list selection meeting
  - identifies and documents final resource selections for recommendation to EMC
- May 17 — EMC meeting
  - approves resource short list selection for commercial negotiations

**Estimated dates; EMC approval may be sought earlier via email.*

Appendix

- RFP scenarios
- Gas price forecasts
- Power price forecasts

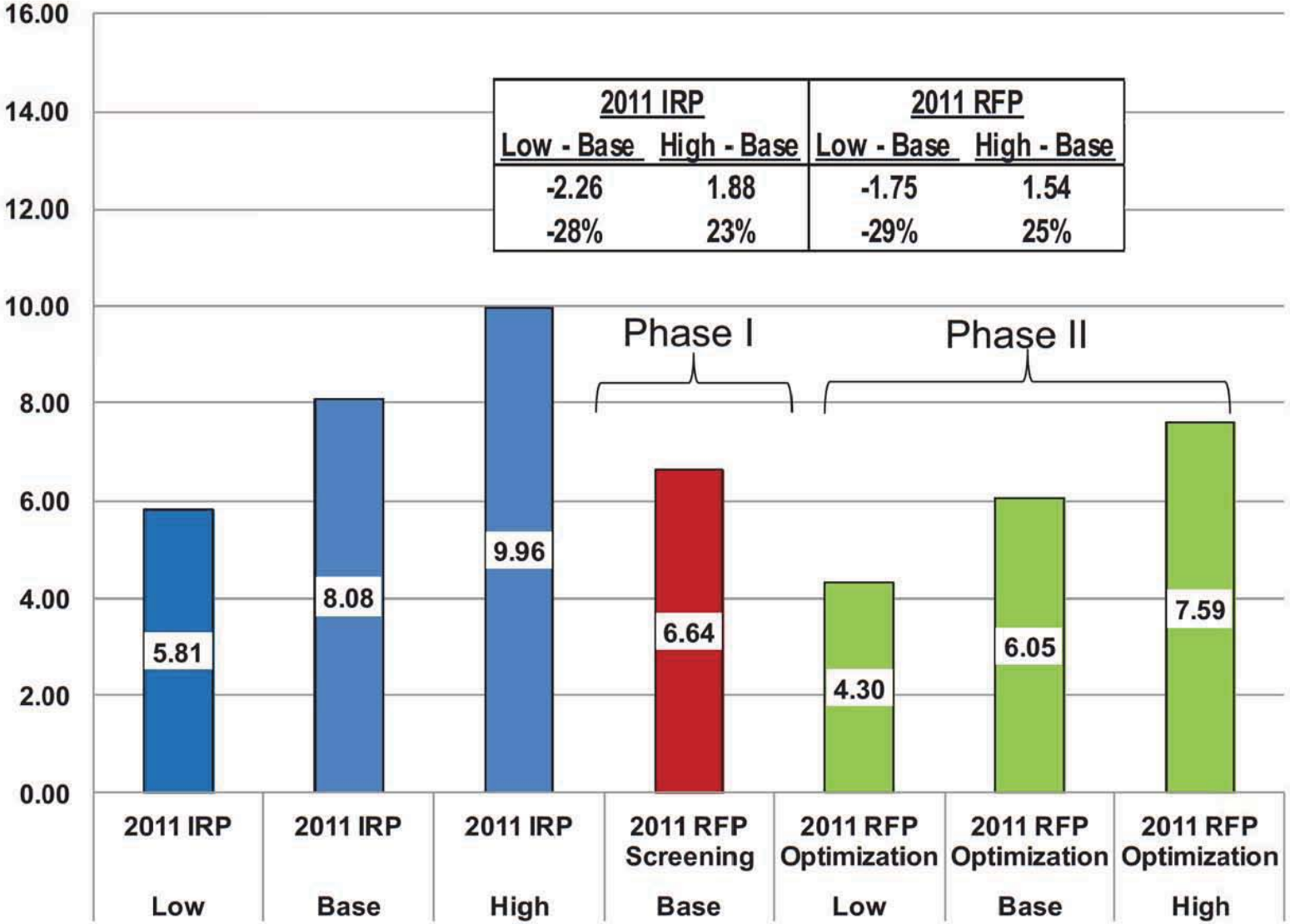
2011 RFP price scenarios

	WECC Demand	PSE Demand	Gas Price	Generic Resource Costs	Emissions Price
Base Case	Base	Base	Base	Base	None
Base + CO2	Base	Base	Base	Base	EPA APA Analysis
Base + No Centralia*	Base	Base	Base	Base	None
High Prices	High Structural	Base	High	Base	None
Low Growth	Low Structural	Low Structural	Low	Base	None

*Base + No Centralia: Centralia is forced to retire in 2013.

Compare Levelized Sumas Gas Prices

(nominal $)



Comparison of price scenarios

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Low Growth	$36.43
High Growth	$61.80

RFP for All Generation Sources Update

Presented to PSE's Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Aliza Seelig

Consulting Resource Acquisition Analyst

May 17, 2012

Key factors considered for RFP short list selection

- PSE's draft F2012 load forecast
- Continued drop in near-term natural gas prices
- Ability of RFP offers to obtain transmission solutions
- PSE's current renewable surplus limiting renewable need until 2020 or later
- Requirements to meet Washington Emissions Performance Standard (RCW 80.80)

Comparison of Sumas Hub gas price forecasts

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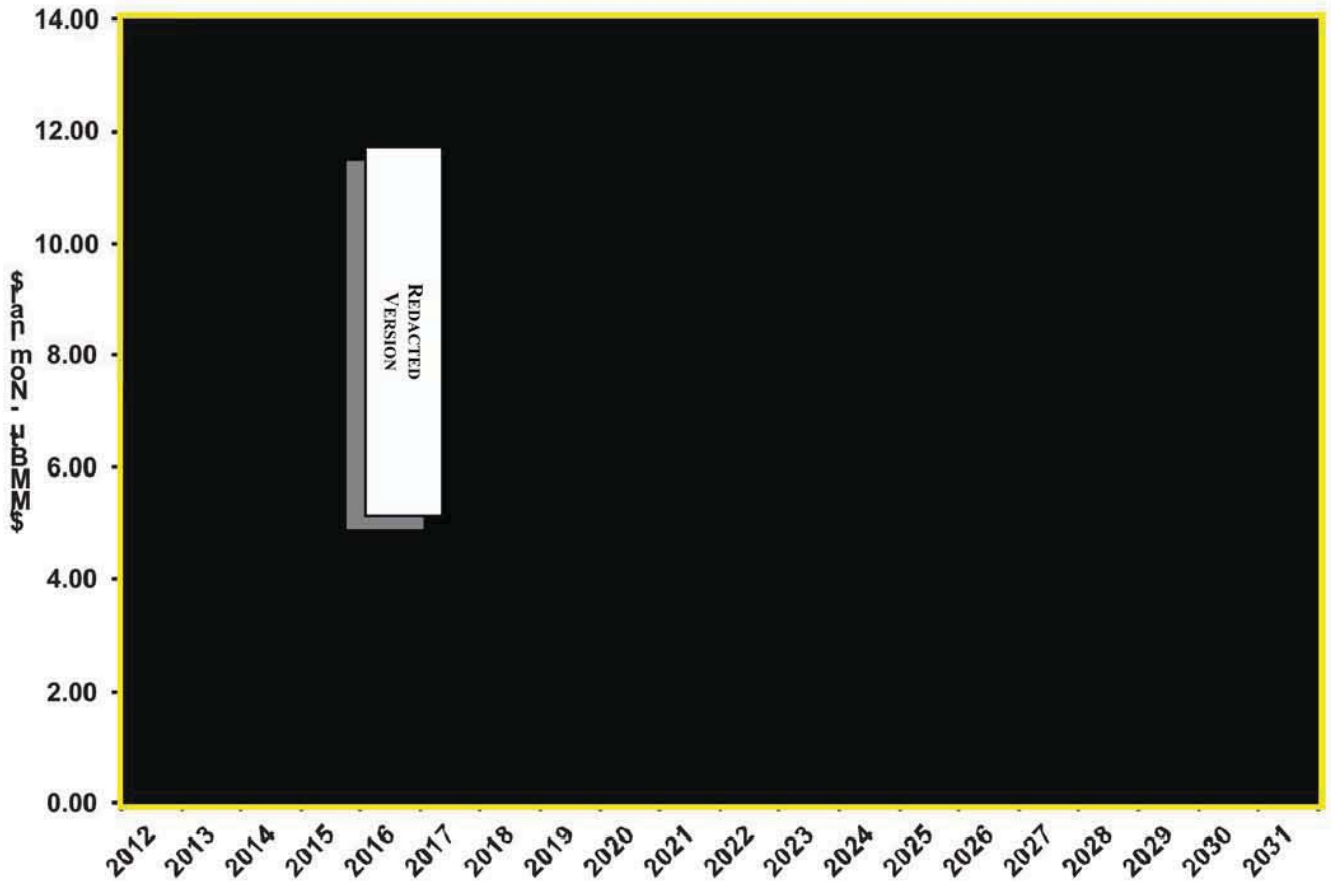

Over the shorter term, the relatively warm 2011-12 winter in North America reduced gas demand and diverted gas to storage reducing prices for the summer and upcoming winter.

Phase II proposals eliminated prior to completing quantitative analysis[1]

Proposal	Rationale
[redacted]	Uncertain transmission solution; change in control risk; [redacted] limits flexibility
[redacted]	No transmission solution
[redacted]	No near-term renewable need; community issues
[redacted]	No near-term renewable need; development risk; counterparty risk

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[1] [redacted] withdrew its offer of a Market PPA during Phase II. It was not included in the quantitative analysis.

[2] Counterparty recently expressed interest in discussing terms and potentially having additional transmission capacity.

PSE PUGET SOUND ENERGY

Individual project ranking in Base with new gas price scenario (Draft)

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Project Name	PPA or Ownership	Project Start	Portfolio Benefit	PB / kW	PB / kW Ranking	Net Cost / kW	Net Cost / kW Ranking
[redacted]	Tolling	2016	$ 29,977	[redacted]	1	[redacted]	1
Centralia PPA	Fixed Price	2012	$ 209,309		2		5
[redacted]	Fixed Price	2016	$ 14,303		3		3
[redacted]	Fixed Price	2014	$ 13,114		4		2
[redacted]	Fixed Price	2012	$ 11,288		5		6
[redacted]	[redacted]	[redacted]	$ 30,582		6		4
Self Build Peaker [redacted]	Ownership	2015	$ 13,828		7		9
[redacted]	Ownership	2014	$ 10,035		8		10
[redacted]	Fixed Price	2014	$ (1,465)		9		8
[redacted]	Fixed Price	2013	$ (6,125)		10		7

REDACTED VERSION

Metrics Key:

- A lower number is better for "Net Cost/kW-yr".
- A higher number is better for "Portfolio Benefit" and "PB/kW-yr".

Draft optimization results

- Selection in more scenarios is considered more favorable

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Optimization Results Summary

Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
					0
				X	1
X	X		X	X	4
	X	X			2
X	X	X	X		4
			X		1
				X	1
X		X			2
				X	1
X	X	X	X		4

Preliminary short list outlook

RFP evaluation indicates that Centralia should be pursued first because

- Centralia fills immediate and longer term need while not exceeding it
- Opportunity to pursue TransAlta may be lost if delayed

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	2012	2013	2014	2015	2016	2017	2018	2019	2020
Capacity (Deficit) / Surplus in MW:	(129)	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)
[redacted]									
Remaining Capacity (Deficit) / Surplus in MW:	[redacted]								

Note: Capacity need does not reflect need for additional operating reserves when new resources are on PSE's system. March Point capacity as shown is reduced by PSE's operating reserve requirement for this resource addition.

Coal Transition Power Purchase & Sale Agreement

Seller:
- TransAlta Centralia Generation, LLC

Product:
- Firm, flat (7x24) electrical energy delivered to the Point of Delivery

Term:
- Dec 1, 2012 – Dec 31, 2025

Source:
- Centralia Transition Coal Facility (CTCF)

[redacted]

Point of Delivery:
- Centralia

[redacted]

Quantity:
- 125 MWh/hr; Dec 1, 2012 – Nov 30, 2013
- 225 MWh/hr; Dec 1, 2013 – Nov 30, 2014
- 425 MWh/hr; Dec 1, 2014 – Nov 30, 2015
- 498 MWh/hr; Dec 1, 2015 – Dec 31, 2022
- 400 MWh/hr; Jan 1, 2023 – Dec 31, 2024
- 300 MWh/hr; Jan 1, 2025 – Dec 31, 2025

Price:
- [redacted] MWh; Dec 1, 2012 – Nov 30, 2014
- [redacted] / MWh*; Dec 1, 2014 – Nov 30, 2020
- [redacted] MWh*; Dec 1, 2020 – Dec 31, 2025

Termination:

[redacted]

*escalates @ [redacted] per year

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PSE PUGET SOUND ENERGY

Next steps:

- Issue final short list to EMC and notify bidders
- Negotiate and finalize agreement with TransAlta
- Re-evaluate updates as needed
- Seek EMC approval of Coal Transition PPA
- Seek Board approval of Coal Transition PPA

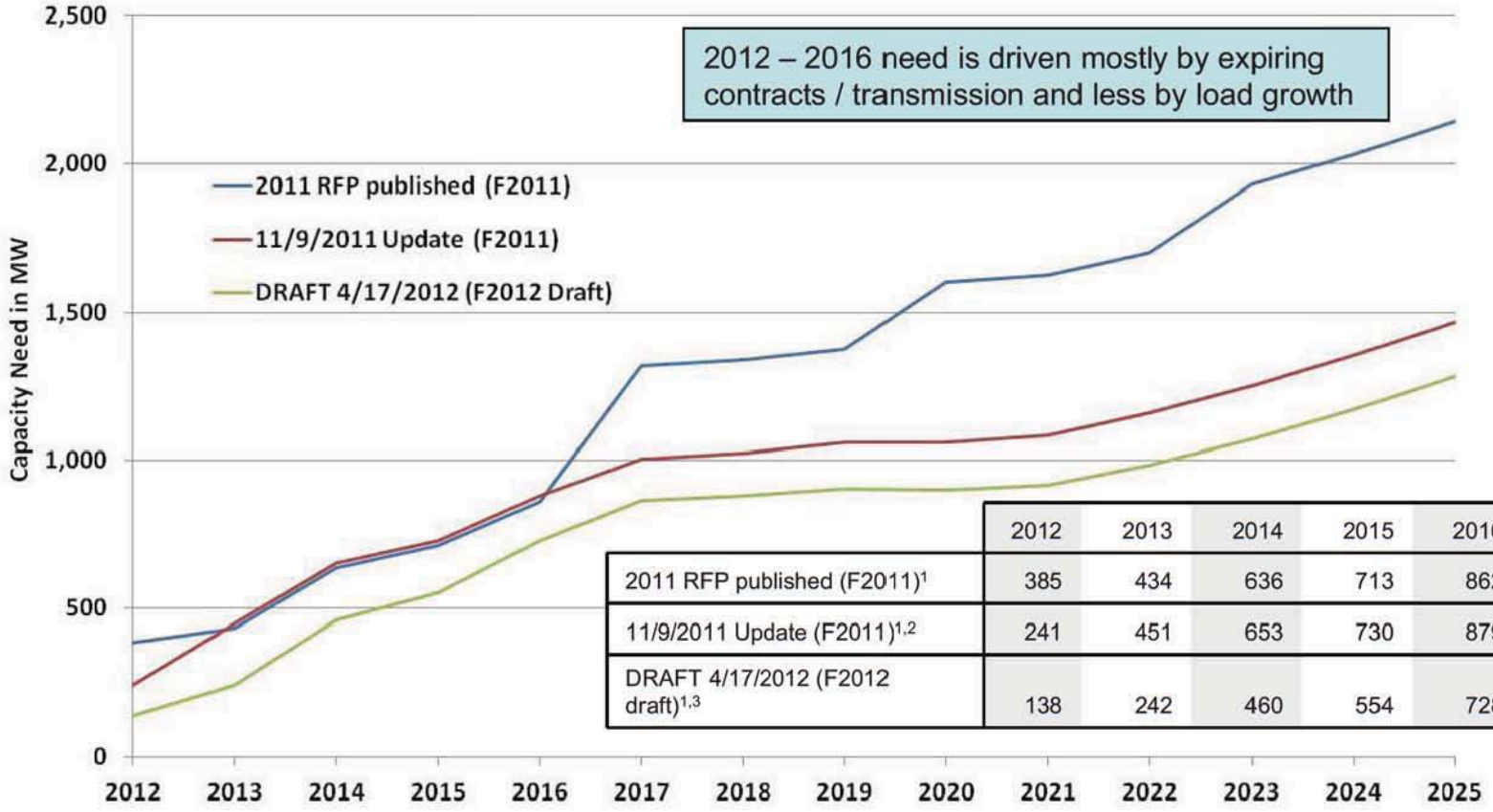
Regulatory process:

- File petition with WUTC in June 2012 in order for PPA to be effective by December 2012
- Petition will seek approval of Coal Transition PPA and the recovery of related acquisition costs (cost of power and equity rate of return)

PSE PUGET SOUND ENERGY

Appendix

2011 RFP updates to capacity need



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Notes:

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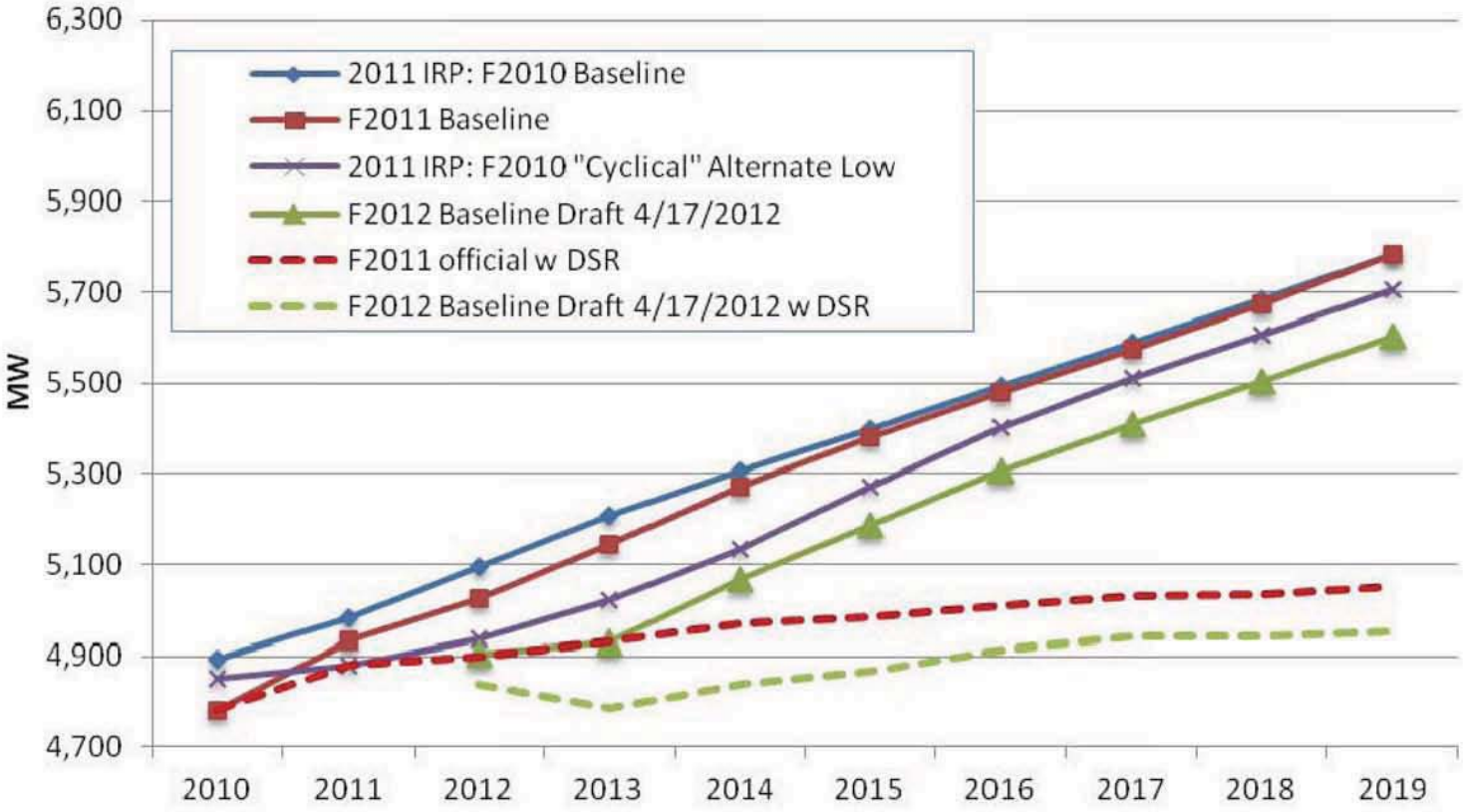
2. *Update to need reflects addition of short-term hedges, no existing gas plant retirements, line loss update (presented to EMC on 12/15/2011 and 3/15/2012)*
3. *F2012 reflects loss of Jefferson County on 4/2013, updates of existing gas plant contribution to peak*

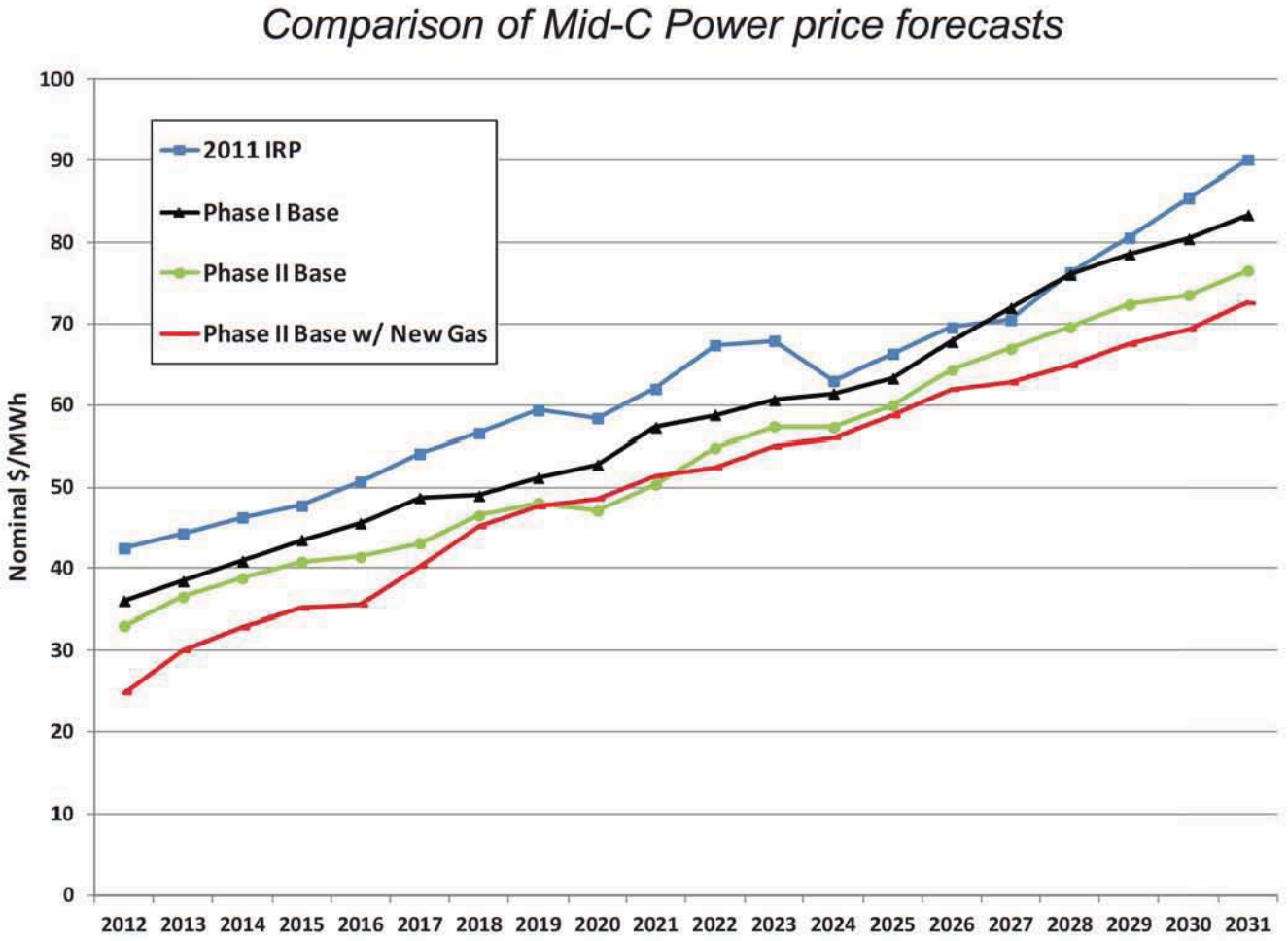
Comparison of December peak load forecasts



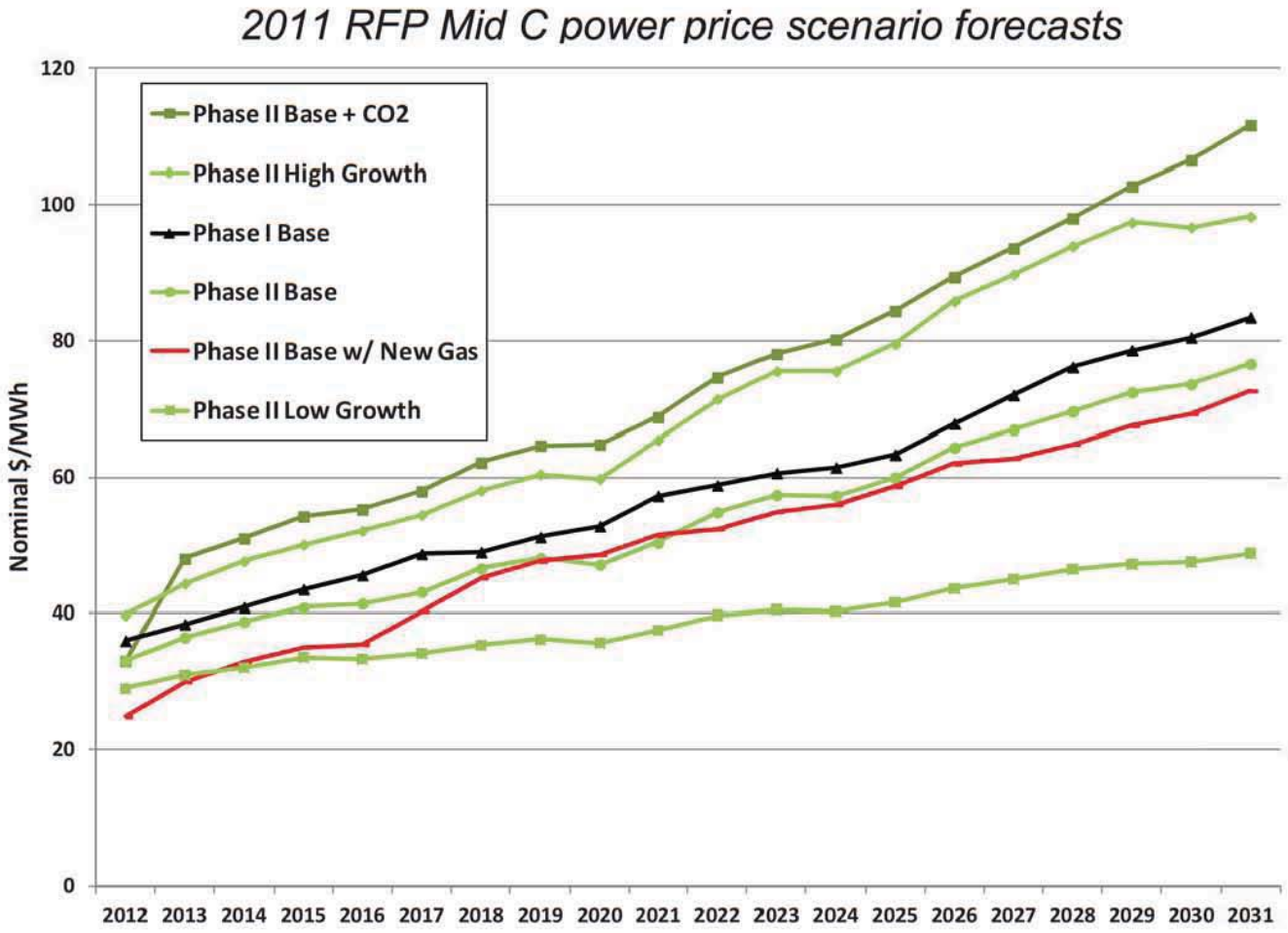
WUTC staff comments 2011 IRP acceptance letter: *"Due to the prolonged recession, we find the 2010-2016 portion of the Low Cyclical forecast as plausible, and urge the Company to give adequate weight to this forecast as it acquires additional resources during this time period."*

Note: F2012 baseline reflects loss of Jefferson County April 2013

Change in Mid C power prices



2011 RFP Electric prices



Draft qualitative assessment

DRAFT for discussions purposes; subject to change based on final findings

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[redacted] **(#11112)**	+	-	-	o	o	- No firm transmission; short-term supply
[redacted] **(#11118)**	+	+	o	o	o	+ Operational flexibility; Long-term supply
[redacted] **(#11103)**	-	-	o	o	+	- High cost; capacity need (2016)
[redacted] **(#11113)**	o	-	o	-	o	- Renewable need (2020); Community issues
[redacted] **(#11117)**	+	o	-	o	o	- Change in control risk; Y2016 resource
[redacted] **(#11117)**	o	-	-	o	o	- Change in control risk; Transmission does not match operational flexibility
[redacted] **(#11126)**	+	+	?	o	o	+/- Flexible products; however, uncertain of value for long-term; Ties up transmission at [redacted]
[redacted] **(#11116)**	-	o	-	o	o	- High cost for capacity; Development, counterparty & fuel risk
[redacted] **(#11127)**	?	+	?	o	o	- Price unknown
[redacted] **(#11110)**	+	o	-	o	o	-Short-term supply
[redacted] **(#11124)**	+	+	o	+	o	+ Asset-backed fixed price; Long-term Supply; System benefits; QF

REDACTED VERSION

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KEY:

+	A key advantage relative to other candidate short list proposals
-	A key disadvantage relative to other candidate short list proposals
o	Neither a key advantage or disadvantage relative to other candidate short list proposals

Quantitative screening metrics definitions

- **Portfolio Benefit** ($): difference between the net present value portfolio revenue requirement of a proposed project, and the net present value portfolio revenue requirement of the generic portfolio strategy. (Higher is better.)

- **Levelized Cost** ($/MWh): level annual revenue requirement equivalent to the net present value revenue requirement based on a 20-year analytic period including end effects divided by the level annual generation equivalent to the net present value of generation for the 20 year period. (Lower is better.)

- **Portfolio Benefit Ratio:** *portfolio benefit* divided by the present value of the proposed project revenue requirement. (Higher is better.)

- **Net cost per unit of contribution to need** ($/kW-yr): difference between the project revenue requirement and the market revenue of the project's net generation divided by the capacity contribution. If a renewable project is being considered, then the numerator is divided by its annual contribution to PSE's renewable energy target. (Lower is better.)

- **Levelized *portfolio benefit* per unit of contribution to need** ($PB/kW-yr): a project's *portfolio benefit* divided by the present value of the project's capacity contribution. If a renewable project is being considered, then the numerator is divided by its annual contribution to PSE's renewable energy target. (Higher is better.)

Additional screening metrics for individual project evaluations (draft)

- Base with New Gas Price Scenario

Benefit Ratio Ranking - Toll PPA/Dispatchable Ownership

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking	Levelized Cost
[redacted]	2.49	1	[redacted]
[redacted]	0.18	2	
Self Build Peaker[redacted]	0.05	3	
[redacted]	0.00	4	

Benefit Ratio Ranking - Fixed/Index Price PPA

Project Name	Portfolio Benefit Ratio	Benefit Ratio Ranking	Levelized Cost
[redacted]	0.27	1	[redacted]
[redacted]	0.24	2	
Trans Alta PPA	0.13	3	
[redacted]	0.05	4	
[redacted]	(0.03)	5	
[redacted]	(0.08)	6	
[redacted]	(0.48)	7	

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PSE PUGET SOUND ENERGY

Proposed short list (Draft)

Staff Recommendation	RFP ID	Proposal	Structure	Fuel Type	Size (MW)	Term
RFP Proposals[1]						
Short List	11102	**Centralia** *TransAlta*	PPA	Coal	up to 500	1/1/12-12/31/25
Short List	11117	[redacted]	winter PPA	NatG-SCCT	[redacted]	11/1/16-2/28/21
Short List	11124	[redacted]	PPA	NatG-CCCT	[redacted]	12/1/12-11/30/22
Continue to Investigate	11126	[redacted]	winter on-peak PPA / exchange	System	[redacted]	[3]
Not Selected	11112	[redacted]	PPA	System	[redacted]	11/1/12-12/31/16
Not Selected	11118	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Not Selected	11103	[redacted]	ownership	NatG-CCCT	[redacted]	n/a online
Not Selected	11113	[redacted]	PPA	Wind	[redacted]	1/1/13-1/1/38
Not Selected	11117	[redacted]	winter PPA	NatG-CCCT	[redacted]	2/1/13-3/31/22
Not Selected	11116	[redacted]	PPA with RECs	Biomass	[redacted]	12/1/13-12/1/38
Not Selected	11110	[redacted]	PPA	System	[redacted]	1/1/13-3/31/17

NOTES:

1- [redacted] withdrew their offer of a Market PPA during Phase 2 of the evaluation. No price was ultimately proposed.

2 - Proposal offered up to 300 MW of capacity; however, transmission constraints limit delivered capacity to 134 MW.

3 - During Phase 2, PSE analyzed two 10-year temporal exchange product offers from this counterparty with the following term options: 7/1/13-2/28/23 or 7/1/15-2/28/25

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2011 RFP Short List Selection

Presented to PSE's Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

June 12, 2012

Short List Selection

PUGET SOUND ENERGY

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Coal Transition PPA: *TransAlta Centralia Generation, LLC*

- Facility: Operating 1340 MW coal facility located in Centralia, WA
- Product/Size: Firm, flat (7x24) power delivered to PSE; 125 MW increasing to 498 MW over term
- [redacted] [redacted]
- 1st Yr PPA Price: [redacted] MWh[1] (does not include equity component)
- Key Benefits: (i) long-term fixed price; (ii) ramps to match PSE's capacity need; (iii) recognized as public policy resource preference by the State of Washington; (iv) strong public support

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[redacted]

(1) Price escalates over term

Key Considerations

PUGET SOUND ENERGY

- Analysis period extended to consider latest market assumptions
  - Used new F2012 load forecast (April 17, 2012) for a more current economic outlook
  - Updated natural gas price forecasts; 3-month average forward marks as of April 19, long-term as of April 24, 2012
- Transmission solutions important
  - Prefer resources that demonstrated an ability to secure long-term firm transmission to PSE's system
- Renewable need filled until 2020+
  - Practical result is renewable resources assessed based on their competitiveness with other resources, based on relative value of capacity, energy, though benefit of deferring additional renewable resource additions beyond 2020 was reflected in analysis.
- Legal constraints of RCW 80.80 (Emissions Performance Standard) limits non-resource specific PPAs to less than 5 years
  - Evaluating competitiveness of shorter-term resources may be more appropriately addressed by PSE's portfolio hedging group which may be able to obtain more competitive offers with lower transaction costs and risks
- Valuation of resource alternatives shows things are close
  - Quantitative analysis demonstrates that resources are relatively close to each other in terms of economics (small changes to price, size, timing, or PSE's capacity need impact the combination of resources being selected); the qualitative analysis combined with the quantitative results determine the resource strategy

Evaluation Summary

PSE PUGET SOUND ENERGY

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Status	Proposal	Quantitative summary	Qualitative summary
Selected	**Coal Transition (Centralia) PPA** TransAlta (#11102) Start: 2012 Term: 13-yrs Size: ramps up to 498 MW	▪ Least cost in 4 of 5 scenarios ▪ Lowers risk of portfolio costs ▪ Positive economic benefits; competitive levelized cost; high portfolio benefit/kW ▪ Benefits of long-term physical fixed price increases with rising power costs ▪ Best match to PSE's growing capacity need	▪ Provides long-term physical firm energy in addition to capacity ▪ Firm power backed by physical asset, [redacted] ▪ 498 MW of long-term firm transmission secured for contract term ▪ Counterparty accepts [redacted] ▪ Strong counterparty (BBB S&P credit rating) with long history of international owner/operator performance ▪ Consistent with and supportive of state policy goals and is supported by public ▪ Opportunity may be lost if not pursued now considering to the MOA between the state and TransAlta
Selected	[redacted] (#11117) [redacted]	▪ Least cost in 4 of 5 scenarios ▪ Top ranked proposal based on screening model results ▪ Attractively priced winter-only "heat rate call option" ▪ Fits into future capacity need	▪ Strong counterparty relationship; extends existing contract at same terms ▪ Timing allows ability to continue [redacted]
Selected	[redacted] (#11124) [redacted]	▪ Least cost in 3 of 5 scenarios ▪ Positive economic benefits; competitive levelized cost ▪ Benefits increase with rising costs ▪ Creates capacity surplus for first four years	▪ Strong counterparty relationship with low risks ▪ Provides grid system benefits [redacted] ▪ [redacted] may create opportunity to negotiate better terms

Notes:
(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker
(2) For additional description of benefits and risks, see RFP Executive Summary

Evaluation Summary (cont.)

PUGET SOUND ENERGY

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Status	Proposal	Quantitative summary	Qualitative summary
Not selected	[redacted] (#11118)	▪ [redacted]	[redacted]
Not selected	[redacted] (#11103)	▪ Least cost in no scenarios ▪ Other RFP alternatives have more favorable economics ▪ Size would produce substantial surplus until 2016	▪ Existing facility will likely face uncertainty because [redacted]
Not selected	[redacted] (#11123)	▪ Least cost in 2 of 5 scenarios ▪ Positive economic benefits; however, additional analysis is required to evaluate appropriate market premium of energy exchange (shorter-term exchange is offered at only [redacted] premium verses [redacted] for longer-term)	▪ 10-yr deal is complicated by the Emissions Performance Standard ▪ Transmission solution uncertain [redacted] ▪ More competitive pricing could be sought through PSE's portfolio hedging group with lower transaction costs and risks
Not selected	[redacted] (#11110)	▪ Least cost in 3 of 5 scenarios ▪ Economic benefits are negative; short-term PPAs are may be better evaluated through hedging program	▪ Since PPA is required to be less than 5-yrs due to Emissions Performance Standard, the short term trade desk may be able to obtain a more competitive offer with lower transaction costs and risks

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Notes:

(1) One proposal withdrew from the 2011 RFP during Phase 2. Four other proposals selected at the end of Phase 1 for further evaluation were eliminated in Phase 2 prior to the optimization and risk analysis for qualitative reasons. A list of these proposals and the primary reasons they were not selected is included in the appendix.

(2) For additional description of benefits and risks, see RFP Executive Summary

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Resource Strategy

PSE PUGET SOUND ENERGY

- Coal Transition PPA fills immediate and longer term need while not exceeding it and provides protection from higher price market environments
- Coal Transition PPA should be pursued first and immediately
  - [redacted]
  - The Coal Transition PPA requires pre-approval from WUTC in order to be effective (180-day process)
  - Opportunity to pursue Coal Transition PPA may be lost if delayed
- Other short list resources should not be executed until outcome of Coal Transition PPA is known
  - The resource selection mix would change if the Coal Transition PPA is not approved by WUTC
  - Other resource alternatives not selected in RFP may be favored in order to fill PSE's capacity need

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Comparison of Need with RFP Short List[1]	2012	2013	2014	2015	2016	2017	2018	2019	2020
Capacity (Deficit) / Surplus in MW[2]	(129)	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)
Coal Transition PPA	[redacted]								
[redacted] (#11124)									
[redacted] (#11117)									
Remaining Capacity (Deficit) / Surplus in MW									

Notes:

(1) This chart demonstrates how the RFP short list fits into PSE's need and does not suggest that PSE will contract for all proposed resources.

(2) Capacity need does not reflect need for additional operating reserves when new resources are on PSE's system (see chart in appendix for capacity need that includes operating reserves).

(3) [redacted]

(4) Under the F2012 "low load" forecast, the need for 500 MW of capacity shifts from 2015 to 2016.

Next Steps

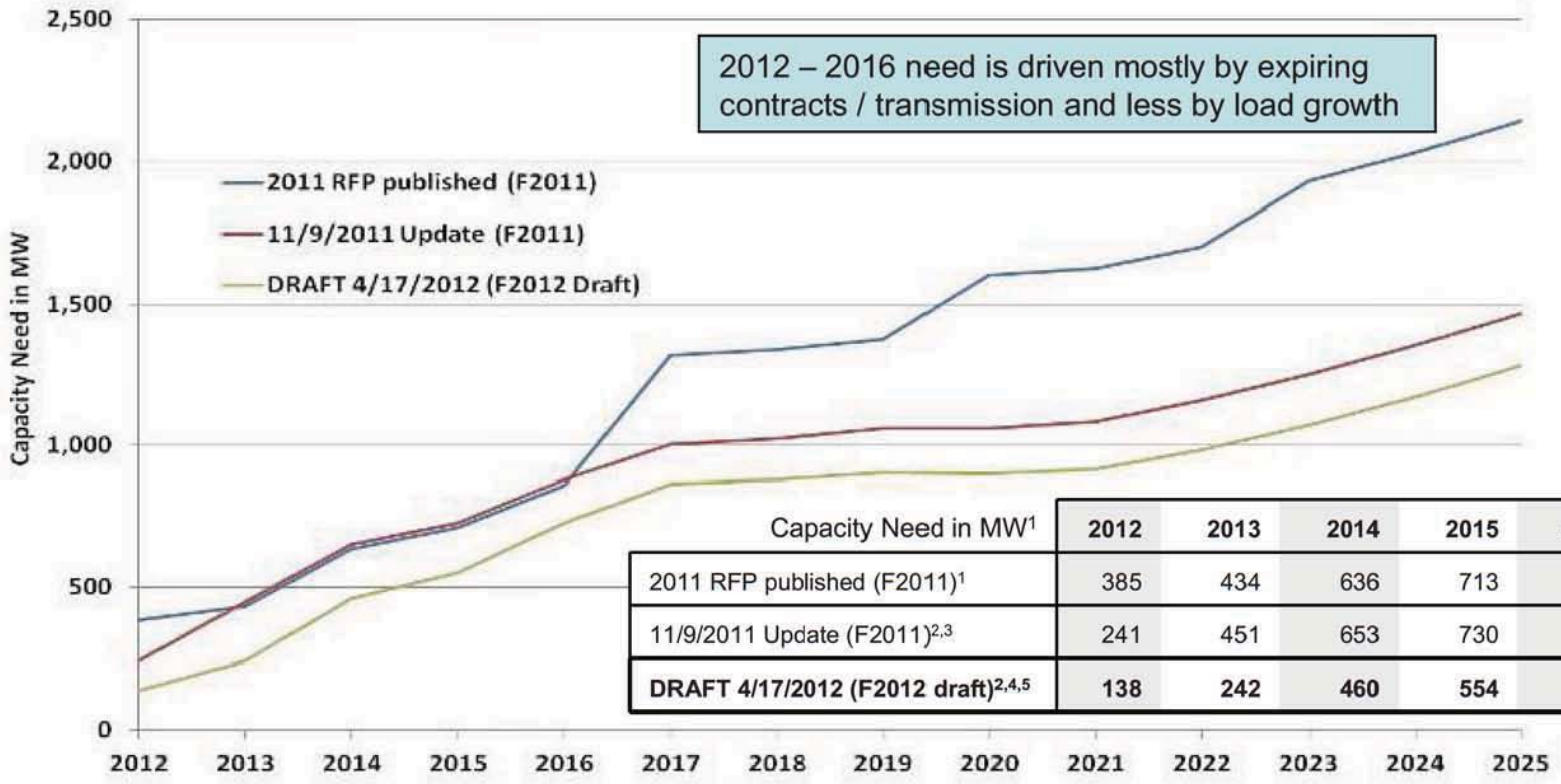
PUGET SOUND ENERGY

- Notify bidders of selection status
- Finalize negotiations with TransAlta for Coal Transition PPA
- Reevaluation of potential new or revised offers
- Seek EMC approval of Coal Transition PPA on June 22, 2012
- Seek Board of Directors approval of Coal Transition PPA on June 28, 2012
- File petition with WUTC seeking pre-approval of Coal Transition PPA by July 3, 2012
- After PSE receives a final, non-appealable order approving or disapproving the Coal Transition PPA, PSE will refresh resource alternatives evaluation and conduct negotiations with other short listed resources

PSE PUGET SOUND ENERGY

Appendix

2011 RFP capacity need (updated from 2011 IRP)



Capacity Need in MW[1]	2012	2013	2014	2015	2016	2017
2011 RFP published (F2011)[1]	385	434	636	713	862	1,317
11/9/2011 Update (F2011)[2,3]	241	451	653	730	879	1,005
DRAFT 4/17/2012 (F2012 draft)[2,4,5]	**138**	**242**	**460**	**554**	**728**	**866**

Notes:

(1) Based on 2011 Integrated Resource Plan; includes a planning reserve margin of 15.7%

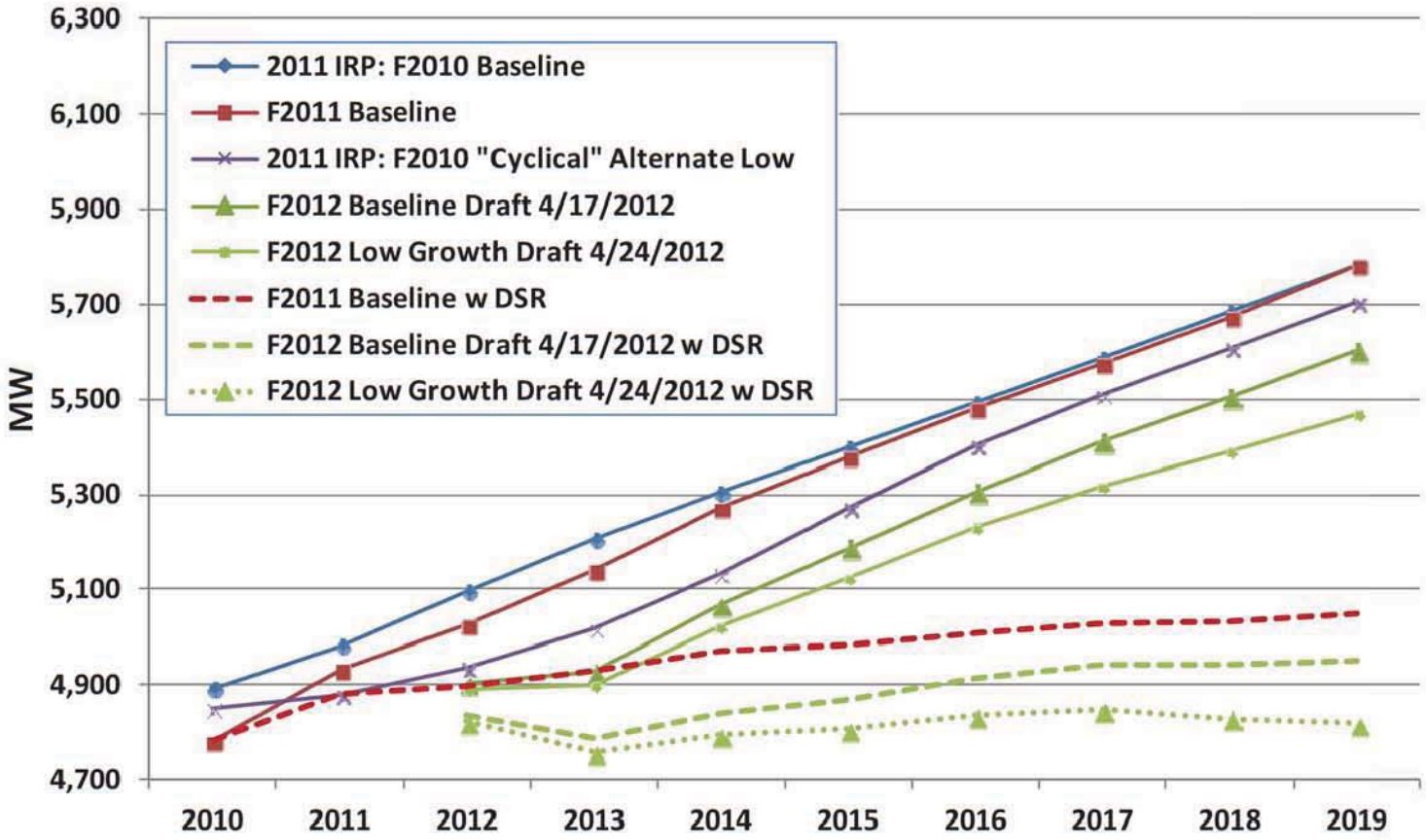
(2) Capacity need reflects need for additional operating reserves if new resources are on PSE's system

(3) Update to need reflects addition of short-term hedges, no existing gas plant retirements, line loss update (presented to EMC on 12/15/2011 and 3/15/2012)

(4) F2012 reflects loss of Jefferson County as of 4/2013, updates of existing gas plant contribution to peak

(5) Final F2012 load forecast shows negligible change to capacity need

Comparison of December peak load forecasts



WUTC comments 2011 IRP acknowledgement letter: *"Due to the prolonged recession in the current economic cycle , we find the 2010-2016 period of the scenario [Low Cyclical forecast] plausible, and urge the Company to give adequate weight to this forecast as it acquires additional resources during this period of time."*

Note: F2012 baseline reflects loss of Jefferson County April 2013

Short-list under Draft F2012 Low load forecast

- Under the "Low Load" scenario the need for 498 MW of Coal Transition PPA shifts out from 2015 to 2016
- Surpluses created by Coal Transition PPA range between 15 and 51 MW through 2015

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Comparison of Need with RFP Short List[1]	2012	2013	2014	2015	2016	2017	2018	2019	2020
Capacity (Deficit) / Surplus in MW:	(110)	(193)	(378)	(447)	(591)	(699)	(693)	(694)	(666)
Coal Transition PPA	125	225	425	498	498	498	498	498	498
[redacted] (#11124)	[redacted]								
[redacted] (#11117)	[redacted]								
Remaining Capacity (Deficit) / Surplus in MW:	[redacted]								
Surplus created by Coal Transition PPA	[redacted]								

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Note: This chart demonstrates how the RFP short list fits into PSE's need and does not suggest that PSE will contract for all proposed resources.

PSE PUGET SOUND ENERGY

Proposals not included in optimization & risk analysis[1]

Proposal	Rationale
[redacted](#11117)	Uncertain transmission solution; change in control risk; [redacted] limits flexibility; as proposed the project economics are less favorable than other RFP alternatives
[redacted](#11112)	No transmission solution (fatal flaw)
[redacted](#11113)	PSE currently has no near-term renewable need; project continues to face community issues from earlier development efforts; [redacted]
[redacted](#11116)	PSE currently has no near-term renewable need; development risk; counterparty risk
[redacted]	[redacted]
[redacted](#11103)	Tolling agreement is higher cost than the ownership offer; potential amendment to the Emissions Performance Standard would impact the costs or limit the sale of power to less than 5 years

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Notes:
(1) [redacted](#11127) withdrew its offer of a Market PPA during Phase II. It was not included in the quantitative analysis.
(2) Since completing the evaluation, counterparty has updated terms and has verbal indicated that the have additional transmission capacity. RFP team will re-evaluate with any revised offers received after notifying bidders.
(3) For additional description of risks and rational, see RFP Executive Summary

Optimization scenario results

- Coal Transition PPA and [redacted] are selected in 4 out of 5 scenarios and both fit well within PSE's capacity need
- Sensitivities show that changes in price offers on other projects could change selections, but the portfolio cost may be similar

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
[redacted] (#11103)						0
PSE Self Build Peaker					X	1
[redacted] #11124)		X		X	X	3
[redacted] #11110)	X	X	X			3
Coal Transition (Centralia) PPA	X	X	X	X		4
[redacted] #11123)				X		1
[redacted] (#11123)					X	1
[redacted] #11123)	X		X			2
[redacted] (#11118)					X	1
[redacted] (#11117)	X	X	X	X		4
Portfolio Cost ($000)	10,151,274	13,491,908	9,858,326	11,097,217	7,966,006	

Notes:
(1) Selection in more scenarios is considered favorable; however, scenarios are not equally weighted
(2) "Base w/ New Gas" scenario reflects most current gas price forecast; proposed "Base" scenario for 2013 IRP
(3) In "Base + CO2" scenario, Coal Transition PPA is tested with a higher PPA price to reflect the increase in market prices between "Base" and "Base + CO2" (see slide 14 for details)
(4) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

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PSE PUGET SOUND ENERGY

Screening model results: "Base w/ New Gas" scenario

- Coal Transition PPA, [redacted] and [redacted] are favorable relative to generic resources and other RFP alternatives in screening analysis

Capacity Proposals	PPA or Ownership	Project Start	Book Life / Contract Term	Levelized Cost $/MWh	Portfolio Benefit $000	Levelized PB / kW	Levelized PB / kW Ranking	Portfolio Benefit Ratio	Levelized Net Cost / kW	Levelized Net Cost / kW Ranking
[redacted] (#11117)	Tolling	2016	6	[redacted]	$ 29,977	[redacted]	1	2.49	[redacted]	1
Coal Transition (Centralia) PPA*	Fixed Price	2012	14		$ 193,260		2	0.13		7
[redacted] (#11123)	Index Price	2016	11		$ 14,303		3	0.27		4
[redacted] (#11123)	Index Price	2014	11		$ 13,114		4	0.24		3
[redacted] (#11124)	Fixed Price	2013	10		$ 11,288		5	0.05		8
[redacted] (#11117)	Tolling	2013	6		$ 14,223		6	0.12		2
[redacted] (#11118)	[redacted]	[redacted]	[redacted]		$ 30,582		7	0.18		5
[redacted] (#11117)	Tolling	2013	11		$ 17,381		8	0.07		6
PSE Self Build Peaker (Frame Tech.)	Ownership	2015	35		$ 13,828		9	0.05		11
[redacted] (#11103)	Ownership	2014	29		$ 12,037		10	0.00		13
[redacted] (#11103)	Tolling	2014	15		$ (25,766)		11	(0.02)		12
[redacted] (#11123)	Fixed Price	2014	5		$ (1,465)		12	(0.03)		10
[redacted] (#11110)	Fixed Price	2013	5		$ (6,125)		13	(0.08)		9
[redacted] (#11116)	Fixed Price	2014	25		$ (12,211)		14	(0.08)		14
[redacted] (#11112)	Fatal Flaw									

Renewable Proposals	PPA or Ownership	Project Start	Book Life / Contract Term	Levelized Cost $/MWh	Portfolio Benefit	Levelized PB / REC	Levelized PB / REC Ranking	Portfolio Benefit Ratio	Levelized Net Cost / REC	Levelized Net Cost / REC Ranking
[redacted] (#11116)	Fixed Price	2014	25	[redacted]	$ 27,408	[redacted]	1	0.1960	[redacted]	2
[redacted] (#11113)	Fixed Price	2013	25	[redacted]	$ 7,833	[redacted]	2	0.0330	[redacted]	1

Coal Transition PPA analysis includes equity component based on PSE's self build peaker

PSM I Metrics Key:

- Results are based on "Base w/ New Gas" price scenario only; Phase II did not evaluate alternative PSM I screening model scenarios.
- A lower number is better for "Levelized Net Cost/kW" and "Levelized Net Cost/kW or "Levelized Net Cost/REC".
- A higher number is better for "Portfolio Benefit", "Portfolio Benefit Ratio", and "Levelized PB/kW" or "Levelized PB/REC".

Quantitative screening metrics definitions

- **Portfolio Benefit** ($): difference between the net present value portfolio revenue requirement with the proposed project in the portfolio replacing an equivalent amount of generic resource, and the net present value portfolio revenue requirement of the all generic portfolio. (Higher is better. Useful for comparing projects with the same winter capacity value or the same contribution to meeting PSE's renewable energy target.)

- **Levelized Cost** ($/MWh): the net present value of the proposed project's revenue requirement divided by the net present value of the proposed project's generation. (Lower is better. Useful for comparing projects that have the same or similar operating characteristics.)

- **Portfolio Benefit Ratio:** *portfolio benefit* divided by the net present value of the proposed project's revenue requirement. (Higher is better. Useful for comparing projects that have the same or similar operating characteristics.)

- **Levelized net cost per unit of contribution to need** ($/kW or $/REC): difference between the net present value project revenue requirement and the net present value market revenue of the project's generation divided by the net present value of the project's capacity contribution. If a renewable project is being considered, then the numerator is divided by the net present value of the project's contribution to PSE's renewable energy target. (Lower is better. Useful for comparing across technologies and size.)

- **Levelized *portfolio benefit* per unit of contribution to need** ($PB/kW or $PB/REC): a project's *portfolio benefit* divided by the present value of the project's capacity contribution. If a renewable project is being considered, If a renewable project is being considered, then the numerator is divided by the net present value of the project's contribution to PSE's renewable energy target. (Higher is better. Useful for comparing across technologies and size.)

AURORA 2011 RFP Phase II Base scenario summary

- Reflects falling natural gas prices, electricity prices, and the abandoned federal legislative efforts for an economy-wide cap-and-trade program.
- The following are the key assumptions sources:
  - Regional Load: NPCC 6th Power Plan Base less Conservation
  - PSE Peaks and Load: F2012 Base load forecast
  - PSE demand-side resources: Consistent with 2011 IRP
  - Natural Gas Price
    - 2012-2015: 3-month average forward marks for period ending Nov. 7, 2011
    - 2016-2031: October 2011 Wood Mackenzie long-run fundamental forecast
  - Resource Costs: Consistent with 2011 IRP
  - CO_2 costs: No price included, includes known regional retirements of coal plants

2011 RFP scenarios and sensitivities

Red text indicates assumptions are different than the Base assumptions.

Base

- PSE F2012 Base load forecast
- Mid Natural Gas Price
- Mid Regional Loads
- No CO_2 Price

High Prices

- PSE F2012 Base load forecast
- High Natural Gas Price
- High Regional Loads
- No CO_2 Price

Base + CO2

- PSE F2012 Base load forecast
- High Natural Gas Price
- Mid Regional Loads
- CO_2 Starts 2013 at $18/Ton

Low Growth

- PSE F2012 Low load forecast (structural)
- Low Natural Gas Price
- Low Regional Loads
- No CO_2 Price

Base w/ New Gas

- PSE F2012 Base load forecast
- Natural Gas Price = Wood Mackenzie April 2012 + 3 month average forward marks ending Apr 19, 2012 (lower than base)
- Mid Regional Loads
- No CO_2 Price

Sensitivity (PSM III Only): Low Price w/ Base load

- PSE F2012 Base load forecast
- Low Natural Gas Price
- Low Growth scenario power price

PSM III optimization scenarios and sensitivities

SCENARIOS	INPUT ASSUMPTIONS: PSE Demand	Gas Price	AURORA Electric Price	Generic Resource Costs	Emissions Price
Base	Base	Base	Base	Base	None
Base + CO2	Base	Base	Base	Base	EPA APA Analysis
Base w/ New Gas[1]	Base	Base + New Gas	Base + New Gas	Base	None
High Prices	Base	High	High	Base	None
Low Growth	Low Structural[2]	Low	Low	Base	None
SENSITIVITY					
Low Price w/ Base Load	Base	Low	Low	Base	None

Notes:
(1) "Base w/ New Gas": New Wood Mackenzie gas prices as of late April 2012
(2) Lower regional population growth

Comparison of Sumas Hub gas price forecasts

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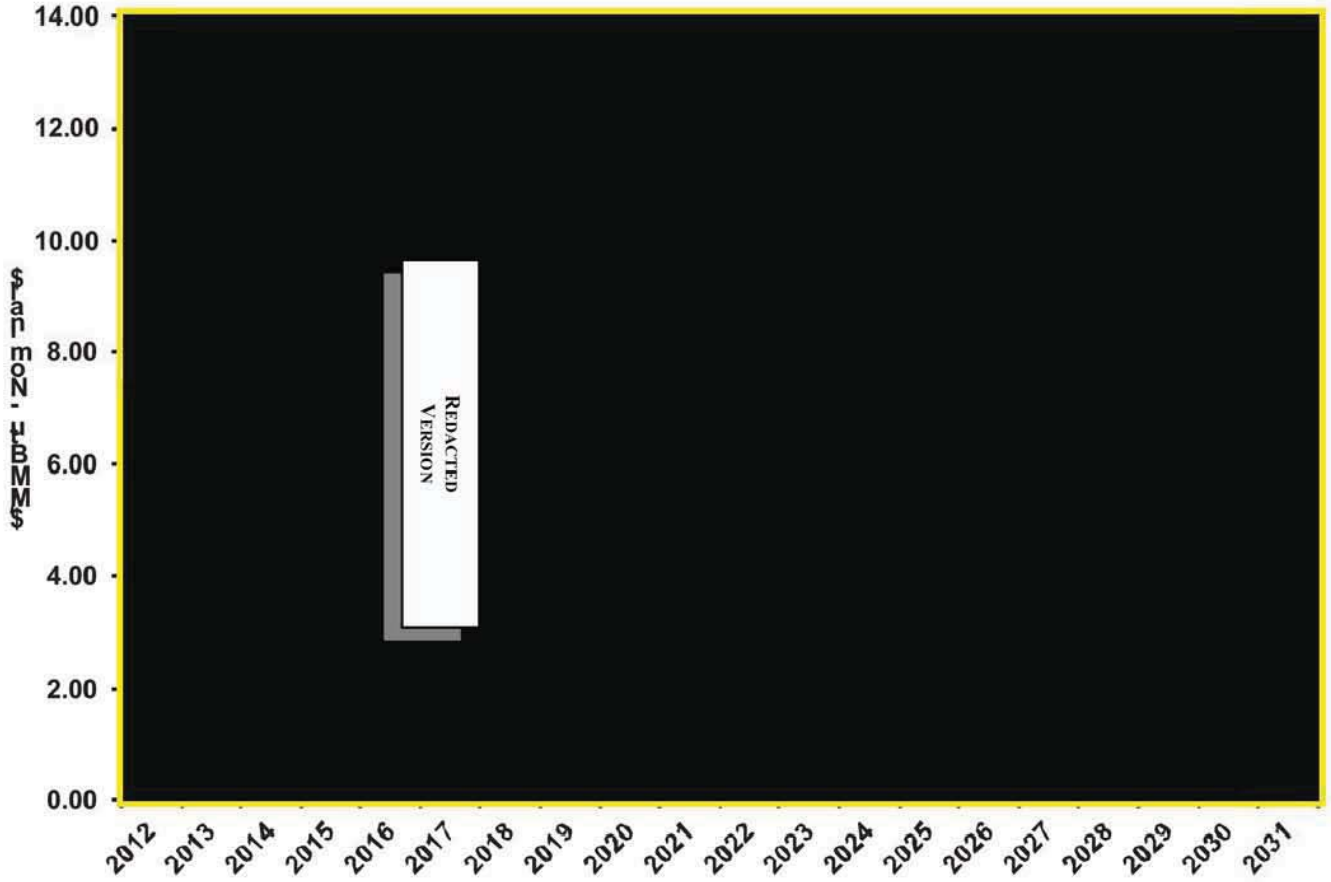
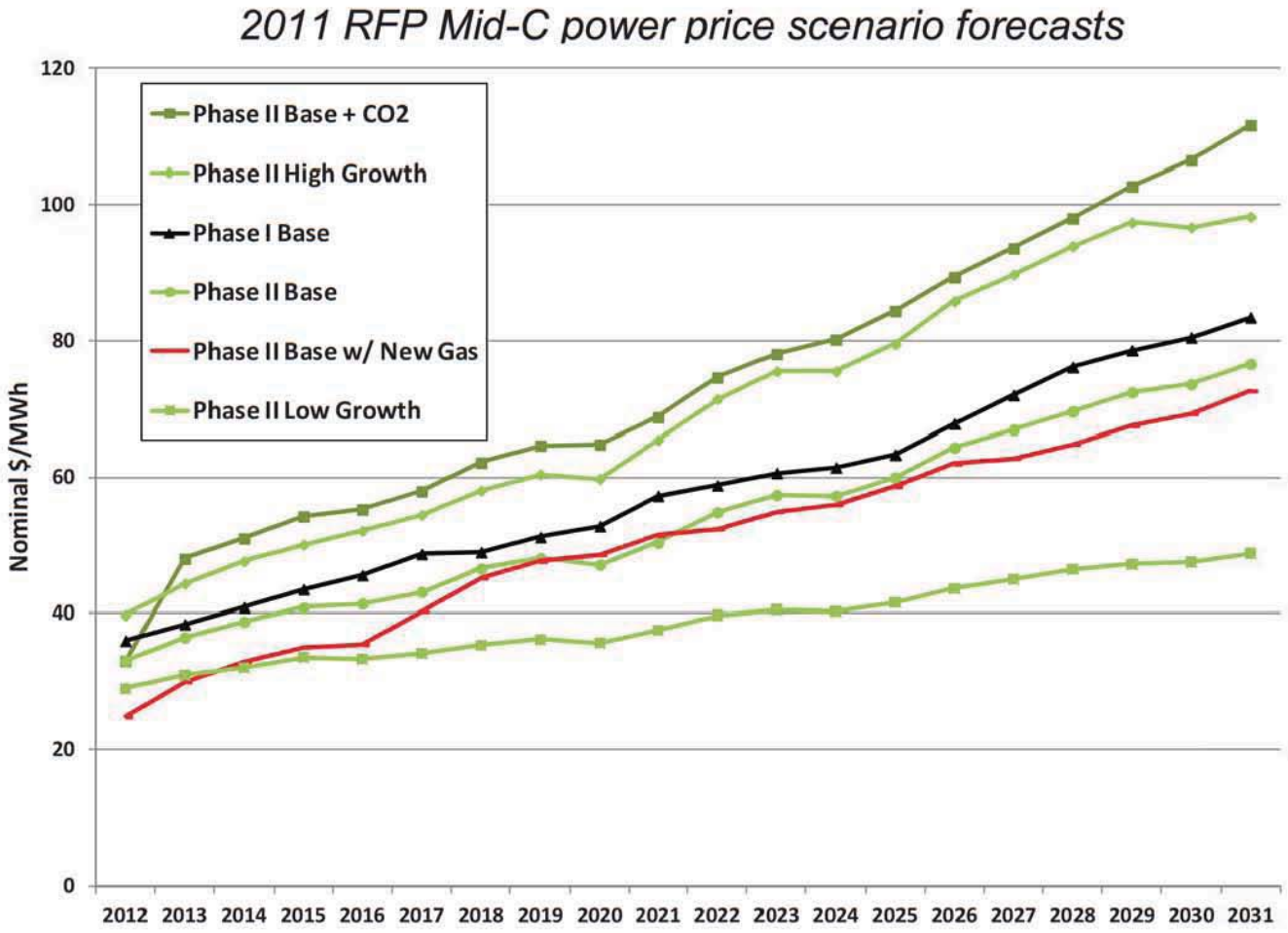


Note: Over the shorter term, the relatively warm 2011-12 winter in North America reduced gas demand, diverted gas to storage, and reduced prices for the 2012 summer and 2012-13 winter.

2011 RFP electric price forecasts



PSE PUGET SOUND ENERGY

Creating the "Base + CO2" scenario

	Nominal $/tCO$_2$e		Mid C Power Price $/MWh		Adder in Base + CO2 scenario
	Base[1]	Base + CO2[2]	Base	Base + CO2	$/MWh
2012	0	0	33.04	33.04	0.00
2013	0	18	36.50	47.98	11.48
2014	0	20	38.78	50.96	12.18
2015	0	21	40.81	54.22	13.41
2016	0	23	41.40	55.24	13.84
2017	0	25	43.09	57.93	14.84
2018	0	27	46.52	62.12	15.60
2019	0	29	48.04	64.62	16.58
2020	0	31	47.12	64.78	17.66
2021	0	33	50.33	68.73	18.40
2022	0	36	54.82	74.57	19.75
2023	0	38	57.36	78.01	20.65
2024	0	41	57.25	80.14	22.89
2025	0	44	59.94	84.36	24.42
2026	0	48	64.33	89.36	25.03
2027	0	51	66.91	93.58	26.67
2028	0	55	69.58	98.01	28.43
2029	0	59	72.38	102.69	30.31
2030	0	64	73.56	106.46	32.90
2031	0	69	76.56	111.61	35.05

The table shows:

- CO_2 price used by PSE in "Base"[1] and "Base + CO2"[2] scenarios
- Mid-C power prices
- Adder included in the evaluation of the Coal Transition PPA, which is the difference in the Mid-C power prices between scenarios

Notes:
(1) "Base" and all other scenarios except "Base + CO2"
(2) Source is EPA's analysis of the American Power Act of 2010

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Optimization sensitivities:

[redacted]

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Scenario	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	Selected in X of 5 Scenarios
[redacted]						5
[redacted] (#11103)						0
PSE Self Build Peaker						0
[redacted] (#11124)			X		X	2
[redacted] (#11110)	X	X	X			3
Coal Transition (Centralia) PPA	X	X	X	X	X	5
[redacted] (#11123)					X	1
[redacted] (#11123)						0
[redacted] (#11123)	X	X				2
[redacted] (#11118)						0
[redacted] (#11117)	X	X	X	X	X	5
Portfolio Cost ($000)						
w/ Centralia price adjustment	[redacted]					
w/ Centralia price as offered	10,151,274	9,858,326	13,491,908	7,966,006	11,097,217	
Increase (Reduction) in portfolio cost with sensitivity	[redacted]					

Notes:

(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) Portfolio does not include Coal Transition PPA

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Optimization sensitivities:

[redacted]

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	Scenario					Selected in X of 5 Scenarios
	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	
[redacted]						5
[redacted](#11103)						0
PSE Self Build Peaker		X		X		2
[redacted](#11124)		X	X	X	X	4
[redacted](#11110)		X	X			2
Coal Transition (Centralia) PPA	X		X		X	3
[redacted](#11123)					X	1
[redacted](#11123)[1]		X		X		2
[redacted](#11123)						0
[redacted](#11118)	X	X	X	X	X	5
[redacted](#11117)	X	X	X		X	4

Portfolio Cost ($000)					
w/[redacted] price reduction	[redacted]				
w/[redacted] price as offered	10,151,274	9,858,326	13,491,908	8,139,571	11,097,217
Increase (Reduction) in portfolio cost with sensitivity	[redacted]				

Notes:

(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) Portfolio does not include [redacted]

Optimization sensitivities:

[redacted]

	Scenario					Selected in X of 5 Scenarios
	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	
[redacted]						5
[redacted](#11103)						0
PSE Self Build Peaker		X		X		2
[redacted](#11124)	X	X	X	X	X	5
[redacted](#11110)	X	X	X	X		4
Coal Transition (Centralia) PPA [1]	X		X		X	3
[redacted](#11123)					X	1
[redacted](#11123)		X		X		2
[redacted](#11123)						0
[redacted](#11118)		X		X		2
[redacted](#11117)	X	X	X	X	X	5

Portfolio Cost ($000)					
w/ [redacted] price reduction	[redacted]				
w/ [redacted] price as offered	10,151,274	9,858,326 [2]	13,491,908 [2]	8,639,987	11,097,217
Increase (Reduction) in portfolio cost with sensitivity	[redacted]				

Notes:

(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) Portfolio does not include [redacted]

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Optimization sensitivities:

Are resources being selected just filling the near term need or do they provide benefits in the long-term?

- If PSE could rely on short-term market purchases until 2015 and current contract opportunities are lost, Coal Transition PPA is selected in 3 of 5 scenarios

	Start	Scenario				
		Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth
[redacted] #11103)	2014		X			
PSE Self Build Peaker	2015					X
[redacted] (#11124)	2012		X		X	
[redacted] #11110)	2013	X	X			
Coal Transition (Centralia) PPA	2012	X		X	X	
[redacted] #11123)	2014				X	
[redacted] #11123)	2014			X		X
[redacted] (#11123)	2016	X	X			
[redacted] (#11118)	2012					
[redacted] #11117)	2013	X	X	X	X	X
Portfolio Cost ($000)		[redacted]				

Note: Coal Transition PPA analysis includes equity component based on PSE's self build peaker

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Sensitivity analysis:

Comparing portfolios with & without Coal Transition PPA (in PSM III)

- Coal Transition PPA provides the biggest portfolio benefits when gas and power prices are higher and is not favorable compared to alternatives in a sustained low growth environment

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	With Centralia	No Centralia
[redacted] #11103)		
PSE Self Build Peaker		X
[redacted] (#11124)		X
[redacted] #11110)	X	X
Coal Transition (Centralia) PPA	X	
[redacted] (#11123)		
[redacted] #11123)		X
[redacted] (#11123)	X	
[redacted] (#11118)		X
[redacted] (#11117)	X	

Portfolio Cost ($000's)	Scenarios				
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth
No Centralia	[redacted]				
With Centralia					
(Benefit)/Cost Portfolio with Centralia	[redacted]				

Notes:

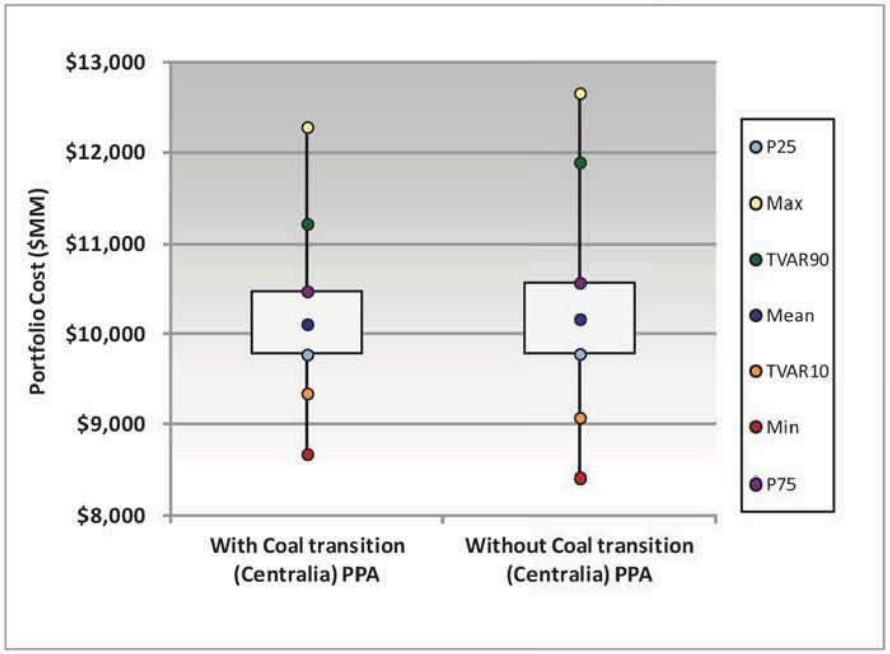
(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) No Coal Transition PPA portfolio is created from "Low Price w/ Base Load" sensitivity.

Risk analysis in RFP Phase II Base scenario:

Comparing portfolios with & without Coal Transition PPA (in PSM III)

- Coal Transition PPA reduces exposure to high prices
- Risk Analysis considers variability in natural gas and power prices (Base, High, Low), wind and hydro generation (historical), and load (Base, High, Low)



	With Centralia	No Centralia
[redacted] (#11103)		
PSE Self Build Peaker		X
[redacted] #11124)		X
[redacted] (#11110)	X	X
Coal Transition (Centralia) PPA	X	
[redacted] (#11123)		
[redacted] #11123)		X
[redacted] (#11123)	X	
[redacted] #11118)		X
[redacted] (#11117)	X	

Portfolio Cost (Revenue Requirement) $MM

	With Coal transition (Centralia) PPA	Without Coal transition (Centralia)
Max	[redacted]	
TVAR90		
P75		
Median		
Mean		
P25		
TVAR10		
Min		
Annual Volatility (%)	24.1%	24.5%

Notes:

(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) No Coal Transition PPA portfolio is created from "Low Price w/ Base Load" sensitivity.

Risk analysis in RFP Phase II Base scenario:

Annual Sumas Price Distribution

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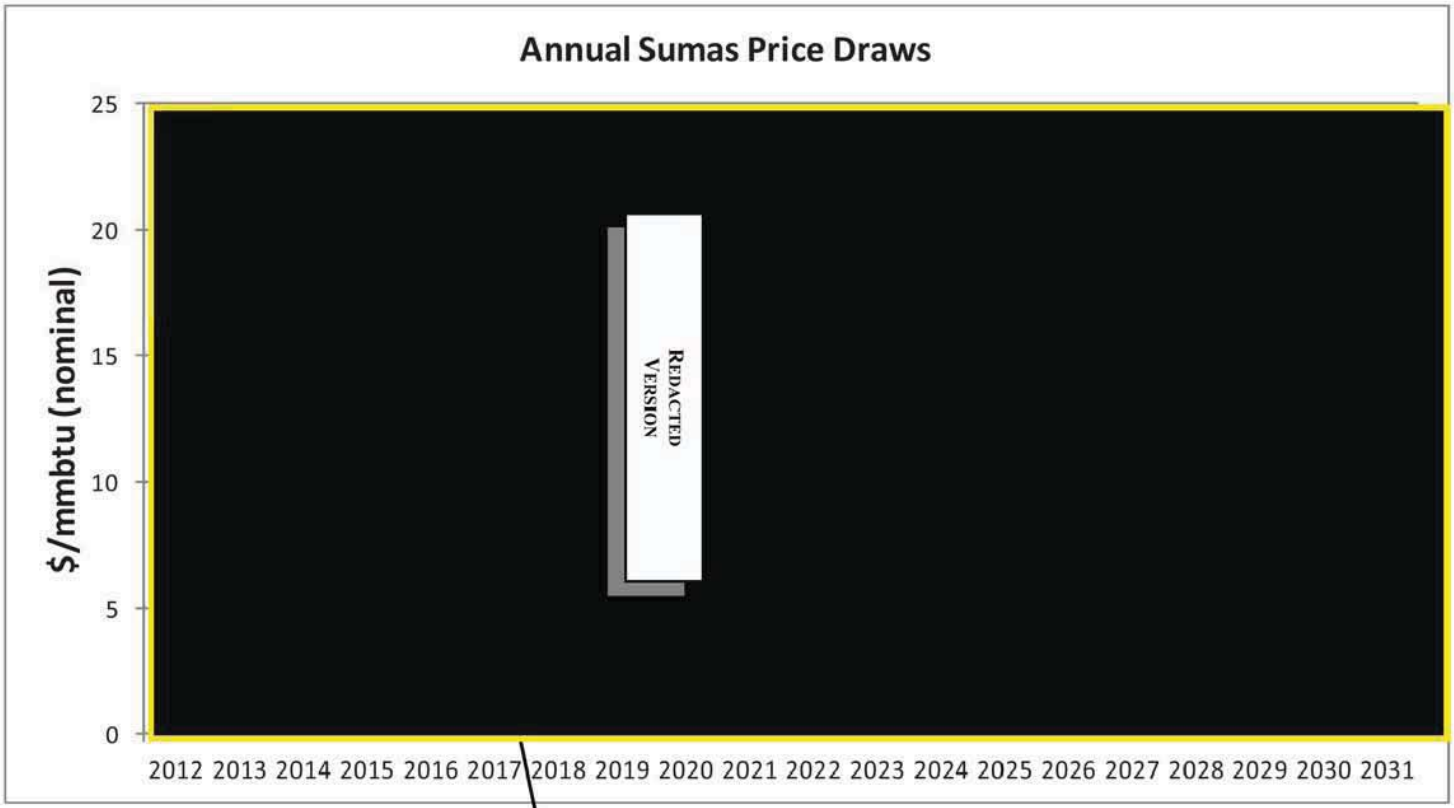
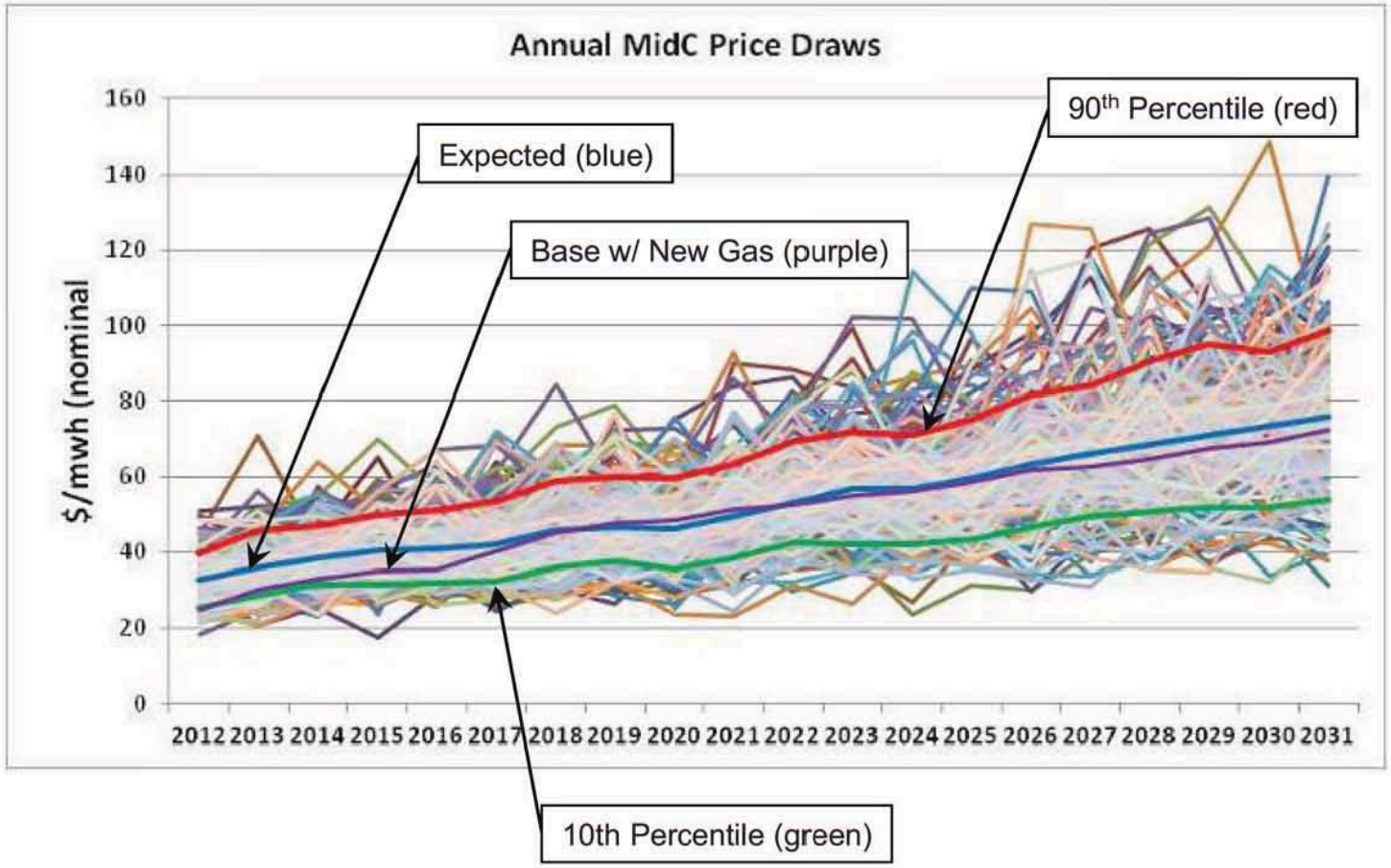


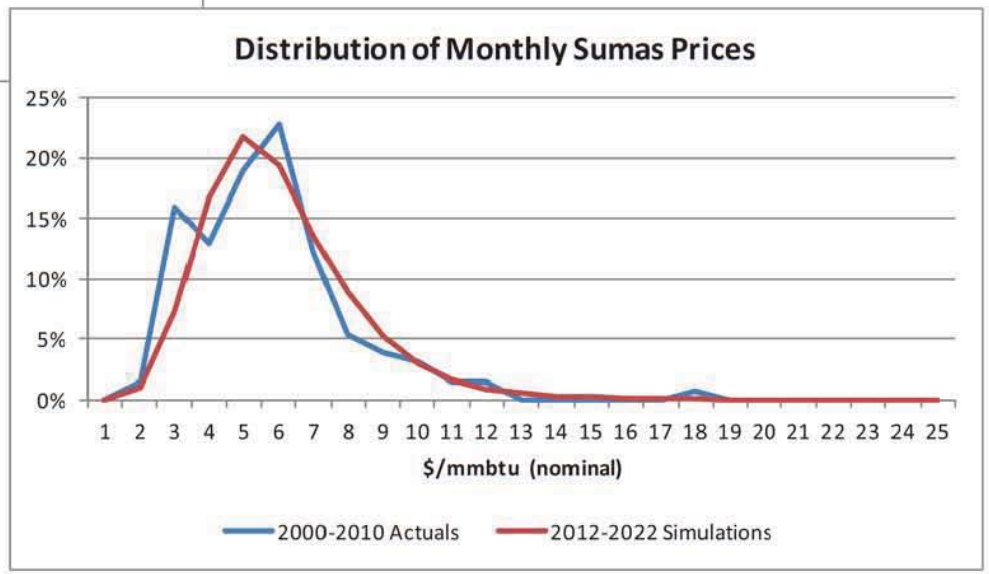
Risk analysis in RFP Phase II Base scenario:

Annual Mid-C Electric Price Distribution



Risk analysis in RFP Phase II Base scenario:

Historical distributions compared to RFP



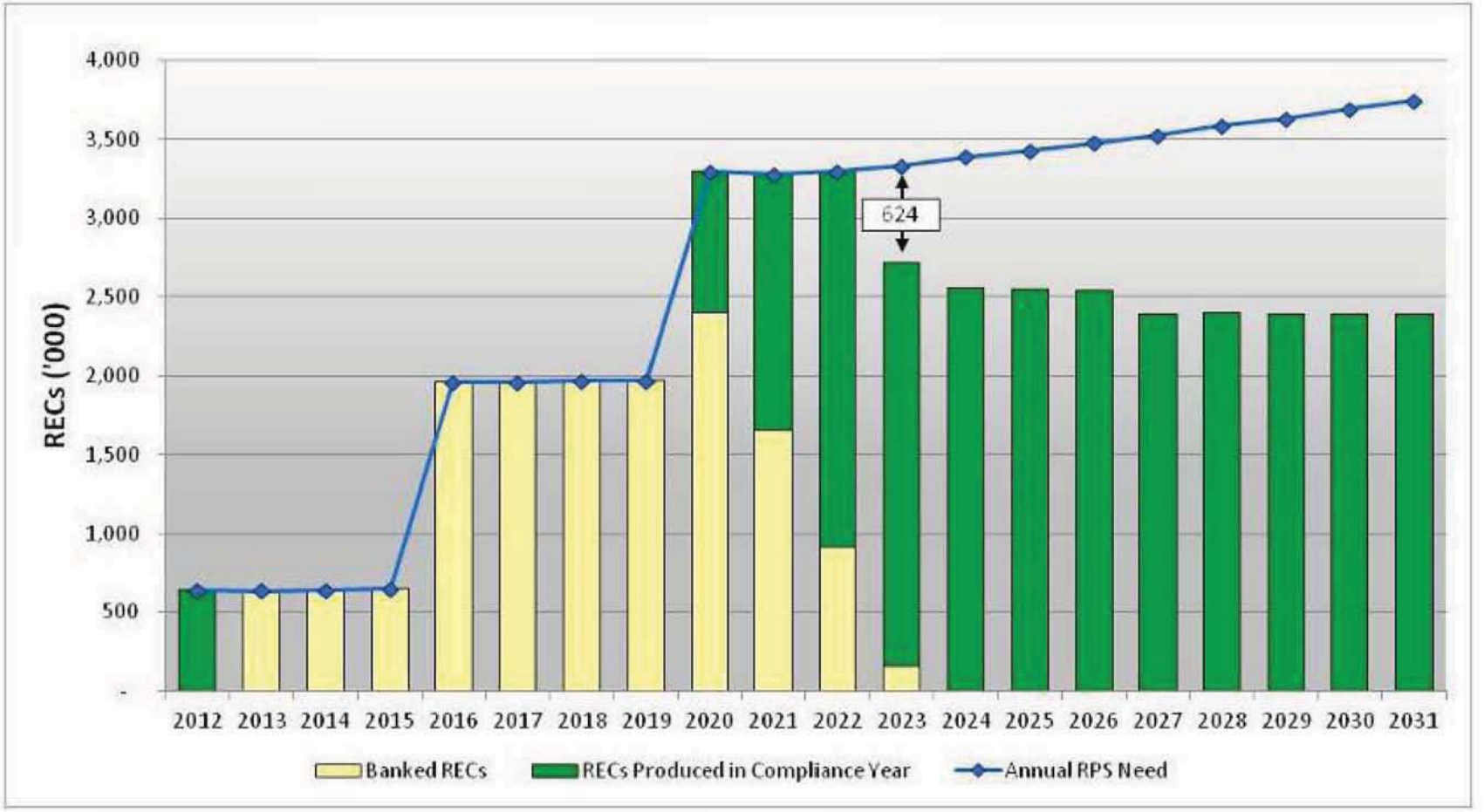
PSE PUGET SOUND ENERGY

REC banking in 2011 RFP Phase II

- Phase II evaluation includes banking RECs from existing resources -- estimated based on P50 generation
- RECs produced from apprentice labor multiplier credits are not bifurcated from underlying REC
- Non-REC eligible generation such as hydro efficiency upgrades are not banked
- RECs not used for compliance in the year they are created, or banked for future year's use are sold at voluntary market price.

REC banking in 2011 RFP Phase II

- Renewable need is shifted from 2020 to 2023 if existing RECs are banked



Coal Transition PPA

Presented to PSE's Energy Management Committee

PUGET SOUND ENERGY

Roger Garratt

Director, Financial Planning & Strategic Initiatives

June 22, 2012

Coal Transition PPA Update

PSE PUGET SOUND ENERGY

- New information requires additional evaluation before the Coal Transition Power Purchase and Sale Agreement ("Coal Transition PPA") can be recommended to management.

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  - Revised prices from RFP participants
  - Potential impact of reduced long-term firm transmission from BPA
  - PSE is negotiating with TransAlta [redacted]

Presentation Outline

- PPA terms & conditions
- Need for resource
- Comparative analysis
- Risks & mitigations
- Benefits
- Appendix

REDACTED VERSION

Terms & Conditions

PSE PUGET SOUND ENERGY

Coal Transition Power Purchase & Sale Agreement

Seller: TransAlta Centralia Generation, LLC

Product:

- Firm, flat (7x24) electrical energy delivered to the Point of Delivery
- Operating reserves [redacted]

Term: Dec 1, 2012[1] – Dec 31, 2025

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Source:

- Centralia Transition Coal Facility (CTCF)
- [redacted]

Point of Delivery (POD):

- Centralia
- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

[redacted]

(1) *Effective date is later of 12/01/2012 or upon WUTC approval*
(2) *Price escalates @* [redacted]

Quantity:

- 125 MWh/hr; Dec 1, 2012 – Nov 30, 2013
- 225 MWh/hr; Dec 1, 2013 – Nov 30, 2014
- 425 MWh/hr; Dec 1, 2014 – Nov 30, 2015
- 498 MWh/hr; Dec 1, 2015 – Dec 31, 2022
- 400 MWh/hr; Jan 1, 2023 – Dec 31, 2024
- 300 MWh/hr; Jan 1, 2025 – Dec 31, 2025

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Price paid to Seller:

- $[redacted]/ MWh; Dec 1, 2012 – Nov 30, 2014
- $[redacted]/ MWh[2]; Dec 1, 2014 – Nov 30, 2020
- $[redacted]/ MWh[2]; Dec 1, 2020 – Dec 31, 2025

Termination (with liability): [redacted]

Termination (without liability):

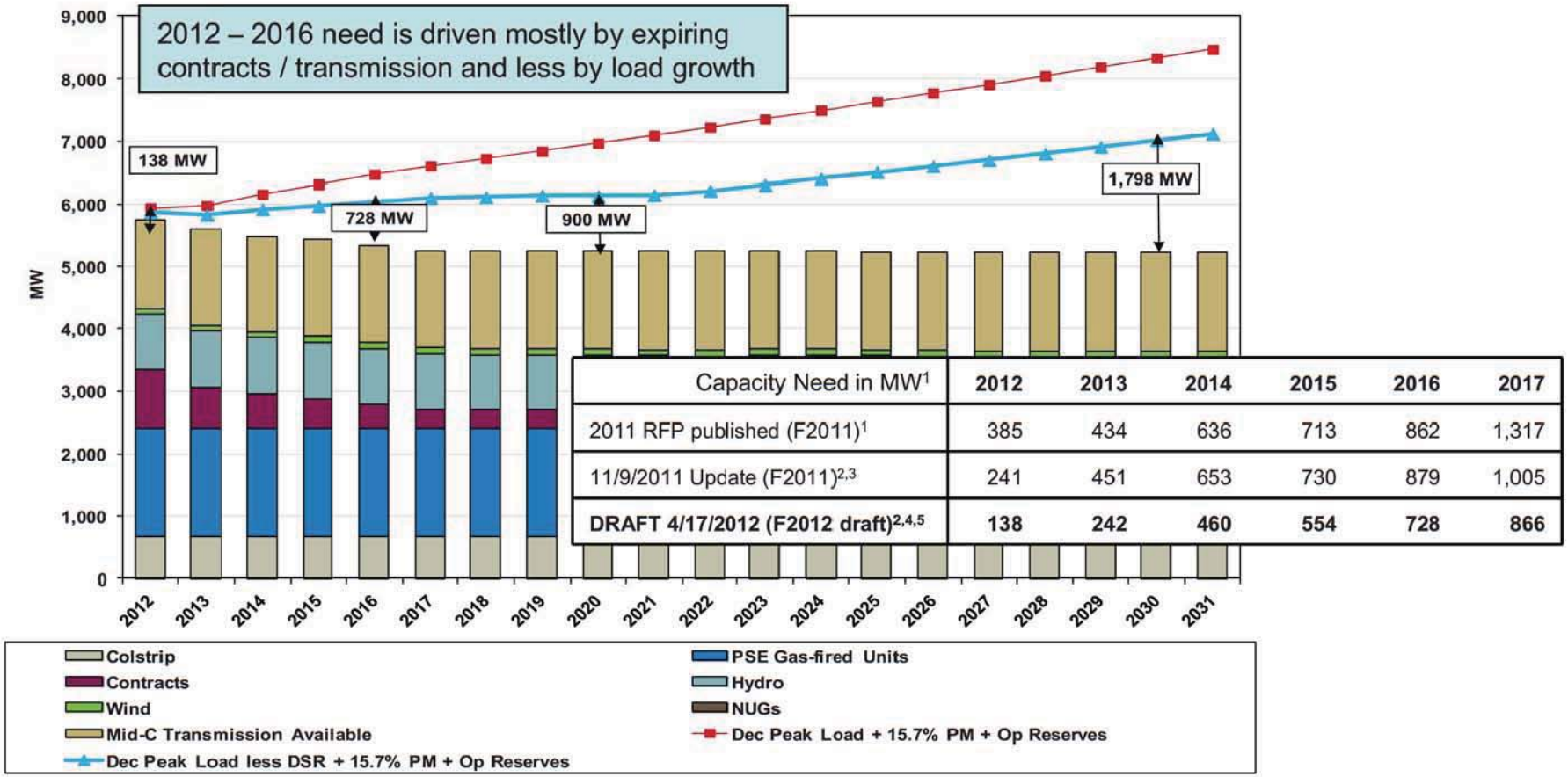
- [redacted]
- [redacted]
- [redacted]

Credit:

- [redacted]

PUGET SOUND ENERGY

2011 RFP capacity need (updated from 2011 IRP)



Capacity Need in MW[1]	2012	2013	2014	2015	2016	2017
2011 RFP published (F2011)[1]	385	434	636	713	862	1,317
11/9/2011 Update (F2011)[2,3]	241	451	653	730	879	1,005
DRAFT 4/17/2012 (F2012 draft)[2,4,5]	**138**	**242**	**460**	**554**	**728**	**866**

Notes:

(1) Based on 2011 Integrated Resource Plan; includes a planning reserve margin of 15.7%

(2) Capacity need reflects need for additional operating reserves if new resources are on PSE's system

(3) Update to need reflects addition of short-term hedges, no existing gas plant retirements, line loss update (presented to EMC on 12/15/2011 and 3/15/2012)

(4) F2012 reflects loss of Jefferson County as of 4/2013, updates of existing gas plant contribution to peak

(5) Final F2012 load forecast shows negligible change to capacity need

2011 RFP Analysis of Alternatives

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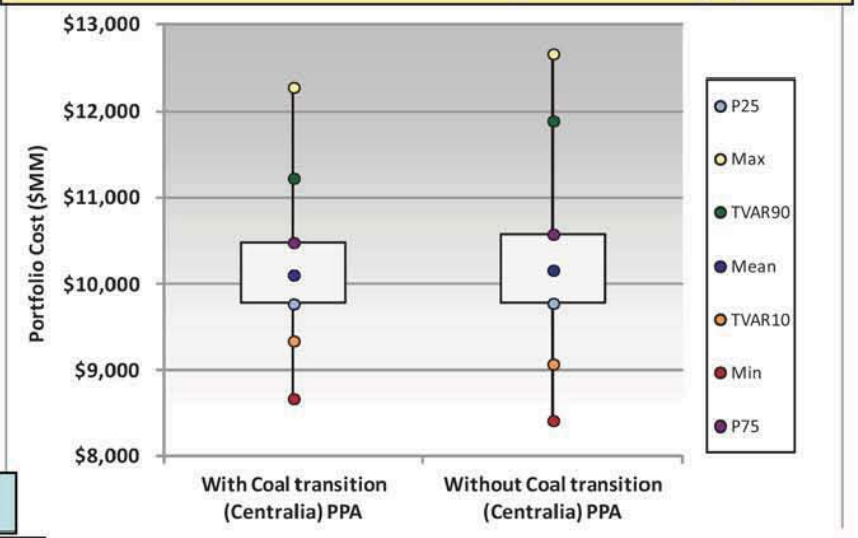
- 2011 RFP sought resources to meet the capacity need
- RFP proposals were subjected to a thorough cross-departmental analysis of qualitative and quantitative attributes
- RFP analysis shows that the Coal Transition PPA, combined with the other short listed resources, represent the lowest cost portfolio with the lowest risk compared to other alternatives

Coal Transition PPA reduces exposure to high prices



Coal Transition PPA lowest cost in 4 out of 5 scenarios

	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
[redacted] (#11103)						0
PSE Self Build Peaker					X	1
[redacted] (#11124)		X		X	X	3
[redacted] (#11110)	X	X	X			3
Coal Transition (Centralia) PPA	X	X	X	X		4
[redacted] (#11123)				X		1
[redacted] (#11123)					X	1
[redacted] (#11123)	X		X			2
[redacted] (#11118)					X	1
[redacted] (#11117)	X	X	X	X		4
Portfolio Cost ($000)	10,151,274	13,491,908	9,858,326	11,097,217	7,966,006	

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Portfolio Cost (Revenue Requirement) $MM

	With Coal transition (Centralia) PPA	Without Coal transition (Centralia)
Max	12,286	12,662
TVAR90	11,227	11,895
P75	10,478	10,574
Median	10,122	10,209
Mean	10,114	10,170
P25	9,778	9,785
TVAR10	9,347	9,077
Min	8,673	8,418
Annual Volatility (%)	24.1%	24.5%

Notes:

(1) Selection in more scenarios is considered favorable; however, scenarios are not equally weighted

(2) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(3) Risk Analysis shows the range of possible portfolio costs considering variability in natural gas and power prices, wind and hydro generation, peaks, and demand

(4) Analysis performed prior to receiving a [redacted] offer from [redacted] on June 22, 2012. (See summary of revised offers on slide 10.)

2011 RFP Evaluation Summary

PSE PUGET SOUND ENERGY

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Status	Proposal	Quantitative summary	Qualitative summary
Selected	**Coal Transition PPA** TransAlta (#11102) Start: 2012 Term: 13-yrs Size: ramps up to 498 MW REDACTED VERSION	• Least cost in 4 of 5 scenarios • Lowers risk of higher portfolio costs • Positive economic benefits; competitive levelized cost; reasonable portfolio benefit/kW • Benefits of long-term physical fixed price increases with rising power costs • Best match to PSE's growing capacity need	• Provides long-term physical firm energy in addition to capacity • Firm power backed by physical asset, [redacted] • 100 MW of long-term firm transmission secured with BPA for contract term after exercising renewal rights in 2016; PSE holds 398 MW of long-term firm transmission (to be confirmed with BPA) • Counterparty accepts [redacted] • Strong counterparty (BBB S&P credit rating) with long history of international owner/operator performance • Consistent with and supportive of state policy goals and is supported by public • Opportunity may be lost if not pursued now considering the MOA between the state and TransAlta
Selected	[redacted](#11117) Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in 4 of 5 scenarios • Top ranked proposal based on screening model results • Attractively priced [redacted] • Fits into future capacity need	• [redacted]
Selected	[redacted](#11124) Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in 3 of 5 scenarios • Competitive levelized cost • Benefits of [redacted] • Creates capacity surplus for first four years	• [redacted]

Notes:

(1) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(2) For additional description of benefits and risks, see RFP Executive Summary

(3) Evaluation performed prior to receiving a [redacted] offer from [redacted] on June 22, 2012. (See summary of revised offers on slide 10.)

Evaluation Summary (cont.)

PSE PUGET SOUND ENERGY

Status	Proposal	Quantitative summary	Qualitative summary
Not selected	[redacted](#11118) Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in only 1 scenario ("Low Growth") • Positive economic benefits; ranks high on "net costs" • Price reductions required to compete with Coal Transition PPA • Size does not fit well if Coal Transition PPA is selected	• [redacted]
Not selected	[redacted](#11103) Proposed Start: [redacted] Modeled Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in no scenarios • Other RFP alternatives have more favorable economics • Size would produce substantial surplus until 2016	• [redacted]
Not selected	[redacted](#11123) Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in 2 of 5 scenarios • Positive economic benefits [redacted]	• [redacted]
Not selected	[redacted](#11110) Start: [redacted] Term: [redacted] Size: [redacted]	• Least cost in 3 of 5 scenarios • Economic benefits are negative; short-term PPAs may be better evaluated through hedging program	• [redacted]

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REDACTED VERSION

Notes:

(1) One proposal withdrew from the 2011 RFP during Phase 2. Four other proposals selected at the end of Phase 1 for further evaluation were eliminated in Phase 2 prior to the optimization and risk analysis for qualitative reasons. A list of these proposals and the primary reasons they were not selected is included in the appendix.

(2) For additional description of benefits and risks, see RFP Executive Summary

(3) Evaluation performed prior to receiving a [redacted] offer from [redacted] on June 22, 2012. (See summary of revised offers on slide 10.)

Risks & Mitigations

PUGET SOUND ENERGY

PPA Risk	Mitigation
• Non-performance	• [redacted]
• Curtailment of facility/transmission	• [redacted]
• GHG standards; Change in law	• [redacted]
• Counterparty default	• [redacted]
• Transmission on PSE System (398 MW) from Centralia	▪ [redacted]
• MOA b/t TransAlta & State	▪ [redacted]
Regulatory Risk	**Mitigation**
• WUTC approval	• PPA is not effective until approved by the UTC; if UTC approves with conditions or decision is overturned, then either Party has right to terminate the PPA
• [redacted]	• [redacted]
Environmental Risk	**Mitigation**
• New GHG (carbon) legislation	• Unlikely new law would be fully realized before 2017; prospect of an economy-wide cap-and-trade program has stalled in Congress • PSE's analysis assumes a straight "pass-through tax" for carbon costs based on valuation of CO2 and shows moderate risk for cost impacts
• New environmental requirements	• [redacted] • New laws or rules typically take up to 5+ years to implement • Potential state support of Centralia in negotiations with EPA as a result of new law

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RFP evaluation shows benefits

PSE PUGET SOUND ENERGY

Low cost / risk resource to meet PSE's capacity need…

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- Project economics associated with the PPA are positive;
  - Least cost in 4 of 5 scenarios
  - Lowers risk of portfolio costs
  - Analysis suggests significant portfolio benefit
- Provides physical, long-term flat firm power delivered to PSE's system;

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- Existing resource with demonstrated reliable operating history
- Volumes increase over the first several years to closely match PSE's capacity need

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- Coal transition power has strong public, local community, environmental groups and government support
- Strong counterparty (BBB S&P credit rating);
- Fixed price structure provides hedge against rising power costs and stability compared natural gas tolling resources
- [redacted]
- State law recognizes coal transition power as a public policy resource preference
- Helps the state achieve GHG reduction goals

Note:
(1) Evaluation performed prior to receiving a [redacted] *offer from* [redacted] *on June 22, 2012. (See summary of revised offers on slide 10.)*

Revised RFP offers

PUGET SOUND ENERGY

Price refresh date	Type	Project / Owner	State	Capacity (MW)	Term	New price
5/3/2012	NatG-CCCT	[redacted] (#11117)	[redacted]	[redacted]	[redacted]	(1)
5/17/2012	NatG-CCCT	[redacted] (#11103) [redacted]	[redacted]	[redacted]	[redacted]	$[redacted] million
6/22/2012	NatG-CCCT	[redacted] (#11118) [redacted]	[redacted]	[redacted]	[redacted]	$[redacted] million (2)

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(1) [redacted] restructured their offer to a [redacted]

(2) [redacted] was not offered in the original proposal

Appendix

- History of events
- Facility & counterparty
- Regulatory process
- Sample equity return calculation
- Quantiative Revisions after June 12, 2012 EMC
  - PSM I updates
- Next steps

History of Events

PSE PUGET SOUND ENERGY

…provide for the reduction of GHG emissions…

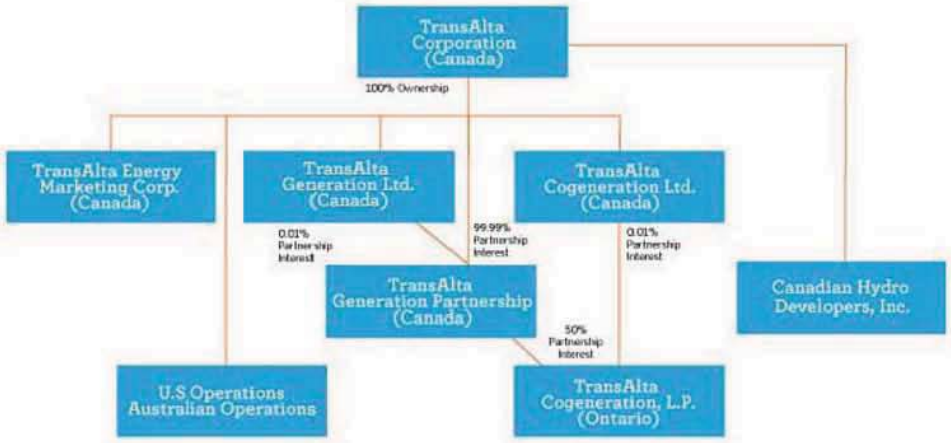
Date	Event
Apr 26, 2010	Memorandum of Understanding ("MOU") between TransAlta and the state of Washington executed
Nov 2010	TransAlta initiated discussions with PSE for a potential purchased power agreement ("PPA")
Apr 2011	State Legislature passed Engrossed Second Substitute Senate Bill 5769 ("E2SSB')
Aug 1, 2011	PSE filed draft Request-for-Proposals ("RFP")
Oct 17, 2011	Utilities and Transportation Commission ("UTC") approved draft RFP; PSE filed final RFP
Nov 1, 2011	RFP bids were due to PSE
Dec 23, 2011	Memorandum of Agreement ("MOA") between TransAlta and the state of Washington executed
Apr 2012	PSE updates capacity need forecast and new gas price forecast
June 12, 2012	PSE issues short list
Jun 22 / 28, 2012*	EMC and BOD receive recommendation to enter into Centralia PPA
Jul 3, 2012*	Seek pre-approval and cost recovery
Dec 31, 2012	Annual payments set forth in MOA begin, if TransAlta has secured a long-term contract

**Expected timing*

PSE PUGET SOUND ENERGY

TransAlta Centralia Generation, LLC

- Located in Lewis County, Washington
- Centralia Coal Plant is Washington State's largest baseload power source—generates 10% of Washington's power
- Coal fuel supply delivered by train from the Powder River Basin in the U.S. Midwest
- Capacity: 1340 MW
- On-line date: 1971
- 100% owned & operated by TransAlta



TransAlta Corporation (parent company)

- Canada's largest publicly traded wholesale power generator & marketer with over 100 years of operating experience
- Over 8,000 MW positioned in Canada, Western U.S. and Australia
- Listed on Toronto and New York stock exchanges

Regulatory Process

PUGET SOUND ENERGY

- PSE must file a petition for approval of the Coal Transition PPA, including supporting testimony and exhibits. The petition will seek:
  - (i) approval of and prudence of the Coal Transition PPA
  - (ii) determination of the equity component associated with the Coal Transition PPA
  - (iii) deferral of the difference between the costs of Coal Transition PPA and market power included in rates

- The WUTC must act on the petition within 180 days from the date of filing of the petition for approval. PSE anticipates requesting that the WUTC expedite the hearing of the petition and request that the WUTC act on the petition within 150 days from the date of filing of the petition for approval. Below is a projected schedule of an expedited proceeding

PSE's Prefiled Direct Testimony	July 3, 2012
Staff, Public Counsel, and Intervenor Response Testimony	September 21, 2012
PSE Rebuttal Testimony	October 5, 2012
Evidentiary Hearing	October 22 – 25, 2012
Simultaneous Initial Briefs	November 6, 2012
Simultaneous Reply Briefs	November 13, 2012
Requested Effective Date	November 30, 2012

- If the WUTC does not issue a final order within 180 days from the date of filing of the petition, or if the WUTC disapproves the petition, the Coal Transition PPA is null and void. If the WUTC were to approve the Coal Transition PPA upon conditions other than those set forth in the petition, PSE has the right to reject the agreement.

Deferral & Equity Component

PUGET SOUND ENERGY

- PSE will request for deferral of the amount by which the costs associated with the Coal Transition PPA exceed the power costs currently included in rates
  - cost of equity component will be included in power costs as part of the PPA costs
  - full cost of PPA will run through the PCA mechanism
  - cost of equity component will be adjusted within the PCA mechanism similar to other adjustments i.e. disallowances except the signs would be reversed so that the equity component does not pass through the reserve calculation
  - The deferral will reduce power costs until the Coal Transition PPA is included in rates.

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- If the Commission were to approve the Coal Transition PPA, PSE would be permitted "to earn the equity component of its authorized rate of return in the same manner as if it had purchased or built an equivalent plant and to recover the cost of the coal transition power under the power purchase agreement." (RCW 80.04.570(6)(a))

- The cost of an equivalent plant:
  - is the least cost purchased or self-built electric generation plant with equivalent capacity,
  - is calculated in dollars per kilowatt, and
  - must be determined in the original process of Commission approval of the Coal Transition (Centralia) PPA.

  (RCW 80.04.570(6)(b))

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- The equivalent plant must be amortized over the life of the Coal Transition PPA to determine the recovery of the equity value (RCW 80.04.570(6)(c))

- PSE will propose using generic self build peaker in 2011 RFP process
  - $[redacted]kW, which results in an equity component of approximately $4.5/MWh

Equity Component Example

PUGET SOUND ENERGY

Simplified Example for Demonstration Purposes Only

- To forecast an equity return on a Coal Transition PPA:
  - Calculate the equity return PSE is allowed to earn on an equivalent plant (e.g. RFP self-build peaker) amortized over the term of the PPA
  - Unitize the equity return by dividing the net present value (NPV) of the equity return over the term of the PPA
  - Multiply the unitized equity return by the projected Coal Transition PPA capacity
- The example on the right shows the levelized equity return unitized in MW per hour and would be multiplied to the energy (MWh) of a Coal Transition PPA.

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Assumptions Used to Find an Equity Return on an Equivalent Plant

100	Capacity of an Equivalent Plant (MW)
$ [redacted]	Capital Cost Equivalent Plant ($/kW)
$ [redacted]	Capital Cost Equivalent Plant ($MM)
13	PPA Term
7.80%	WACC and Discount Rate
9.80%	Equity Cost
48.0%	Equity Ratio
7.24%	Weighted Pre-tax Equity Return (Revenue Required)

In $MM per 100MW					
Year	Plant	Depr	Net Plant	Avg Net Plant	Equity Return
0	[redacted]		[redacted]		
1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
9	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
11	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
12	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
13	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
				Nominal Total Equity Return	$ [redacted]
				Net Present Value of Equity Return	$ [redacted]
				Levelized Equity Return (Annual)	$3.9

Levelized Equity Return	$39.2	per kW - annually
Levelized Equity Return	$3.3	per kW - monthly
Levelized Equity Return	**$4.5**	**per MWh**

Notes:

(1) Table does not reflect revenue-sensitive taxes.

(2) The proposed methodology may or may not be the final methodology approved by the WUTC. However, this approach is similar to that shared with the WUTC at the time that the law was being finalized.

PSE PUGET SOUND ENERGY

Appendix

- Revisions after June 12, 2012 EMC
  - PSM I updates
- Next steps

Screening model results have updated market purchase costs

- The screening model results have been updated since the EMC meeting on June 12, 2012 to correct an overstatement of market purchase costs which included the doubling up of transmission costs. This change does not change the selection of resources in Phase 2, since PSE relied upon the qualitative review and all quantitative results.

- This review of the PSM I model led to the discovery that the PSM III optimization model does not include transmission costs with market purchases.

PUGET SOUND ENERGY

Revised screening model results: "Base w/ New Gas" scenario

- Selection to short-list was based on qualitative and quantitative results, while PSRC PPA is less favorable compared to generics in the revised results; it is selected in 3 of 5 scenarios in the Optimization model.

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REDACTED VERSION

Capacity Proposals	PPA or Ownership	Project Start	Book Life / Contract Term	Levelized Cost $/MWh	Portfolio Benefit $000	Levelized PB / kW	Levelized PB / kW Ranking	Portfolio Benefit Ratio	Levelized Net Cost / kW	Levelized Net Cost / kW Ranking
[redacted](#11117)	Tolling	[redacted]	[redacted]	[redacted]	$ 29,878	$ [redacted]/ kW	1	2.48	$ [redacted]/ kW	1
[redacted](#11123)	Index Price	[redacted]	[redacted]	[redacted]	$ 16,787	$ [redacted]/ kW	2	0.32	$ [redacted]/ kW	4
[redacted](#11123)	Index Price	[redacted]	[redacted]	[redacted]	$ 13,852	$ [redacted]/ kW	3	0.25	$ [redacted]/ kW	3
Coal Transition (Centralia) PPA*	Fixed Price	2012	14	[redacted]	$ 86,666	$ [redacted]/ kW	4	0.06	$ [redacted]/ kW	7
[redacted](#11117)	Tolling	[redacted]	[redacted]	[redacted]	$ 14,034	$ [redacted]/ kW	5	0.12	$ [redacted]/ kW	2
[redacted](#11118)	Tolling	[redacted]	[redacted]	[redacted]	$ 26,999	$ [redacted]/ kW	6	0.16	$ [redacted]/ kW	5
[redacted](#11117)	Tolling	[redacted]	[redacted]	[redacted]	$ 17,164	$ [redacted]/ kW	7	0.07	$ [redacted]/ kW	6
PSE Self Build Peaker (Frame Tech.)	Ownership	2015	[redacted]	[redacted]	$ 13,580	$ [redacted]/ kW	8	0.05	$[redacted]/ kW	11
[redacted](#11103) Original	Ownership	[redacted]	[redacted]	[redacted]	$ 8,829	$ [redacted]/ kW	9	0.00	$[redacted]/ kW	13
[redacted](#11124)	Fixed Price	[redacted]	[redacted]	[redacted]	$ (1,485)	$ [redacted]/ kW	10	(0.01)	$[redacted]/ kW	8
[redacted](#11123)	Fixed Price	[redacted]	[redacted]	[redacted]	$ (1,486)	$ [redacted]/ kW	11	(0.03)	$[redacted]/ kW	10
[redacted](#11110)	Fixed Price	[redacted]	[redacted]	[redacted]	$ (2,518)	$[redacted]/ kW	12	(0.03)	$[redacted]/ kW	9
[redacted](#11103)	Tolling	[redacted]	[redacted]	[redacted]	$ (86,787)	$[redacted]/ kW	13	(0.06)	$[redacted]/ kW	12
[redacted](#11116)	Fixed Price	[redacted]	[redacted]	[redacted]	$ (19,022)	$[redacted]/ kW	14	(0.13)	$[redacted]/ kW	14
[redacted](#11112)	Fatal Flaw									

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Renewable Proposals	PPA or Ownership	Project Start	Book Life / Contract Term	Levelized Cost $/MWh	Portfolio Benefit	Levelized PB / REC	Levelized PB / REC Ranking	Portfolio Benefit Ratio	Levelized Net Cost / REC	Levelized Net Cost / REC Ranking
[redacted](#11116)	Fixed Price	[redacted]	[redacted]	[redacted]	$ 15,694	$ [redacted]/ REC	1	0.11	$ [redacted]/ REC	2
[redacted](#11113)	Fixed Price	[redacted]	[redacted]	[redacted]	$ 52,606	$ [redacted]/ REC	2	0.22	$ [redacted]/ REC	1

**Coal Transition PPA analysis includes equity component based on PSE's self build peaker*

PSM I Metrics Key:

- Results are based on "Base w/ New Gas" price scenario only; Phase II did not evaluate alternative PSM I screening model scenarios.
- A lower number is better for "Levelized Net Cost/kW" and "Levelized Net Cost/kW or "Levelized Net Cost/REC".
- A higher number is better for "Portfolio Benefit", "Portfolio Benefit Ratio", and "Levelized PB/kW" or "Levelized PB/REC".

Market Purchase Costs in Optimization Model

Issue

- Transmission costs for market purchases are not included
- The Optimization model does not separate market purchases and sales making it difficult to include costs only on market purchases; however, a solution is under review
- While PSE believes it is reasonable and important to reflect these transmission costs, the optimization analysis to date does not include these costs.

Expected Impact

- Adding transmission costs to market purchases would increase the overall costs for all portfolios
- Coal transition power would benefit from the change because it is replacing market purchases that are more expensive than in previous analyses.

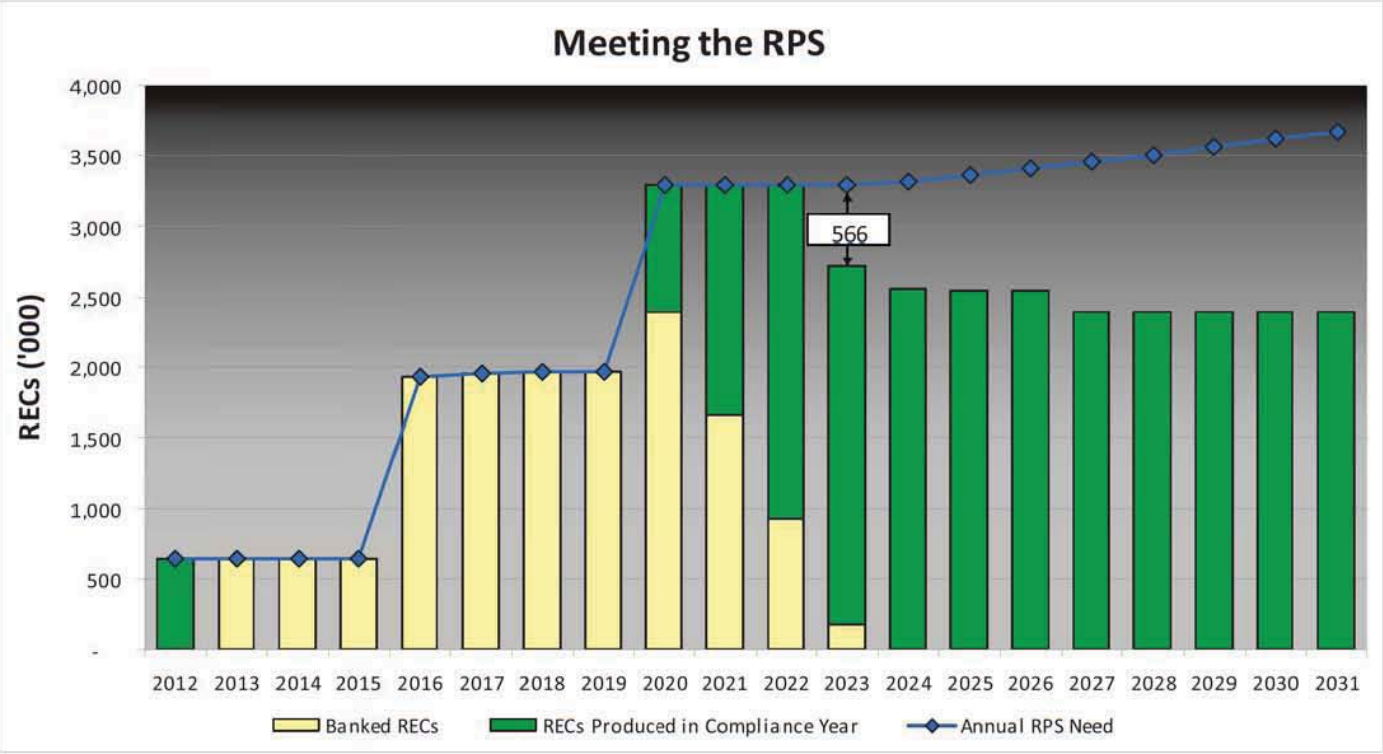
PSE PUGET SOUND ENERGY

Other revisions

- The following updates correct minor typographic errors and small calculation errors

REC banking in 2011 RFP Phase II

- Renewable need approximately 566,000 RECs in 2023
- No impact on analysis, slide created from old data



Revised Optimization sensitivity:

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

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REDACTED VERSION

	Scenario					
	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	Selected in X of 5 Scenarios
Max % PPA price increase for continued selection? (or % (Decrease) to be	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5
[redacted](#11103)						0
PSE Self Build Peaker						0
[redacted](#11124)			X		X	2
[redacted](#11110)	X	X	X			3
Coal Transition (Centralia) PPA	X	X	X	X	X	5
[redacted](#11123)					X	1
[redacted](#11123)						0
[redacted](#11123)	X	X				2
[redacted](#11118)						0
[redacted](#11117)	X	X	X	X	X	5

Portfolio Cost ($000)

w/ Centralia price adjustment	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
w/ Centralia price as offered	10,151,274	9,858,326	13,491,908	7,966,006	11,097,217
Increase (Reduction) in portfolio cost with sensitivity	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Notes:
(1)Coal Transition PPA analysis includes equity component based on PSE's self build peaker
(2) Portfolio does not include Coal Transition PPA

PUGET SOUND ENERGY

PSM III optimization scenarios and sensitivities

SCENARIOS	INPUT ASSUMPTIONS: PSE Demand	Gas Price	AURORA Electric Price	Generic Resource Costs	Emissions Price
Base	Base	Base	Base	Base	None
Base + CO2	Base	Base	Base + CO2	Base	EPA APA Analysis
Base w/ New Gas[1]	Base	Base + New Gas	Base + New Gas	Base	None
High Prices	Base	High	High	Base	None
Low Growth	Low Structural[2]	Low	Low	Base	None
SENSITIVITY					
Low Price w/ Base Load	Base	Low	Low	Base	None

Notes:
(1) "Base w/ New Gas": New Wood Mackenzie gas prices as of late April 2012
(2) Lower regional population growth

Coal Transition PPA

Presented to the Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

July 20, 2012

Recommendation

PUGET SOUND ENERGY

- Based on the determination of need, the identification and analysis of alternatives, and the described benefits of the proposed transaction, management requests the Energy Management Committee recommend that the Board of Directors approve resolutions allowing PSE to enter into a Coal Transition Power Purchase and Sale Agreement ("Coal Transition PPA") by and between PSE and TransAlta Centralia Generation LLC ("TransAlta")

Presentation Outline

- PPA terms & conditions
- Need for resource
- Comparative analysis
- Risks & mitigations
- Benefits
- Appendix

Terms & Conditions

PSE PUGET SOUND ENERGY

Coal Transition PPA

Seller: TransAlta Centralia Generation, LLC

Product:

- Firm, flat (7x24) electrical energy delivered to the Point of Delivery
- Operating reserves [redacted]

Term: Dec 1, 2014 – Dec 31, 2025

Source:

- Centralia Transition Coal Facility (CTCF)
- [redacted]

Point of Delivery (POD):

- Centralia
- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

Quantity:

- 180 MWh/hr; Dec 1, 2014 – Nov 30, 2015
- 280 MWh/hr; Dec 1, 2015 – Nov 30, 2016
- 380 MWh/hr; Dec 1, 2016 – Dec 31, 2024
- 300 MWh/hr; Jan 1, 2025 – Dec 31, 2025

Price paid to Seller:

- [redacted] / MWh[1]; Dec 1, 2014 – Nov 30, 2020
- [redacted] / MWh[1]; Dec 1, 2020 – Dec 31, 2025

Termination (with liability): [redacted]

Termination (without liability):

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Credit:

- [redacted]

Notes:
(1) Price escalates @ [redacted]

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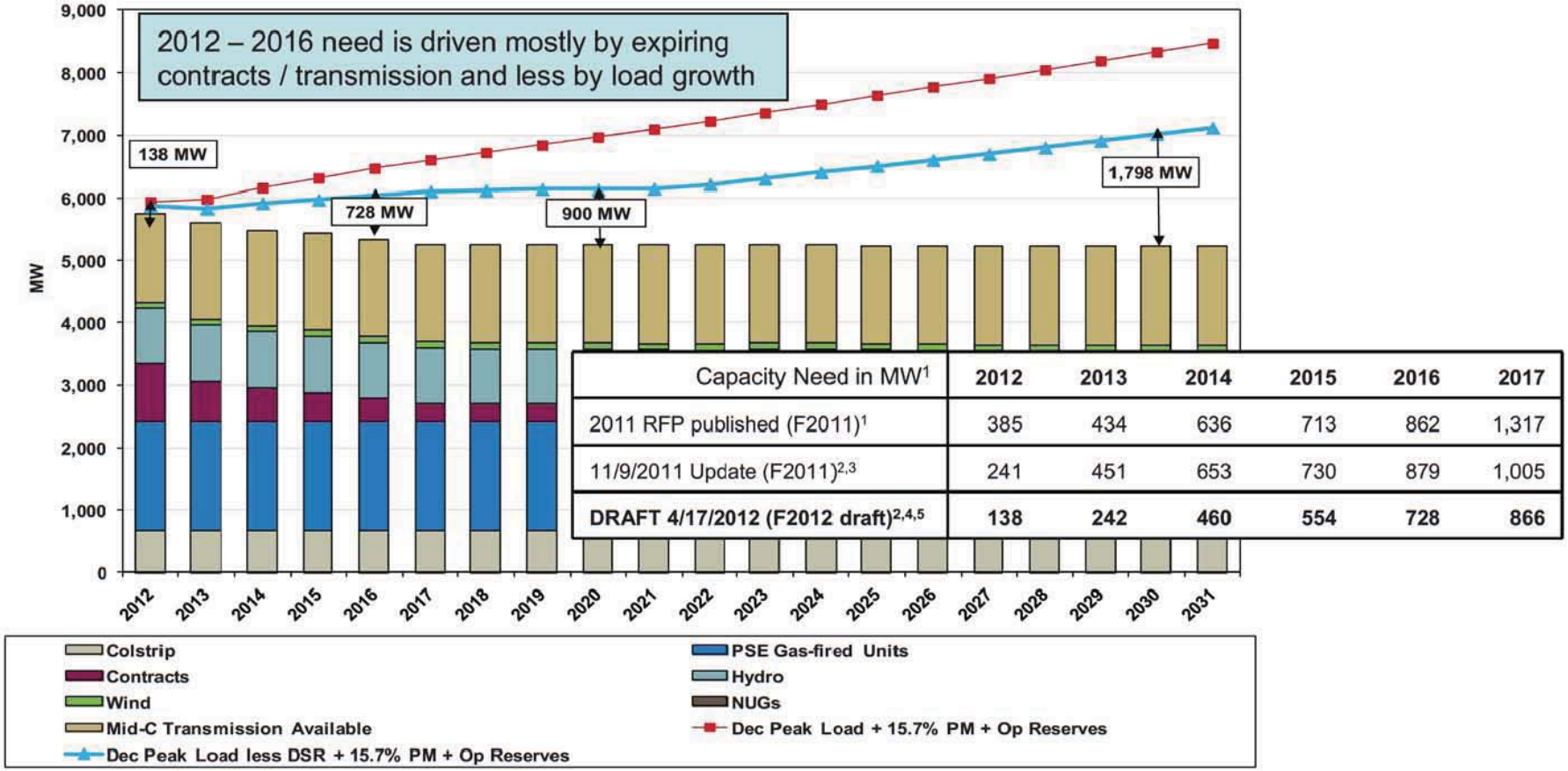
PUGET SOUND ENERGY

2011 RFP capacity need (updated from 2011 IRP)



Capacity Need in MW[1]	2012	2013	2014	2015	2016	2017
2011 RFP published (F2011)[1]	385	434	636	713	862	1,317
11/9/2011 Update (F2011)[2,3]	241	451	653	730	879	1,005
DRAFT 4/17/2012 (F2012 draft)[2,4,5]	**138**	**242**	**460**	**554**	**728**	**866**

Notes:

(1) Based on 2011 Integrated Resource Plan; includes a planning reserve margin of 15.7%

(2) Capacity need reflects need for additional operating reserves if new resources are on PSE's system

(3) Update to need reflects addition of short-term hedges, no existing gas plant retirements, line loss update (presented to EMC on 12/15/2011 and 3/15/2012)

(4) F2012 reflects loss of Jefferson County as of 4/2013, updates of existing gas plant contribution to peak

(5) Final F2012 load forecast shows negligible change to capacity need

Analysis of Alternatives

PUGET SOUND ENERGY

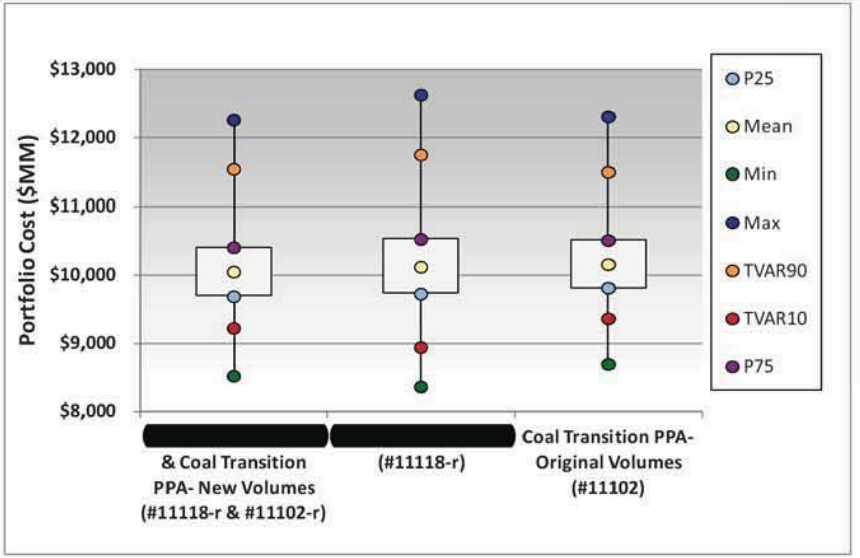
Evaluation of alternatives

- 2011 RFP sought resources to meet the capacity need
- RFP proposals were subjected to a cross-departmental analysis of qualitative and quantitative attributes
- RFP analysis shows that the Coal Transition PPA represent the lowest cost portfolio with the lowest risk compared to other alternatives

Reevaluation

- After conclusion of RFP, PSE received revised proposals
- PSE reevaluation of the revised offers shows that the Coal Transition PPA and the [redacted] is lowest cost and lowest risk compared to other alternatives

Coal Transition PPA reduces exposure to high prices



Coal Transition PPA low cost in 4 out of 5 scenarios

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected
[redacted] (#11118-r)	X	X	X	X	X	5
PSE Self Build Peaker	-	-	-	-	X	1
[redacted] (#11124)	X	X	X	X	-	4
[redacted] (#11110)	-	X	-	-	X	2
Coal Transition PPA- New Volumes	X	X	X	X	-	4
[redacted] (#11123)	-	-	-	X	-	1
[redacted] (#11123)	-	-	-	-	X	1
[redacted] (#11123)	X	X	X	-	-	3
[redacted] (#11117)	X	X	X	X	-	4
Portfolio Cost ($000)	10,126,098	13,455,720	9,800,864	11,168,954	7,959,626	

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Analysis of Alternatives

PUGET SOUND ENERGY

Project	Qualitative Advantages (+)	Qualitative Risks (-)
11117-r	[redacted]	[redacted]
11118-r	[redacted]	[redacted]
11103-r	[redacted]	[redacted]

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Low cost / risk resource to meet PSE's capacity need…

- Project economics associated with the Coal Transition PPA are positive:
  - Lowest cost in 4 of 5 scenarios
  - Reduced risk in higher price environment
  - Analysis suggests significant portfolio benefits in combination with selected short listed resources
- Provides physical, long-term flat firm power delivered to PSE's system
- Existing resource with demonstrated reliable operating history
- Volumes increase over the first several years to better match PSE's capacity growing need
- Coal transition power has strong public, local community, environmental groups and government support
- 380 MW of long-term firm transmission is held by PSE; 280 MW directly interconnected to PSE's system avoiding 3rd party transmission wheeling costs
- Strong counterparty (BBB S&P credit rating)
- Fixed price structure provides hedge against rising power costs and stability as compared as natural gas tolling resources
- [redacted]
- State law recognizes coal transition power as a public policy resource preference
- Helps the state achieve GHG reduction goals

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Risks & Mitigations

PSE PUGET SOUND ENERGY

PPA Risk	Mitigation
• Non-performance	• [redacted]
• Curtailment of facility/transmission	• [redacted]
• GHG standards; Change in law	• [redacted]
• Counterparty default	• [redacted]
• MOA b/t TransAlta & State	• [redacted]

Regulatory Risk	Mitigation
• WUTC approval	• PPA is not effective until approved by the UTC; if UTC approves with conditions or decision is overturned, then either Party has right to terminate the PPA
• [redacted]	• [redacted]

Environmental Risk	Mitigation
• New GHG (carbon) legislation	• Unlikely new law would be fully realized before 2017; prospect of an economy-wide cap-and-trade program has stalled in Congress • PSE's analysis assumes a straight "pass-through tax" for carbon costs based on valuation of CO2 and shows moderate risk for cost impacts
• New environmental requirements	• [redacted] • New laws or rules typically take up to 5+ years to implement • Potential state support of CTCF in negotiations with EPA as a result of new law

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PSE PUGET SOUND ENERGY

Appendix

- History of events
- Facility & counterparty
- Regulatory process
- Quantitative analysis
- Sample equity return calculation

History of Events

PUGET SOUND ENERGY

…provide for the reduction of GHG emissions…

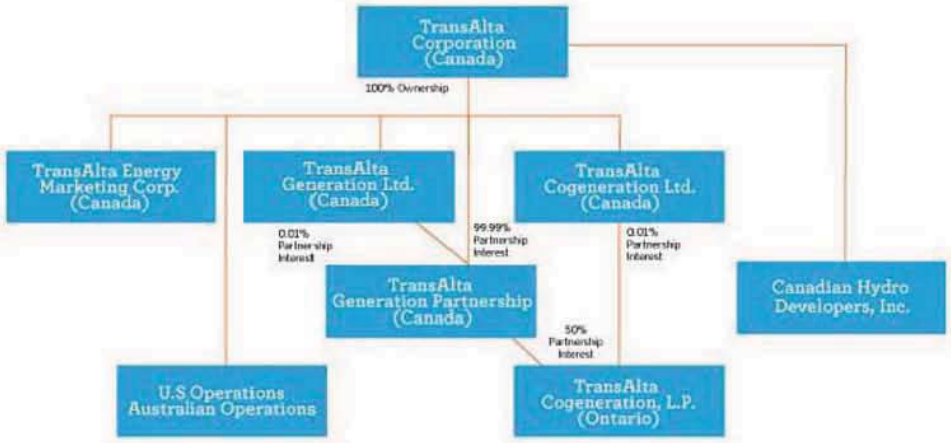
Date	Event
Apr 26, 2010	Memorandum of Understanding ("MOU") between TransAlta and the State of Washington executed
Nov 2010	TransAlta initiated discussions with PSE for a potential purchased power agreement ("PPA")
Apr 2011	State Legislature passed Engrossed Second Substitute Senate Bill 5769 ("E2SSB")
Aug 1, 2011	PSE filed draft Request-for-Proposals ("RFP")
Oct 17, 2011	Washington Utilities and Transportation Commission ("WUTC") approved draft RFP; PSE filed final RFP
Nov 1, 2011	RFP bids were due to PSE
Dec 23, 2011	Memorandum of Agreement ("MOA") between TransAlta and the State of Washington executed
Apr 2012	PSE updates capacity need forecast and new gas price forecast
Jun 12, 2012	PSE issues short list
Jun 22 – Jul 13, 2012	Revised RFP bids received / Reevaluation of offers and revision to short list selection
Jul 20, 2012*	Energy Management Committee ("EMC") approval of Coal Transition PPA sought
Jul 24, 2012*	Board of Directors ("BOD") approval of Coal Transition PPA sought
Mid-Aug. 2012*	WUTC pre-approval petition filing (180 days)
Dec 31, 2012 *	Annual payments set forth in MOA begin, if TransAlta has secured a long-term contract

**Expected timing*

PSE PUGET SOUND ENERGY

TransAlta Centralia Generation, LLC

- Located in Lewis County, Washington
- CTCF is Washington State's largest baseload power source—generates 10% of Washington's power
- Coal fuel supply delivered by train from the Powder River Basin in SE MT/NE WY
- Capacity: 1340 MW
- On-line date: 1971
- 100% owned & operated by TransAlta



TransAlta Corporation (parent company)

- Canada's largest publicly traded wholesale power generator & marketer with over 100 years of operating experience
- Over 8,000 MW positioned in Canada, Western U.S. and Australia
- Listed on Toronto and New York stock exchanges

Regulatory Process

PUGET SOUND ENERGY

- PSE must file a petition for approval of the Coal Transition PPA, including supporting testimony and exhibits. The petition will seek:
  - (i) approval of and prudence of the Coal Transition PPA
  - (ii) determination of the equity component associated with the Coal Transition PPA
  - (iii) Deferral treatment of the difference between the costs (including the equity return) of Coal Transition PPA and market power included in rates similar to deferral treatment received for Goldendale and Mint Farm facilities which were under RCW 80.80.060

- The WUTC must act on the petition within 180 days from the date of filing of the petition for approval. Below is a projected schedule of an expedited proceeding.

PSE's Prefiled Direct Testimony	Mid-August 2012
Staff, Public Counsel, and Intervenor Response Testimony	November 30, 2012
PSE Rebuttal Testimony	December 14, 2012
Evidentiary Hearing	January 7 – 10, 2013
Simultaneous Initial Briefs	January 18, 2013
Simultaneous Reply Briefs	January 25, 2013
Requested Effective Date	February 15, 2013

- If the WUTC does not issue a final order within 180 days from the date of filing of the petition, or if the WUTC disapproves the petition, the Coal Transition PPA is null and void. If the WUTC were to approve the Coal Transition PPA upon conditions other than those set forth in the petition, PSE has the right to reject the agreement.

Deferral & Equity Component

PUGET SOUND ENERGY

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- PSE will request deferral treatment of the amount by which the costs associated with the Coal Transition PPA, including the equity return, exceed the power costs included in rates which was the approved recovery methodology for Goldendale and Mint Farm facilities

- If the Commission were to approve the Coal Transition PPA, PSE would be permitted "to earn the equity component of its authorized rate of return in the same manner as if it had purchased or built an equivalent plant and to recover the cost of the coal transition power under the power purchase agreement." (RCW 80.04.570(6)(a))

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- The cost of an equivalent plant:
  - is the least cost purchased or self-built electric generation plant with equivalent capacity,
  - is calculated in dollars per kilowatt, and
  - must be determined in the original process of Commission approval of the Coal Transition PPA.

  (RCW 80.04.570(6)(b))

- The equivalent plant must be amortized over the life of the Coal Transition PPA to determine the recovery of the equity value (RCW 80.04.570(6)(c))

- PSE used the estimated cost of the self build [redacted] peaker in the RFP analysis
  - $[redacted]kW (confirmed by 3rd party consultant), which results in an equity component of approximately $4.4/MWh

- The most appropriate equivalent cost will be determined for the WUTC pre-approval petition filing

Optimization Results

PUGET SOUND ENERGY

Coal Transition PPA low cost in 4 out of 5 scenarios

- After the RFP, PSE received revised offers
- Reevaluation of the revised offers shows that the Coal Transition PPA and [redacted] is lowest cost and lowest risk compared to other alternatives.

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REDACTED VERSION

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected
[redacted] (#11118-r) (1)	X	X	X	X	X	5
PSE Self Build Peaker	-	-	-	-	X	1
[redacted] (#11124)	X	X	X	X	-	4
[redacted] (#11110)	-	X	-	-	X	2
Coal Transition PPA- New Volumes (2)	X	X	X	X	-	4
[redacted] (#11123)	-	-	-	X	-	1
[redacted] (#11123)	-	-	-	-	X	1
[redacted] (#11123)	X	X	X	-	-	3
[redacted] (#11117)	X	X	X	X	-	4
Portfolio Cost ($000)	10,126,098	13,455,720	9,800,864	11,168,954	7,959,626	

Notes:

(1) Selection in more scenarios is considered favorable; however, scenarios are not equally weighted

(2) Coal Transition PPA analysis includes equity component based on PSE's self build peaker

(3) Optimization excludes projects identified with unresolved risk.

(4) By including the [redacted] revised offer, the portfolio cost in "Base w/ New Gas" is lower only by $9.28 MM (or ≈0.09%), which is not enough to overcome the proposal's associated qualitative risks.

Coal Transition PPA reduces exposure to high prices

- Risk analysis shows the range of possible portfolio costs considering variability in natural gas and power prices, wind and hydro generation and demand
- Coal Transition PPA combined with [redacted] performs better than either [redacted] or Coal Transition PPA as a standalone resource with:
  - Lower average portfolio cost
  - Reduced exposure to higher prices

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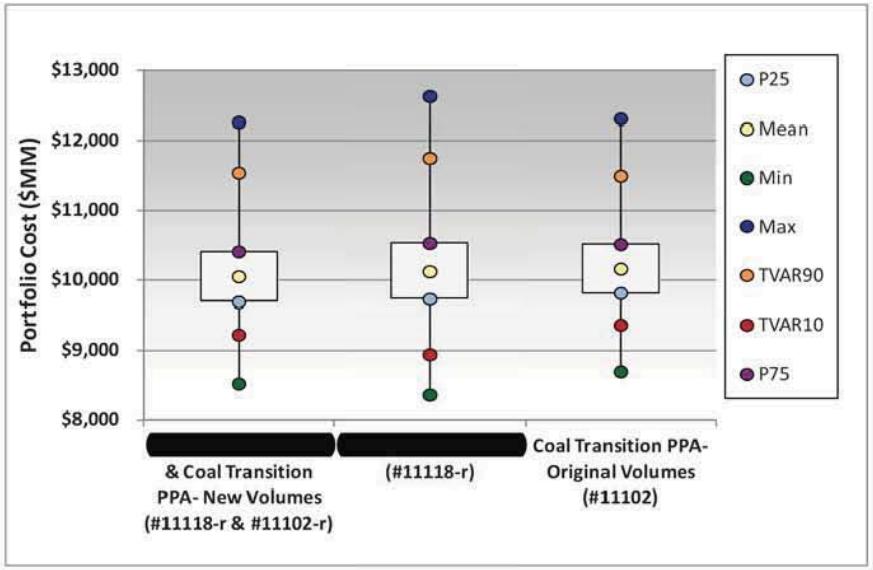
Portfolio Cost (Revenue Requirement) $MM

	[redacted] & Coal Transition PPA (New Volumes)	[redacted]	Coal Transition PPA (Original Volumes)
Max	$ 12,264	$ 12,631	$ 12,311
TVAR90	$ 11,543	$ 11,753	$ 11,498
P75	$ 10,409	$ 10,530	$ 10,513
Median	$ 9,885	$ 10,040	$ 10,140
Mean	$ 10,052	$ 10,124	$ 10,161
P25	$ 9,690	$ 9,729	$ 9,816
TVAR10	$ 9,225	$ 8,944	$ 9,367
Min	$ 8,524	$ 8,366	$ 8,698
Annual Volatility (%)	10.5%	11.3%	9.9%

Risk Analysis Box Plot



Manual Portfolios

PSE PUGET SOUND ENERGY

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Modeled Portfolios:

I. [redacted] & Coal Transition PPA (New Volumes)

II. [redacted] Only

III. Coal Transition PPA (Original Volumes) Only

- Manual Portfolio builds reduce surpluses created by optimization model
- Tested each portfolio in the different scenarios
- The Coal Transition PPA & [redacted] portfolio performed better than the standalone portfolios in all scenarios except for the [redacted] portfolio in the Low Growth scenario

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Manual Portfolio Scenario	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth
Portfolio Cost ($000) [redacted] & Coal Transition PPA (New Volumes)	10,099,967	13,485,087	9,760,813	11,199,548	8,061,042
Portfolio Cost ($000) w [redacted]	10,217,753	13,548,800	9,842,868	11,517,866	7,942,193
Portfolio Cost ($000) w Coal Transition PPA Only	10,170,918	13,600,610	9,877,969	11,201,975	8,159,288
Difference to [redacted] & Centralia - (Benefit)/Cost					
Portfolio Cost ($000) w [redacted]	(117,785)	(63,713)	(82,054)	(318,319)	118,850
Portfolio Cost ($000) w Coal Transition PPA (Original Volumes) Only	(70,950)	(115,524)	(117,156)	(2,428)	(98,246)

Equity Component Example

Simplified Example for Illustration Purposes Only

- To forecast an equity return on a Coal Transition PPA:
  - Calculate the equity return PSE is allowed to earn on an equivalent plant (e.g. RFP self-build peaker) amortized over the term of the PPA
  - Unitize the equity return by dividing the net present value (NPV) of the equity return over the term of the PPA
  - Multiply the unitized equity return by the projected Coal Transition PPA capacity
- The example on the right shows the levelized equity return unitized in MW per hour and would be multiplied to the energy (MWh) of a Coal Transition PPA

Assumptions Used to Find an Equity Return on an Equivalent Plant

100	Capacity of an Equivalent Plant (MW)
$ [redacted]	2011 IRP Peaker Plant Cost $/kw (2013 dollars)
$ [redacted]	Capital Cost Equivalent Plant $MM
11	PPA Term
7.80%	WACC and Discount Rate
9.80%	Equity Cost
48.0%	Equity Ratio
7.24%	Weighted Pre-tax Equity Return (Revenue Requirment Rate)

In $MM per 100MW

Year	Plant	Depr	Net Plant	Avg Net Plant	Equity Kicker Calculation
0	[redacted]		[redacted]		7.24%
1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
5	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
6	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
9	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
10	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
11	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
				Nominal Equity Return per 100 MW	$ [redacted]
				Net Present Value Equity Return per 100MW	$ [redacted]
				Levlized Equity Return per 100MW(Annual)	$3.84
				Levelized Equity Return $/KW Annually	$38.36
				Levelized Return $/MWH	$4.39

Note: The proposed methodology may or may not be the final methodology approved by the WUTC. However, this approach is similar to that shared with the WUTC at the time that the law was being finalized.

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