EXHIBIT NO. ___(RG-7HC)
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____**

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

REDACTED VERSION

AUGUST 20, 2012

Coal Transition PPA

Presented to the Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Chris Bevil

Manager, Resource Acquisitions

July 20, 2012

Recommendation

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- 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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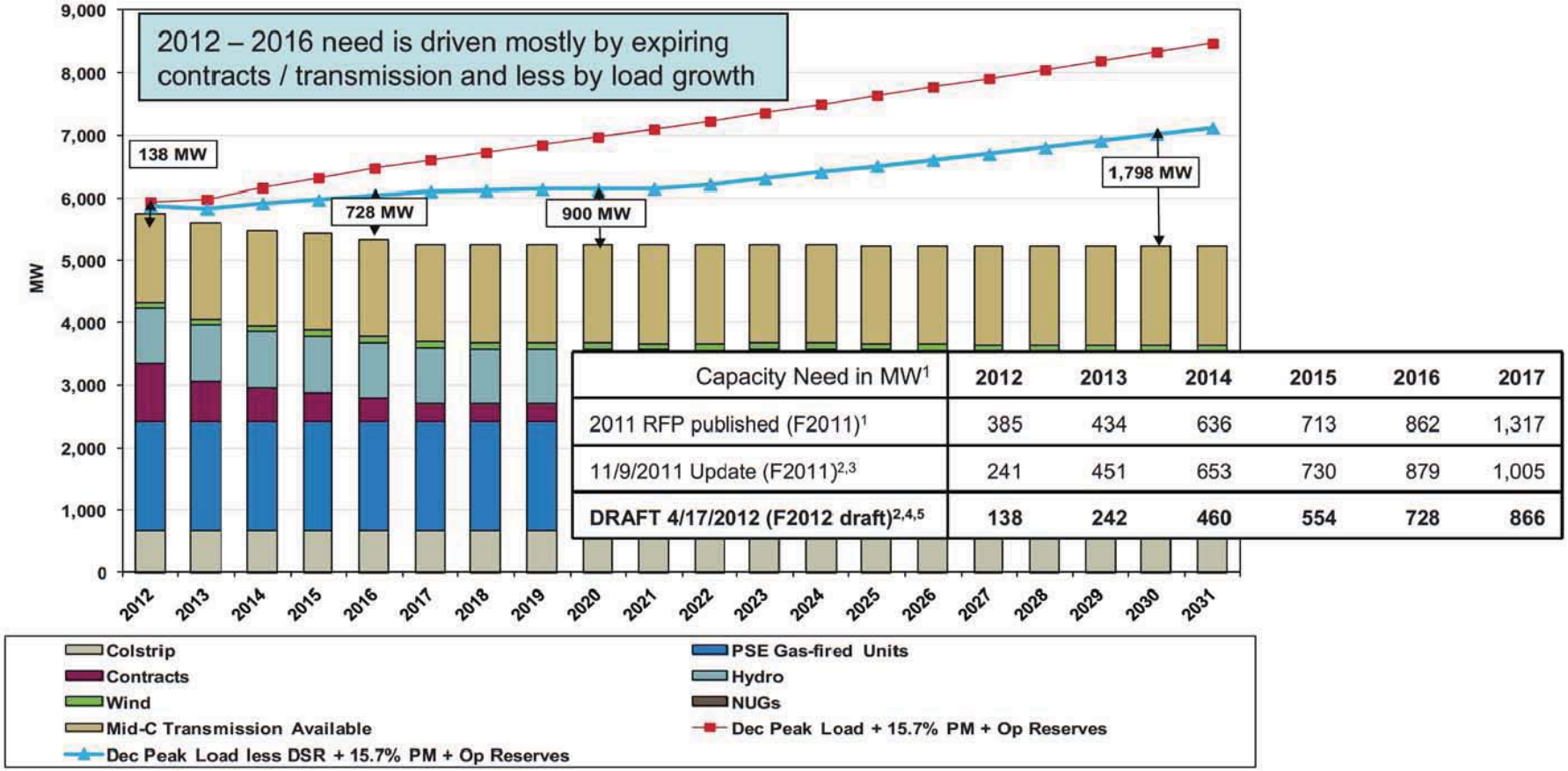
2011 RFP capacity need (updated from 2011 IRP)



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

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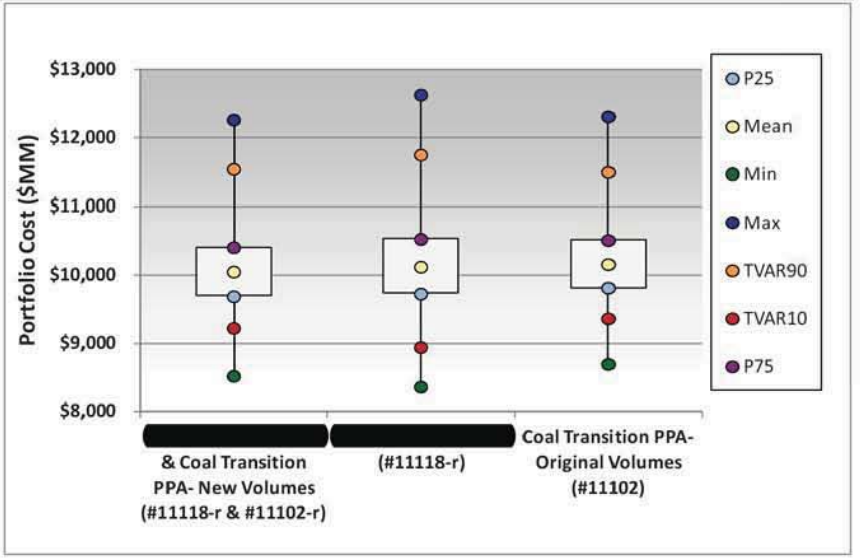
Evaluation of alternatives

- 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	

EMC Meeting // July 20, 2012

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Analysis of Alternatives

PSE PUGET SOUND ENERGY

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

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Benefits

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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

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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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Appendix

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

History of Events

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…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*

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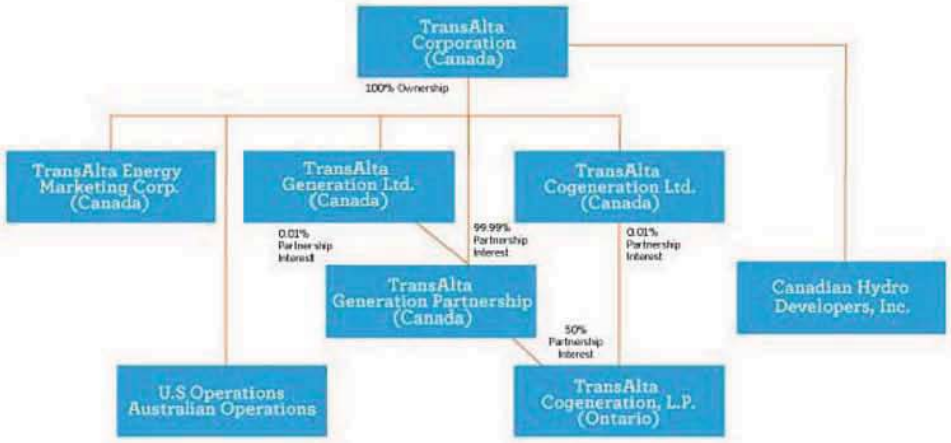
TransAlta Centralia Generation, LLC

- 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

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- 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

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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))

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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 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

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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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	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
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[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.

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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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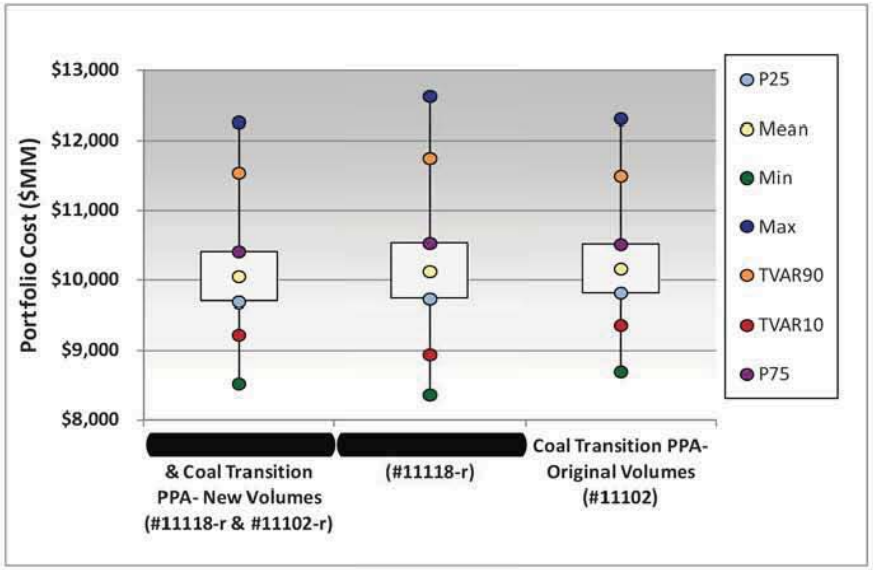
Portfolio Cost (Revenue Requirement) $MM

	[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



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Manual Portfolios

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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

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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

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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.