EXHIBIT NO. ___(RG-6HC)
DOCKET NO. UE-13____
2013 PSE PCORC
WITNESS: ROGER GARRATT

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.,** **Respondent.**	**Docket No. UE-13____**

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

REDACTED VERSION

APRIL 25, 2013

PUGET SOUND ENERGY

Report to the Board of Directors

Approval of the Acquisition of the Ferndale Cogeneration Station

September 27, 2012

Ferndale Cogeneration Station Plant Acquisition

PSE Report to the Board of Directors • September 27, 2012

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Ferndale Cogeneration Station Plant Acquisition

PSE Report to the Board of Directors • September 27, 2012

List of Attachments

L. Updates presented after the 2011 RFP

L1. Presentations to PSE's Energy Management Committee ("EMC")

L2. Presentations to PSE's Board of Directors

L3. Presentations to the Washington Utilities and Transportation Commission ("WUTC")

RESOLUTIONS OF THE BOARD OF DIRECTORS OF

PUGET SOUND ENERGY, INC.

APPROVAL OF PURCHASE OF FERNDALE COGENERATION STATION AND AMENDMENT OF 2012 CAPITAL BUDGET

WHEREAS, the Board of Directors of Puget Sound Energy, Inc. ("PSE" or the "Company") has determined that it is in the best interests of the Company, its customers, shareholders and other stakeholders to add energy resources into the Company's energy resource portfolio consistent with the Company's least cost planning and analysis;

WHEREAS, the Company's review, analyses and evaluation of bids and responses to its 2011 Generation Resources Request for Proposal have determined an existing dual-fueled generating facility located in Ferndale, Washington and owned by Tenaska Washington Partners, L.P. ("TWP"), to be a least cost resource for additional energy resource generation;

WHEREAS, the facility owned by TWP consists of an approximately 270 MW (nominal) dual-fueled combined cycle cogeneration facility situated on approximately 16 acres of leased land located immediately adjacent to the Phillips 66 Ferndale Refinery in Ferndale, Washington, gas delivery facilities, an electrical switchyard, and other facilities (collectively, the "Ferndale Facility");

WHEREAS, the Company's management has negotiated with TWP the terms and conditions of an Asset Acquisition Agreement ("AAA"), pursuant to which the Company would purchase the Ferndale Facility from TWP, as well as certain other contractual agreements, all as more further described below:

1. PSE will purchase from TWP the Ferndale Facility upon the closing of the AAA for a purchase price of $84 million, of which $8.4 million initially will be placed into escrow to secure certain of TWP's indemnification obligations for a period of time concurrent with the life of such obligations.

2. The closing of the AAA is conditioned upon the satisfaction of certain conditions precedent, including approval of the transaction by the FERC, expiration of the Hart-Scott-Rodino waiting period, and receipt by PSE of an order by the WUTC declaring the Ferndale Facility to be in compliance with the state of Washington's greenhouse gas ("GHG") emissions standard. Further, PSE may terminate the AAA in the event that a GHC emissions standard has been implemented that establishes an emissions rate that is less

than the facility can meet utilizing assumptions regarding dispatch under PSE ownership.

3. At closing, pursuant to a Steam Agreement Assignment and Consent, a form of which is attached to the AAA, Phillips 66 will consent to the assignment and amendment to certain terms of the existing steam agreement between Phillips 66 and TWP, under which the Ferndale Facility provides steam to the adjacent refinery. [redacted]

4. Also at closing, pursuant to additional consents and assignments, forms of which are attached to the AAA, Phillips 66 will consent to the assignment and amendment to certain terms of the existing lease and an easement to PSE from TWP. Such lease has a term expiring in 2041, coterminous with the Steam Agreement, [redacted], and will require PSE to fund a $1.6 million escrow amount to secure certain post-term removal obligations.

5. Also at closing, PSE will enter into an agreement for necessary supplies of industrial water with Public Utility District No. 1 of Whatcom County, and an agreement for firm natural gas transportation service, with Cascade Natural Gas Corporation. PSE may also enter into an agreement for operations and maintenance services with a third-party service provider should management determine there to be an economic rationale for such course prior to closing. In the alternative, PSE would staff and operate the Ferndale Facility directly.

WHEREAS, in addition to the $84 million purchase price for the Ferndale Facility under the AAA, PSE management anticipates incremental expenditures of approximately $4.5 million to fund necessary equipment upgrades, system improvements, transaction costs and other expenses, which aggregate amount of $88.5 million is not currently included in PSE's 2012 capital budget;

WHEREAS, the Ferndale Facility, the AAA, the other contractual agreements with TWP and Phillips 66, and other related matters, including the anticipated additional investments in or expenses related to operation of the Ferndale Facility and risks associated with it, are described more fully in a memorandum provided to the Board of Directors in advance of this meeting and filed with the minutes (the "Ferndale Facility Proposal"); and

WHEREAS, the officers now seek Board approval of and authority to enter into the AAA and all other contracts and actions described in the Ferndale Facility Proposal and relating to the acquisition and operation of the Ferndale Facility.

REDACTED VERSION

IT IS, THEREFORE

RESOLVED, that the Board, after full consideration and due deliberation, deems it advisable and in the best interests of the Company, its customers, shareholders and other stakeholders to approve (i) the acquisition and operation of the Ferndale Facility pursuant to the AAA, (ii) the payment of the purchase price and the incremental expenses described in the Ferndale Facility Proposal, and (iii) the related agreements and the other transactions described in the Ferndale Facility Proposal; and be it further

RESOLVED, that the Board hereby authorizes the Company's Chief Executive Officer, its Chief Financial Officer, its Senior Vice President, Energy Operations, and any such other officers they deem appropriate (the "Authorized Officers") to execute the AAA and all other assignments, agreements and contracts described in the Ferndale Facility Proposal, which may include such further additions, amendments or changes to the terms thereof as are deemed necessary and appropriate by the Authorized Officers, provided such additions, amendments or changes are not inconsistent with these resolutions; and be it further

RESOLVED, that the Board hereby approves an amendment to the Capital Budget and related financial statements of PSE for the calendar year 2012 in the additional amount of $88.5 million, such monies to be used to pay the purchase price for the Ferndale Facility and such other incremental costs of purchase as are more further described in the Ferndale Facility Proposal; and be it further

RESOLVED, that the Authorized Officers are further authorized to waive any conditions precedent to the closing of the AAA in order to facilitate the closing of such agreement, provided that each of the Authorized Officers agrees to such waiver and deems it to be in the best interest of the Company, its customers, shareholders and other stakeholders.

GENERAL AUTHORITY

AND IT IS FURTHER

RESOLVED, that any and all actions taken by the officers of the Company, or any of them, as deemed by such officers to be necessary or advisable to effectuate the transactions contemplated by the foregoing resolutions, including the filing of appropriate documentation with the WUTC, whether prior to or subsequent to this action by this Board of Directors, are hereby authorized, approved and ratified, and the taking of any and all such actions and the performance of any and all such things in connection with the foregoing shall conclusively establish such officers' authority therefor from the Company and the approval and ratification thereof by this Board of Directors.

Ferndale Cogeneration Station Decision

Presented to PSE's Board of Directors

PUGET SOUND ENERGY

Roger Garratt

Financial Planning and Strategic Initiatives

September 27, 2012

Recommendation

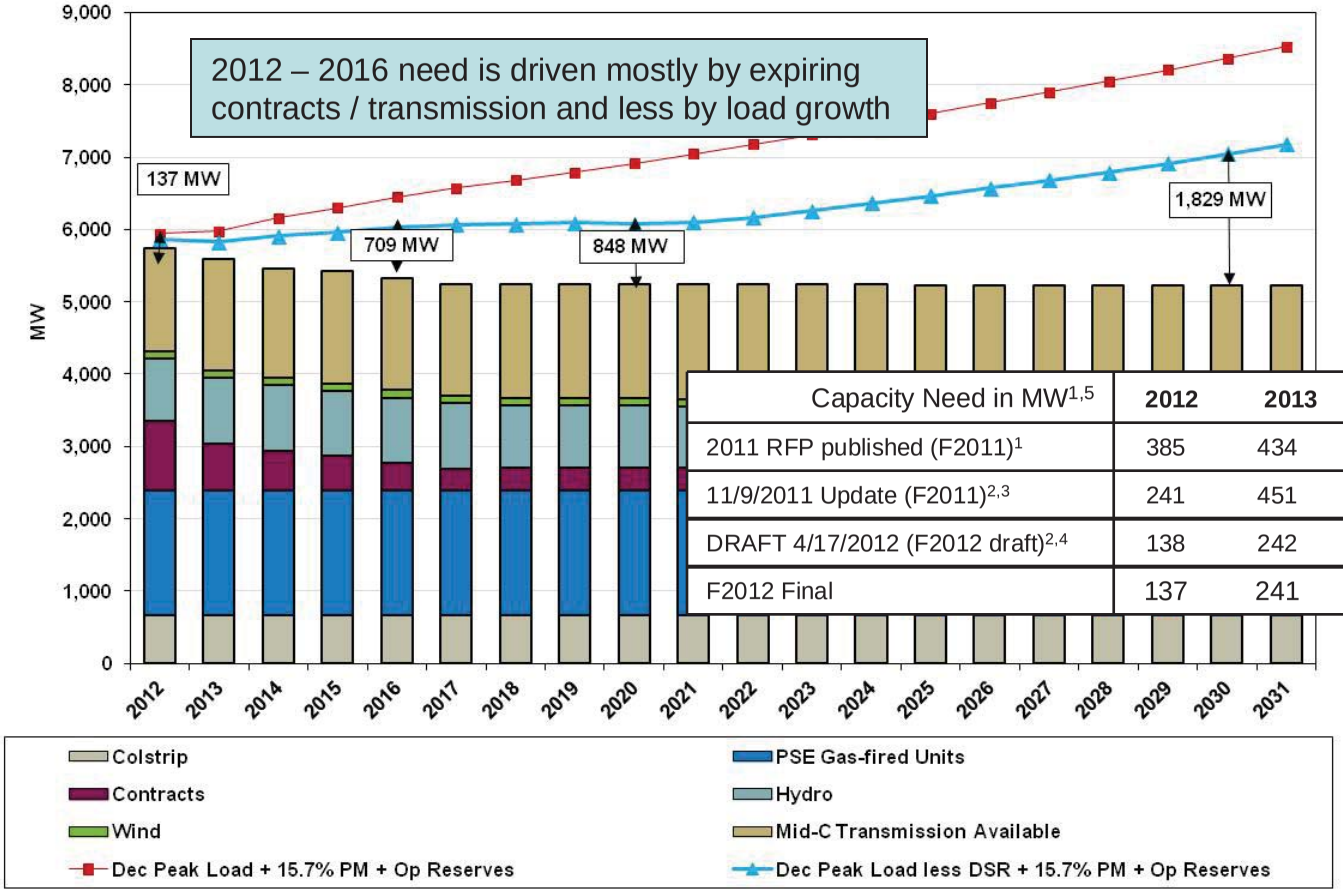
PUGET SOUND ENERGY

- 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 an Asset Acquisition Agreement ("AAA") by and between PSE and Tenaska Washington Partners, L.P. ("TWP")

Presentation Outline

- Need for resource
- Facility description
- Deal structure
- Financial details
- Comparative analysis
- Risks & mitigations
- Benefits
- Appendix

Ferndale Reevaluation capacity need (Final F2012)



Capacity Need in MW[1,5]	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]	138	242	460	554	728	866
F2012 Final	137	241	457	545	709	834

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) Capacity figures exclude Coal Transition PPA, which hasn't been pre-approved by WUTC; contract capacity amounts are: 2014 - 180 MW, 2015 - 280 MW, 2016 to 2024 - 380 MW, 2025 - 300 MW

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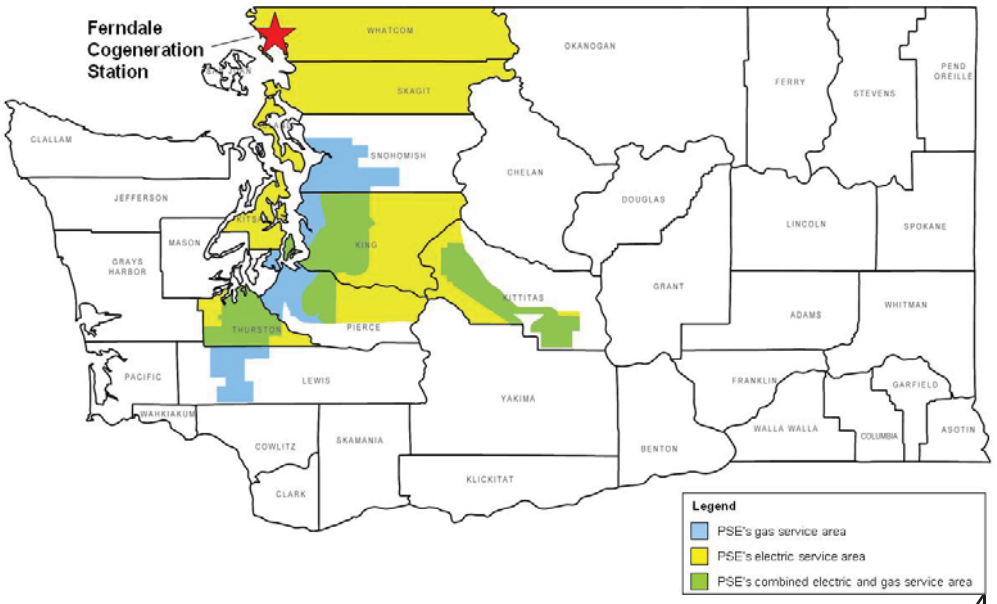
Ferndale Cogeneration Station

- Located in Whatcom County, Washington
- 16-acre site within 850 acre boundary of Phillips 66 refinery
- On-line date: April 1994
- 2x1 dual-fueled combined-cycle; 2-GE 7EA gas turbines
- 290 MW capacity (23º F with duct firing)
- Heat Rate: [redacted] BTU/kWh (net annual average)
- 2.05 million gallon fuel oil storage tank
- Electrical interconnection - PSE via Terrell Substation
- Natural gas interconnection - Cascade via Sumas
- Water supply agreement - Whatcom County PUD



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Major Agreements - Facility

Asset Acquisition Agreement

Counterparty

- Tenaska Washington Partners, L.P. ("TWP")

Target Close

- November 1, 2012

Key Commercial Terms

- PSE acquires 100% ownership interest in project assets
- Purchase Price $84,000,000, paid at closing (receipt of all approvals and conditions precedent)
- [redacted]
  - [redacted]
- [redacted]
- [redacted]
- [redacted]
- Receipt of key regulatory approvals:
  - Federal Energy Regulatory Commission
  - Hart-Scott-Rodino Antitrust Improvements Act
  - WUTC Declaratory Order related to Greenhouse Gas Performance Standards Law
- Conditions to closing:
  - Customary conditions; including final title
  - Assignment of certain agreements; including Lease & Easement and Steam Agreements (as amended to accommodate PSE)
  - No adverse Emissions Performance Standard rule change

[redacted]

REDACTED VERSION

Major Agreements - Land

PUGET SOUND ENERGY

Lease & Easement Agreement

Counterparty

- Phillips 66 (“Phillips”)

Key Dates

- Commenced August 1992
- Expires August 2041 (49 year term)

Key Commercial Terms

- [redacted]
- Surface and subsurface improvements must be removed at end of lease; $1,660,000 current escrow requirement
- [redacted]
- [redacted]

Steam Agreement

Counterparty

- Phillips 66 (“Phillips”)

Key Dates

- Coterminous with Lease Agreement

Key Commercial Terms

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

Commercial Term Modifications

Items awaiting final approval from Phillips 66:

- [redacted]
- [redacted]

REDACTED VERSION

Major Agreements - Utilities

PUGET SOUND ENERGY

Natural Gas Transportation Service Agreement

Counterparty

- Cascade Natural Gas Corporation ("Cascade")

Key Dates

- Commenced January 1991 under original agreement; new agreement effective upon closing
- New agreement expires September, 2037; year-to-year renewal post expiry

Key Commercial Terms

- Firm gas transportation up to 52,000 MMBtu/day
- [redacted]
- Priced using standard Cascade rate schedule

Agreement for Industrial Water Purchase

Counterparty

- Public Utility District No. 1 of Whatcom County ("Whatcom PUD")

Key Dates

- Commenced April 1992
- Current agreement expires December 31, 2014; long-term contract available in 2014

Key Commercial Terms

- Contract supply of up to 2 million gallons of water per day; quantities can be changed with Whatcom PUD consent
- Priced using standard Whatcom PUD rate schedule

Large Generator Interconnection Agreement ("LGIA")

Counterparty

- Puget Sound Energy, Inc. ("PSE")

Key Dates

- Commenced June 2009; new agreement effective upon closing

LGIA Capacity Limits

- 285 MW summer limit, 300 MW winter limit

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O&M Plan

PUGET SOUND ENERGY

Tenaska Staffing Levels and Employee Qualifications

- 22 employees; Management (x 4), Administrative (x 2), Craft (x 14), Lab technician (x 1)
  - 1 Tenaska compliance employee would not transition as part of the transaction
- Highly qualified personnel; 50% of staff employed since commercial operation
- Ferndale earned OSHA Voluntary Protection Program Star Safety Award

Third Party Staffing Option

Plant Staffing Levels

- Majority of plant staff expected to be offered employment
- Non-management employees would remain non-union

Scope of Services

- Operation of plant turned over to Third Party
- PSE would be involved in operating plan and budget, as well as environmental oversight

Payment and Compensation Structure

- Cost plus model, with annual fee and bonus opportunity

Liability

- Risk sharing and liability are key issues

PSE Staffing Option

Plant Staffing Levels

- Majority of plant staff expected to be offered employment
- Employees would transition into union, IBEW Local 77, pursuant to PSE labor relations protocol
- Plant operated under Modified DuPont Schedule

Capital Budget

PUGET SOUND ENERGY

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Capital Budget Notes

- Budget ($89MM) evaluated during RFP process indicated Ferndale was a least cost resource
- Refined estimates ($88MM) have not materially deviated from original assumptions
- 96% of capital costs attributed to facility and upgrades

Asset Description	PSE Budget Estimate
Facility Purchase Details	**$ 84,000,000**
Real Estate Excise Tax (REET) (50%)	**$** [redacted]
Facility Improvements	**$** [redacted]
IT	$ [redacted]
Security	$ [redacted]
Interconnection & Transmission	$ [redacted]
NERC/WECC testing	$ [redacted]
Signage	$ [redacted]
Operating Standards Upgrades	**$** [redacted]
Transaction & Due Diligence	**$** [redacted]
Documentation	$ [redacted]
Due Diligence	$ [redacted]
PSE Labor	$ [redacted]
Hart-Scott Rodino filing	$ [redacted]
Alta Survey	$ [redacted]
Title Insurance	$ [redacted]
Total Acquisition Costs	**$ 87,993,973**

Income Statement (000s)	2013	2014	2015	2016	2017
Fixed Cost Subtotal	8,269	10,753	9,330	12,340	10,616
Fixed Gas Transport	[redacted]				
Land Lease					
Asset Retirement Expense					
Fixed Operation Expense					
Major Maintenance Expense					
Maintenance Expense					
Total Property Tax					
Insurance					
Variable Cost Subtotal	10,633	10,936	12,300	14,937	18,427
Variable Gas Transport	[redacted]				
Fuel Cost					
Variable Operation Expense					
Total Operating Expenses	18,902	21,689	21,630	27,277	29,043

O&M Budget Notes

- Proforma assumes PSE performs O&M
- Major maintenance costs time based versus run-time
- Variable costs assume 21% capacity factor

Ferndale Re-Evaluation

PUGET SOUND ENERGY

- Re-evaluation reaffirms Ferndale is a least cost and least risk resource
  - Updated RFP analysis based on due diligence findings and new assumptions
  - Tested using most current long-term price forecast from 2013 IRP Base scenario
  - Analysis continues to select Ferndale and Coal Transition PPA in lowest cost portfolio
  - Qualitative analysis of alternatives did not change and qualitative benefits of Ferndale were reaffirmed

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	2013 IRP Base Scenario			Base w/ New Gas Scenario		
	All Optimized	No Ferndale Own	No Centralia	All Optimized	No Ferndale Own	No Centralia
Ferndale Own	X		X	X		X
Coal Transition (Centralia) PPA	X			X		
[redacted] (#11117)	X	X	X	X	X	X
PSE Self Build Peaker			X			X
[redacted] (#11124)			X			X
[redacted] (#11110)			X			X
[redacted] (#11123)						
[redacted] (#11123)			X			X
[redacted] (#11123)	X	X		X	X	
[redacted] (#11103)		X			X	
Portfolio Cost	**$ 9,493,027**	**$ 9,868,097**	**$ 9,536,635**	**$ 9,752,629**	**$ 10,144,885**	**$ 9,855,476**

Notes:

(1) The qualitative evaluation of alternatives were presented in the RFP executive summary from the Coal Transition PPA Report to the Board of Directors dated July 24, 2012.

(2) Ferndale reevaluated in "Base w/ New Gas" scenario based on due diligence findings.

(3) Coal Transition PPA analysis includes equity component based on $[redacted]/kW capacity cost equivalent consistent with WUTC pre-approval filing as compared to the $[redacted]/kW used in the 2011 RFP analysis.

(4) Optimization includes all viable resource alternatives from as described in the final 2011 RFP results.

Risks & Mitigations

PUGET SOUND ENERGY

Deal Risk	Mitigation
• Phillips 66 Agreements awaiting final approval	• In the event Phillips 66 management is unable to waive Facility buyout rights or agree to reasonable lease rates, PSE would have the right not to close on purchase
Environmental Risk	**Mitigation**
• Change of law lowers Emissions Performance Standard	• Transaction is targeted to close by November 1, 2012, prior to the anticipated EPS rule change • Closing condition gives PSE termination right in the event an EPS rule is enacted that Facility will be unable to meet
• Remediation liability	• PSE consultant conducting Phase II study in order to provide baseline for determining environmental liabilities accruing under PSE ownership
Operations Risk	**Mitigation**
• Phillips 66 tolled steam obligation	• [redacted] •
• Unanticipated upgrade costs	• Minimal costs assumed because technical and operations teams conducted extensive diligence and have relied on familiarity with Facility, historical inspection reporting, and professional judgment to make an educated determination of Facility's upgrade needs
Gas Transportation Risk	**Mitigation**
• Insufficient firm transportation capacity	• [redacted]

REDACTED VERSION

PUGET SOUND ENERGY

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

- Project economics are positive:
  - Lowest cost in 6 of 6 scenarios; includes new scenario using current IRP price forecast
  - Reduces portfolio risk
  - Analysis suggests significant portfolio benefits in combination with selected short listed resources
- PSE is familiar with this facility and its operations (contracted with facility from April 1994 through December 2011)
- Existing resource with demonstrated reliable operating history
- Plant has been well maintained and is expected to be economically viable for at least 27 years
- Facility uses proven, reliable GE 7EA gas turbines; plant has a solid operating history
- Facility is interconnected to PSE's system providing load management and no exposure to cost increases from third party transmission providers
- Location reduces cross-Cascade and Puget Sound Area Northern Intertie curtailment exposure
- Firm gas transport on Cascade would be transferred to PSE as part of the purchase
- Facility has dual-fuel capability
- Counterparty is well-known with low execution risk
- Dispatchable units

Appendix

- Acquisition closing items and timeline
- Deal diagram
- Additional quantitative analysis
- Facility aerial layout
- Interconnection / Transmission synopsis

Closing Items

PUGET SOUND ENERGY

- Asset Acquisition Agreement
  - Regulatory approvals must be obtained in advance of anticipated Washington State Emissions Performance Standard ("EPS") limit changes
  - Tenaska must resolve claims associated with Lease & Easement Agreement and Steam Agreement
- Lease & Easement Agreement and Steam Agreement
  - Phillips 66 has agreed to a number of modifications to allow transition to PSE ownership
  - Agreements assigned at close
- Agreement for Industrial Water Purchase
  - Agreement assigned at close
- Operations and Maintenance
  - PSE to finalize operations and maintenance plan
- Natural Gas Service Agreement and Large Generator Interconnection Agreement
  - Existing agreements terminated in favor of new agreements
- Emissions Performance Standard
  - Asset Acquisition Agreement contains closing condition requiring compliance with then current EPS limits
  - Current limit under the EPS is 1,100 lbs of CO_2 / MWh
  - Commerce department undergoing review to modify limits
  - New, lower draft standard of ~975 lbs of CO_2 / MWh expected early-October at earliest
  - 30 day review period
  - 30 day final draft comment period
  - New rule in effect anticipated by early-December at earliest

Acquisition Schedule

PSE PUGET SOUND ENERGY

June 2012 | **July 2012** | **August 2012** | **September 2012** | **October 2012** | **November 2012** | **December 2012**

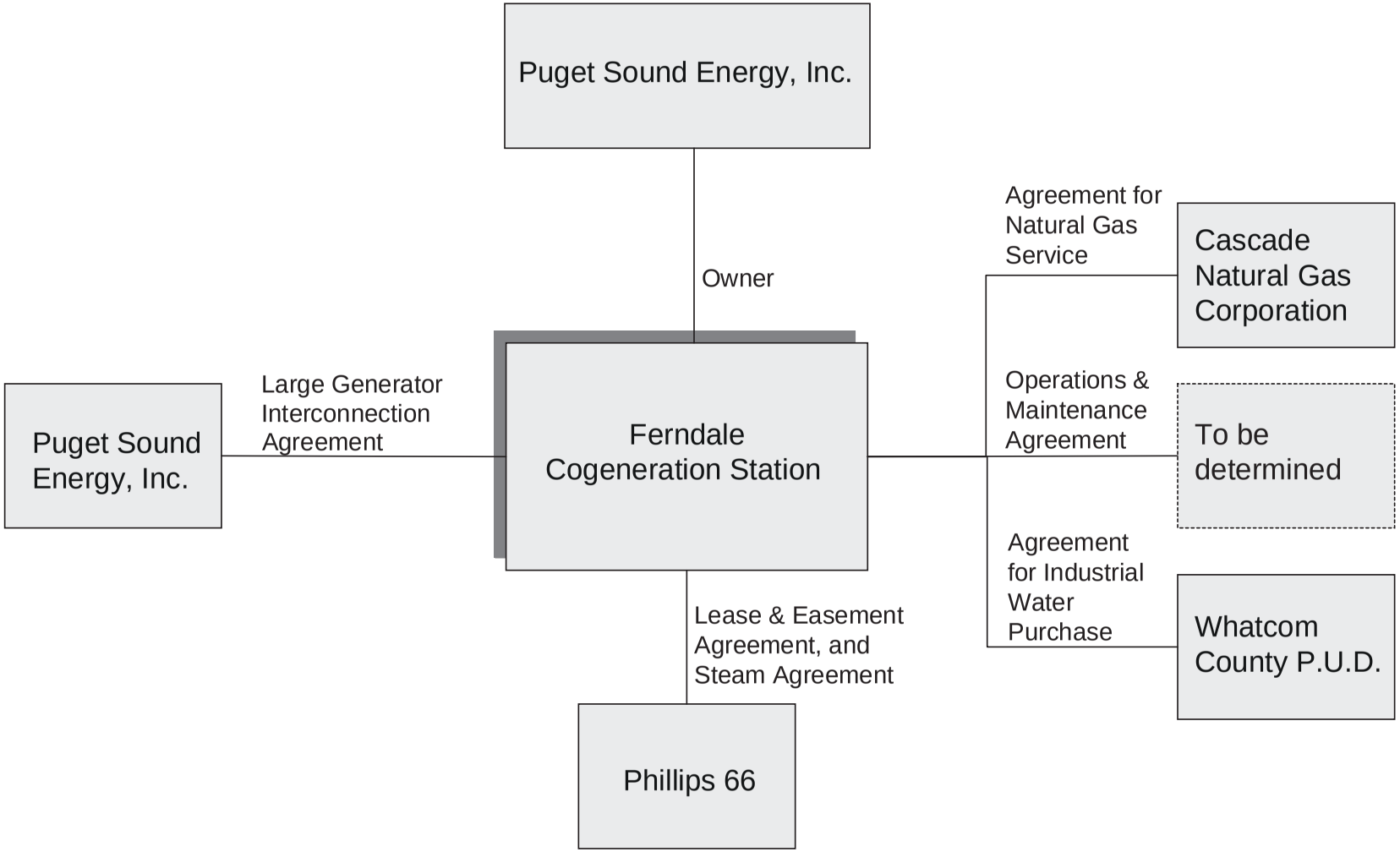
- Tenaska proposes Ferndale sale
- LOI signed
- Due diligence
  - Data requests and review
  - Site visits
  - Plant performance testing
- Major Agreements
  - Asset Acquisition
  - Steam / Lease
  - Gas Transportation
  - Water Supply
  - LGIA
  - O&M staffing strategy
- BOD Prep
- EMC Presentation
- BOD Presentation
- Regulatory approvals
  - FERC Form 203
  - Hart-Scott-Rodino
  - WUTC Declaratory Order
- Financial close

- WA EPS draft rule adopted (expected)
- 30 day hearing period ends
- 30 day final draft comment period ends
- Projected change to WA EPS

Diligence team is closely monitoring process

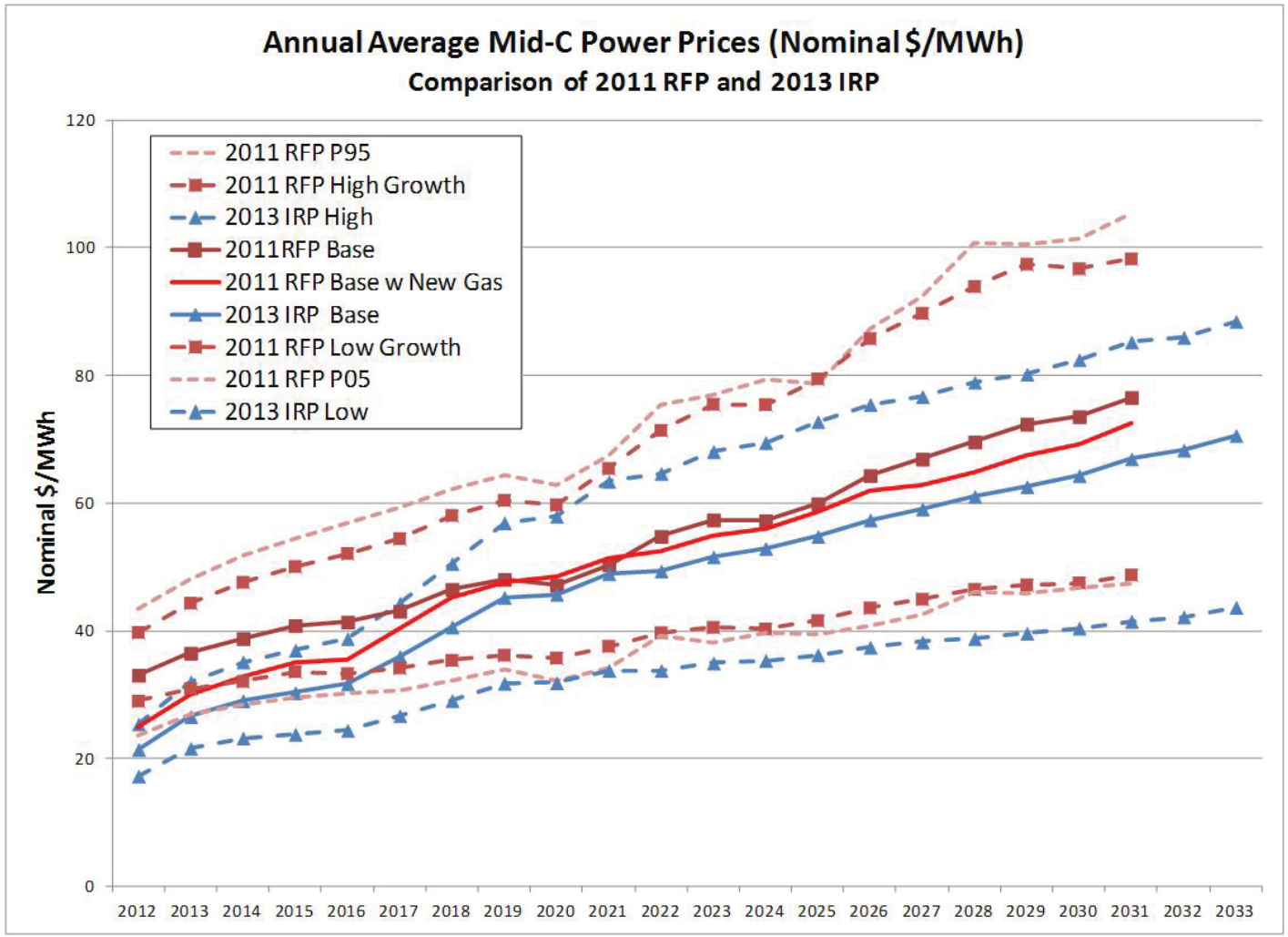
Team is working to advance approvals

Deal Structure



Evaluation Scenarios

2013 Integrated Resource Plan scenarios show lower power prices than the Phase II 2011 RFP scenarios



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 showed Coal Transition PPA represented lowest cost portfolio with lowest risk compared to other alternatives

July 2012 Reevaluation

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

September 2012 Reevaluation

- Ferndale ownership due diligence findings show reduced portfolio cost in Base w/ New gas scenario
- Under most contemporaneous 2013 IRP base scenario Ferndale is low cost

REDACTED VERSION

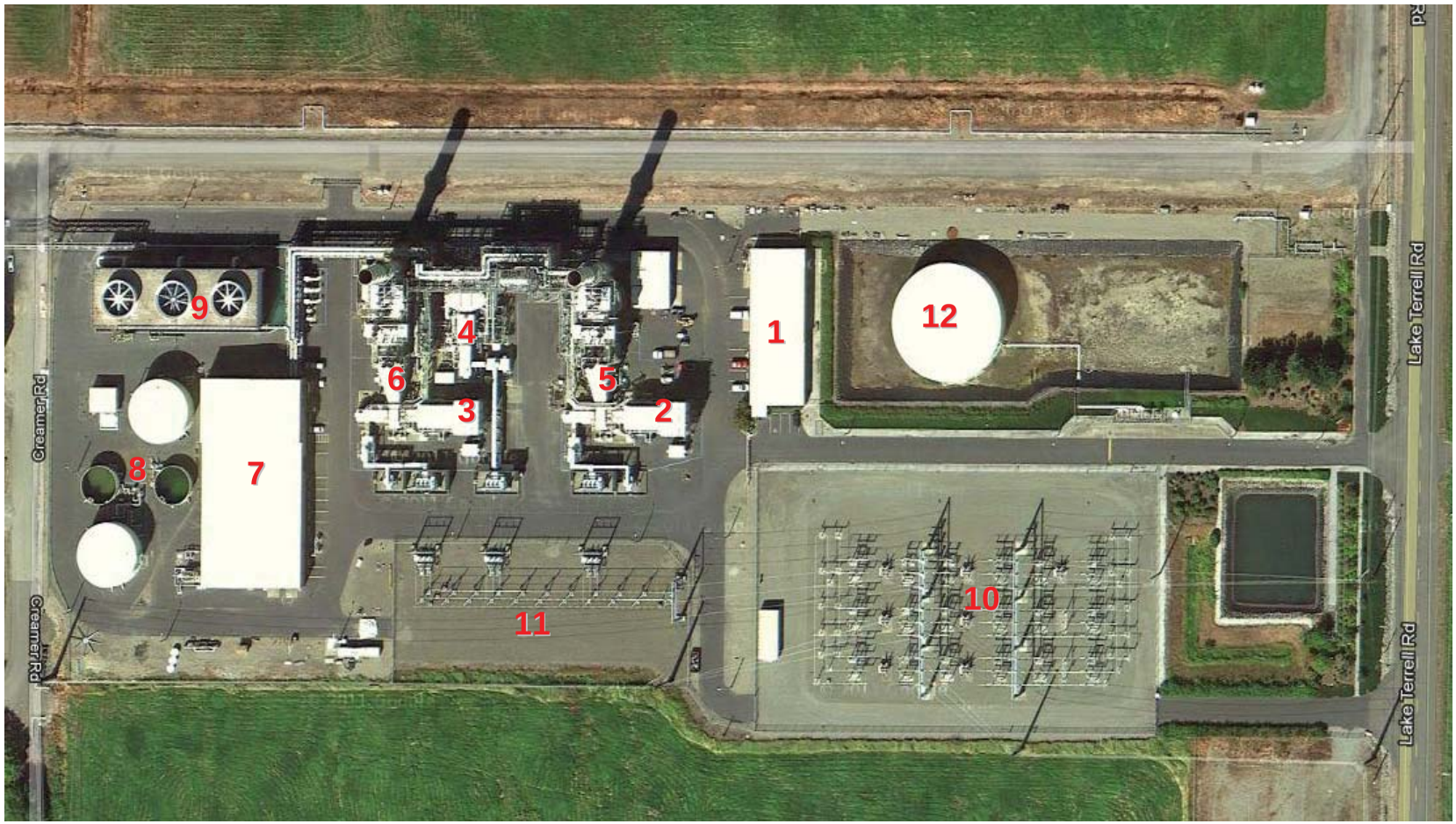
July Reevaluation: Ferndale acquisition low cost in 5 out of 5 scenarios

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected
Ferndale Own (#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	

September 2012 Reevaluation:
Ferndale acquisition low cost resource most current base scenario

	Scenario	
	2013 IRP Base	Base w/ New Gas
Ferndale Own (1)	X	X
Coal Transition (Centralia) PPA (2)	X	X
[redacted] (#11117)	X	X
PSE Self Build Peaker		
[redacted] (#11124)		
[redacted] (#11110)		
[redacted] (#11123)		
[redacted] (#11123)		
[redacted] (#11123)	X	X
[redacted] (#11103)		
Portfolio Cost ($000)	**9,493,027**	**9,752,629**

Facility Overview



1. Administration Building
2. Gas Turbine “A” and Generator
3. Gas Turbine “B” and Generator
4. Steam Turbine and Generator
5. HRSG “A”
6. HRSG “B”
7. Water Treatment Bldg
8. Water Tanks
9. Cooling Tower
10. PSE Terrell Substation
11. Plant Switchyard
12. Fuel Oil Tank

Interconnection / Transmission

PUGET SOUND ENERGY

Benefits of ownership and operation

- Provides local load service benefits to Whatcom County
  - Reliability benefits in the event of outages elsewhere in the county
  - Flexibility benefits when other generation (e.g., Ensearch) in the county isn't running
- Reduces cross-Cascades power flows and risk of cross-Cascade transmission curtailments
- Reduces risk of Puget Sound Area Northern Intertie ("PSANI") curtailments when South-to-North power flows are heavy through the Puget Sound area

Interconnection

- Tenaska signed LGIA with PSE (June, 2009) for Ferndale - 280 MW winter; 245 MW summer
- Upon purchase of the Facility, the existing LGIA will be terminated and a new LGIA between PSE Marketing and PSE Transmission Contracts will be executed:
  - Based on the results of a recent System Impact Study, the new LGIA will allow the Facility to operate with an increase of the output limits to 300 MW winter and 285 MW summer
- PSE identified only one technical compliance issue - requires installation of generator excitation limiters

Transmission

- Ferndale has operated and will operate as a PSE Designated Network Resource in securing network transmission capacity
- Transmission from the plant and through PSEI will be consistent with the LGIA limits

"LGIA" – Large Generator Interconnection Agreement
"PSEI" – PSE Operations (Transmission Contracts)
"PSEM" – PSE Marketing

M E M O R A N D U M

September 27, 2012

Confidential

To: PSE Board of Directors

cc: Bracewell & Giuliani LLP

From: Roger Garratt

Subject: Proposed Transaction to acquire the 270-MW Ferndale Cogeneration Station natural gas-fired combined cycle facility.

The purpose of this memorandum is to recommend acquisition of the Ferndale Cogeneration Station, 270-MW combined cycle facility located in Ferndale, Washington (the “Facility") pursuant to the execution of Definitive Agreements at a purchase price of $84,000,000 million for an all-in capital cost of $87,993,973 million (~$303/kW), in accordance with the Resolutions set forth in Section I. The facility began commercial operation on April 8, 1994 and is currently owned by Tenaska Washington Partners, L.P. ("TWP"). (See Attachment B, "Transaction Structure".) This memo and associated attachments summarizes the business case for acquiring the Facility and describes the analysis of its benefits, costs, and risks conducted by PSE’s long-term resource planning and acquisition teams.

1. Facility overview and deal terms

Facility description and history

The Ferndale Cogeneration Station is a 270 MW operating power plant which has historically served PSE. It is a dual fueled[1], combined-cycle[2] cogeneration facility located on an approximately 16-acre site[3] wholly within the boundaries of the approximately 850-acre Phillips 66 Refinery site near Ferndale, Washington. The plant's annual average heat rate at 270 MW is [redacted] Btu/kWh on a Higher Heating Value ("HHV") basis. This heat rate includes fuel for process steam and all modes of operation to achieve this output (including part load, base load and duct firing). When operating, the Facility is capable of providing steam to the neighboring refinery pursuant to a Steam Agreement with Phillips 66 described on page 5.

Plant capacity values

Why are they different?

Plant capacity values vary based on a variety of factors. For the Ferndale Cogeneration Station, factors such as ambient temperature, the use of duct firing and whether the Facility is delivering steam to its steam host all impact the maximum potential output of the plant. This memo and its attachments most commonly express the Facility's capacity in terms of its nameplate capacity at ISO conditions (59˚ F and 60% relative humidity at sea level), with duct firing but without process steam delivery. However, there are times when it is useful to discuss the plant's capacity under alternate conditions, such as those described below.

- 270 MW – Represents nameplate capacity at ISO conditions with duct firing but without process steam delivery.
- 245 MW – Represents baseload plant capacity at ISO conditions without duct firing and without process steam delivery. PSE's former power purchase agreement with Tenaska had a contract capacity of 245 MW.
- 290 MW – Represents plant capacity at PSE's planning standard (23˚ F) with duct firing but without process steam delivery.
- 265 MW – Represents baseload plant capacity at PSE's planning standard (23˚ F) without duct firing and without process steam delivery.

[1] The primary fuel is natural gas and the backup fuel is No. 2 fuel oil ("distillate").

[2] The Facility is a conventional 2x1 ("two-on-one") combined cycle power plant with two combustion turbine generators, two heat recovery steam generators ("HRSGs") and one steam turbine generator.

[3] The total leased area for the site is approximately 16 acres; roughly 14 acres is used by the Facility and another two acres is occupied by a PSE substation and transmission line easement.

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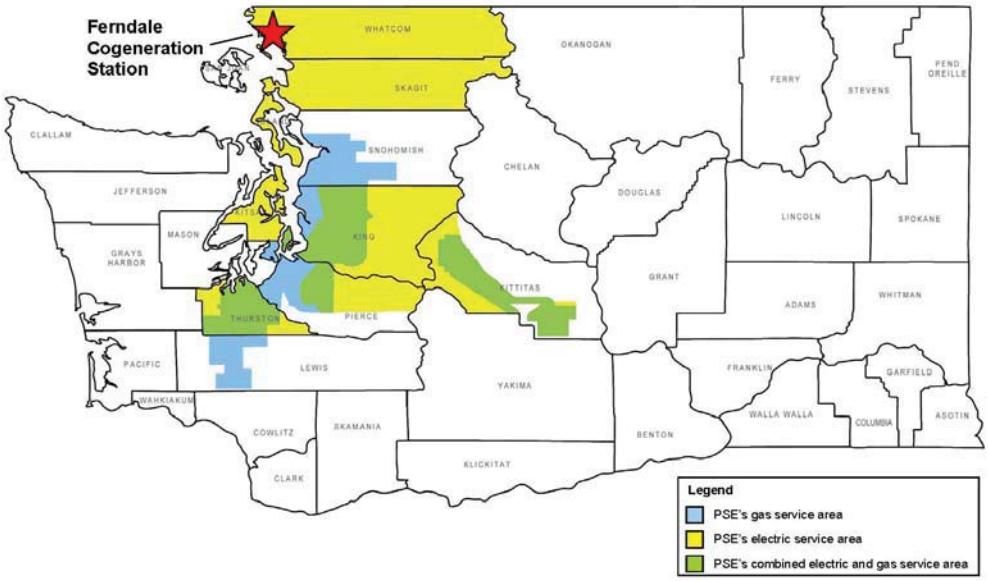
The Facility interconnects to Cascade Natural Gas Corporation's distribution system via a 6-mile pipeline just east of the Phillips 66 Refinery, and is directly interconnected to PSE's 115 kV transmission system through the Lake Terrell Substation. Industrial water for cooling tower, steam cycle makeup and other uses is supplied to the Facility by the Public Utility District No. 1 of Whatcom County ("Whatcom PUD") from the Nooksack River. Waste water is treated at the site and then piped through a line that extends through the neighboring refinery where it ties into the refinery outfall prior to discharge into the Strait of Georgia. Storm water from areas with the potential for oil spill passes through an oil-water separator before it is piped to the waste water treatment system.

For a more detailed description of the Facility refer to Attachment G (Summary Due Diligence Findings), Attachment I (Gas Supply and Delivery Plan) and Attachment J (Interconnection and Transmission Plan).

Figure 1. Location of Ferndale Cogeneration Station in Whatcom County, Washington



History. PSE entered into a long-term power purchase agreement ("PPA") for 245 MW of firm electricity from the Ferndale Cogeneration Station beginning April 8, 1994. Effective June 1, 2001, TWP entered into an excess power agreement with PSE to share in the margins generated by PSE when the Facility generated energy in excess of the contracted capacity of 245 MW. At the same time the plant was enhanced with a gas turbine inlet cooling system to increase summer capacity.

In addition to PSE's operating history with the Facility, Tenaska has bid into four separate PSE requests for proposals ("RFPs"), which has given PSE an opportunity to understand the intricacies of this Facility.

The PPA terminated upon expiration of its term on December 31, 2011. From the time the plant commenced commercial operation under the PPA, the net availability factor[4] over its term averaged approximately 99%.

Summary of the acquisition and principal agreements

A non-binding Letter of Intent (“LOI”) to acquire Ferndale was executed with TWP on August 3, 2012. After signing the LOI, the parties have negotiated a definitive purchase agreement in accordance with its terms, referred to as the Asset Acquisition Agreement or “AAA.”

A detailed summary of the Asset Acquisition Agreement and other principal agreements is attached as Attachment A. The principal commercial terms of the proposed transaction are briefly summarized as follows:

[4] Actual output plus available capacity expressed as a percentage of contract capacity for the period excluding scheduled outage.

- **Asset Acquisition Agreement.** PSE will purchase from Tenaska Washington Partners, L.P. ("TWP") all of the assets related to the Ferndale Cogeneration Station for $84,000,000. [redacted]

  The agreement requires several conditions to close, including certain regulatory approvals and compliance with state greenhouse gas laws.

- **Lease & Easement and Consent to Assign and Amend Lease & Easement.** The Facility is located on an approximately 16-acre site wholly within the boundaries of the approximately 850-acre site of the Phillips 66 Refinery. TWP leases the Facility site pursuant to the Lease & Easement ("Lease"), between TWP and Phillips 66. The term of the Lease is coterminous with the term of the Steam Agreement (see below) which expires in 2041. [redacted]

- **Steam Agreement and Consent to Assign and Amend Steam Agreement.** The Facility currently provides a tolled steam option to the Phillips 66 Refinery pursuant to the Steam Agreement ("Steam Agreement") between TWP and Phillips 66. The Steam Agreement expires in 2041, coterminous with the expiration of the Lease (described above).

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[redacted]

- **Agreement for Natural Gas Service Firm Transportation.** TWP has contracted with Cascade for firm natural gas transportation to the Facility pursuant to the Agreement for Natural Gas Service Firm Transportation ("Transportation Agreement") between TWP and Cascade. Natural gas is delivered to the Facility via a 20-inch pipeline owned by Cascade. The Cascade pipeline interconnects directly with the Westcoast Energy, Inc. system at the international border at Sumas, Washington, providing access to Canadian gas without incurring transportation costs on the Northwest Pipeline system. While the initial term of the Transportation Agreement expires June 18, 2013 and has the option for two successive 5-year terms, upon closing PSE intends to terminate the existing agreement in favor of a new, 25 year agreement with substantially the same terms. [redacted].

  A Memorandum of Understanding ("MOU") with Cascade provides for Cascade's consent to assignment of the Transportation Agreement, termination of the Transportation Agreement, effectiveness of the new transportation agreement, and effectiveness of an amendment to [redacted], all at closing.

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- **Agreement for Industrial Water Purchase.** Whatcom PUD provides the Facility with up to 2.0 million gallons per day of industrial water pursuant to the Agreement for Industrial Water Purchase ("Industrial Water Purchase Agreement") between TWP and Whatcom PUD. TWP has the option to increase its demand to 3.0 million gallons per day. The Facility is interconnected with Whatcom PUD by a 16-inch buried water pipeline. The term of the Industrial Water Purchase Agreement ends December 31, 2014, though Whatcom PUD has expressed interest in extending the agreement on a long-term basis. At closing, the Industrial Water Purchase Agreement will be assigned to PSE.

- **Interconnection Agreement**. The Facility is interconnected to the PSE transmission system pursuant to a Standard Large Generator Interconnection Agreement ("LGIA") between PSE and TWP. Upon purchase of the Facility, the existing LGIA between TWP and PSE will be terminated and a new LGIA between PSE Marketing and PSE Transmission Contracts will be executed. Based on the results of a recent System Impact Study, the new LGIA will allow the Facility to operate with an increase of the maximum output limits to 300 MW winter and 285 MW summer.

2. Financial matters

Current capital budget

The requested Ferndale Facility capital budget is $88,500,000. The purchase price for the facility is $84,000,000. Additional costs comprising the total capital budget are attributed to Facility repairs, interconnection compliance charges, Information Technology upgrades, PSE due diligence costs, and fees associated with regulatory filings. The overall capital budget has not materially deviated from the original $89,000,000 assumption used at the outset of due diligence.

The Facility acquisition will be financed consistent with past utility financing practices, employing a combination of funds from operations, short-term debt drawn from the Company's capital expenditure facility, long-term debt and, as needed to balance the debt, equity provided from PSE's parent Puget Energy.

Figure 2. Current capital budget estimate

Asset Description	PSE Budget Estimate
Facility Purchase Details	**$ 84,000,000**
Real Estate Excise Tax (REET) (50%)	**$** [redacted]
Facility Improvements	**$** [redacted]
IT	$ [redacted]
Security	$ [redacted]
Interconnection & Transmission	$ [redacted]
NERC/WECC testing	$ [redacted]
Signage	$ [redacted]
Operating Standards Upgrades	**$** [redacted]
Transaction & Due Diligence	**$** [redacted]
Documentation	$ [redacted]
Due Diligence	$ [redacted]
PSE Labor	$ [redacted]
Hart-Scott Rodino filing	$ [redacted]
Alta Survey	$ [redacted]
Title Insurance	$ [redacted]
Total Acquisition Costs	**$ 87,993,973**

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Five-year operations and maintenance ("O&M") and capital budget

The five-year O&M and capital budget plan was derived based on the operating history and current condition of the Ferndale Facility. Market conditions have altered run-time in recent years and consequently major maintenance costs are assumed to be on time-based versus run-time schedule. In addition to maintenance costs, the O&M budget contains provisions for fixed personnel, lease, property tax, gas transportation, and insurance expenses. Variable gas and consumable expenses were also included in the budget; these costs were based on Aurora dispatch model results. The following five-year summary is based on PSE operating the Facility; however, the Company has also been evaluating third-party O&M options and ultimately may elect to choose a third-party service provider. This option would be selected if PSE concludes that cost savings could be achieved while ensuring safety and reliability.

Figure 3. Five-year O&M and capital budget

Income Statement (000s)	2013	2014	2015	2016	2017
Fixed Cost Subtotal	8,269	10,753	9,330	12,340	10,616
Fixed Gas Transport	[redacted]				
Land Lease					
Asset Retirement Expense					
Fixed Operation Expense					
Major Maintenance Expense					
Maintenance Expense					
Total Property Tax					
Insurance					
Variable Cost Subtotal	10,633	10,936	12,300	14,937	18,427
Variable Gas Transport	[redacted]				
Fuel Cost					
Variable Operation Expense					
Total Operating Expenses	18,902	21,689	21,630	27,277	29,043

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First-year rate impact

PSE estimates that starting in 2013 the proposed acquisition will result in a first-year rate increase of approximately $19 million or about 1% based on rates set in PSE's 2011 General Rate Case.

3. Determination of need and evaluation of alternatives

Need for additional supply resources

The Integrated Resource Plan ("IRP") guides PSE's efforts to acquire new energy resources at the lowest reasonable cost, as directed by the Revised Code of Washington chapter 19.280 (RCW 19.280). PSE biennially prepares a revised IRP. Each IRP provides an updated customer demand forecast and an analysis of the costs and risks involved in securing new energy supplies. As shown in Figure 4, the most recent IRP, filed with the Washington Utilities and Transportation Commission ("WUTC") in May 2011, identified a need for additional supply-side and demand-side capacity resources to meet customers' peak and energy needs.

Since that time, PSE has updated its capacity need forecast multiple times. PSE's final capacity need forecast for the 2011 Request for Proposals for All Generation Sources ("2011 RFP"), which incorporates resources added after publication of the 2011 IRP and results from the F2012 load forecast[5], is shown in Figure 4.

[5] The 2011 RFP analysis uses the draft F2012 load forecast from April 17, 2012. This difference between the April 17, 2012 peak forecast and the final F2012 forecast is less than 0.1% through 2025 and grows to 0.5% by 2031.

Figure 4. Electric resource capacity need forecast[6]

Capacity Need in MW[1,6]	2013	2014	2015	2016	2017
2011 IRP published (F2010)[1]	875	934	991	1,025	1,476
2011 RFP published (F2011)[1,2,3]	434	636	713	862	1,317
11/9/2011 Update (F2011)[2,3,4]	451	653	730	879	1,005
DRAFT 4/17/2012 (F2012 draft)[2,3,5]	242	460	554	728	866
F2012 Final	241	457	545	709	834

Table notes:

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

(2) Includes short-term resources (various contract starts and lengths) and transmission contract extensions that were not known for inclusion in the 2011 IRP analysis.

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

(4) 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).

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

(6) Capacity figures exclude Coal Transition PPA, which hasn't been pre-approved by WUTC; contract amounts are: 2015—180 MW, 2016—280 MW, 2017 to 2024—380 MW and 2025—300 MW.

Comparative analysis

PSE conducted a thorough comparative analysis process that ultimately led to the selection of the Ferndale Cogeneration Station—in combination with other selected resources—as part of a lowest cost and lowest risk solution to help meet PSE's long-term resource needs. This process involved three stages of quantitative and qualitative evaluation.

1. **2011 RFP for All Generation Sources ("2011 RFP")** – The 2011 RFP analysis was conducted between November 1, 2011 and mid-June 2012. This analysis compared 29 proposals comprised of a variety of resource types and offer structures, and produced an initial short list.

2. **July 2012 re-evaluation of revised offers ("the re-evaluation")** – The re-evaluation analysis was conducted between June 22 and July 24, 2012. This analysis evaluated revised offers received after identifying the 2011 RFP short list, and produced a revised short list.

3. **Ferndale Cogeneration Station Due Diligence ("due diligence")** – The due diligence analysis was conducted between August 3 and September 20, 2012. This analysis took a closer look at the Ferndale Cogeneration Station, seeking to identify potential benefits, costs and risks associated with acquiring the Facility.

2011 RFP and July 2012 Reevaluation

PSE filed its 2011 Request for Proposals for All Generation Sources ("2011 RFP") on October 17, 2011. The 2011 RFP sought resources to meet the capacity need described in this memo on pages 10-11.

All RFP proposals were subjected to a thorough cross-departmental analysis of their qualitative and quantitative attributes. PSE's resource evaluation process is designed to be consistent with guidance set forth in the Washington Administrative Code ("WAC") and the Revised Code of Washington ("RCW"), which encourage utilities to seek resources that provide clean, safe and reliable power to meet their needs using lowest reasonable cost as a criterion. RCW 19.280.020 defines "lowest reasonable cost" as "the lowest cost mix of generating resources and conservation analysis of a wide range of commercially available resources." PSE's evaluation methods have been developed over time based on PSE's experience as a resource developer, owner, acquirer, operator and evaluator, and have been subjected to scrutiny by the WUTC in previous cost-recovery filings. A detailed description of the process PSE followed to evaluate and select resources in accordance with Washington's laws was submitted as Attachment B to the Coal Transition PPA report presented at the July 24, 2012 Board of Directors' Meeting.

PSE completed its 2011 RFP evaluation in mid-June 2012, identified a short list and notified bidders of their selection status shortly thereafter. However, by June 22, 2012 PSE received three revised offers for resources not selected in the 2011 RFP. The evaluation team postponed negotiations with selected resources. This allowed time to evaluate the new offers—which included a revised offer from TWP for the Ferndale Cogeneration Station—to determine if the short list should be updated.

Taking into consideration the quantitative and qualitative analysis performed during the re-evaluation, the evaluation team determined that the short list should indeed be modified and that two offers, the Tenaska Ferndale Cogeneration Station Ownership together with the Coal Transition PPA, represent the lowest cost and lowest risk portfolio compared to other alternatives.

- **The Ferndale Cogeneration Station Ownership offer,** as revised after the 2012 RFP, is a long-term, low cost existing resource that is directly connected to PSE's transmission system. Ferndale is well-known to PSE and provides system benefits.

- **The Coal Transition PPA**, as revised during the re-evaluation, is an 11-year PPA for up to 380 MW of coal transition power that helps the State of Washington achieve its greenhouse gas emission reduction goals and provides financial assistance to host communities. It is a least-cost and least-risk resource that offers PSE customers a hedge against higher prices over the life of the PPA.

The July 2012 re-evaluation process, results and decisions are described in detail in Attachment E.

Due Diligence

PSE and TWP executed a non-binding Letter of Intent ("LOI") for the purchase and sale of the Ferndale Cogeneration Station on August 3, 2012 initiating a more in-depth review of the plant by PSE from the perspective of a potential owner and possible

operator, [redacted], as originally proposed in the 2011 RFP. PSE assembled a cross-functional team to perform a due diligence review designed to identify potential risks, advantages, or costs associated with the plant and with integrating the plant into PSE's existing fleet of resources.

The due diligence effort involved PSE working groups such as engineering and operations, compliance, environmental and permitting, insurance, human resources, information technology ("IT") and community relations. The evaluation team began to consider how PSE would run the plant, and what would be required to bring the plant into PSE's fleet according to the Company's operating standards, and in compliance with state, regional and federal laws. During this time PSE staff also developed plans for fuel supply and delivery, and interconnection and transmission. Meanwhile, the quantitative analysis team continued to refine costs based on this more rigorous level of review, to compare these costs to alternatives and to develop a project pro forma.

Ultimately, the due diligence process found that the Ferndale Generation Station is a reliable, well-maintained, low cost resource interconnected to PSE's system that would help meet PSE's long-term resource needs. No fatal flaws were discovered during the evaluation of the Facility. The following sections provide a summary of key risks and mitigations, and a summary of the principal benefits identified during the evaluation process.

See Attachment G for a summary of due diligence findings, Attachment H for the asset management plan, Attachment I for the gas supply and delivery plan, and Attachment J for the interconnection and transmission plan.

Summary of risks and mitigations

A summary of key risks and mitigations is provided below. For a more detailed discussion of risks and mitigations, refer to Attachment F.

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Commercial risk

- [redacted]

Environmental risks

- The Washington State Department of Commerce is considering lowering the state's Emissions Performance Standard ("EPS") from 1,100 lb-CO_2/MWh to 975 lb-CO_2/MWh. It is doubtful that the Facility can meet the 975 lb-CO_2/MWh EPS. If Closing occurs prior to the change of the standard, the Facility would be "grandfathered" under the higher standard. The transaction to acquire the Ferndale Cogeneration Station is targeted to close November 1, 2012, prior to the anticipated EPS change. The AAA includes a closing condition that gives PSE the right to terminate the agreement in the event an EPS change is enacted that the Facility will be unable to meet.
- There is a risk associated with liability related to environmental impacts that occurred prior to PSE acquisition of the Facility, as the lessee bears the responsibility for remediating the site. PSE is conducting a Phase II analysis to provide a baseline for determining environmental liabilities accruing under PSE Facility ownership.

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Operational risk

- [redacted]

Resource need

- There is a risk that PSE's load growth will be less than the current F2012 load growth forecast. To mitigate this risk, in its analysis PSE used the most current load growth forecast. This is lower than the low cyclical forecast from the 2011 IRP that the WUTC directed the Company to consider in its 2011 IRP acceptance letter. PSE carefully considered the appropriate timing for executing short list resources. PSE will use its hedging program to manage any potential short-term energy surpluses and other portfolio volatility.

Summary of principal benefits

PSE's analysis and due diligence show that the Ferndale Cogeneration Station is a reliable, low cost resource that will help meet PSE's long-term energy and capacity needs. A list of principal benefits associated with acquiring this resource are bulleted as follows.

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- Project economics are favorable.
- PSE analysis shows that Ferndale is a lowest cost resource compared to other alternatives.
- Analysis suggests Ferndale offers significant portfolio benefits in combination with selected short listed resources.
- PSE is familiar with this facility and its operations (held a tolling agreement that expired December 31, 2011).
- Facility is interconnected to PSE's system providing load management and wind integration benefits, and no exposure to cost increases from 3rd party transmission providers.
- Ferndale offers a reliability benefit due to presumed reduction of Cross-Cascades and Puget Sound Area Northern Intertie ("PSANI") curtailment events.
- Firm gas transport on Cascade would be assigned to PSE as part of the purchase. Cost reduction will be achieved through negotiation and extension of agreement.
- Facility uses proven reliable GE 7EA gas turbines; plant has a solid operating history and has been well maintained.
- Facility has dual-fuel capability (diesel and natural gas).
- Units are dispatchable.
- Plant is expected to be economically viable and maintained to operate through 2039.
- Counterparty is well-known with low execution risk.

4. PSE's plan for operating and managing the facility

Asset management plan

PSE intends to staff and operate the plant consistent with other combined cycle facilities in the Company's portfolio. As part of the due diligence process, PSE continues to evaluate the viability of outsourcing portions of the operations and maintenance function. In the event PSE management determines that there is sufficient value in a third-party proposal, the Company may elect to contract for these services.

Transmission and interconnection plan

Interconnection. Upon purchase of the Facility, the existing Large Generator Interconnection Agreement ("LGIA") between Tenaska and PSE will be terminated and a new LGIA between PSE Marketing and PSE Transmission Contracts. The stated capacity in the existing LGIA is 280 MW winter and 245 MW summer. In connection with the new LGIA, PSE has studied and determined that the Facility can generate additional incremental capacity up to 300 MW winter and 285 MW summer, which will be the stated maximum outputs in the new LGIA.

Transmission. The Facility will be designated as a Network Resource to secure network transmission capacity. The megawatt amount of network transmission capacity will be consistent with the limit contained in the new LGIA.

See Attachment J for more information about interconnection and transmission.

Gas supply and delivery plan

While the plant can be run on distillate fuel, PSE will secure firm gas pipeline capacity to support the full output of the Facility. The option of running the Facility on distillate offers

greater flexibility to the entire PSE fleet by allowing gas supply destined for the Facility to be diverted to other PSE plants that do not have distillate back-up should the need arise. However, PSE does not intend to initially utilize the oil tank, as the portfolio benefits do not currently exceed the cost.

Gas transportation. A new firm transportation agreement between PSE and Cascade Natural Gas Corporation ("Cascade") for 52,000 MMBtu/day will become effective when the transaction to purchase the Facility closes. PSE has determined that pricing under the terms of the new agreement is more advantageous than modifying the existing contract between Cascade and TWP. Cascade has also agreed to amend, [redacted]

Gas supply. Upon PSE ownership, the Facility would be integrated into PSE's rolling three year supply hedging program. The Facility has the ability to access gas from British Columbia directly at the Sumas trading hub through Cascade's connection to the Westcoast Energy Inc. ("Westcoast") system. PSE will also hold capacity on Westcoast for approximately one half of the plant requirements to allow purchase of supplies at the Station 2 trading hub, enhancing price diversity and physical access.

For more discussion of the gas supply and delivery plan, as well as PSE's gas hedging program, see Attachment I.

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5. Decision and execution

Closing

PSE and TWP are targeting September 27, 2012 to execute the Asset Acquisition Agreement, upon completion of negotiations and following approval from PSE's Board of Directors and TWP's Management and Investment Partners. PSE estimates that the transaction should close within 60 days following the date the Asset Acquisition Agreement is executed conditioned upon receipt of all regulatory and other approvals. Closing is targeted to occur approximately November 1, 2012.

Regulatory Approvals

Application for EPS Determination

On February 7, 2007, Governor Gregoire issued Executive Order 07-02 (Washington Climate Change Challenge), which required the State of Washington to achieve the following statewide greenhouse gas ("GHG") emission reductions:

1. by 2020 reduce overall GHG emissions in the state to 1990 levels;
2. by 2035 reduce overall GHG emissions in the state to 25 percent below 1990 levels; and
3. by 2050 reduce overall GHG emissions in the state to 50 percent below 1990 levels, or 70 percent below the state's expected GHG emissions that year.

On May 3, 2007, the State of Washington enacted climate change legislation (S.B. 6001) to reduce greenhouse gas emissions and provide incentives for developing new sources of clean and renewable energy. This bill was implemented via chapter 80.80 RCW, which imposes an emissions performance standard on baseload electric

generation in the State of Washington.[6] Electric utilities may not enter into a long-term financial commitment[7] for baseload electric generation on or after July 1, 2008, unless the generating plant's emissions are the lower of:

- 1100 pounds of GHG per megawatt (MW)-hour; or
- the average available GHG emissions output as updated by the Department of Commerce.

To satisfy this requirement, PSE must file an application for a determination from the Washington Utilities and Transportation Commission ("WUTC") that the Ferndale Generation Station complies with the GHG emissions performance standard, including whether the resource is baseload electric generation. PSE must submit the following information in support of its application:

i. The plant technology, design, fuel and fuel consumption;

ii. Any site certificate or other permits necessary for operation of the power plant, including, any determination made by the Department of Ecology, local air authority or the Energy Facility Site Evaluation Council regarding compliance with the greenhouse gas emissions performance standard;

iii. Such other information as is available to or in the possession of the electrical company concerning exhaust emissions including total annual pounds of greenhouse gas from each power plant.

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[6] Baseload electric generation means electric generation from a power plant that is designed and intended to provide electricity at an annualized plant capacity factor of at least 60 percent.

[7] Long-term financial commitment means either a new ownership interest in baseload electric generation or an upgrade to a baseload electric generation facility; or a new or renewed contract for baseload electric generation with a term of five or more years for provision of retail power or wholesale power to end-use customers in the State of Washington.

WAC 480-100-415(3)(a).

The WUTC's determination that the Ferndale Generation Station complies with the GHG emissions performance standard will be separate and distinct from the rate proceeding in which the WUTC will make its prudence determination and allow PSE to place Ferndale costs into rates. Receipt of this determination is a condition of closing.

FERC 203 approval

Acquisition of the facility requires the approval of FERC under Section 203 of the Federal Power Act. PSE intends to file the Section 203 application with FERC upon receiving Board approval to acquire the resource. In reviewing filings under Section 203, FERC must determine whether the proposed transaction is in the public interest. This determination requires an evaluation of the effect of the proposed transaction on competition under a market concentration screening test. Indicative analysis has been performed to examine the effect of the acquisition on PSE's market concentration. Results of this analysis indicate that PSE passes the screens. PSE anticipates receipt of FERC's ruling on its Section 203 application within one to two months after filing.

Hart-Scott-Rodino Filing

The Proposed Transaction will require compliance with the premerger notification program under the Hart Scott Rodino Antitrust Improvements Act of 1976, as amended, and expiration of the “waiting period” thereunder must expire before closing.

Rate recovery

PSE will seek a determination of prudence and rate recovery for the Ferndale Cogeneration Station acquisition most likely through a Power Cost Only Rate Case (“PCORC”) filing with the Washington Utilities and Transportation Commission (“WUTC”). The filing is anticipated to occur in December 2012 and regulatory approval

of the rates is anticipated six months thereafter.

For a more detailed discussion of regulatory and accounting matters, refer to Attachment K.

Recommendation

Based on PSE's determination of need, analysis of alternatives, and the described benefits of the proposed transaction, management recommends that the Board of Directors adopt the Resolutions (Section I) approving acquisition of the Ferndale Cogeneration Station, including an appropriate increase to the 2012 capital budget to enable this acquisition.

Guide to Acronyms and Key Terms

Abbreviation/Term	*Meaning*
AAA	Asset Acquisition Agreement
AC	alternating current
aMW	average megawatts
AGC	automatic generation control, enables remote load following
AOP	Air Operating Permit
AST	aboveground storage tank
B&V	Black and Veatch, engineering consultants
Btu	British thermal unit
Btu/hr	British thermal units per hour
Cascade	Cascade Natural Gas Corporation, a natural gas transportation provider
CEMS	continuous emissions monitoring system
CI	combustion inspection performed on combustion turbines every 8,000 fired hours or 900 starts
CiSCO	Custom Instrumentation Services Corporation, CEMS supplier
CO	carbon monoxide
CO_2	carbon dioxide
Company, The	Puget Sound Energy
COPE Summary	summary report of four property risk characteristics: construction, occupancy, protection and exposure
DC	direct current
DCS	central distributed control system
DNR	designated network resource

Abbreviation/Term	*Meaning*
DOC	Washington's Department of Commerce
DOH	Washington's Department of Health
Ecology	Washington's Department of Ecology
EMC	PSE's Energy Management Committee
EPS	Washington state's Emission Performance Standard (*also referred to as a GHG performance standard*), RCW 80.80.40
ESA	environmental site assessment
Facility, The	Ferndale Cogeneration Station
FERC	Federal Energy Regulatory Commission
FERC 203 / Section 203	Section 203 of the Federal Power Act
FM Global	PSE's property insurance provider for the Facility, also the current property insurance provider for the Facility
GE	General Electric
GHG	greenhouse gas
GSU	generator step-up transformer
HHV	higher heating value
HGP	hot gas path inspection performed on combustion turbines every 24,000 fired hours or 1,200 starts
HP	high pressure
HRSG	heat recovery steam generator
HRST	technical support vendor specializing in boilers and HRSGs
IP	intermediate pressure
IRP	Integrated Resource Plan
ISO	International Organization for Standardization (see ISO conditions described below)

Abbreviation/Term	*Meaning*
ISO conditions	used to describe plant operational characteristics; conditions are 59˚ F and 60% relative humidity at sea level
kV	kilovolt
kWh	kilowatt-hour
LGIA	Large Generator Interconnection Agreement
LP	low pressure
LOI	Letter of Intent
LTSA	Long-term Services Agreement
MDNS	Mitigated Determination of Non-Significance
Mid-C	Mid-Columbia power trading hub
MMBtu/hr	million British thermal units per hour
MI	major inspection performed on combustion turbines every 48,000 fired hours or 2,400 starts
MTCA	Model Toxics Control Act
MW	megawatt
MWh	megawatt-hour
NERC	North American Electric Reliability Corporation
NOV	notice of violation associated with air emissions
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NWCAA	Northwest Clean Air Agency
O&M	operations and maintenance
OAC	Order of Approval to Construct

Abbreviation/Term	*Meaning*
OSHA	Occupational Safety and Health Administration
OSS	onsite sewage system
PAHs	polycyclic aromatic hydrocarbons
PARIS	Ecology's Water Quality Permitting and Reporting Information System
PCORC	Power Cost Only Rate Case
PPA	Power Purchase Agreement
PSANI	Puget Sound Area Northern Intertie, transmission
PSD	Prevention of Significant Determination permit
PSE	Puget Sound Energy
psig	pounds per square inch gauge
PUD	public utility district
PWS	public water system
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RMP	risk management plan
RFP	Request for Proposals
SCR	selective catalytic reduction, used to inject anhydrous ammonia into each HRSG to help reduce NOx emissions
SEPA	State Environmental Policy Act
SMS	Sediment Management Standards
SO_2	sulfur dioxide
SPCC Plan	Spill Prevention Control and Countermeasures Plan

Abbreviation/Term	*Meaning*
STG (also "ST")	steam turbine generator
TILs	GE technical information letters, which communicate to users necessary alterations and upgrades to their equipment
Title V	Title V operating permit under the Clean Air Act, usually issued by state or local governments
TOI	Tenaska Operations, Inc.
TSS	total suspended solids, a water quality measurement, listed as a conventional pollutant in the U.S. Clean Water Act
TWP	Tenaska Washington Partners, L.P.
UPS	uninterruptible power supply, provides emergency low voltage AC power to the Facility
URS	URS Corporation, environmental due diligence consultant
VPP	Voluntary Protection Programs (voluntary OSHA safety programs)
WAC	Washington Administrative Code
WCHD	Whatcom County Health Department
WECC	Western Electricity Coordinating Council
Westcoast	Westcoast Energy Inc., a natural gas transportation provider
WUTC	Washington Utility and Transportation Commission
WWTF	wastewater treatment facilities

Attachment A

Summary of principal agreements

Acquisition of the Ferndale Cogeneration Station

- PSE will acquire from Tenaska Washington Partners, L.P ("TWP") all of the assets related to the Ferndale Cogeneration Station, a 270 MW dual fueled, combined-cycle cogeneration facility located on an approximately 16-acre site wholly within the boundaries of the approximately 850-acre Phillips 66 Refinery site near Ferndale, Washington (the "Facility").

- Set forth below are synopses of the principal terms of the Asset Acquisition Agreement ("AAA"), which documents the Facility purchase transaction, and the principal project documents related to the Facility that will be assumed or entered into by PSE.

Asset Acquisition Agreement

- Transaction Structure. TWP will sell, and PSE will purchase, all assets relating to the operation of the Facility at the closing.

- Purchase Price. PSE will pay a purchase price of $84,000,000 (the "Purchase Price"), payable upon closing.

- Escrow. [redacted]

- Representations and Warranties. The AAA contains representations and warranties typical for transactions of this type. Among other things, TWP's representations and warranties to PSE relate to: organizational and authority matters; matters requiring third party consents; absence of brokers; solvency of TWP; condition and sufficiency of the purchased assets; certain matters related to the acquired real property and the acquired contracts; compliance

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with law and permits; environmental matters; litigation, tax, insurance, intellectual property and employments matters; historical financial information; and credit support obligations.

- Covenants. The parties have agreed to various covenants in the AAA, including, among other things, covenants related to: efforts to obtain regulatory approvals and third party consents necessary to consummate the transaction; conduct and operation of the Facility and activities related to the acquired assets prior to closing; PSE's access to the Facility site and Facility books and records prior to closing; furnishing financial and plant accounting data sufficient to meet FERC accounting requirements; risk of loss in the event of casualty or condemnation prior to closing; and provision of transitional services if required by PSE.

[redacted]

- Tax Matters. The parties have agreed that any real estate excise tax imposed on the sale of the acquired assets shall be shared equally between PSE and TWP. TWP shall be responsible for any sales and use tax imposed on the transaction.
- Conditions to Closing. Mutual conditions to closing include: no laws or injunctions prohibiting the transaction; receipt of FERC approval and expiration of HSR waiting period; and all third party consents and approvals being obtained.

  In addition, the AAA contains conditions to closing that run in favor of PSE, including that:

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- TWP's representations and warranties remain true and correct, except as would constitute a material adverse effect;
- No GHG standard shall have been implemented that establishes an emissions rate that is less than the Facility can meet utilizing reasonable assumptions regarding dispatch under PSE ownership;
- PSE shall have received a WUTC order declaring the Facility and the transaction to be in compliance with the GHG standard;
- Counterparties to certain project documents, including the Lease, Steam Agreement and gas transportation agreement, shall have agreed to amendments and/or new agreements (the forms of which are attached to the AAA); and
- PSE shall have received a title policy or irrevocable title commitment.

The closing is not conditioned on the prior approval by the WUTC regarding issues related to costs or cost recovery.

- Indemnification. [redacted]

- Limitations on Liability. [redacted]

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- Termination. In addition to voluntary termination provisions, the AAA provides that it may be terminated under certain circumstances, including the following: (1) by either party, if the closing has not occurred by December 31, 2012, which date shall be extended by 60 days if closing has not occurred due to the failure to obtain certain regulatory approval or third party consents; (2) by a party in the event of a material breach by the other party; and (3) by either party in the event of a material adverse effect on TWP or the assets to be acquired.

Steam Agreement

- The Facility currently provides steam to the Phillips 66 Refinery pursuant to the Steam Agreement ("Steam Agreement") between TWP and Phillips 66 Company ("Phillips"). Phillips has agreed to certain amendments to the Steam Agreement that will become effective upon the closing. As amended, the key terms of the Steam Agreement will be:

- Term. The Steam Agreement expires in 2041, coterminous with the expiration of the Lease (described below).

- Steam Delivery. [redacted]

- Fixed Annual Payments. [redacted]

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- Buyout Option. [redacted]

Lease & Easement

- The Facility is located on an approximately 16-acre site wholly within the boundaries of the approximately 850-acre site of the Phillips 66 Refinery. TWP leases the Facility site pursuant to the Lease ("Lease"), between TWP and Phillips. Phillips has agreed to certain amendments to the Lease that will become effective upon the closing. As amended, the key terms of the Lease will be:

- Term. The Lease expires in 2041, coterminous with the expiration of the Steam Agreement (described above).

- Rent. [redacted]

- Facility Removal and Remediation. Upon expiration or termination of the Lease, PSE would be obligated to remove the Facility from the leased property and restore the land to a similar condition which existed prior to the construction of the Facility, including remediating environmental conditions on the leased property. PSE, at the option of Phillips, would also be responsible for removing certain subsurface improvements installed on the leased property related to the Facility.

- Escrow Account. PSE would be responsible for funding an escrow account at closing to secure PSE's removal and remediation obligations set forth above.

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The escrow amount to be funded will be approximately $1.6 million, subject to change from time to time based upon updated estimates of the cost to perform PSE's removal and remediation obligations. PSE will have the option to either deposit cash or post a Letter of Credit to satisfy this obligation.

Agreement for Industrial Water Purchase

- Public Utility District No. 1 of Whatcom County ("Whatcom PUD") provides the Facility with industrial water pursuant to the Agreement for Industrial Water Purchase ("Industrial Water Purchase Agreement") between TWP and Whatcom PUD. PSE will assume TWP's obligations under the Industrial Water Purchase Agreement at closing. The key terms of the Industrial Water Purchase are:

- Term. The Industrial Water Purchase Agreement expires December 31, 2014. Whatcom PUD has expressed an interest in extending the agreement on a long-term basis.

- Water Delivery. Whatcom PUD is obligated to provide the Facility up to up to 2 million gallons per day of industrial water. Delivery quantity can be changed with PUD consent.

- Costs. Standard utility rates apply.

Agreement for Natural Gas Service

- Cascade Natural Gas Corporation ("Cascade") currently provides the Facility with firm natural gas transportation pursuant to the Agreement for Natural Gas Service Firm Transportation between TWP and Cascade. PSE will take assignment of this agreement (a special contract requiring WUTC approval when implemented in 1991) in order to reserve the firm capacity, however, both Cascade and PSE would prefer to eliminate or modify certain of the terms of that agreement. PSE prefers the rate structure of the standard form Cascade firm transportation service and the standard agreement does not

require advance WUTC approval. PSE will enter into a new Agreement for Natural Gas Service ("Gas Service Agreement") at closing which will supersede and replace the prior agreement. The key terms of the Gas Service Agreement will be:

- Term. The Gas Service Agreement would have an initial term that expires September 30, 2037, with additional year-to-year renewals until terminated by either party.

- Gas Transportation. Cascade will be obligated to provide firm gas transportation for up to 52,000 MMBtu/day. Cascade has also agreed to an amendment to the gas service agreement for PSE's nearby Whitehorn Generating Station which would allow diversion of an additional 6,900 MMBtu/day from the Whitehorn Generating Station to the Facility.

- Costs. Standard Cascade rate schedule 663 pricing will be used. Variable costs would total from $0.05 to 0.15 per MMBtu depending on monthly usage and fixed costs total $78,500/month.

Potential O&M Agreement

- PSE is evaluating the cost-effectiveness of contracting with a third party service provider to perform operations and maintenance services for the Facility after the closing. It is likely that any such service provider would require a cost-plus pricing structure, with a service fee and a bonus or penalty payable based upon the Facility's availability. Alternatively, PSE would staff and operate the Facility directly.

Interconnection Agreement

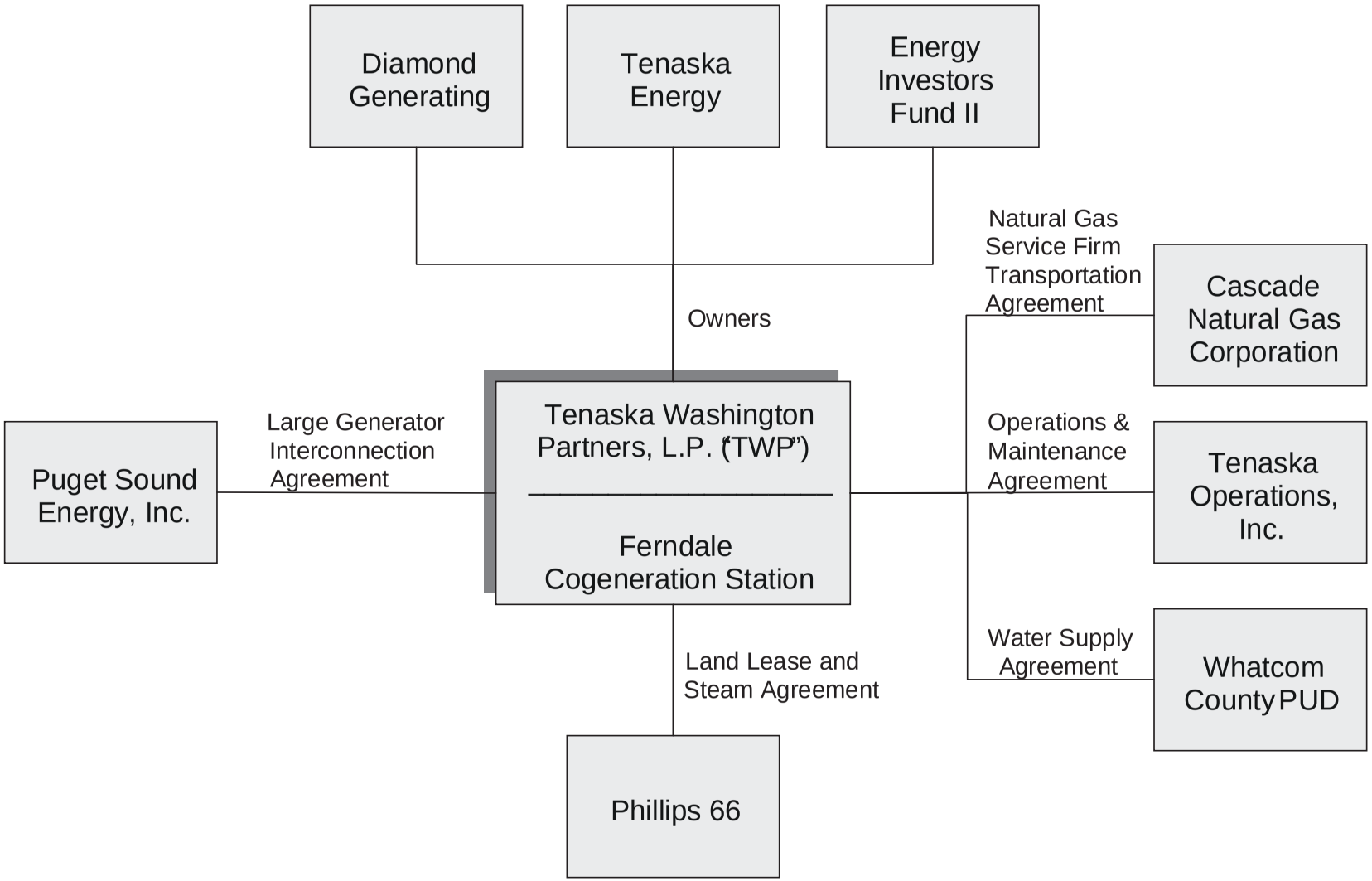
- The Facility is interconnected to the PSE transmission system pursuant to a Standard Large Generator Interconnection Agreement ("LGIA") between PSE and TWP. Upon purchase of the Facility, the existing LGIA between TWP and PSE will be terminated and a new LGIA between PSE Marketing

and PSE Transmission Contracts will be executed. Based on the results of a recent System Impact Study, the new LGIA will allow the Facility to operate with an increase of the maximum output limits to 300 MW winter and 285 MW summer.

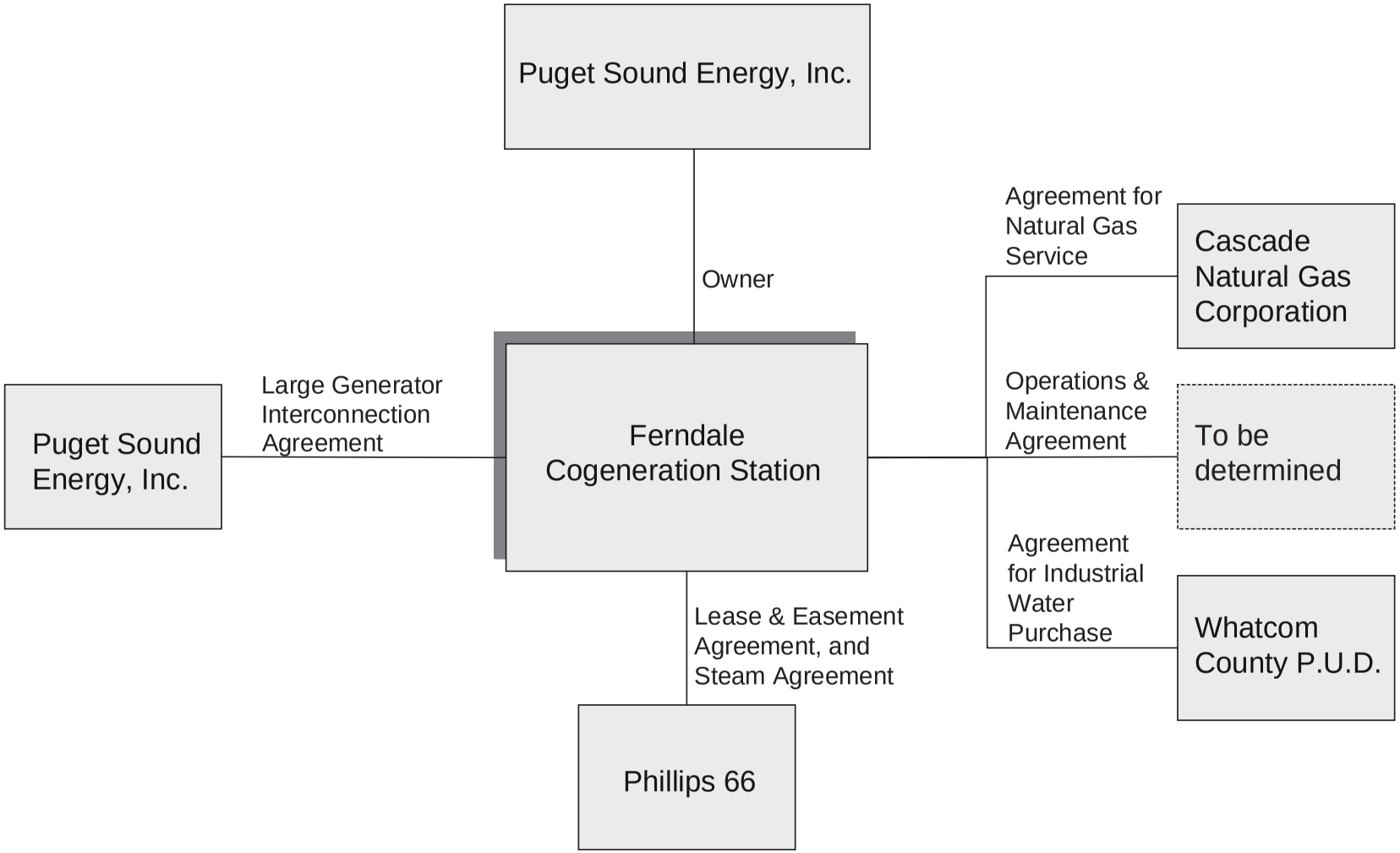
Attachment B

Transaction structure

Ferndale Cogeneration Station – Pre-Closing Structure



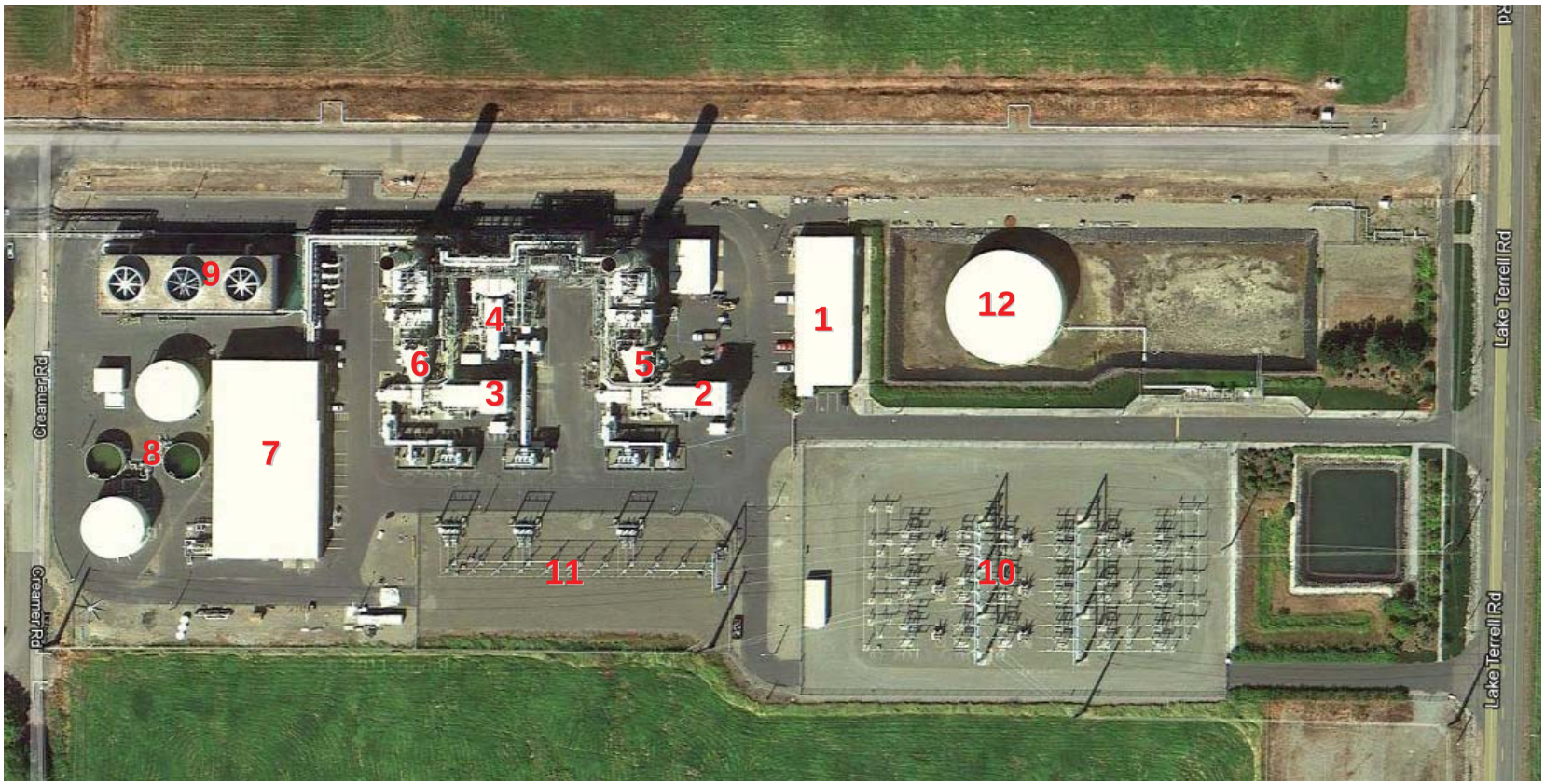
Ferndale Cogeneration Station – Post-Closing Structure



Attachment C

Facility description

Ferndale 270 MW Natural Gas-Fired CCCT Project



1. Administration Building
2. Gas Turbine "A" and Generator
3. Gas Turbine "B" and Generator
4. Steam Turbine and Generator
5. HRSG "A"
6. HRSG "B"
7. Water Treatment Bldg
8. Water Tanks
9. Cooling Tower
10. PSE Terrell Substation
11. Plant Switchyard
12. Fuel Oil Tank

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Ferndale Facility Overview

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Online Date	COD 4/8/1994
Location	16-acre site* located wholly within the boundaries of the 850-acre Philips Refinery in Ferndale, Washington
Capacity	270 MW nameplate capacity at ISO conditions (59˚) with duct firing, no process steam
Heat Rate	[redacted] Btu/kWh (HHV), 2x1 baseload, at ISO
Technology	2x1 combined cycle power plant using (2) GE 7EA combustion turbines; (2) ABB-CE triple-pressure HRSGs with duct firing; (1) GE steam turbine; (3) GE generators; GE Mark V controls; (1) 3-cell evaporative cooling tower.
O&M	Formal operations and maintenance agreement with Tenaska Operations, Inc. Site was under Long Term Services Agreement with GE until 12/31/2011.
Water Transport	Agreement for Industrial Water Purchase with Whatcom County PUD for up to 2.0 million gallons per day delivered via 2000' buried water pipeline, with up to 3.0 million gallons per day with written notice. Plant-treated process wastewater line extends through neighboring refinery and ties into refinery outfall before discharge into the Strait of Georgia.
Fuel	Fueled by natural gas with diesel fuel as a backup. Gas requirements at baseload estimated at 52,000 MMBtu/d
Gas Supply	Project holds firm gas supply from Cascade Natural Gas pipeline via Sumas. 340 psig nominal gas delivery pressure.
Transmission	Interconnected to PSE's 115kV transmission system via Terrell Substation.

**The total leased area for the site is approximately 16 acres; roughly 14 acres is used by the Facility and another two acres is occupied by a PSE substation and transmission line easement.*

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Attachment D

Facility stand-alone financial pro forma

Facility Description:

The Facility, to be described further herein, consists of the real property, personal property, and intangible property including permits, real estate rights, interconnection agreements, and other necessary rights and agreements to own and operate a 270 MW GE 7EA combined cycle combustion turbine (the "Facility") located in Ferndale, WA. The all-in cost to acquire the Facility is approximately $88 million.

Facility and Transaction: Basic Assumptions and Definitions:

Facility:	The Ferndale Cogeneration Station, a 270 MW Combined Cycle Combustion Turbine Generation Facility at ISO conditions, is located in Whatcom County within the boundaries of the 850-acre Phillips 66 Refinery ("the Facility")
Real Estate:	Phillips 66 owns the underlying property and has leased the land to Tenaska under the terms of a Lease and Easement Agreement and coterminous Steam Agreement
Seller:	Tenaska Washington Partners, L.P. ("TWP")
Owner:	PSE (post Closing)
Timing and Nature of Acquisition:	PSE is acquiring a 100% ownership interest in the project assets owned by TWP.
Closing:	December 1, 2012 (estimated date)

Description of Plant:

COD:	April 8, 1994
Location:	16-acre site located wholly within the boundaries of the 850-acre Phillips Refinery in Ferndale, Washington.
Net Output:	290 MW combined cycle plant (winter rating, including duct firing capability).
Capacity Factor:	Approximately 21% over the projection as determined using the AURORA Model
Technology:	Two 94 MW GE 7EA combustion turbines (Model MS 7111) with air-cooled GE generators. Two ABB-CE triple-pressure Heat Recovery Steam Generators (HRSGs) with duct burners. One 96 MW GE steam turbine with air-cooled GE generator. One 3-cell evaporative cooling tower.
Heat Rate:	Primary Firing: [redacted] Btu/kWh (at ISO, as determined by Black and Veatch from August 2012 performance testing) Duct Firing: [redacted] Btu/kWh (incremental basis, at ISO). The projection does not assume any tolled steam. PSE will have complete freedom to dispatch (or not dispatch) the Facility. Since the final dispatch of the Facility may change even on the day of operation, it is unlikely Phillips 66 will toll steam because of complicated logistics for their steam operations.
Gas Requirements:	52,000 MMBtu/d for primary firing; 6,900 MMBtu/d additional with duct firing at 23 °F (290 MW max).
Gas Transportation:	Firm gas supply from 20" Cascade Natural Gas pipeline via Sumas. 350 psig nominal gas delivery pressure.
Transmission:	Direct interconnect to PSE 115kV transmission system via PSE Terrell Substation onsite.
Water Supply and Wastewater Disposal:	Water supply agreement with Whatcom County PUD for up to 2.0 million gallons per day delivered via 2000 foot 16" buried water pipeline; with advanced notice this amount can increase to 3.0 million gallons per day. Plant-treated wastewater line extends through the neighboring refinery and ties into refinery outfall prior to discharge into the Strait of Georgia.
Operation to	Each gas turbine has approximately 80,000 fired hours and 240 starts as

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Date: of August 2012.

Real Estate: The ground lease for the Facility was granted in 1992 and is set to expire in 2041, unless a renewal is negotiated with Phillips 66. [redacted]

An easement for a wastewater disposal pipe, which is appurtenant to the Facility's ground lease, extends to the south and west of the power plant. This easement establishes rights for the installation and maintenance of a pipeline that carries industrial wastewater from the Facility and discharges it into the wastewater system of the Phillips 66 refinery. Phillips 66 operates an outfall which discharges their wastewater (together with the wastewater from the Facility) into the Strait of Georgia. If Phillips 66 were to cease accepting wastewater from the Facility (which they have the right to do under the terms of the wastewater easement), approximately 3,000 linear feet of new pipeline and a new outfall would need to be permitted and constructed.

The ground lease for the Facility is burdened by various typical easements for utilities, which include natural gas, water, and power lines, as well as an easement owned by PSE for the Terrell Substation.

The Projection:

This document and its exhibits (the "Projection") illustrate the projection of financial results to PSE from its investment in the Facility. Included in the Projection are pro forma financial statements illustrating operation and maintenance of the Facility through the year 2031 and a description of the data and assumptions used to derive them. Although the Facility will be acquired and owned by PSE directly, the financial statements are presented for clarity as though the Facility were a wholly-owned subsidiary that would be consolidated on PSE's books.

For the comparative analysis, the cost projections include operating and maintenance costs through the shut-down of the Facility in 2039 as dictated by the current land lease. Shut-down of the Facility at the end of 2039 will allow sufficient time to remove equipment from the site. This proven technology could be operated and maintained beyond the current the

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Agreements. After completing the acquisition PSE may seek to extend the lease agreement with Phillips.

Acquisition Cost – Summary

Asset Description	PSE Budget Estimate
Facility Purchase Details	**$ 84,000,000**
Real Estate Excise Tax (REET) (50%)	**$** [redacted]
Facility Improvements	**$** [redacted]
IT	$ [redacted]
Security	$ [redacted]
Interconnection & Transmission	$ [redacted]
NERC/WECC testing	$ [redacted]
Signage	$ [redacted]
Operating Standards Upgrades	**$** [redacted]
Transaction & Due Diligence	**$** [redacted]
Documentation	$ [redacted]
Due Diligence	$ [redacted]
PSE Labor	$ [redacted]
Hart-Scott Rodino filing	$ [redacted]
Alta Survey	$ [redacted]
Title Insurance	$ [redacted]
Total Acquisition Costs	**$ 87,993,973**

Facility Purchase Price: PSE will acquire all assets of the Facility.

Real Estate Excise Tax: The Real Estate Excise Tax ("REET") is a Washington State tax levied on the portion of property classified as "real" in which a controlling interest of the property is transferred. The Real Property is estimated to cost $75,000,000. The combined tax rate for Whatcom County and Washington State is 1.78%. PSE and TWP will each bear 50% of this cost. The estimated cost is not expected to exceed $667,500.

Real Property Estimate x REET Rate x Proportion Owed by PSE

$75,000,000 x 1.78% x 50% = $667,500

Facility Improvements The Facility will require improvements to the communication links with PSE's Power Supply Operations Center and generator testing to comply with NERC/WECC regulations, PSE standard information technology and security equipment, and new signage. These improvements will be

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capitalized under existing Units of Property ("UOP") guidance.

Operating Standard Improvements:

Operating standard improvements are to bring the Facility up to the standards the Company requires for to rehabilitate its condition for reliable operations, which will be capitalized in accordance with Federal Energy Regulatory Commission Uniform System of Accounts. The following have been identified during due diligence as improvements:

- Cooling tower repairs and upgrades to address normal degradation and potential efficiency improvements.

Transaction and Due Diligence:

Transaction and due diligence costs are PSE's internal costs for due diligence and negotiations, title insurance, third party expert consultants and legal fees associated with the transaction.

Income Statement- Assumptions

Income Statement	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Regulated Revenue- Rates	[redacted]									
Annual Capacity Factor										
Annual Energy (GWh)										
Fixed Cost Subtotal										
Fixed Gas Transport										
Land Lease										
Asset Retirement Expense										
Fixed Operation Expense										
Major Maintenance Expense										
Maintenance Expense										
Total Property Tax										
Insurance										
Variable Costs										
Variable Gas Transport										
Fuel Cost										
Variable Operation Expense										
Total Operating Expenses										
EBITDA										
Gross Margin										
Depreciation & Amortization										
EBIT										
Operating Margin										
Net Interest Expense										
Interest Income										
Interest Expense										
Net Interest Expense										
Pre-Tax Income										
Profit Margin										
Taxable Income										
Pre-tax Income										
Plus Depr. & Amort.										
Less Tax Depreciation										
Net Taxable Income										
Taxable Income										
Current Income Tax										
Deferred Income Tax										
Net Income										

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Income Statement	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Regulated Revenue- Rates	[redacted]									
Annual Capacity Factor										
Annual Energy (GWh)										
Fixed Cost Subtotal										
Fixed Gas Transport										
Land Lease										
Asset Retirement Expense										
Fixed Operation Expense										
Major Maintenance Expense										
Maintenance Expense										
Total Property Tax										
Insurance										
Variable Costs										
Variable Gas Transport										
Fuel Cost										
Variable Operation Expense										
Total Operating Expenses										
EBITDA										
Gross Margin										
Depreciation & Amortization										
EBIT										
Operating Margin										
Net Interest Expense										
Interest Income										
Interest Expense										
Net Interest Expense										
Pre-Tax Income										
Profit Margin										
Taxable Income										
Pre-tax Income										
Plus Depr. & Amort.										
Less Tax Depreciation										
Net Taxable Income										
Taxable Income										
Current Income Tax										
Deferred Income Tax										
Net Income										

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Revenues:

Revenue Requirement: The Projection calculates revenues required to recover Facility costs, including return on assets included in the rate base, as well as fixed and variable operating expenses.

The revenue requirement calculation assumes complete cost recovery and no regulatory lag. The ownership and operating costs of the new Facility not included in rates would be deferred, under RCW 80.80.060 similar to the approach taken with the acquisition of Mint Farm. The deferral would be impacted by the total amount expended on the Facility and offset by reductions in market purchases.

Annual Capacity Factor: The Projection uses the AURORA model in the most recent 2013 IRP base power and gas prices to derive plant capacity factor. The 20 year average capacity factor is 21%. The underlying gas price projection for 2012 through 2016 uses a three month average of forward market gas prices for 2012 through 2016 as of July 19, 2012. The gas price projection in 2017 through 2031 is the April 2012 Wood Mackenzie Long-term view forecast. Dispatch related (variable) costs from the Projection drive the dispatch decision, which compares the marginal cost to fire the plant to the market price for power. If the plant is “in the money” during a given hour, it will dispatch at full capacity. Market power prices are calculated using PSE’s Aurora model. The Projection also takes into account forced outage rates, estimated at 3% in AURORA.

Annual Energy: Annual Energy is equal to the Net Capacity Factor multiplied by the Capacity multiplied by 8760 (365 days per year x 24 hours per day) hours.

Fixed Costs:

Inflation:

Both fixed and variable costs are escalated over time by a 2.5% annual projected inflation. PSE staff reviewed Moody's inflation factors and determined that PSE's typical long-term inflation assumptions are reasonable and consistent with long-term inflation projections. Moody's is a well respected firm providing macro economic data to the power industry and is also used in PSE's IRP and load growth estimations. Sample Moody's inflation indices reviewed:

Source:	**U.S. Bureau of Labor Statistics (BLS); Moody's Analytics (ECCA) Forecast**				
Mnemonic:	FECIWCQ.US	FPDPGDP.US	FPDIIFNESI.US	FXPPIME.US	FAHEMF.US
Description:	ECI: Wages and Salaries - All Civilian - All Workers, (Index Dec-2005=100, SA)	NIPA: Chain-Type Price Index - GDP, (Index 2005=100, SA)	NIPA: Implicit Price Deflator - Fixed Investment - Industrial Equipment (Total), (Index 2005=100, SA)	PPI: Metals and Metal Products - Total, (Index 1982=100, NSA)	Avg. Hourly Earnings: Manufacturing, ($ per Hour, SA)
Native Frequency:	QUARTERLY	QUARTERLY	QUARTERLY	QUARTERLY	QUARTERLY
Geography:	United States	United States	United States	United States	United States
Last Updated:	08/07/2012	08/07/2012	08/07/2012	09/10/2012	09/10/2012
Historical End Date:	06/30/12	06/30/12	06/30/12	06/30/12	06/30/12
2013	[redacted]				
2014					
2015					
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Fixed Gas Transportation:

The Facility is a dual fuel (natural gas and distillate) Facility. There is on-site fuel storage for approximately 2.05 million gallons of distillate. Gas and transportation requirements are 58,900 MMBtu/day for 290 MW baseload including duct-fire (winter rating). The Facility is interconnected to the Westcoast Energy Inc. ("Westcoast") system by Cascade Natural Gas Company's ("Cascade") distribution system. The Cascade distribution system delivery pressure is a minimum of 350 psig and a maximum pressure of 700 psig.

Through Cascade's connection to Westcoast, the Facility has the ability to access gas from British Columbia directly at the Sumas/Huntingdon trading hub. PSE will also hold capacity on Westcoast for half the plant requirements to allow purchase of supplies at the Station 2 trading hub, enhancing price diversity and physical access. There is currently no separate gas supply in place for the Facility. Upon PSE ownership, this Facility would be integrated into PSE's rolling three year supply hedging program.

While the plant can be run on distillate, PSE will secure firm gas pipeline capacity to support the full output of the Facility. The option of running the Facility on distillate would allow greater flexibility to the entire PSE fleet by allowing gas supply destined for the Facility to be diverted to other PSE plants without distillate back-up. However, at this time, PSE does not plan to maintain a distilate inventory at the Facility as the value of such flexibility does not appear to be greater than the cost..

The Facility currently holds 52,000 MMBtu/day of firm gas transportation under a special contract on the Cascade system, which expires on June 18, 2013, but could be renewed for up to 10 years PSE has determined that pricing under the new standard form Cascade transportation agreement is more advantageous than an extension and modification of the existing special contract. Cascade has agreed to retire the existing special contract for 52,000 MMBtu/day in favor of a new standard firm transportation agreement, effective upon closing of the transaction.

[redacted]

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modified co-fire ratio would only be required in the relatively rare circumstance that PSE wished to run both the duct-fire increment at the Facility at the same time as the full output of the Whitehorn plant.

Fixed Gas Transport	2013
Cascade Reservation Charge ($/MMBtu-day)	
Total Capacity Needed (MMBtu / day)	
Cascade Cost ($)	
Westcoast Reservation Charge ($/MMBtu-day)	
Total Capacity Needed (MMBtu / day)	
West Coast Reservation Charge ($)	
Station 2 Basis differential gain ($)	
West Coast Cost ($)	
Total Fixed Gas Transport	

Annual Land Lease Expense:

Asset Retirement Expense:

PSE would be responsible for funding an escrow account at closing to secure PSE's removal and remediation obligations set forth above. The escrow amount to be funded will be approximately $1.6 million, subject to change from time to time based upon updated estimates of the cost to perform PSE's removal and remediation obligations. PSE will have the option to either deposit cash or post a Letter of Credit to satisfy this obligation. The pro forma represents this cost as a Letter of Credit.

Fixed Operations Expense:

Operations expenses are shown below for a typical operating year based on PSE's operation of the Facility. However, PSE is exploring third party operation of the Facility. These expenses are escalated annually by 2.5%.

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Fixed Operations Expense	2013
PLANT OPERATIONS*	[redacted]
NERC/WECC compliance	
IT Support Analyst	
ERG Analyst	
Project Management	
Compliance	
Consumables	
Safety	
Grounds/Building/Janitorial	
Sales tax	
Total	

Fixed Maintenance Expense:

Maintenance expenses are shown below for a typical operating year based on PSE's operation of the Facility. These expenses are escalated annually at 2.5%.

Fixed Maintenance Expense	2013
Water Treatment System Mainte	[redacted]
Combustion Turbine Maintenanc	
Steam Turbine Maintenance	
Electrical and Controls Maintena	
HRSG Maintenance	
SCR Maintenance	
Facilities Maintenance	
Cooling Tower Maintenance	
Condenser Maintenance	
Fuel Systems Maintenance	
Balance of Plant Maintenance	
Corrective Maintenance	
Transmission Maintenance	
Supplemental O&M projects	
Total	

Property Tax:

The personal property tax is calculated by multiplying this discount

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factor by the Whatcom County estimated mil rate of $11.54 per $1,000 of assessed value. The real property tax is calculated by multiplying Whatcom County's real property adjustment of 88.2% by the mil. The acquisition cost of $87,993,973 is estimated to be comprised of $84,000,000 (96%) in personal property and $3,993,973 (4%) in real property, for property tax purposes.[1]

Property is assessed on January 1st, with payment due the following year in two equal installments, in the months of April and October. The Projection illustrates property taxes on an accrual basis, consistent with PSE's accounting practices.

Cost calculation for a typical year:

Property Tax Expense	**2013**
Real Property	$ 3,993,973
Whatcom Cty Real Property Adjustment	88.2%
Whatcom Cty Prop Tax Mil Rate ($ / $1000)	$ 11.54
Real Property Tax	$ 40,666
Personal Property	$ 84,000,000
Whatcom Cty Personal Property Adjustment	90.8%
PSE Centrally Assessed Personal Property Discount Factor	26%
Whatcom Cty Prop Tax Mil Rate ($ / $1000)	11.544
Personal Property Tax	$ 231,660
Total Property Tax	**$ 272,326**

PSE is also responsible for property taxes associated with the land lease for the 16 acre Ferndale site. This cost is estimated at $2,517 in 2013.

Insurance:

PSE would add the Facility to its permanent property insurance program. The estimated insured value is between $217,650,000 and $263,850,000 based on the estimated replacement cost. Additionally, PSE will add General Liability Insurance, and may add Automobile, and Workers Compensation insurance. The Total estimated annual premium budget: $259,000 to $304,000. For the pro forma $304,000 was included.

[1] This allocation results from the inclusion of most of the major equipment into the personal-property category. This characterization is consistent with PSE's treatment for its other combustion facilities.

	2013
Property Insurance	[redacted]
General Liability	
Automobile	
Workers Compensations	
Total Insurance	

Personnel:

Tenaska Staffing

The current Facility staff consists of four management positions (Plant Manager, Manager of Operations, Manager of Maintenance, and a Plant Controller), two administrative support workers (an Administrative Assistant and a Purchasing/Warehouse Coordinator), fourteen Craft Workers (three Maintenance Mechanics, three Control Room Operators, four Plant Operators, three I&E Technicians, and one Lead Control Room Operator), and one Technician (Laboratory Technician and Plant Operator). The four management positions are exempt salaried employees, the seventeen other employees are non-exempt, compensated at an hourly rate. The labor force at Ferndale is presently non-union.

Post-closing PSE Staffing

Subject to the conclusion of an analysis discussed under "Outsourced Staffing," below. PSE's Energy Operations department plans to staff the plant similar to the current design except that the labor force would transition into the union, IBEW Local 77, pursuant to PSE labor relations protocol. Corporate support will be required from the Power Generation, Information Technology ("IT") and Materials Management departments for on-going plant support and to facilitate integration of the asset into PSE's existing portfolio.

Management (3) – PSE anticipates operating the Facility with a Plant Manager, an Operations and Maintenance Supervisor, and a Planner/Scheduler. Current management will be encouraged to apply and successful applicants will be transitioned to PSE subsequent to Closing .

Craft personnel (15) – Presently the plant operates on a 12-hour rotating shift schedule. PSE will operate the plant using a 12-hour rotating shift commonly referred to as the "Modified DuPont Schedule." This Modified DuPont Schedule is currently in use at other PSE combined cycle combustion turbine plants. PSE plans to

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interview and transition desired employees into the union pursuant to labor relations protocol. Nine CT Journey Workers will be on the 12-hour rotating shift at any given time. Two (2) CT Journey Workers will be on day shift assignment to facilitate core electrical and mechanical maintenance of the facility. One ICE Technician will be assigned to dayshift. One 1) CT Technician also will be assigned to a day shift role. Additional staffing will consist of one Operating Supprt Specialist and one Warehouser.

Outsourced Staffing

During the acquisition diligence period, PSE's Energy Operations department began evaluating the benefits and costs associated with a third party operator at the Ferndale Facility. In the event that PSE determines there is adequate value in contracting with a third party, the Company may elect to outsource portions of the operations function of the Facility. The staffing plan would be agreed upon during the process of setting the plant's annual O&M budget.

Variable Costs:

Variable Gas Transportation:

Variable gas transportation is charged based on the quantity of gas (measured in MMBtu) actually used and has three components.

1) Fuel Adder: The value of the gas that PSE must give to Cascade and NWP to compress and move PSE's gas. It is projected to be 0.4103% for the life of the Facility.

2) Commodity Charge: This is the variable component of the Cascade tariff. The charge will vary based on the load factor of the Facility. This charge is forecast at an equivalent escalation of 1% per year.

3) Use Tax: A Washington State tax charged on the Average Fuel Cost expected to be 3.852% for the life of the Facility.

Cost calculation for a typical year:

	Variable Fuel Transport Details	2013
A	Gas Use (MMBTU /year)	[redacted]
B	Fuel Adder of .4103% ($/MMBtu)	
C	Commodity Charge ($/MMBtu)	
D	WA State Use Tax ($/MMBtu)	
	Total Variable Fuel Transport Cost A*(B+C+D)	

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Fuel Cost:

Fuel expenses are calculated by multiplying the applicable Facility Output by the applicable Facility Heat Rate by the fuel price and by the estimated operating hours per year. Fuel expense is a function of plant capacity factor, and the associated annual dispatch rates are calculated using AURORA. The underlying yearly average gas price forecast and fuel expenses from the 2013 IRP Base gas prices are as follows:

	Fuel Cost $/MMBTu	Fuel Expense $
2012	[redacted]	
2013		
2014		
2015		
2016		
2017		
2018		
2019		
2020		
2021		
2027		
2028		
2029		
2030		
2031		

Variable Operations:

The variable operating costs for a typical year are as follows. The costs are escalated at 2.5% annually.

Variable Operations Expense	2013
Demin Chemicals	[redacted]
HRSG Chemicals	
Cooling Tower Chemicals	
Emissions Chemicals	
Station Water	
Utility Cost	
Total	

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EBITDA: Earnings before interest, taxes, depreciation and amortization ("EBITDA") are calculated as revenues less all expenses.

Depreciation and Amortization: The Projection assumes the following depreciable lives for book and tax purposes.

	Book Depreciation	Tax / MACRS
Turbine & Equipment	27	20
Fuel Nozzles / Transition Pieces / Capital	27	20
Liners	27	20
1&2 Stage Shrouds / Nozzles	27	20
3rd Stage Shrouds / Nozzles, All Buckets	27	20
Structures	27	20
Land	NA	NA
Gas Transport	27	20

Major parts for the combustion turbine are capitalized and depreciated over the remaining book life of the plant. The projection uses the date of facility closing in 2039 for the book life, which is 27 years. All new capital expenditures will be capitalized over the remaining book life.

EBIT: Earnings before interest and taxes are equal to EBITDA less Depreciation and Amortization.

Interest Expense: Interest Expense is calculated based on PSE's mid-year pro forma rate base multiplied by the assumed debt percentage in the capital structure. This method is consistent with conventions used by regulated utilities. The Projection assumes a regulated rate of return of 7.8% and a debt percentage of 52% at a weighted pretax cost of debt of 5.95%.

Pretax Income: Pretax income is equal to EBIT less Interest Expense.

Net Taxable Income: Net Taxable Income is equal to Pretax Income plus Book Depreciation and amortization, less Tax Depreciation.

Income Taxes Paid: Income Taxes paid are calculated as Net Taxable Income multiplied by the Federal corporate income tax rate of 35%.

Deferred Income Taxes: Deferred Income Taxes are calculated as the difference between book and tax depreciation expenses multiplied by the Federal corporate

income tax rate of 35%.

Major Maintenance and Inventory:

Major Maintenance:

Major Maintenance expense is the cost of part refurbishment, labor, crane rental and consumable items. These types of costs are expensed in the same year as the maintenance event. Major Maintenance capital is the cost of purchasing and installing new parts. Major maintenance new parts are capitalized and depreciated over the remaining book life of the plant. PSE will acquire a set of initial parts in inventory as part of the acquisition and will cycle parts to and from inventory for major maintenance events.

The following shows the forecasted Major Maintenance schedule and costs for the pro forma projections:

	Major Maintenance			
Year	2 X Gas Turbine	1 X Steam Turbine	Capital	O&M
2012			[redacted]	
2013				
2014	Combustion Inspection -1	Steam Turbine Major 1		
2015				
2016	Major Inspection -1			
2017		Steam Turbine Minor 1		
2018	Combustion Inspection -2			
2019				
2020	Combustion Inspection -3			
2021		Steam Turbine Minor 2		
2022	Hot Gas Path -1			
2023				
2024	Combustion Inspection -4	Steam Turbine Major 2		
2025				
2026	Combustion Inspection -5			
2027				
2028	Major Inspection -2	Steam Turbine Minor 2		
2029				
2030	Combustion Inspection -7			
2031		Steam Turbine Minor 2		
2032	Combustion Inspection -8			
2033				
2034	Hot Gas Path -2			
2035		Steam Turbine Major 3		
2036	Combustion Inspection -9			
2037				
2038	Combustion Inspection -10	Steam Turbine Minor 2		
2039				

Inventory:

Inventory captures the value of major component parts and Balance of Plant ("BOP") items. PSE will have one set of spare parts to use for major maintenance events. Parts will be used in the plant, used parts will be sent for refurbishing and then back into inventory after refurbishment and later deployed for the next maintenance event.

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Balance Sheet – Assumptions

Balance Sheet	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Retained Earnings										
Opening Balance	[redacted]									
Plus Net Income										
Less Dividend Paid										
Retained Earnings										
Assets										
PPE										
Inventory										
Accumulated Depreciation										
Net PPE										
Total Assets										
Liabilities										
LT Debt										
Debt Principal Paid										
Accumulated Deferred Tax										
Total Liabilities										
Equity										
Common Shares										
Retained Earnings										
Total Equity										
Total Liabilities and Equity										

Balance Sheet	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Retained Earnings	[redacted]									
Opening Balance										
Plus Net Income										
Less Dividend Paid										
Retained Earnings										
Assets										
PPE										
Inventory										
Accumulated Depreciation										
Net PPE										
Total Assets										
Liabilities										
LT Debt										
Debt Principal Paid										
Accumulated Deferred Tax										
Total Liabilities										
Equity										
Common Shares										
Retained Earnings										
Total Equity										
Total Liabilities and Equity										

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Retained Earnings:	Retained Earnings are calculated as the previous year's Retained Earnings balance plus Net Income, less Dividends Paid. The balance sheet contains no line items for cash or short-term debt, and the Projection assumes that any cash shortfalls or surpluses are financed with debt.
Property Plant and Equipment:	For book purposes, the value of the plant reflects capitalization of all Facility capital costs.
Long Term Debt:	Based on a capital structure of 52% debt at a long-term rate of 5.85%, PSE will incur new long-term debt obligations. Consistent with regulated utility modeling methods, debt is repaid in a fashion that allows the Projection to maintain PSE's equity/debt split on the Balance Sheet throughout the life of the Facility. This is accomplished by equating debt payment to the sum of depreciation, deferred tax, and working capital multiplied by the PSE debt percent.
Accumulated Deferred Taxes:	Accumulated Deferred Taxes is calculated as the deferred tax balance from previous year plus/less the deferred tax balance from current year.
Common Shares:	Common Shares is the cumulative capital contributions from equity holders.
Total Shareholders' Equity:	Total Shareholders' Equity is calculated as the Common Shares balance plus/less Retained Earnings balance.

Cash Flow – Assumptions

Cash Flow	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Operating Cash Flow										
Net Income	[redacted]									
Depreciation										
Deferred Taxes										
Changes in Current Accounts										
Total Operating Cash										
Investment Cash Flow										
Capital Investment in Plant										
Total Investment Cash										
Financing Cash Flow										
New Equity										
New Debt										
Total Financing Cash										
Net Cash Flow / Max Dividend										

Cash Flow	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Operating Cash Flow										
Net Income	[redacted]									
Depreciation										
Deferred Taxes										
Changes in Current Accounts										
Total Operating Cash										
Investment Cash Flow										
Capital Investment in Plant										
Total Investment Cash										
Financing Cash Flow										
New Equity										
New Debt										
Total Financing Cash										
Net Cash Flow / Max Dividend										

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Operating Cash Flow: Operating Cash Flow is calculated as the sum of After Tax Net Income and depreciation from the Income Statement plus the change from the previous year in Deferred Taxes and working capital balance from the Balance Sheet.

Investment Cash Flow: Investment Cash Flow is calculated as the capital expenditures net of any gain/loss on investments.

Financing Cash Flow: Cash from Financing is cash received from/paid to debt holders, and cash received from equity holders. Debt is repaid in a fashion that allows the Projection to maintain PSE's capital structure ratio on the balance sheet throughout the life of the Facility. This is accomplished by equating debt payment to the sum of book depreciation, deferred tax, and working capital, multiplied by the debt percent assumed for PSE's capital structure.

Max Dividend: All available Cash from Operations is distributed to equity holders net of the debt repayment. This cash distribution methodology results in the Projection showing negative cumulative retained earnings.

Attachment E

Comparative Analysis

1. July 2012 memo: Re-evaluation of revised RFP offers

July 2012 memo: Reevaluation of revised offers

I. Executive Summary

In mid-June 2012, the RFP evaluation team, was prepared to recommend pursuing three resource proposals based on the results of PSE's 2011 RFP analysis:

- the Coal Transition Power PPA (#11102),
- the [redacted] (#11117), [redacted] MW PPA beginning in 2016; and
- the [redacted] (#11124), a 10-year PPA for [redacted] MW from an existing [redacted].

The analysis indicated that the three selected resources represented the lowest cost portfolio with the lowest risk compared to other alternatives in the 2011 RFP. See the 2011 RFP Evaluation Document for a description of PSE's RFP results and decisions.

On or about June 13, 2012, PSE notified bidders of their selection status in the RFP. By June 22, 2012, PSE received revised offers from the following three counterparties not selected in the 2011 RFP:

- [redacted] (#11103-r) – reduced purchase price from [redacted] million to [redacted] million.
- Ferndale Ownership (#11118-r) –offered an ownership option for the Ferndale Cogeneration Station at a purchase price of $84 million; the previous bid in the 2011 RFP was [redacted]
- [redacted] (#11117-r) – restructured the not selected [redacted] offer to a November-February product, reduced fixed charges, increased variable costs, and changed the fuel index to [redacted]

Additionally, the RFP evaluation team identified a new transmission risk for the Coal Transition Power PPA (#11102) that could potentially limit PSE's ability to purchase contract volumes in excess of 380 MW.

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Before recommending to the Energy Management Committee ("EMC") and the Board of Directors ("BOD") that PSE enter into the Coal Transition Power PPA (#11102), the RFP evaluation team

- reevaluated all revised offers received after completing and identifying the 2011 RFP short list to determine if the short list should be updated; and
- considered the impacts of limited PSE transmission transfer capability for the Coal Transition Power PPA (#11102).

The reevaluation showed that the Coal Transition Power PPA (#11102) at the original volumes was no longer least cost in 4 of 5 scenarios. On June 27, 2012, PSE discontinued its pursuit of the Coal Transition Power PPA (#11102) at the original volumes.

On July 5, 2012, TransAlta revised the commercial structure of the Coal Transition Power PPA (#11102-r) to a smaller volume and later start.

Of the multiple combinations of options available, the Coal Transition Power PPA (#11102-r) offer at the lower volumes, when combined with the Ferndale Ownership (#11118-r) offer, appears to be the most attractive option from a portfolio perspective.

II. Description of reevaluation process

For the reevaluation, PSE considered both the quantitative and qualitative merits of each proposal offer. The reevaluation was conducted in the PSM III Optimization model both by optimizing and constructing manual portfolios.

The following steps were taken to perform the analysis:

- Perform optimization analysis with revised offers in five scenarios to reexamine short-list
  - Offers as of June 22, 2012
  - Offers as of July 5, 2012
- Perform a qualitative review of the offers
- Test manually constructed portfolios to compare
  - Ferndale Ownership (#11118-r)
  - Coal Transition Power PPA (Original Volumes) (#11102)
  - Ferndale Ownership (#11118-r) combined with Coal Transition Power PPA (New Volumes) (#11102-r)
- Perform risk analysis on manually constructed portfolios

III. Description of proposals received

Figure 1 below summarizes the four revised offers received near the end and shortly after the conclusion of the 2011 RFP. The purchase price of the [redacted]

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(#11103-r) offer was reduced from [redacted] million to [redacted] million ([redacted]/kW)[1]. Tenaska proposed the Ferndale Ownership (#11118-r) offer at a purchase price of $84 million ($315/kW)[2]; the original 2011 RFP offer was a 10-year tolling option (#11118). [redacted] restructured the [redacted] 10 Year Winter Only (#11117-r) offer to a November-February product, reduced fixed charges, increased variable costs, and changed the fuel index to [redacted]. TransAlta revised the Coal Transition Power PPA (#11102-r) offer to include a later start —2014 rather than 2012—and a reduced volume of up to 380 MW.

Figure 1. Revised RFP offers[3]

Price refresh date	Type	Project / Owner	State	Capacity (MW)	Term	New price
5/30/2012	NatG-CCCT	[redacted] (#11117-r) [redacted]	OR	[redacted]	2/1/13-2/28/22	**(see note)***
5/17/2012	NatG-CCCT	[redacted] (#11103-r) [redacted]	WA	[redacted]	Dec 2012	**[redacted] million**
6/22/2012	NatG-CCCT	**Ferndale Ownership** (#11118-r) *Tenaska*	WA	280	Dec 2012	**$84 million**
7/5/2012	Coal Transition Power	**Coal Transition Power PPA (New Volumes)** (#11102-r) *TransAlta*	WA	Up to 380	12/1/14-12/31/25	**No Change**

Note: [redacted] restructured their offer to a Nov-Feb product, reduced fixed charges, increased variable costs, and changed the fuel index to [redacted].

[1] Based on ISO capacity estimated for analysis at [redacted] MW.

[2] Based on ISO capacity estimated for analysis at [redacted] MW.

[3] PSE screened offers as received, see Appendix A in this memo for screening model results.

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IV. Analysis Results

2011 RFP Optimization Analysis

In the 2011 RFP, PSE identified a short-list based on the qualitative and quantitative evaluation of the proposals. Figure 2 identifies the original optimization results from the 2011 RFP for comparison.

Figure 2. 2011 RFP Scenario Optimization Results

	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 (#11102)	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 Power PPA (#11102) is tested with a higher PPA price to reflect the increase in market prices between "Base" and "Base + CO2"
(4) Coal Transition Power PPA (#11102) analysis includes equity component based on PSE's self build peaker [redacted]

Reevaluation Optimization Analysis conducted after June 22, 2012

Since PSE received revised proposals after completing the analysis provided above, PSE evaluated these revised proposals to see how they might impact the 2011 RFP decisions. Figure 3 shows the results of the optimization analysis with the revised offers.

Although PSE previously eliminated [redacted] (#11117) due to qualitative risks, it was decided to reevaluate the new offer with the lowered prices in order to see if the revised pricing would warrant accepting the additional risks associated with the proposal.

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Figure 3. Optimization runs of the revised proposals received as of June 22, 2012

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
[redacted] (#11103-r) (1)	-	-	-	-	-	0
Ferndale Own (#11118-r) (1)	X	X	X	-	X	4
PSE Self Build Peaker	-	-	-	-	-	0
[redacted] (#11124)	-	X	-	X	-	2
[redacted] (#11110)	X	X	-	-	-	2
Coal Transition (Centralia) PPA-Original Volumes (#11102)(2)	-	-	-	X	-	1
[redacted] (#11123)	-	-	-	X	-	1
[redacted] (#11123)	-	-	X	-	-	1
[redacted] (#11123)	X	-	-	-	X	2
[redacted] (#11118) (1)	-	-	-	X	-	1
[redacted] (#11117)	X	X	X	X	X	5
[redacted] (#11117-r) (3)	X	X	X	-	X	4
Portfolio Cost ($000)	**10,162,133**	**13,515,892**	**9,791,584**	**11,087,783**	**7,913,627**	

Notes:

(1) Includes cost of West Coast pipeline capacity consistent with PSE's gas hedging strategy for combined cycle plants. During the 2011 RFP evaluation, PSE did not include firm pipeline gas transportation charges for gas plants with oil backup, such as the Ferndale plant.

(2) Coal Transition Power PPA (Original Volumes) (#11102) includes additional BPA transmission costs to reflect the additional transmission PSE would need to acquire to achieve 498 MW of firm transmission rights; does not reflect risk of obtaining an additional 118MW of BPA transmission; analysis includes equity component based on PSE's self build peaker at [redacted]/kW.

(3) [redacted] revised term sheet did not identify the transmission capacity available to PSE's system; PSE modeled based on potential capacity identified by [redacted] in discussions; however, this capacity doesn't match the unit output.

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On July 5, 2012, TransAlta revised the commercial structure of the Coal Transition Power PPA (#11102-r) to a smaller volume and later start. Figure 4 shows the reevaluation of offers, as of July 5, 2012, after PSE received the revised offer from TransAlta; however this result does not take into account the qualitative review. When the [redacted] (#11117-r) offer is eliminated as a result of the qualitative risks summarized in Figure 6, the Coal Transition Power PPA (#11102-r) is lowest cost in 4 out of 5 scenarios, as shown in Figure 5. The difference in portfolio cost with the Coal Transition Power PPA (#11102-r) in the "Base w/ New Gas" scenario is only $9.28 million dollars (or approximately 0.09%) more than the portfolio with the [redacted] (#11117-r); not enough cost difference to accept the additional risks associated with the proposal.

Figure 4. Optimization runs of the revised proposals received as of July 5, 2012

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
[redacted] (#11103) (1)	-	-	-	-	-	0
Ferndale Own (#11118-r)(1)	X	X	X	-	X	4
PSE Self Build Peaker	-	-	-	-	-	0
[redacted] (#11124)	X	X	-	X	-	3
[redacted] (#11110)	-	X	-	-	-	1
Coal Transition (Centralia) PPA – July 5 Volumes (#11102-r) (2)	X	X	-	X	-	3
[redacted] (#11123)	-	-	-	X	-	1
[redacted] (#11123)	-	-	X	-	-	1
[redacted] (#11123)	X	X	-	-	X	3
[redacted] (#11118) (1)	-	-	-	X	-	1
[redacted] (#11117)	X	X	X	X	X	5
[redacted] (#11117-r) (3)	-	-	X	-	X	2
Portfolio Cost ($000)	**10,126,098**	**13,455,720**	**9,791,584**	**11,139,586**	**7,913,627**	

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Notes:

(1) Includes cost of West Coast pipeline capacity consistent with PSE's gas hedging strategy for combined cycle plants. During the 2011 RFP evaluation, PSE did not include firm pipeline gas transportation charges for gas plants with oil backup, such as the Ferndale plant.

(2) Analysis includes equity component based on PSE's self build peaker at [redacted]/kW.

(3) [redacted] revised term sheet did not identify the transmission capacity available to PSE's system; PSE modeled based on potential capacity identified by [redacted] in prior discussion; however, this capacity doesn't match the unit output.

Figure 5. Optimization runs of the revised proposals received as of July 5, 2012 excluding [redacted] (#11118), [redacted] (#11103-r), and [redacted] (#11117-r)

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected
Ferndale Own (#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) Includes cost of West Coast pipeline capacity consistent with PSE's gas hedging strategy for combined cycle plants. During the 2011 RFP evaluation, PSE did not include firm pipeline gas transportation charges for gas plants with oil backup, such as the Ferndale plant.

(2) Analysis includes equity component based on PSE's self build peaker at [redacted].

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Qualitative Review

In addition to the quantitative analysis, PSE considers the merits of each proposal as identified in the 2011 RFP's Evaluation Criteria, presented in Appendix B of the 2011 RFP Evaluation Document. Important considerations include:

- Is the project viable as proposed?
- Are there unacceptable risks associated with counterparty, commercial terms, technology, permitting, fuel supply, etc.?
- Is there a clear transmission solution?
- Are project costs competitive with other alternatives?

As shown in Figure 6 below, evaluation of the revised proposals continues to show significant qualitative risks for both the [redacted] (#11117-r) offer and [redacted] (#11103-r) offer. PSE has identified significant advantages for both the Coal Transition Power PPA (revised volume) (#11102-r) offer and the Ferndale Ownership (#11118-r) offer; however, both of these offers require quick action or these opportunities may be at risk.

Figure 6. Qualitative evaluation of revised offers

Project	Qualitative Advantages (+)	Qualitative Risks (-)
11102-r **Coal Transition Power PPA (Centralia)** TransAlta *11-yr PPA,* *Operating Transition Coal* *Up to 380 MW* *COD: 1971* *Term: 12/1/14-12/31/25*	• PPA economic benefits are favorable compared to alternatives • Physical, long-term flat firm power PPA delivered to PSE's system • Fixed price structure provides a hedge against rising power costs and stability compared to variability and uncertainty of natural gas tolling resource alternatives • Firm power backed by physical asset, [redacted] • Existing resource with demonstrated reliable operating history avoids development risk and operational performance of new resources • Capacity quantity ramps up over the term to match PSE's updated capacity need (in addition, capacity quantity begins to ramp down at end of term to allow PSE to better manage replacement of capacity • 380 MW of long-term firm transmission is held by PSE for contract term; 280 MW directly interconnected to PSE's system, which avoids 3rd party transmission costs, and 100 MW BPA firm point-to-point transmission from C.W. Paul; [redacted] • [redacted] • New state law recognizes coal transition power as a public policy resource preference, which allows and provides incentives for long-term contracts • Entering into PPA helps the State of Washington to achieve it's greenhouse gas emission reduction goals • Entering into PPA helps provide financial assistance to host communities • Coal transition power has strong public, local community,	• If market power prices drop over the long term compared to current market power price forecasts, then the PPA economics are not as attractive • [redacted] • If the WUTC does not approve PPA petition filing, then PPA does not become effective and terminates

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Project	Qualitative Advantages (+)	Qualitative Risks (-)
	environmental groups and government support • Strong counterparty (BBB S&P credit rating) with long history of international owner/operator performance • PPA requires pre-approval by WUTC before it becomes effective • PSE is allowed to earn its authorized rate of return on the PPA and avoids putting capital at risk	
11117-r [redacted]	• PPA economic benefits are favorable when PSE assumes firm transmission capacity is available to PSE' system with costs escalating at a typical inflation rate. • Existing resource avoids development risk. • Counterparty is well-known; successfully executed [redacted] other transactions with counterparty • Risks of pass-through gas costs and transportation minimized by abundant supply and pipeline rate settlement.	• [redacted] offer does not include clear transmission solution for the [redacted] transmission that must be secured; compared to other offers there is a greater exposure to increases in transmission costs [redacted] • Current analysis assumes 234 MW of BPA network transmission can be secured which is less than full output of the PPA offer • Cycling charges have not been clearly identified within the proposed tolling agreement indicating that portfolio benefits may be lower if PSE takes only 234 MW • [redacted] creating a change in control risk • Gas supply is expected to be readily available; however it is a more expensive location • Winter-only dispatchable unit with no real-time flexibility for wind integration or load changes • [redacted]
11118-r **Ferndale** Tenaska *Ownership* *Operating Nat-G-CCCT* *280 MW* *COD: 4/8/94* *Modeled start: 2013*	• Project economics are favorable • Existing resource avoids development risks. • PSE is familiar with this facility and its operations; recent 20-yr PPA expired 12/31/2011. • Counterparty is well known. PSE has an excellent relationship with the counterparty, although additional negotiations will be required to complete the agreement. • Facility is interconnected to PSE's system providing load management and wind integration benefits, and no exposure to cost increases from other transmission providers. • Firm gas transport on Cascade would be transferred to PSE as part of the purchase. Cost reduction may be possible through negotiation and extension of agreement. • Facility uses proven, reliable GE 7EA gas turbines; plant has a solid operating history and has been well maintained • Facility has dual-fuel capability (backup fuel delivered by truck); the availability of the oil backup system may allow greater flexibility with this plant and may provide opportunities to modify gas transportation plans resulting in lower costs • Counterparty is well-known and low risk • Dispatchable unit • Remaining economic plant life in analysis is assumed to be 19 years, while PSE expects to plant to be economically viable for many years beyond that date	• Full due diligence for an owned asset has not been conducted, but would be prior to purchase. • The State of Washington is considering amending and lowering the Emissions Performance Standard from 1,100 lbs CO2e/MWh to between 700 to 900 lbs CO2e/MWh. Lowering the standard to the proposed levels may restrict PSE from acquiring the facility if the facility is unable to meet the new standard. • Costs to bring plant up to PSE's operating standards may vary from estimate (estimated at $3M based on PSE's acquisition of Sumas.)

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Project	Qualitative Advantages (+)	Qualitative Risks (-)
11103-r [redacted]	• Existing resource avoids development risk • Facility uses efficient [redacted] gas turbines with [redacted] • Very good heat rate [redacted] • Duct firing and turndown capability to 145 MW improves dispatch flexibility • Ownership provides PSE with control and offers stability in secured capacity; asset life is [redacted] reducing the need for PSE to return to the marketplace in the [redacted].	• Project economics less favorable than alternatives • Project is not offered with firm transmission to PSE's system, but there does appear to be a strategy to obtain BPA long-term firm transmission. [redacted] however, compared to other offers there is a greater exposure to increases in transmission costs as BPA has proposed a significant increase in transmission costs • PSE can supply pipeline capacity from gas book 2013-2015; however, after 2015, would require a pipeline expansion. There is some risk that an expansion by 2016 may be more expensive than existing capacity • Condition of major equipment [redacted] may have been adversely affected by [redacted] • [redacted] • [redacted] • [redacted] • Current off-take contracts on the facility do not expire until end of [redacted] • The State of Washington is considering amending and lowering the Emissions Performance Standard from 1,100 lbs CO2e/MWh to between 700 to 900 lbs CO2e/MWh. Lowering the standard to the proposed levels would limit the sale of power to less than 5 years; efficiency upgrades to achieve the standard are extremely unlikely to be economical • Offer as proposed is conditioned on closing Dec. 2012

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Manual Portfolio Construction

The evaluation team also constructed manual portfolios to demonstrate the quantitative merits of potential portfolios while minimizing surpluses created by the model.[4] Manual portfolios were constructed in the PSM III optimization model—with PSE's qualitative and quantitative review in mind—to better identify the costs and risks of specific portfolios:

- Ferndale Ownership (#11118-r),
- Combined Coal Transition Power PPA (revised volumes) (#11102-r) and Ferndale Ownership (#11118-r)
- Coal Transition Power PPA (Original volumes) (#11102)

After manually constructing portfolios, the team considered each portfolio's costs in the five scenarios and in the risk analysis in a manner consistent with the 2011 RFP analysis. Appendix B to this memo identifies the resources included in the manually constructed portfolios and their surpluses.

[4] The optimization model is designed to build portfolios that must meet capacity and renewable energy requirements. It is not able to easily minimize surpluses or consider any adjustments in timing of other potential options. The RFP team used its judgment and experience to construct manual portfolios by creating portfolios using the [redacted] (#11123), [redacted] (#11110), [redacted] (#11124), and [redacted] (#11117) offers to fill in need from a least cost perspective. It was concluded in the 2011 RFP that both the [redacted] and [redacted] offers were better evaluated by PSE's trade floor as short-term decisions.

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Scenario Analysis

Figure 7. Portfolio cost comparison of manually constructed portfolios

Portfolio	Scenario: Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth
Portfolio Cost ($000) Ferndale Ownership (#11118-r) & Coal Transition PPA (New Volumes) (#11102-r)	10,099,967	13,485,087	9,760,813	11,199,548	8,061,042
Portfolio Cost ($000) w Ferndale Ownership (#11118-r) Only	10,21т,тро	13,54у,у00	9,8пн,усу	11,51т,8сс	7,9пн,мфо
Portfolio Cost ($000) w Coal Transition PPA (Original Volumes) (#11102) Only	10,170,918	13,600,610	9,877,969	11,201,975	8,159,288
Difference to Ferndale Ownership (#11118-r) & Coal Transition PPA (New Volumes) (#11102-r) – (Benefit)/Cost					
Portfolio Cost ($000) w Ferndale Ownership (#11118-r) Only	11т,тур	со,тмо	ун,лрп	31у,омф	(1му,урл)
Portfolio Cost ($000) w Coal Transition PPA (Original Volumes) (#11102) Only	70,950	115,524	117,156	2,428	98,246

Figure 7 shows that the combined Ferndale Ownership (#11118-r) and Coal Transition Power PPA (New Volumes) (#11102-r) offers provide the lowest cost portfolio in all five scenarios compared to the Coal Transition Power PPA (Original Volumes) (#11102). The combined Ferndale Ownership (#11118-r) and Coal Transition Power PPA (New Volumes) (#11102-r) offers provide the lowest cost portfolio in four of five scenarios.

Risk Analysis

PSE performed risk analysis consistent with the approach in the 2011 RFP. PSE analyzed the range of the portfolio costs varying natural gas prices, power prices, hydro generation, wind generation, and peak and energy loads to assess the cost and risk of the manually constructed portfolios. Figures 8 to 10 demonstrate that the combined Ferndale Ownership (#11118-r) and Coal Transition Power PPA (New Volumes) (#11102-r) offers provide a least cost and risk portfolio compared to either the Coal Transition Power PPA (Original Volumes) (#11102-r) offer or the new Ferndale Ownership (#11118-r) option alone.

Figure 8. Stochastic Risk Analysis in RFP Phase 2 Base Scenario

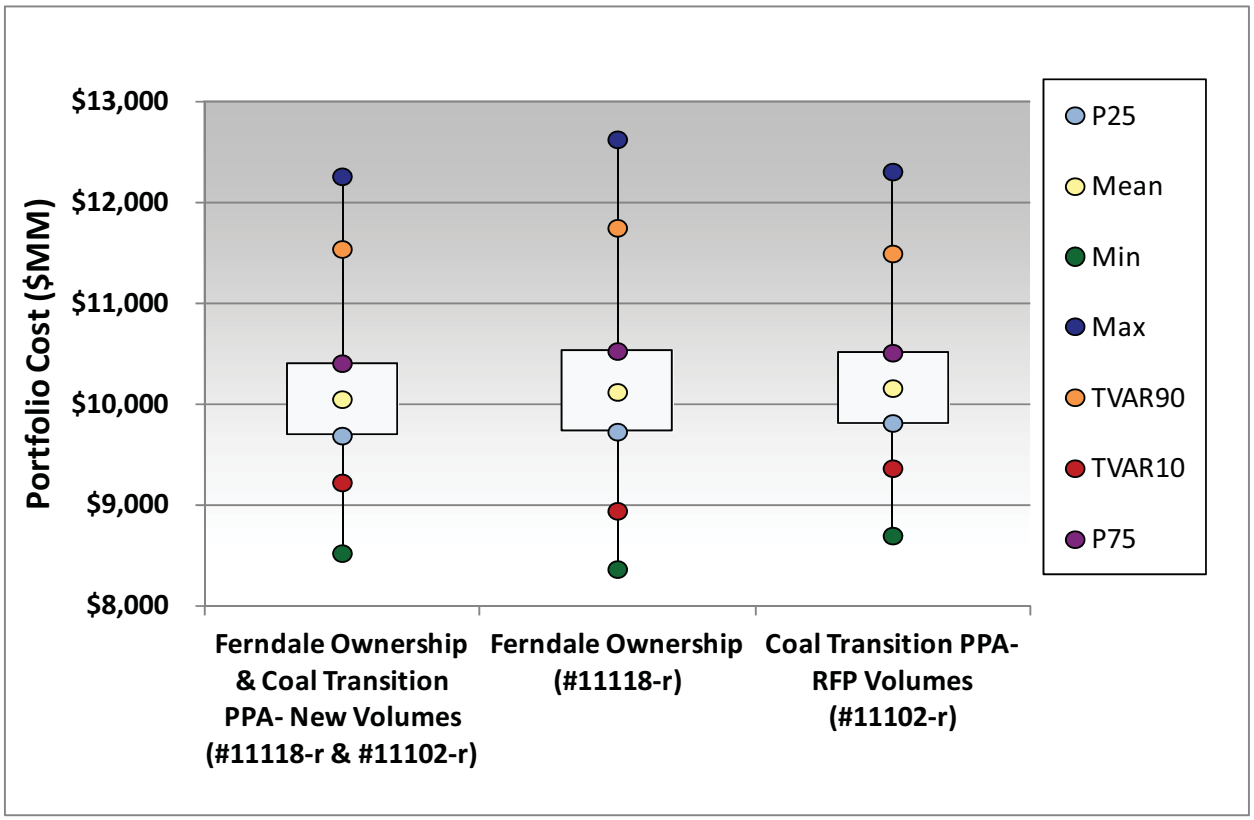

Figure 9. Risk analysis comparison of the Ferndale Ownership (#11118-r) offer and the Coal Transition Power PPA (New Volumes) (#11102-r) offer to the Coal Transition Power PPA (Original Volumes) (#11102)

Portfolio Cost (Revenue Requirement) $MM

	Ferndale Ownership & Coal Transition PPA- New Volumes (#11118-r & #11102-r)	Coal Transition PPA- Original Volumes (#11102)	(Benefit)/Cost of Ferndale Own & Coal Transition PPA- New Volumes (#11118-r & #11102-r)
Max	12,264	12,311	(47)
TVAR90	11,543	11,498	45
P75	10,409	10,513	(104)
Median	9,885	10,140	(255)
Mean	10,052	10,161	(110)
P25	9,690	9,816	(125)
TVAR10	9,225	9,367	(141)
Min	8,524	8,698	(174)
Annual Volatility (%)	10.5%	9.9%	0.6%
Cost at Risk	1,491	1,336	154

Figure 10. Risk analysis comparison of the Ferndale Ownership (#11118-r) offer and the Coal Transition Power PPA (New Volumes) (#11102-r) to the Ferndale Ownership (#11118-r) Offer

Portfolio Cost (Revenue Requirement) $MM

	Ferndale Ownership & Coal Transition PPA (New Volumes) (#11118-r & #11102-r)	Ferndale Ownership (#11118-r)	(Benefit)/Cost of Ferndale Own & Coal Transition PPA- New Volumes (#11118-r & #11102-r)
Max	12,264	12,631	(367)
TVAR90	11,543	11,753	(210)
P75	10,409	10,530	(121)
Median	9,885	10,040	(156)
Mean	10,052	10,124	(72)
P25	9,690	9,729	(39)
TVAR10	9,225	8,944	281
Min	8,524	8,366	158
Annual Volatility (%)	10.5%	11.3%	-0.9%
Cost at Risk	1,491	1,629	(138)

V. Key Findings

Taking into consideration the quantitative and qualitative analysis, the 2011 RFP July 2012 re-evaluation finds that the Ferndale Ownership (#11118-r) offer and the Coal Transition Power PPA (New Volumes) (#11102-r) offers are least cost and least risk. The Ferndale Ownership (#11118-r) offer is a low cost existing resource that is well-known to PSE and provides system benefits. At the new volumes, the Coal Transition Power PPA (New Volumes) (#11102-r) offer is another least-cost resource that provides PSE customers a hedge against higher prices that no other resource has been able to offer for the duration and at the price offered by TransAlta.

Although the revised [redacted] (#11117-r) offer is competitive from a cost perspective with the least-cost offers identified, there are numerous risks to reaching a binding agreement and the project does not have the ability to provide system benefits such as load management and wind-integration. The [redacted] (#11103-r), although offered at a seemingly attractive price exceeds PSE's current need, making it less cost-competitive.

The following table shows the new selected resources from the reevaluation. Since a combination of the Ferndale Ownership (#11118-r) and Coal Transition Power PPA (New Volumes) (#11102-r) offers fit closely with PSE's near-term need, the [redacted] (#11124) is no longer needed until 2017. Additionally, PSE believes it is better to first pursue the two near-term projects prior to beginning negotiations for the [redacted] (#11117-r).

Figure 11. Meeting PSE's identified capacity need

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capacity (Deficit) / Surplus in MW:	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)	(854)	(918)	(1,000)	(1,095)	(1,198)
Coal Transition PPA (#11102-r)	[redacted]												
Ferndale Ownership (#11118-r)													
[redacted] (#11123)													
[redacted] A (#11117)													
Remaining Capacity (Deficit) / Surplus in MW:	**38**	**15**	**27**	**64**	**10**	**(5)**	**(27)**	**(22)**	**(135)**	**(199)**	**(356)**	**(450)**	**(634)**

VI. Next Steps

As described in this memo, the results of PSE's July 2012 re-evaluation of revised offers led the RFP evaluation team to recommend pursuing both the Coal Transition Power PPA (New Volumes) (#11102-r) and the Ferndale ownership offer (#11118-r). Next steps for each of these offers are described below.

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Pursue Coal Transition Power PPA (New Volumes) (#11102-r) offer. PSE staff expects to request from its EMC approval to recommend that PSE's BOD approve resolutions allowing PSE to enter into the Coal Transition Power PPA (New Volumes) (#11102-r). If the BOD adopt the resolutions, PSE will seek approval of the Coal Transition Power PPA (New Volumes) (#11102-r) in a filing with the Washington Utilities and Transportation Commission ("WUTC") in mid-August 2012. To be effective, the Coal Transition Power PPA (New Volumes) (#11102-r) requires approval from the WUTC, which is a 180-day process.

Pursue Ferndale Ownership (#11118-r) offer. Over the next few months, PSE expects to actively engage in negotiations and discussions with Tenaska regarding the Ferndale Ownership (#11118-r) offer. At the same time, PSE has assembled a cross-functional team of evaluators to take a more in-depth look at the plant from the perspective of a potential owner and possible operator—rather than a PPA off-taker, as originally proposed. This team will perform a critical due diligence review designed to identify any potential risks, advantages or costs associated with the plant and integrating the plant into PSE's existing fleet of resources. Assuming that the due diligence review results in favorable findings and negotiations with the counterparty are successful, the evaluation team anticipates that it will recommend the Ferndale Ownership (#11118-r) offer to the EMC and the BOD at the conclusion of these proceedings.

Appendix A. New proposal screening results

As PSE received the revised and new offers, staff screened the results quantitatively in the PSM I screening model. The following shows how the screening results compared. While the screening model shows relative rankings, it represents the results of only one scenario—Base w/ New Gas, uses the PSM I simple dispatch logic and includes additional transmission costs on market purchases that the PSM III and IRP did not include. More in depth evaluation is performed in the PSM III Optimization model.

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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]	$ 29,878	[redacted]	1	2.48	[redacted]	1
[redacted] e (#11123)	Index Price	2016	11	[redacted]	$ 17,876	[redacted]	2	0.34	[redacted]	5
Coal Transition PPA (#11102-r) New Volumes	PPA	2014	12	[redacted]	$ 114,488	[redacted]	3	0.11	[redacted]	9
[redacted] (#11123)	Index Price	2014	11	[redacted]	$ 15,174	[redacted]	4	0.27	[redacted]	4
Ferndale Purchase (#11118-r) Reprice	Ownership	2013	19	[redacted]	$ 96,126	[redacted]	5	0.25	[redacted]	6
[redacted] (#11117-r) [redacted]	Tolling	2013	10	[redacted]	$ 41,203	[redacted]	6	0.38	[redacted]	3
Ferndale Purchase (#11118-r) w/ West Coast costs	Ownership	2013	19	[redacted]	$ 65,680	[redacted]	7	0.16	[redacted]	8
Coal Transition PPA (#11102) RFP Volumes	PPA	2012	14	[redacted]	$ 75,367	[redacted]	8	0.05	[redacted]	10
[redacted] (#11118) [redacted]	Tolling	2012	11	[redacted]	$ 15,005	[redacted]	9	0.08	[redacted]	7
[redacted] (#11117)	Tolling	2013	6	[redacted]	$ 6,758	[redacted]	10	0.06	[redacted]	2
[redacted]	Ownership	2015	35	[redacted]	$ 13,580	[redacted]	11	0.05	[redacted]	15
[redacted] (#11124)	Fixed Price	2013	10	[redacted]	$ (1,485)	[redacted]	12	(0.01)	[redacted]	11
[redacted] (#11103-r) [redacted]	Ownership	2014	29	[redacted]	$ (62,439)	[redacted]	13	(0.03)	[redacted]	16
[redacted] (#11124) [redacted]	Fixed Price	2013	10	[redacted]	$ (5,387)	[redacted]	14	(0.02)	[redacted]	12
[redacted] (#11103) [redacted]	Ownership	2014	29	[redacted]	$ (78,209)	[redacted]	15	(0.03)	[redacted]	17
[redacted] (#11123)	Fixed Price	2014	5	[redacted]	$ (5,013)	[redacted]	16	(0.09)	[redacted]	14
[redacted] (#11110)	Fixed Price	2013	5	[redacted]	$ (7,307)	[redacted]	17	(0.10)	[redacted]	13
[redacted] (#11116)	Fixed Price	2014	25	[redacted]	$ (19,022)	[redacted]	18	(0.13)	[redacted]	18
[redacted] (#11112)	Fatal Flaw									

Notes:

(1) Includes cost of West Coast pipeline capacity consistent with PSE's gas hedging strategy for combined cycle plants. During the 2011 RFP evaluation, PSE did not include firm pipeline gas transportation charges for gas plants with oil backup, such as the Ferndale plant (#11118).

(2) Coal Transition Power PPA (#11102) (RFP Volumes) includes additional BPA transmission costs to reflect PSE's 280 MW of firm transmission rights, but does not reflect risk of obtaining additional BPA transmission. Analysis includes equity component based on PSE's self build peaker.

(3) [redacted] revised term sheet did not identify the transmission capacity available to PSE's system. PSE modeled based on potential capacity identified by [redacted] in prior discussion; however, this capacity doesn't match the unit output.

(4) After another review of the models, PSE staff found the [redacted] (#11123), [redacted] (#11110), [redacted] (#11117), [redacted] (#11103) offers were not reported in the RFP Document on page 35 based on the latest model revisions. The revisions corrected an overstatement of market purchase costs which includes the doubling up of transmission costs. Results shown here reflect the latest model revisions. These revisions were minor and would not have made an impact on the RFP decisions because more weight was placed on the PSM III optimization analysis results.

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Appendix B. Manual Portfolios

Ferndale Own & Coal Transition PPA (#11118-r & #11102-r) (New Volumes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capacity Need	(129)	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)	(854)	(918)	(1,000)	(1,095)	(1,198)
Ferndale Own (#11118-r)	[redacted]													
[redacted] (#11124)														
Coal Transition PPA (#11102-r) (New Volumes)														
[redacted] (#11123)														
[redacted] (#11117)														
Peakers														
Transmission														
Wind														
Biomass														
Remaining Capacity (Deficit) / Surplus in MW:														

Ferndale Ownership (#11118-r)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capacity Need	(129)	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)	(854)	(918)	(1,000)	(1,095)	(1,198)
Ferndale Own (#11118-r)	[redacted]													
[redacted] (#11124)														
[redacted] (#11110)														
Coal Transition PPA (#11102-r) (New Volumes)														
[redacted] (#11123)														
[redacted] (#11117)														
Peakers														
Transmission														
Wind														
Biomass														
Remaining Capacity (Deficit) / Surplus in MW:														

Coal Transition PPA (#11102) (RFP Volumes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capacity Need	(129)	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)	(854)	(918)	(1,000)	(1,095)	(1,198)
Ferndale Own (#11118-r)	[redacted]													
[redacted] (#11124)														
[redacted] (#11110)														
Coal Transition PPA (#11102) (RFP Volumes)														
[redacted] (#11123)														
[redacted] (#11117)														
Peakers														
Transmission														
Wind														
Biomass														
Remaining Capacity (Deficit) / Surplus in MW:														

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Ferndale Own & Coal Transition PPA (#11118-r & #11102-r) (New Volumes)

	2026	2027	2028	2029	2030	2031
Capacity Need	(1,286)	(1,380)	(1,479)	(1,580)	(1,681)	(1,777)
Ferndale Own (#11118-r)						
[redacted] (#11124)						
Coal Transition PPA (#11102-r) (New Volumes)						
[redacted] (#11123)						
[redacted] (#11117)						
Peakers						
Transmission						
Wind						
Biomass						
Remaining Capacity (Deficit) / Surplus in MW:						

Ferndale Ownership (#11118-r)

	2026	2027	2028	2029	2030	2031
Capacity Need	(1,286)	(1,380)	(1,479)	(1,580)	(1,681)	(1,777)
Ferndale Own (#11118-r)						
[redacted] (#11124)						
[redacted] (#11110)						
Coal Transition PPA (#11102-r) (New Volumes)						
[redacted] (#11123)						
[redacted] (#11117)						
Peakers						
Transmission						
Wind						
Biomass						
Remaining Capacity (Deficit) / Surplus in MW:						

Coal Transition PPA (#11102) (RFP Volumes)

	2026	2027	2028	2029	2030	2031
Capacity Need	(1,286)	(1,380)	(1,479)	(1,580)	(1,681)	(1,777)
Ferndale Own (#11118-r)						
[redacted] (#11124)						
[redacted] (#11110)						
Coal Transition PPA (#11102) (RFP Volumes)						
[redacted] (#11123)						
[redacted] (#11117)						
Peakers						
Transmission						
Wind						
Biomass						
Remaining Capacity (Deficit) / Surplus in MW:						

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Attachment E

Comparative Analysis

2. Ferndale Comparative Analysis

September 2012: Ferndale Re-Evaluation Results

The Re-Evaluation of Ferndale compared to current viable alternatives as described in the final 2011 RFP results reaffirms that Ferndale is a least cost and least risk resource alternative. PSE has not received any competitive new or revised offers since the *July 2012 memo: Re-evaluation of revised offers* presented to PSE's Board of Directors on July 24, 2012. Since that time, PSE has conducted further due diligence for Ferndale and PSE has updated its analysis based on the due diligence findings and current price forecasts. The key changes to the Ferndale assumptions for the updated analysis are:

- The facility's winter capacity is evaluated at 290 MW compared to 284 MW based on performance testing in August 2012 and a new interconnection study that accommodates the maxmimum generation output of the facility up to 300 MW.

- The useful life of the facility was determined to be 27 years compared to the RFP assumption of 19 years based on techncal due diligence and the expected plan and budget from the Energy Operations group.

- O&M cost projections were higher compared to the RFP assumptions. Further, the operation costs included in the analysis are based on PSE operating the faciltiy; however, PSE is considering a third-party operator.

Since the 2013 IRP process began, PSE evaluated Ferndale and the alternatives using the "2013 IRP Base" gas and power prices (PSE's most current long-term price forecast) and the "2011 RFP Phase II Base w/ New gas price" scenario (PSE's April 2012 forecast, which was most current at the end of the RFP). As shown in Figure 1, the "2013 IRP Base" prices are lower than the "2011 RFP Phase II Base w/ New gas" price scenario. Other updates included use of the proposed $[redacted]/kW capacity cost equivalent to calculate the equity return for the Coal Transition PPA compared to the $[redacted]/kW used in the RFP analysis.

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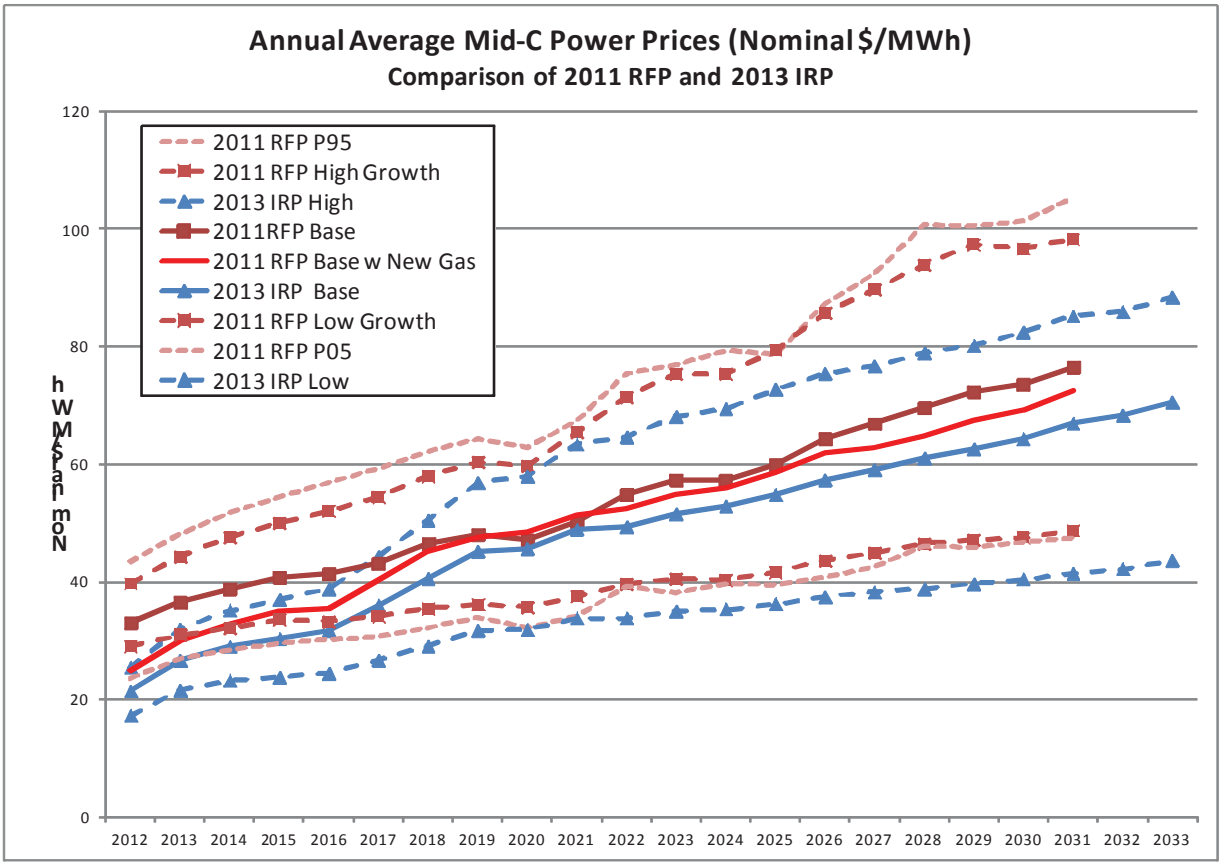
Another key update to the analysis includes the recently updated self-build peaker cost from PSE's engineering consultant, Black and Veatch ("B&V"), which are approximately $[redacted]/kW (in 2015 dollars) for a 2015 build compared to $[redacted]/kW used in the RFP.

Figure 1. Comparison of 2011 RFP Phase II scenarios to 2013 IRP scenarios



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In the "2013 IRP Base" gas and power price scenario, Ferndale is selected as lowest cost in the optimal portfolio when all viable options were available, as was also the case in the "2011 RFP Base w/ New gas" scenario analysis. These results are shown in Figure 2.

Figure 2. 2013 IRP Base power and gas prices scenario results

	2013 IRP Base Scenario		
	All Optimized	**No Ferndale Own**	**No Centralia**
Ferndale Own	X		X
Coal Transition (Centralia) PPA	X		
[redacted] (#11117)	X	X	X
PSE Self Build Peaker			X
[redacted] (#11124)			X
[redacted] (#11110)			X
[redacted] (#11123)			
[redacted] (#11123)			X
[redacted] (#11123)	X	X	
[redacted] (#11103)		X	
Portfolio Cost ($000)	**$ 9,493,027**	**$ 9,868,097**	**$ 9,536,635**
Increase from Optimized ($000)	**$ -**	**$ 375,070**	**$ 43,608**

Notes:
- Ferndale costs and operational characteristics updated for due diligence findings
- Coal Transition PPA equity return based on $[redacted]/kW capacity cost equivalent compared to $[redacted]/kW used in the RFP.

Reevaluation in the "2011 RFP Phase II Base with New Gas" scenario continues to show the selection of the Ferndale Ownership offer and the Coal Transition PPA as the lowest cost portfolio as illustrated in Figure 3. Both the "2011 RFP Phase II Base with New Gas" scenario and the "2013 IRP Base" scenario show

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the same selections in the optimization and the two sensitivities performed[1]. The Ferndale Ownership is attractive under both higher and lower price scenarios; however, the new results do not show selection of the [redacted] (#11124) anymore. Qualitative evaluation of alternatives other than Ferndale did not change and qualitative benefits of Ferndale were reaffirmed (see *RFP executive summary* and July *2012 memo: Re-evaluation of revised offers* as presented in Coal Transition PPA Report to the Board of Directors dated July 24, 2012 for details).

Figure 3. 2011 RFP Phase II Base with new gas price scenario results

	Base w/ New Gas Scenario		
	All Optimized	**No Ferndale Own**	**No Centralia**
Ferndale Own	X		X
Coal Transition (Centralia) PPA	X		
[redacted] (#11117)	X	X	X
PSE Self Build Peaker			X
[redacted] (#11124)			X
[redacted] (#11110)			X
[redacted] (#11123)			
[redacted] (#11123)			X
[redacted] (#11123)	X	X	
[redacted] (#11103)		X	

Portfolio Cost ($000)	**$ 9,752,629**	**$ 10,144,885**	**$ 9,855,476**
Increase from all Optimized ($000)	$ -	$ 392,256	$ 102,847

Notes:

- Ferndale costs and operational characteristics updated for due diligence findings
- Coal Transition PPA equity return based on $[redacted]/kW capacity cost equivalent compared to $[redacted]/kW used in the RFP.

[1] Sensitivities were performed by removing an identified resource from the resource options and optimizing the model.

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Attachment F

Key risks and mitigations

Attachment F. Key Risks and Mitigations

Potential Risks	Mitigations
Commercial and legal	
Steam Agreement with Phillips 66 [redacted]	• [redacted]
Steam Agreement with Phillips 66 [redacted]	• [redacted] • [redacted]
Lease with Phillips 66 Under the terms of the lease with Phillips 66, obligation to fund an escrow account to remove the Facility and certain perform subsurface improvements from the leased property and restore the property to substantially its former condition upon the expiration of the Lease, unless Phillips exercises a buyout option pursuant to the Steam Agreement.	• PSE may opt to satisfy the escrow obligation with either a Letter of Credit or cash. Current funding requirements total $1,660,493. • PSE has assumed obligation would be met with a Letter of Credit.
Lease with Phillips 66 [redacted]	• [redacted]

REDACTED VERSION

Attachment F. Key Risks and Mitigations

Potential Risks	Mitigations
Resource need	
Load Forecast Load growth is lower than current F2012 load forecast.	• Analysis uses PSE's most current load forecast (F2012), which is lower than the low cyclical forecast from the 2011 IRP that the WUTC directed the Company to consider in its 2011 IRP acceptance letter; key driver of PSE's capacity need is expiring contracts. • PSE carefully considered appropriate timing for executing short list resources and will use its hedging program to manage any potential short-term energy surpluses and other portfolio volatility.
Operations risks	
Steam Agreement with Phillips 66 [redacted]	• [redacted] • [redacted]
Facility Upgrade Expenses Costs to bring plant up to PSE's operating standards may vary from estimate (approximately $500,000).	• Technical and operations teams conducted extensive diligence and have relied on familiarity with Facility, historical inspection reporting, and professional judgment to make an educated determination of Facility's upgrade needs.

REDACTED VERSION

Attachment F. Key Risks and Mitigations

Potential Risks	Mitigations
Environmental matters	
Emissions Performance Standard Washington State Department of Commerce is considering amending and lowering the Emissions Performance Standard ("EPS"), which may restrict PSE from acquiring the facility if it is unable to meet new standard.	• Transaction is targeted to close by November 1, 2012, prior to the anticipated EPS rule change. • Closing condition gives PSE termination right in the event an EPS rule is enacted that Facility will be unable to meet.
Remediation Potentially unknown environmental liabilities related to environmental impacts prior to PSE acquisition.	• PSE consultant conducting Phase II study in order to provide baseline for determining environmental liabilities accruing under PSE ownership.
Natural Gas Service matters	
[redacted]	• [redacted]
[redacted]	• [redacted] • [redacted]

REDACTED VERSION

Attachment G

Summary due diligence findings

Summary Due Diligence Findings

The Ferndale Cogeneration Station (“Facility”) is a 270 MW (nameplate capacity at ISO conditions with duct firing) 2x1 combined-cycle, dual fuel natural gas/diesel-fired power facility that began commercial operation on April 8, 1994. The Facility may, if requested, provide steam at a rate of up to 150,000 lbs/hr to the adjacent Phillips 66 Refinery. The Facility is interconnected to the Cascade Natural Gas underground pipeline distribution system and to Puget Sound Energy’s ("PSE") 115kV transmission system via PSE’s Terrell Substation onsite. Tenaska Washington Partners, L.P. (“TWP”) is the current owner of the Facility.

Buildings and equipment occupy approximately 50% of the total area of the 16-acre site. The principle components of the Facility are the two combustion turbines, two Heat Recovery Steam Generators ("HRSGs"), one steam turbine and condenser, one 3-cell evaporative cooling tower, and water treatment facilities.

A. Technical Due Diligence

Overview

The Facility is a conventional dual-fuelled (natural gas as the primary fuel and diesel fuel as the backup fuel) 2x1 (“two-on-one”) combined cycle power plant with two combustion turbine generators and one steam turbine generator. It is currently operated under a formal operations and maintenance agreement with Tenaska Operations, Inc. (“TOI”) and until December 31, 2011 was maintained under a General Electric (“GE”) Long Term Services Agreement (“LTSA”). The plant is rated at approximately 245 MW ISO base load (no duct firing, no process steam), approximately 270 MW with duct firing (ISO, no process steam), and approximately 290 MW winter rating (23° F, with duct firing, no process steam). The two GE Frame 7EA Model MS 7111 combustion turbines provide electrical power via two GE generators as well as exhaust heat to the two ABB-CE HRSGs. The HRSGs generate high, intermediate, and low pressure steam.

Steam generated by the HRSGs drives a triple-pressure GE steam turbine, which drives a third GE generator.

The overall conclusion of PSE's technical due diligence team is that the plant is clean, quiet, well-designed, and in very good condition for its age. Operations and maintenance at the Facility appear to have been carried out by conscientious and experienced personnel guided by good procedures. Regular inspection and testing of major equipment has been carried out consistently, and maintenance tasks have been performed when required. The site was designed for base load operation. Going forward, maintenance intervals will vary based on how often the plant is cycled.

Site

The approximately 16-acre Ferndale site is located wholly within the boundary of the approximately 850-acre Phillips 66 Refinery off Lake Terrell road in Ferndale, Washington.

The majority of the site is covered in asphalt paving. Crane accessibility for maintenance is good, with the exception of access to the steam turbine, which requires a long crane reach due to the amount of equipment in the vicinity.

Fuel

The Facility is designed to run primarily on natural gas, with diesel fuel (low sulfur #2 distillate, or fuel oil) as a backup fuel. Cascade Natural Gas delivers natural gas at a nominal gas pressure of 350 psig via a 36-mile pipeline from the Sumas, Washington area. This pipeline was upgraded in 1993 (including a 6-mile, 20" lateral serving the plant) to provide full fuel requirements from either the Westcoast pipeline (Canadian gas) at Sumas or Northwest Pipeline (U.S. gas) three miles south of Sumas. The Facility is equipped with a gas chromatograph to measure the heating value, relative density, and compressibility of the delivered fuel.

Also onsite is a 2.05 million gallon diesel storage tank, currently empty. A full tank would provide sufficient fuel oil to operate the Facility at base load for approximately five days. The current air permit restricts fuel oil use to 20.4 million gallons per year (approximately two months of base load operation).

Combustion Turbines

GE 7EA gas turbines are mature, well-understood machines with millions of hours of operation by similar units installed around the world. The Ferndale 7EA gas turbines are very similar to the 7EA turbine currently in use by PSE at its Sumas Generating Facility. The 7EA combustion turbine and generator form a large frame, industrial-type machine with an axial flow, multi-stage compressor and power turbine on a common shaft. Each gas turbine is directly coupled to an electric generator located on the outlet side of the turbine. Each combustion turbine generator package includes the following subsystems and components:

- Inlet air filtration system
- Inlet fogging evaporative cooling system to enhance summer capacity
- Dual fuel system
- Combustion system with steam injection for NOx control
- On-base piping for compressor online and offline water wash
- Hydraulic and lube oil systems
- Static starting system including load-commutating inverter and low speed turning gear
- Air-cooled generator
- Fire detection and CO_2 suppression system
- Turbine accessories compartment
- Generator auxiliary compartment and electrical control compartment

- Generator static excitation system
- Generator neutral grounding equipment
- Combustion turbine and generator temperature monitoring devices and bearing temperature and vibration monitoring devices
- Mark V turbine control system with ABB DCS and CiSCO CEMS

The Facility's GE 7EAs are nominal 94 MW machines with 17-stage compressors. Directly upstream of the first compressor stage are the inlet guide vanes that are adjusted during startup and shutdown to protect the compressor from aerodynamic surge or stall. Downstream of each of the 17 rotor stages is a stator stage that directs airflow to the next rotor stage. The last stage of the compressor is comprised of the exit guide vanes that straighten the airflow as it leaves the compressor for the combustors. In the combustion chambers, fuel is mixed with the compressed air and the mixture is ignited. The high-energy gases are then directed through the nozzles to each of the three stages of the power turbine, where the gases expand to generate force against the buckets, rotating the shaft to produce electricity via a GE three-phase, air-cooled 13.8 kV generator.

Fleet experience with GE 7EA gas turbines is extensive and most issues affecting reliability have been worked through over the last 20+ years. Service and support for these models is available from both the OEM and third party suppliers. GE utilizes technical information letters ("TILs") to communicate necessary mechanical and system alterations and upgrades to minimize the effect of potential design shortcomings and maximize reliability. The site has kept up to date with implementation of gas turbine TILs issued by GE, with the exception of the following:

- TIL 1049R3: "B and E Class Gas Turbine Wheel Dovetail Material Loss." This TIL calls for removal of turbine buckets for inspection to

determine whether material loss has occurred at the wheel dovetails. If found, wear can generally be corrected by the application of a metal spray hard coating to the dovetails. The priority level for this TIL is 4 – at first exposure of component. The TIL should therefore be implemented at the next hot gas path inspection.

- TIL 1759: "7EA Enhanced Compressor Bleed Valve Fault Detection and Part Speed Hold Prevention." This TIL is to inform users of an available software upgrade package, which includes enhanced compressor bleed valve fault detection capabilities and modifications to ensure desired deceleration on unit shutdown. The priority level for this TIL is 7 – optional.

- TIL 1819R2: "Turbine Shell to Exhaust Frame Flange Slippage." This TIL recommends installation of radial dowel pins at the turbine shell/exhaust frame flange to help prevent future alignment problems or bearing distress. There are no indications, such as high bearing vibration levels, that would indicate a current alignmnent problem at Ferndale. The priority level for this TIL is 4 – at first exposure of component. Consideration should be given to implementing this TIL at the next hot gas path inspection ("HGP").

- TIL 13461R1: "Replacement of 7EA Stage 17 Rotating Compressor Blades." This TIL recommends that the Stage 17 compressor rotor blades be replaced at first exposure of component due to possible blade distress caused by their design. This TIL was implemented on Unit B during its 2009 HGP. Unit A did not require compressor casing removal at that time, so the TIL has not yet been implemented on that unit and should be done during the next major

inspection ("MI"). The priority level for this TIL is 4 – at first exposure of component.

As of August 2012, both gas turbines had accumulated just over 80,000 fired hours and approximately 240 starts. The average run time of over 330 hours per start demonstrates a more conservative run scheme than is typical for PSE's fleet, with relatively less cycling. The planned maintenance cycle for these units is as follows:

- Combustion Inspection ("CI"): 8,000 fired hours or 900 starts
- Hot Gas Path Inspection ("HGP"): 24,000 fired hours or 1,200 starts
- Major Inspection ("MI"): 48,000 fired hours or 2,400 starts

The recommended maintenance intervals have been followed, with the most recent CI performed in May 2011 with only minor repairs required. Both units underwent HGPs in 2009, and prior to that, MIs in 2002. During the 2002 MI, the units were uprated to a 2035° firing temperature.

The site has performed regular borescope inspections with no major findings. It is notable that the site's insurers are not recommending any gas turbine modifications or inspections, other than continued regular borescope inspections, at this time. There have been no gas turbine trips or forced outages in the past year, and no recent changes in vibration or exhaust temperature spreads. Either of these conditions would have indicated turbine mechanical or construction problems. The units have had very little run time in the last 2-3 years due to reduced market demand; however, no major issues were encountered during recent test runs in August 2012.

Heat Recovery Steam Generators

The Facility incorporates two ABB-CE heat recovery steam generators that utilize typical industry design. The HRSGs produce steam at three pressure levels: high pressure ("HP"), intermediate pressure ("IP") and low pressure ("LP"). The HRSG is protected by numerous high and low drum level alarms and trips in additional to high pressure relief valves.

The HRSGs include the following additional components:

- Three 50% feedwater recirculation pumps
- Continuous and intermittent blowdown system
- A duct burner system to increase steam production

The HRSGs are of conventional design, each with its own exhaust stack 180 feet high and 14 feet in diameter. Exhaust stack dampers to trap heat during inter-operational periods are not present at this Facililty.

The HRSGs were thoroughly inspected by HRST, a leading technical support vendor specializing in boilers and HRSGs, in May 2011. Their report gave recommendations prioritized 1 through 4, with Level 1 recommendations being most important. Facility personnel report that they have since implemented all Level 1 and 2 recommendations, 90% of the Level 3 recommendations, and some of the Level 4 recommendations.

In their current condition, the HRSGs are stable. Continued regular inspections are recommended, as well as completion of the remainder of HRST's recommendations.

Process Steam

Pursuant to the steam agreement dated August 28, 1992, the Facility shall, if requested, provide steam at a rate of up to 150,000 lbs/hr to the adjacent Phillips 66 Refinery. Steam is extracted from the steam turbine for export to the refinery.

Steam Turbine

Steam generated by the HRSGs flows to a non-reheat controlled extraction, uncontrolled admission condensing steam turbine manufactured by GE. The steam turbine is nominally rated at 96 MW and is coupled to a GE 3-phase, air-cooled 13.8 kV generator.

The steam turbine is furnished with auxiliary packages that include a lubricating oil system, a shaft steam sealing system, hydraulic system, cooling systems, and supervisory and control systems. The steam turbine is protected by numerous features such as vibration alarm and trip, mechanical and electronic overspeed trip, high lube oil temperature alarm, low lubrication oil temperature alarm, high lube oil temperature trip, and axial rotor position trip. Critical lubrication continuity is provided by two AC oil pumps and one backup DC oil pump, should AC power become unavailable.

The site has kept up to date with implementation of steam turbine TILs issued by GE, with the exception of the following:

- TIL 1589R1: “High Pressure/Reheat Diaphragm Dishing Recommendations.” This TIL recommends inspection of the high pressure and reheat section diaphragms to determine whether excessive dishing is present. The priority level for this TIL is 4 – at first exposure of component. The TIL should therefore be implemented at the next steam path inspection.

- TIL 1809R1: “Inspection Recommendations for Steam Flow Guide Locking Mechanism.” The TIL provides inspection and corrective

actions for units without a locking mechanism on the steam flow gates. This is a best practice TIL with a priority level of 6 – next scheduled outage.

- TIL 1521R2: "Jethete Material Self Shielded Last Stage Buckets." This TIL provides inspection recommendations for last-stage buckets and has a priority code of 5 – at scheduled component repair or replacment. Its inspection recommendations should be implemented at the next steam path inspection.

A steam turbine minor inspection and valve inspection was performed in 2009 and the unit has accumulated approximately 6,000 operating hours since then. Steam turbine operational checks, such as overspeed tests, are performed annually by site personnel. The main stop valve and non-return valve are exercised daily. There have been no recent steam turbine trips or changes in vibration or other operating characteristics.

Exhaust steam from the steam turbine is condensed in a two-pass, full flow axial steam surface condenser with split water box and two mechanical vacuum pump air removal systems. Waste heat is rejected to the atmosphere through a cooling tower and circulating water system.

Cooling Tower and Circulating Water System

The condenser circulating water system is equipped with three 50% capacity pumps which circulate water through a three-cell, forced draft, wood cooling tower equipped with two-speed fans. Two 100% capacity auxiliary cooling water pumps take water from the cooling tower basin to provide cooling water to the closed loop cooling water system heat exchangers. Two 100% capacity vertical condensate pumps deliver condensate from the condenser hotwell to a deaerator. Four combined high and intermediate/low pressure feedwater pumps (2 x 100% per HRSG) take suction from the deaerator and discharge feedwater to the HRSGs.

An independent inspection of the cooling tower in May 2012 found that the tower has been generally well maintained but recommended some maintenance tasks. The inspection report notes that the fill media has shrunk and become brittle, which could cause pieces to fall off and circulate into the plant water system. Removal and replacement of the fill media is recommended, requiring approximately 30 calendar days by an outside contractor. During this work, minor replacement of structural members could be performed if needed. The report also notes damage to the tower casing from overuse of pressure washing, but states that no action is required for the next 3-5 years.

In addition to the above, an independent review of the cooling system is recommended to identify possible efficiency gains that could be made.

Water Treatment Systems

Raw water for cooling tower and steam cycle makeup and other uses is supplied to the Facility by the Public Utility District No. 1 of Whatcom County ("Whatcom PUD") from the Nooksack River via a 16” diameter branch line. Whatcom PUD provides the Facility with up to 2.0 million gallons per day of industrial water under the current water supply agreement, with the right to increase demand to 3.0 million gallons per day via written notice. The maximum monthly water supply requirements reported to date averaged 1.8 million gallons per day during the month of July 1994.

Raw water is treated in a dual media filter and stored in the 600,000 gallon filtered water storage tank. Water for personnel and sanitary uses is further treated in a potable water module. Demineralized water for steam cycle makeup is produced by either of two 100% capacity demineralizer trains containing carbon filters and anion, cation, and mixed bed exchangers with a regeneration system including a water neutralization tank. Demineralized water is stored in a 600,000 gallon tank.

Chemical systems include chemical storage tanks, redundant chemical metering pumps, and sampling and analyis equipment in a dedicated chemistry lab within the water treatment building.

Due in part to the large potential process steam demand with no condensate return from the Phillips 66 Refinery, the Facility's GE Betz water treatment systems are large and well-equipped, providing extra capacity for most operating conditions.

Waste Water

Waste water is treated with sulfuric acid and sodium hydroxide to control PH, and to remove impurities through flocculent addition, a clarifier, a settling tank, and a filter press from which solids are sent to a landfill. The treated effluent passes through a sand filter before discharge. The wastewater line extends through the neighboring refinery and ties into refinery outfall prior to discharge into the Strait of Georgia.

Sanitary wastewater is discharged through a standard septic tank and leach field. Storm water from areas with the potential for oil spill passes through an oil-water separator before being piped to the wastewater treatment system. The balance of the storm water is collected in a lined retention pond and discharged to adjacent lands.

Electrical

Delivery of electrical output is accomplished through an interconnection to PSE's 115 kV transmission system. Electricity is delivered from the high voltage side of the three generator step-up transformers ("GSUs") through the plant switchyard to the adjacent Terrell Substation. Each GSU sits on a concrete pedestal with concrete pit containment in case of oil leakage.

The Terrell Substation is a three-bay breaker-and-a-half configuration with seven breakers to accommodate four circuits. The substation allows power to flow to or

from either of the two PSE transmission lines that enter the substation. One of the 115 kV lines exits to the north and connects with PSE's ARCO South Substation. The other transmission line exits to the south and connects to the Bellingham Substation. A third line from the substation connects to the refinery.

An Uninterruptible Power Supply ("UPS") system provides emergency low voltage AC power to the Facility. The UPS consists of a rectifier/charger system and 125 VDC battery banks. The UPS supplies emergency power to the distributed control system, switch gear controls, steam turbine emergency lube oil pump, and emergency lighting. To date, no events have been reported in which the Facility has become disconnected from the PSE system. The Facility is not black-start capable.

All three generators were inspected and rewound in 2009 at GE's Anaheim generator shop. TWP states that this was more preventative than corrective, with end turn insulation migration just beginning to show up in borescope inspections at that time. Onsite GE personnel also performed a partial stator rewedge, electrical testing, and dynamic balance during this outage.

Site personnel perform flux analysis on the generators via the installed flux probes. Partial discharge test equipment has not been installed on the generators. Exciter checks and relay testing are performed regularly. Continuous monitoring is performed on the three GSUs and dissolved gas analysis is done every six months on the transformers. The oil circuit breakers were last tested in 2009 and the station circuit breakers were tested in 2010, with the next testing scheduled for 2013. In addition to these checks, the site performs annual oil analysis and regular thermography checks using a FLIR infrared camera.

Controls/Software

The Facility is controlled by a system of local control panels, local instrumentation, and a central distributed control system ("DCS") supplied by ABB. The DCS allows operators to monitor and supervise the turbine control

packages, HRSGs, and balance of plant equipment. The DCS can perform data acquisition, trending and reporting, graphic displays and off- and on-line programming. The DCS has been upgraded with the Wonderware operating system software. There are also communications and instrumentation interconnections to the refinery.

The gas turbines and steam tubine are equipped with GE Mark V controls. PSE has recently upgraded other fleet turbine controls to GE Mark VI. This upgrade should be considered at this Facility, as well as upgrades to the DCS consistent with similar systems in PSE's fleet.

Automatic Generation Control ("AGC") that would enable remote load following is not currently installed at the Facility. AGC could be installed if desired. The plant has made some recent software improvements to assist the operators in meeting PSE's hourly energy targets. The units are equipped with Power System Stabilizers.

MP2 software is used for maintenance planning and inventory management.

Emissions Control & Monitoring

Steam injection within the combustion turbines is used to effectively lower peak combustion temperatures, reducing NOx formed to 42 ppm when operating on gas and 65 ppm on oil. An industry standard selective catalytic reduction ("SCR") system is utilized to inject anhydrous ammonia into each HRSG to further reduce NOx emissions to permit levels of 7 ppm on gas and 12 ppm on oil.

To reduce safety risks, PSE has converted anhydrous ammonia systems at other acquired sites to 19.5% aqueous ammonia. Ferndale personnel state that this conversion was considered at the Facility, but deemed unnecessary due to the belief that anydrous ammonia is safe if handled properly and conversion is not warranted for this remote location next to a refinery. Conversion to aqueous ammonia carries capital costs as well as an increase in operating costs.

SCR catalysts are prone to degradation and fouling over time, especially if cycled regularly. Degradation of the Facility's catalyst is not thought to be an issue currently due to its extremely conservative design. Fouling can be evaluated through regular inspections and mitigated by cleaning when needed.

The continuous emissions monitoring system ("CEMS") was supplied by Custom Instrumentation Services Corporation ("CiSCO"). This is the same type of system used at other PSE fleet sites, such as Goldendale and Mint Farm. The Facility's

Plant Performance

TWP reports an annual average net heat rate at 245 MW output of 8,382 Btu/kWh (HHV) at 31° F, no duct firing, including fuel for process steam. Under their 2011 proposal for a Power Purchase Agreement renewal with PSE, TWP listed a guaranteed heat rate of [redacted] Btu/kWh (HHV) at 40° F, baseload, no duct firing, no process steam. These figures are consistent with expected heat rates for a plant of this type and age.

Performance testing was conducted in August 2012 with PSE and consultants from Black & Veatch onsite. The goal of this testing was to confirm heat rates at a variety of load points, including minimum, maximum, part load, and baseload. As expected due to varying test conditions and the normal slight degradation in heat rate that occurs over time, test results are not identical to the numbers supplied as part of TWP's 2011 RFP submittal. Black & Veatch calculated net heat rates at baseload, no duct firing, no process steam, of [redacted] Btu/kWh (HHV) at ISO conditions and [redacted] Btu/kWh (HHV) at 23° F. These and other values provided by Black & Veatch are reasonably consistent with those submitted by TWP.

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Conclusion

The Ferndale Facility is in very good condition for its age. The plant appears to have been operated and maintained consistently well throughout the plant's history. Major equipment is in good shape with relatively few outstanding issues. Site personnel are knowledgeable, experienced, and able to provide thorough records when requested. In addition, the site holds a perfect safety record and has received the OSHA Voluntary Protection Programs ("VPP") Star worksite designation as well as numerous other safety awards.

Several technical betterment projects should be considered for this Facility to maximize reliability and minimize failure risk.

Recommended Additional Actions

- GE gas turbine and steam turbine Mark V control upgrades consistent with PSE fleet systems.
- DCS upgrades consistent with PSE fleet systems.
- CiSCO CEMS/DARS upgrades to better track, predict, and report air compliance.
- Installation of AGC, if deemed necessary.
- HRSG inspection and repairs to address normal degradation and fouling.
- Cooling tower repairs and upgrades to address normal degradation and potential efficiency improvements.
- Possible conversion of anhydrous ammonia system to aqueous ammonia system, if deemed necessary.

B. Environmental Due Diligence

PSE engaged consultant URS Corporation ("URS") to help perform the environmental due diligence review, which consisted of a site visit, interviews with Facility employees, review of available environmental documentation provided to PSE by Tenaska (including environmental agency correspondence, permit applications, final permits, environmental plans and policies, etc.) at the plant, review of Department of Ecology and Northwest Clean Air Agency ("NWCAA") files pertaining to the Facility and interviews with NWCAA and Whatcom PUD representatives. Together with PSE, URS also interviewed NWCAA staff. As part of its evaluation, URS completed an Environmental Due Diligence Checklist and performed a Phase I Environmental Assessment Investigation.

No significant contamination issues were identified as a result of the environmental due diligence. The Facility appears to be properly sited and constructed and is visually in good condition. There are programs in place to address air emissions, wastewater discharge, stormwater discharges, solid waste management, hazardous materials handling and hazardous waste management.

The existing water supply is provided by the Whatcom PUD under an agreement which expires in 2014. URS staff contacted Whatcom PUD to determine whether there are any known issues that would prevent Whatcom PUD from entering into a new water supply agreement with PSE and were told that Whatcom PUD had offered a 20-year extension to Tenaska and would be willing to sell water to PSE.

The one outstanding issue is with compliance with Washington state's Greenhouse Gas Performance ("GHG") Standards. This is further described on pages 19-21. Two scenarios for compliance are presented.

Historic Use of the Site

The property did not have commercial or industrial development prior to the initiation of construction of the Facility. Historically, the site had been undeveloped with forest land or pasture prior to 1953 when a Mobil Oil Refinery was developed on the adjacent property to the north, west and southwest. The Facility side was used as a "fill disposal area" during development of the refinery.

Facility Siting Permits and Authorizations

Industrial Area

The Ferndale Cogeneration Station is located within land zoned by Whatcom County for Heavy Impact Industrial. As noted above, the Facility is adjacent to the Phillips 66 Refinery and is located on land leased from Phillips 66. The site is outside of the 100-year flood plain.

State Environmental Policy Act ("SEPA")

A Mitigated Determination of Non-Significance ("MDNS") was issued by Whatcom County on March 23, 1992. The conclusion reached in the MDNS was that the lead agency (Whatcom County) determined that the proposal for the power generation facility did not have a probable significant impact on the environment.

Fire Department "Occupancy" Permit and Plans

Site grading, building permits, and occupancy approval were issued by Whatcom County.

Air Emissions

Title V Operating Permit

The Facility is operating under an existing Title V Operating Permit (issued and recently updated in 2012 by NWCAA). The permit conditions allow a significant amount of operating flexibility for the Facility's historic operations, including flexibility for startups. It appears unlikely that PSE would need or want to modify the permit within the foreseeable future. The permit also requies very limited source testing and CEMS only for NOx and O_2.

Tenaska records indicate a very limited number of minor Notices of Violation ("NOVs") and excess emission reports. There have been no significant past or ongoing issues observed in Tenaska's records. This information was confirmed with NWCAA staff who indicated that the Facility has a "sterling compliance record" and excellent rapport with NWCAA staff.

Nitrogen dioxide ("NO_2") and carbon monoxide ("CO") emission limits in the air permits may limit PSE's ability to cycle the Fredonia units with more frequent startups and shutdowns and low load and medium load operation. Subject to confirmation through stress testing, emission tests by Tenaska imply that the selective catalytic reduction ("SCR") units may have sufficient excess capacity to sufficiently control NO_2 emissions to meet the 24-hour emission limit during cycling. However, there is insufficient information to assess whether the 1-hour CO emission limit is attainable during low and minimum load operation because Tenaska's permit-mandated compliance source tests were conducted only at full (>90%) load conditions. Note that CO emissions during cycling would become a potential compliance issue only if NWCAA and Ecology were to modify source testing requirements in the future.

The two units may exceed the permitted sulfur dioxide ("SO_2") emission limit when natural gas sulfur content increases above levels that were assumed for permitting. NWCAA is aware that gas sulfur content in the Williams pipeline

occasionally rises to high levels. NWCAA calculates that the 12 lb/hr permit limit for SO_2 while burning natural gas equates to 3.327gr/100 scf total sulfur in the the natural gas, including 0.26 gr/100scf for the odorant that is added. Thus, when the Williams monitor at Sumas indicates more than 3.06 gr/100scf, the Ferndale Facility's SO_2 emissions are potentially exceeding the hourly limit. NWCAA recognizes that the Ferndale Facility operator will not know this until after the fact because there is a time lapse before Williams posts monitoring data. During PSE's interview with NWCAA, Erica Shuler suggested that events above 3.06 gr/100scf and lasting several days be reported to NWCAA immediately after the plant operator becomes aware. NWCAA will then consider whether to issue an NOV. Since this has regional implications for many Williams pipeline customers, a Governor's proclamation might also provide regulatory relief if high levels ever occur over an extended period of time. Although it appears potentially likely that PSE might face occasional NOVs through no fault of its own, note that NWCAA has never issued NOVs to Tenaska for this situation. Also note that modifying the permit to allow a higher emission rate would likely be problematic.

GHG Performance Standards

The State of Washington's GHG emissions performance standard (EPS) law (RCW 80.80.40), and related rule (WAC Chapter 173-407) will apply to the Facility after change of ownership from Tenaska to PSE.

PSE has performed facility tests to assess heat rate at various operating loads, and is working with Black & Veatch (B&V) to assess compliance with Washington's existing 1,100 lb-CO_2/MWh EPS, which is an annual average limit. GHG emission rates from the Facility that were observed by PSE and B&V range from approximately 950 lb-CO_2/MWh) to 1,195 lb-CO_2/MWh. The actual CO_2 emission rate is a function of efficiency and fuel (natural gas or diesel). When the Facility is operating optimally in its original "designed and intended mode" (e.g., 2x1 baseload at 240 MW), emission rates equal approximately 960 lb-CO_2/MWh. When the Facility operates less efficiently, at lower loads, with duct firing or while

burning diesel, higher emission rates occur. PSE's and B&V's test results indicate that compliance with the 1,100 lb-CO_2/MWh annual average EPS may somewhat limit PSE's cycling (i.e. startups and lower load operations) and other future operational modes. The Washington Deptartment of Commerce is considering a change to the EPS and has proposed a 975 lb-CO_2/MWh annual average EPS. It appears doubtful that the Facility could meet the 975 lb-CO_2/MWh EPS. PSE's options for complying with the EPS are outlined below for two potential scenarios:

Scenario 1 – The Ferndale Power Plant purchase closes prior to State adoption of a new GHG standard.[1]

1) Retain Ferndale's baseload status

   a) Operate in compliance with the existing 1,100 lb-CO_2/MWh standard. This option has the potential to constrain operating flexibility (i.e., frequent starts and stops, and broad-range load swings that may be necessary to meet PSE's system demands).

   b) If 1,100 lb-CO_2/MWh compliance does limit operating flexibility too much:

      i) Request permanent exemption from the Washington Utilities and Transportation Commission ("WUTC").

      ii) The WAC 173-407-150 procedure for baseload cogeneration facilities would ease compliance; however, the Phillips 66 Refinery cannot be assumed to reliably take steam from a cogen plant that operates intermittently.

2) If the above options do not work out, PSE could re-permit Ferndale as a peaking plant (i.e., less than Washington's 60% annual capacity factor in the definition of baseload), which is not subject to the WAC 173-407 EPS. PSE could logically assert that, although the plant was originally designed and intended (and operated) as a baseload plant, system economic and dispatch considerations change as the generating fleet ages and newer

[1] If closing occurs prior to the adoption of a new standard, the Facilitywill be "grandfathered" under the existing 1,100 lb-CO_2/MWh EPS, even if the standard is subsequently lowered. The impact of a future lower standard would be to preclude PSE from entering into contracts to sell power from the Facility for a term of five years or longer or to sell the Facility as a baseload resource, neither are a part of PSE's plan associated with this resource.

more efficient resources become available, resulting in an older facility such as Ferndale operating less than 60% capacity during many years when cheaper resources are available.

The process for changing the Facility to a permitted peaking plant (i.e., non-baseload) could be as simple as establishing a voluntary limitation that could restrict the Facility's net annual operating capacity factor to <60%. This approach is legally enforceable (see WAC 173-400-091) and does not involve reopening the air permit.

Scenario 2 – The Ferndale Power Plant purchase closes after State adoption of a more stringent GHG standard.

The Washington EPS is currently under review by the State Department of Commerce ("DOC"), but the value of the new standard and the timing is uncertain. A lower standard equaling 975 lbs-CO_2/MWh is under consideration by the DOC, and issuance of a proposed rule revision is rumored for October. With this timing, final adoption of the revised standard may not occur until mid-December. Calculations by PSE indicate that the Ferndale Plant would not meet the 975 lb-CO_2/MWh draft proposed standard. If Closing has not occurred prior to the adoption of a new standard, PSE has the right under the AAA to terminate the acquisition. If PSE were to waive its termination right, compliance Options 1)b)ii) and Option 2 above are available to PSE.

The facility has not triggered CO_2 mitigation requirements under the Washington rule and is not expected to under PSE ownership.

Water Supply and Discharge

Industrial Water Supply

The Facility has an industrial water purchase agreement with Whatcom PUD for the supply of industrial water. The source of the water is the Nooksack River. The industrial grade water is filtered and further treated at the Facility for various industrial purposes including cooling water, service water, boiler water, and potable water.

The original agreement was for a period of twenty (20) years, and has been extended to December 31, 2014. URS contacted Stephan Jilk, General Manager

of the Whatcom PUD, to inquire about the terms of the agreement. Mr. Jilk said that Whatcom PUD had offered a new twenty year agreement to Tenaska and that Tenaska had asked that the agreement be limited to two years as their future plans for the Facility were unclear. Mr. Jilk said that the Whatcom PUD would be willing to continue to provide industrial water to the Facility under a new agreement. Potable drinking water is obtained through treating a portion of the industrial water at the Facility to potable standards.

Potable Water Supply

A portion of the industrial water acquired from the Whatcom PUD is further treated at the Facility to potable standards. The facility meets the definition of a public water system ("PWS") on the state level but not on the federal level. Specifically, the Facility meets the definition of a Group B Surface Water Supplied PWS [WAC 246-290-1-20 (5)(c)]. The Washington State Department of Health ("DOH") shares enforcement responsibilities for these regulations with the Whatcom County Health Department ("WCHD").

Wastewater Management

The Facility discharges process wastewater and stormwater under National Pollutant Discharge Elimination System ("NPDES") permit No. WA-003929-1. The process wastewater is discharged from Outfall 001 to the the Strait of Georgia (via Phillips 66 Outfall 001). The permit issued by Washington's Department of Ecology ("Ecology") has an expiration date of September 1, 2011 but it is still active as the Facility has applied for a permit renewal, which is pending with Ecology. No issues have been identified that might delay the permit renewal other than Ecology's workload backlog.

Ecology’s Water Quality Permitting and Reporting Information System ("PARIS") was used to identify the number of NPDES permit discharge violations for the Facility since it started operating in 1993. According to PARIS, there have been

eight violations, and seven of these occurred before 1998 and were either based on total suspended solids ("TSS") or total residual chlorine exceedances. The most recent violotion occurred in May 2011 and as a result of a pH excursion. During this time the pH went down to 5.9 for three minutes, and they were advised by Ecology to note it on the Discharge Monitoring Report ("DMR") as a footnote. However, although the pH decreased for three minutes the Facility was not out of compliance with their NPDES permit as they are allowed the following pH excursions:

- "pH shall be maintained within the range of 6.0 to 9.0. Excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations."

The Facility shares the outfall to the the Strait of Georgia with Phillips 66 who are situated on the neighboring property. Phillips 66 is permitted to discharge both wastewater and stormwater under NPDES Permit No. WA 000298-4. Phillips 66's NPDES permit contains the requirements to inspect the shared outfall and submit an outfall evaluation report once per permit cycle.

A summary of the NPDES permit discharge violations for Phillips 66 discharge to outfall 001 has been reviewed and indicates that in 2004 there were a number of non-compliance incidents for both TSS and oil and grease. Ecology issued several penalities and an enforcement order to Phillips 66 requiring them to upgrade their wastewater treatment facilities ("WWTF"). Phillips 66 has been in compliance with their permit since upgrading the WWTF in 2007 with the exception of the following numeric effluent violation exceedances:

- January 2008 – TSS;
- February 2008 – TSS;
- May 2010 - Fecal Coliform;

- December 2010 – TSS;
- June 2011 - TSS; and
- September 2011 - TSS.

The two most recent violations were caused by a compositor pump failure, which has subsequently been fixed, while the earlier violations were resolved by modifying the operation of the facility.

Phillips 66 conducted a sediment study around the outfall in June 2004, which showed that phenanthrene, fluoranthene and dibenzofurane exceeded the sediment quality standards. Subsequently, Ecology required that Phillips 66 undertake bioassy testing. The bioassy results passed the Sediment Management Standards ("SMS") and Ecology determined that Phillips 66 was in compliance. However, Phillips 66 will be required to monitor the sediments as detailed in Special Condition S11.A.

Stormwater Management

Storm water runoff at the facility is captured under the federal NPDES program (Section 402 of the Clean Water Act). Stormwater from areas other than process units is routed to a retention basin, where it then flows via an underflow weir through a biofiltration swale and is discharged through Outfall 002 to an unnamed ditch to Lummi Bay. Samples for the compliance point for the stormwater run off are collected prior to discharge from the retention pond into the unnamed tributary.

Stormwater that falls into equipment, fueling, or chemical containment areas enters the Facility's wastewater treatment system for treatment and is ultimately discharged though Outfall 001.

The NPDES permit requires the Facility to prepare, maintain, and update a Spill Prevention, Control and Countermeasures ("SPCC") Plan, which addresses the stormwater management controls. The NDPES permit also requires the

implementation of the best management practices regarding the operation and maintenance of the biofiltration swale and stormwater retention pond.

Sanitary Sewer

The Facility's sanitary sewer is discharged to an onsite sewage system ("OSS") which consists of a 1,000 gallon capacity septic tank with a subsurface/soil absorption system consisting of alternative drainfields. The design allows flows of 3,500 gallons per day. The nearest sewer collection system to the Facility is owned and maintained by Birch Bay Water and Sewer District, who are located approximately four miles north of the Facility. URS contacted Birch Bay Water and Sewer District who stated that they did not serve the industries in the vicinity of Lake Terrell Road.

Hazardous Material Handling, Storage and Management

Numerous aboveground storage tanks ("ASTs") for bulk diesel storage, wastewater and wastewater treatment chemicals, and process tanks were observed, including a 12,000 gallon tank for anhydrous ammonia. Additionally, some of the on-site equipment had oil reservoirs for lubrication or to act as dielectric fluid. ASTs and equipment with significant petroleum product bearing reservoirs are summarized in Table 1 below. URS did not observe evidence of releases from these storage tanks or systems; other than the transformer leak discussed in Section 5.4 of the Phase 1 Environmental Site Assessment ("ESA") report. The Facility is classified as a Conditionally Exempt Small Quantity Generator of Resource Conservation and Recovery Act ("RCRA") Hazardous Wastes.

Table 1
Bulk Storage Tanks/Systems

Identifier	Quantity	Max. Capacity (gallons)	Product	Secondary Containment
Diesel AST	1	2,100,000	Diesel	HDPE Lined Earthen Dike
Ammonia AST	1	12,000	Anhydrous Ammonia	Concrete Containment Basin
Wastewater Treatment AST (located inside)	1	6,000	Caustic Sodium Hydroxide	Concrete Containment Basin
Wastewater Treatment AST (located outside)	1	6,000	Sulfuric Acid	Concrete Containment Basin
Gas Turbine Lube Oil Systems	2	3,300	Oil	Concrete Curbing and Drain to OWS
Main Step-Up Transformers	2	6,390	Oil	Concrete Containment Basin
Station Service and Auxiliary Transformers	3	1,690	Oil	Concrete Containment Basin
115KV Oil-Cooled Breakers	6	5,913	Oil	None
Fire Pump Fuel AST	1	250	Diesel	Concrete Curbing with Drain to OWS
Used Oil Totes	2	250	Used Oil	Concrete Curbing with Drain to OWS
Boiler Water Chemical AST	1	1,520	Polymer Phosphate (Optisperse HP 5433)	Concrete Curbing with Drain to OWS
Boiler Water Chemical AST	1	500	Corrosion Inhibitor (Cortrol OS 7785)	Concrete Curbing with Drain to OWS
Boiler Water Chemical AST	1	500	Oxygen Scavenger (Steamate)	Concrete Curbing with Drain to OWS
Cooling Water Chemical AST	1	760	Corrosion Inhibitor (Dianodic DN 2260)	Concrete Curbing with Drain to OWS
Cooling Water Chemical AST	1	2,740	Sodium Hypochlorite	Concrete Curbing with Drain to OWS
Cooling Water Chemical AST	1	760	Dispersant (Continuum AEC 3108)	Concrete Curbing with Drain to OWS
Cooling Water Chemical AST	1	500	Biodispersant (Spectrus BD 1500)	Concrete Curbing with Drain to OWS
Wastewater Treatment Chemical AST	1	1,400	Dewatering Polymer Coagulant (Klaraid CDP 1301)	Concrete Curbing with Drain to OWS

Phase 1 ESA Findings

URS performed a Phase I ESA. A summary of the findings are as follows:

- Diesel-range petroleum hydrocarbons exceeding the Model Toxics Control Act ("MTCA") Method A cleanup level (2,000 ppm) remain beneath the eastern HRSG unit from a pin-hole leak in underground piping discovered in 2011 and in the diesel loading/unloading area that was the result of a flange gasket failure in 1994. Shallow perched groundwater has been documented at the subject property and the residual petroleum hydrocarbon contamination may have affected the shallow groundwater quality.

- Low concentrations of gasoline-range petroleum hydrocarbons were detected in the shallow groundwater at the subject property and the extent or source of this contamination was never fully assessed.

- Current and historical activities associated with the Phillips 66 Refinery have potentially impacted groundwater quality at the subject property. Particularly, overflows or leaks from the oily water sewer line and releases from the adjacent industrial wastewater pond may have impacted the subject property.

- The diesel releases in 1998 (broken drain line adjacent to the fuel loading/unloading area) and 2001 (leaks from the oil/water separator) which were adequately remediated as independent actions are considered to be historic recognized environmental conditions.

- Multiple small releases of diesel have been documented at the subject property which have been investigated and for which remediation has occurred as independent actions.

- The subject property was identified on multiple environmental regulatory databases. Some of the databases are associated with environmental compliance reporting requirements and are not necessarily associated with releases while others were identified indicating releases have occurred at the subject property. All of the releases identified in the regulatory databases appear to be associated with those described above.

- Bulk storage of hazardous substances (e.g., ammonia) and petroleum products were identified at a number of ASTs and equipment reservoirs throughout the Facility. The products observed primarily included lubricants and boiler/cooling water

treatment chemicals. URS did not observe staining or other indications of a release at these areas; except for an approximately 25 square-foot stained area within a transformer containment area and an approximately 50 square-foot area covered by spent bead blast grit. The oily staining was reported to have been cause by a leaking seal on the transformer. The spent bead blast grit was reported to have been spilled during cleaning of wastewater treatment tanks.

- No USTs, or other indications of significant environmental concerns associated with on-site equipment or activities were observed or reported at the facility.

Recommendation

Based on the known releases of petroleum products at the subject property and on the adjacent Phillips 66 Refinery as well as the current and past hazardous chemical use/storage at both facilities, URS advised that a Phase II investigation be conducted to assess the soil and groundwater quality at the subject property to establish the baseline conditions prior to acquisition of the property. Such Phase II investigation is currently underway and is anticipated to be completed prior to PSE's Board of Directors meeting on September 27, 2012, although not prior to the completion of presentation materials. The Phase II investigation will entail advancing soil borings (hydraulic push probes) to assess the soil and groundwater in the vicinity of: the oil/water separator, the eastern HRSG unit, the diesel loading/unloading area, the stormwater retention pond, along the western property boundary adjacent to the Phillips 66 industrial wastewater pond, along the northern property boundary adjacent to the Phillips 66 oily water sewer line, and along the southern property boundary. The borings would be advanced to approximately 15 feet below ground surface and soil and groundwater samples would be analyzed for gasoline and diesel-range petroleum hydrocarbons, volatile organic compounds, polycyclic aromatic hydrocarbons ("PAHs") and metals (including hexavalent chromium).

Noise

There have been no reported noise complaints.

Wetlands

Two URS wetland biologists, Paul Hamidi and Galen Peracca, visited the site on August 22, 2012.

There are three surface water features on the east side of the site: a lined stormwater pond; a bioswale that conveys water from the stormwater pond to a ditch located to the south of the site; and a cobble lined ditch along Lake Terrell Road. Each of the three surface water features is man-made, is maintained, and was not created in an existing wetland. Therefore, none of them would constitute a wetland under the Corps of Engineers, Washington Department of Ecology, or Whatcom County definitions.

The property to the south of the Ferndale Cogeneration Station has been classified as an emergent wetland (probably a Category III rating). The presence of the Facility predates wetland buffer requirements contained in the Whatcom County Municipal Code, and no buffer requirements apply to the Facility site.

Transfer of Ownership Activities

There are several activities that would need to be performed related to the transfer of ownership of the project. The initial list includes the following:

Mitigation and Enhancement Agreement between Tenaska, the Lummi and Nooksack Tribes entered into on May 27, 1992.

This Agreement is binding on Tenaska successors, assignees or transferees. According to discussions with Facility personnel, there have not been any recent contacts with either Tribe nor were they aware of any outstanding issues. Per agreement, both Tribes need to be notified of any assignment or transfer. This would be Tenaska's responsibility.

New Water Supply Agreement

The Ferndale Cogeneration Station has an Industrial Water Purchase Agreement with Whatcom PUD for the supply of Industrial Water. A second amendment for the industrial water purchase agreement was extended by two years to December 31, 2014. The two year extension to the agreement between Whatcom PUD and Tenaska was negotiated by Tenaska. Whatcom PUD has no intention of stopping the industrial water supply to the facility. PSE will need to enter into a new water supply agreement once the existing agreement expires. No issues are anticipated with this extension.

NPDES Permit

NPDES Permit No WA 003129-1 covers both wastewater and stormwater discharge from the facility. The permit expired on September 1, 2011. Tenaska has applied for a renewal and it is pending with Ecology. No issues have been identified other than Ecology's workload backlog. Ecology will need to be notified of the change in ownership and work with Ecology on obtaining the permit renewal. The renewal provisions allow for authorization and therefore a shield to continue discharging from the Facility's processes.

Air Operating Permits

The air permits will need to be transferred to PSE, including the Air Operating Permit ("AOP"), Order of Approval to Construct ("OAC") and Prevention of Significant Determination ("PSD") permits. One letter to NWCAA may take care of both the AOP and OAC. At the same time PSE’s designated responsible official will need to be identified for the AOP.

Anhydrous Ammonia

If PSE decides to continue anhydrous ammonia, the Risk Management Plan ("RMP") will need to be updated with names of responsible individual and contacts. The process is through an online filing.

Decommissioning Plan

PSE will need to develop a decommissioning plan. No plan currently exists.

Spill Prevention Control and Countermeasures ("SPCC") Plan

Facility will need an SPCC certified by a professional engineer.

Facility Response Plan

The Facility Response Plan will need to be updated for PSE.

Storage of Hazardous Chemicals Requiring Right-to-Know Reporting

Facility has submitted Tier II reports. PSE will need to continue to do so.

C. Compliance

NERC / WECC Reliability Standards

The Ferndale Cogeneration Station is subject to the North American Electric Reliability Corporation ("NERC")/Western Electricity Coordinating Council ("WECC") Reliability Standards applicable to Generator Owners and Generator Operators. Derived from FERC Orders 693 and 706, these reliability standards have been in effect since June 2007. Tenaska Washington Partners LP ("TWP") is registered as Generator Owner and Generator Operator in the NERC Registry (NCR # 05418) and falls within the WECC Region and is therefore subject to applicable regional standards.

In April 2007, TWP was audited by WECC and found to be compliant with all 38 NERC requirements and 2 WECC regional requirements applicable to them at that time (Order 693 standards only). They are on a six-year audit cycle, with the next audit anticipated in 2016.

As requested, Tenaska has provided their 2010 audit preparation materials and updates as available. A review of materials has found no significant concern.

Evidence does not meet PSE's current internal expectations for audit or self-certification preparation, but Tenaska (through their 2010 audit and annual self-certifications in 2011 and 2012 have shown themselves to be knowledgeable of and compliant with applicable standards. Significant work and some risk would be involved to incorporate this facility into PSE's 2013 Self-Certification (for the calendar year 2012) and to include any pre-ownership time periods into PSE's scheduled WECC audit in June 2013. This would require additional paperwork collection and attestations from Tenaska and open PSE to potential violations and fines for likely documentation issues. However, acquiring the plant such that PSE takes responsibility only as of closing bears minimal risk and cost specific to these standards.

To assure compliance upon closing, PSE would anticipate conducting maintenance on batteries, relays and other equipment immediately to bring in line with its maintenance program (supporting PRC-005-1.1b). Dynamic testing of the generator is due by the end of 2012 to meet MOD-012-0 requirements (third party cost of approximately $50,000 to conduct testing if not completed by Tenaska prior to sale.) Various training, procedures updates and ratings would be completed as well.

Should the plant be operated by a third-party registered as the Generator Operator with NERC, PSE would retain responsibility for all Generator Owner requirements, including PRC-005-1.1b and MOD-012-0 identified above.

LGIA Technical Specifications

In 2009 TWP signed a Large Generator Interconnection Agreement ("LGIA") with PSE, which includes a provision to meet PSE's established Technical Specifications and Operating Protocols and Procedures for Large Generation Interconnections (PSE Document 9020, updated 11/18/2011).

A review of the technical specifications was conducted to confirm compliance with those standards, and, where not in compliance, to identify major areas of concern and/or upgrades that would be required to meet them. Technical resources looked at System Integrity, Design, Protection and Metering Requirements, as well as Protection Settings and identified the following required upgrades:

- Upgrade and expansion of existing SCADA/RTU equipment. Estimated cost is $75,000.
- Installation of Excitation Limiters. Estimated cost is $375,000.
- Addition of a 59N Relay and other protection modifications. Estimated cost is $20,000.

The installation of the Excitation Limiters would require a 4-week outage of the plant, as well as a six-month lead time for design. Parts would take 14 weeks from purchase. Protection upgrades could be made during this same outage. With provisions and timelines included in the new LGIA, the plant could run in its current configuration in the interim.

D. Real Estate Due Diligence

The Ferndale Cogeneration Station is located in unincorporated Whatcom County, just west of Ferndale. The Facility is adjacent to the Phillips 66 petroleum refinery and was constructed on a ground lease granted to Tenaska by the predecessor to Phillips 66. The ground lease consists of approximately sixteen acres of land, which is bordered on the East by Lake Terrell Road and is surrounded on the remaining three sides by other property held by Phillips 66.

The ground lease for the Facility was granted in 1992 and is set to expire in 2041, unless a renewal is negotiated with Phillips 66. The lease is set up with an annual payment of one dollar, with other consideration being provided to the

refinery through a steam agreement. [redacted]

An easement for a wastewater disposal pipe, which is appurtenant to the Facility's ground lease, extends to the south and west of the power plant. This easement establishes rights for the installation and maintenance of a pipeline that carries industrial wastewater from the Facility and discharges it into the wastewater system of the Phillips 66 refinery. Phillips 66 operates an outfall which discharges their wastewater (together with the wastewater from the Facility) into the Strait of Georgia. If Phillips 66 were to cease accepting wastewater from the Facility (which they have the right to do under the terms of the wastewater easement), approximately 3,000 linear feet of new pipeline and a new outfall would need to be permitted and constructed.

The ground lease for the Facility is burdened by various typical easements for utilities, which include natural gas, water, and power lines, as well as an easement owned by PSE for the Terrell Substation. Pending review of an ALTA survey, which has been commissioned but is not yet complete, PSE does not expect any title issues, easements, etc. to adversely impact the Company's acquisition and operation of the plant.[2]

In summary, the real estate due diligence related to the Facility has not identified any issues of concern other than those identified above.

[2] The survey crew will be on site beginning September 12, 2012, and should conclude field operations prior to the Board meeting on September 27, 2012. The ALTA survey will be complete in October or November.

REDACTED VERSION

E. Insurance Due Diligence

PSE's Insurance Risk Management group and FM Global, PSE's insurance provider, evaluated the Ferndale Cogeneration Station by reviewing documents provided by TWP and by conducting a site survey. Coincidentally, FM Global has been and is currently the property insurer for the Facility.

FM Global's Senior Engineering Specialist, Jake O'Brien, joined PSE staff for the site survey on August 16, 2012. Mr. O'Brien conducted previous plant engineering loss prevention visits in 2010 and 2011, and is familiar with the plant operations and staff. The site visit resulted in favorable findings:

> "There are numerous hazards at combined-cycle power generation facilities such as this, including breakdown of human element programs, oil fires, mechanical or electrical equipment failure, and an additional hazard at this facility, is the presence of gas systems in a high earthquake zone.
>
> Fundamental human element programs include fire protection inspection and maintenance programs, control of ignition sources such as hot work, housekeeping, operator training, and emergency response procedures, among others. In large losses, failure of one or more human element factors is a common theme. At this facility, the various programs are well established, and go a long way toward reducing the overall risk factors.
>
> The hazard associated with large quantities of pressurized oil systems also presents a challenge in preventing and controlling a fire involving turbine generators. The installed fire protection systems on the turbines at this facility help to minimize this hazard.
>
> Mechanical and electrical hazards include turbine overspeed, loss of lube oil, blade failure, and generator winding damage. Overall, this facility has an excellent preventive maintenance and unit inspection program.

> Combined with these features is an ingrained culture to strive for a highly reliable and safe operation."

No notable findings were identified by either PSE staff or FM Global's engineering staff based on the review of documentation provided by TWP. The COPE (Construction, Occupancy, Protection, Exposures) Summary prepared by FM Global confirms that "No active recommendations exist."

Attachment H

Asset management plan

Staffing Plan

Tenaska Staffing

The current Facility staff consists of four management positions (Plant Manager, Manager of Operations, Manager of Maintenance, and a Plant Controller), two administrative support workers (an Administrative Assistant and a Purchasing/Warehouse Coordinator), fourteen Craft Workers (three Maintenance Mechanics, three Control Room Operators, four Plant Operators, three I&E Technicians, and one Lead Control Room Operator), and one Technician (Laboratory Technician and Plant Operator). The four management positions are exempt salaried employees, the seventeen other employees are non-exempt, compensated at an hourly rate. The labor force at Ferndale is presently non-union.

Post-closing PSE Staffing

Subject to the conclusion of an analysis discussed under "Outsourced Staffing," below, PSE's Energy Operations department plans to staff the plant similar to the current design except that the labor force would transition into the union, IBEW Local 77, pursuant to PSE labor relations protocol. Corporate support will be required from the Power Generation, Information Technology ("IT") and Materials Management departments for on-going plant support and to facilitate integration of the asset into PSE's existing portfolio.

Management (3) – PSE anticipates operating the Facility with a Plant Manager, an Operations and Maintenance Supervisor, and a Planner/Scheduler. Current management will be encouraged to apply and successful applicants will be transitioned to PSE subsequent to Closing .

Craft personnel (15) – Presently the plant operates on a 12-hour rotating shift schedule. PSE will operate the plant using a 12-hour rotating shift commonly referred to as the "Modified DuPont Schedule." This Modified DuPont Schedule

is currently in use at other PSE combined cycle combustion turbine plants. PSE plans to interview and transition desired employees into the union pursuant to labor relations protocol. Nine CT Journey Workers will be on the 12-hour rotating shift at any given time. Two (2) CT Journey Workers will be on day shift assignment to facilitate core electrical and mechanical maintenance of the facility. One ICE Technician will be assigned to dayshift. One 1) CT Technician also will be assigned to a day shift role. Additional staffing will consist of one Operating Supprt Specialist and one Warehouser.

Outsourced Staffing

During the acquisition diligence period, PSE's Power Generation department began evaluating the benefits and costs associated with a third party operator at the Ferndale Facility. In the event that PSE determines there is adequate value in contracting with a third party, the Company may elect to outsource portions of the operations function of the Facility. The staffing plan would be agreed upon during the process of setting the plant's annual O&M budget.

Attachment I

Gas supply and delivery plan

1. Gas transportation plan

Natural Gas Transportation Service

Overview

The Ferndale Generating Plant (the “Facility”) is a dual fuel (natural gas and distillate) facility. There is on-site fuel storage for approximately 2.05 million gallons of distillate. Gas and transportation requirements are 52,000 MMBtu/day for 270 MW baseload (winter rating) and a total of 58,900 MMBtu/day including the additional 25 MW of duct-fire capacity. The Facility is interconnected to the Westcoast Energy Inc. ("Westcoast") system by Cascade Natural Gas Company’s (“Cascade”) distribution system. The Cascade distribution system delivery pressure is a minimum of 350 psig and a maximum pressure of 700 psig.

Through Cascade’s connection to Westcoast, the Facility has the ability to access gas from British Columbia directly at the Sumas/Huntingdon trading hub. PSE will also hold capacity on Westcoast for approximately one half the plant requirements to allow purchase of supplies at the Station 2 trading hub, enhancing price diversity and physical access. There is currently no separate gas supply in place for the Facility. Upon PSE ownership, this Facility would be integrated into PSE’s rolling three year supply hedging program.

Transportation Strategy

While the plant can be run on distillate, PSE will secure firm gas pipeline capacity to support the full output of the Facility. The option of running the Facility on distillate would allow greater flexibility to the entire PSE fleet by allowing gas supply destined for the Facility to be diverted to other PSE plants without distillate back-up. However, at this time, PSE does not plan to maintain a distilate inventory at the Facility as the value of such flexibility does not appear to be greater than the cost.

The Facility currently holds 52,000 MMBtu/day of firm gas transportation under a special contract on the Cascade system, which expires on June 18, 2013, but

could be renewed for up to 10 years PSE has determined that pricing under the new standard form Cascade transportation agreement is more advantageous than an extension and modification of the existing special contract. Cascade has agreed to retire the existing special contract for 52,000 MMBtu/day in favor of a new "standard" firm transportation agreement, effective upon closing of the transaction.

[redacted]

REDACTED VERSION

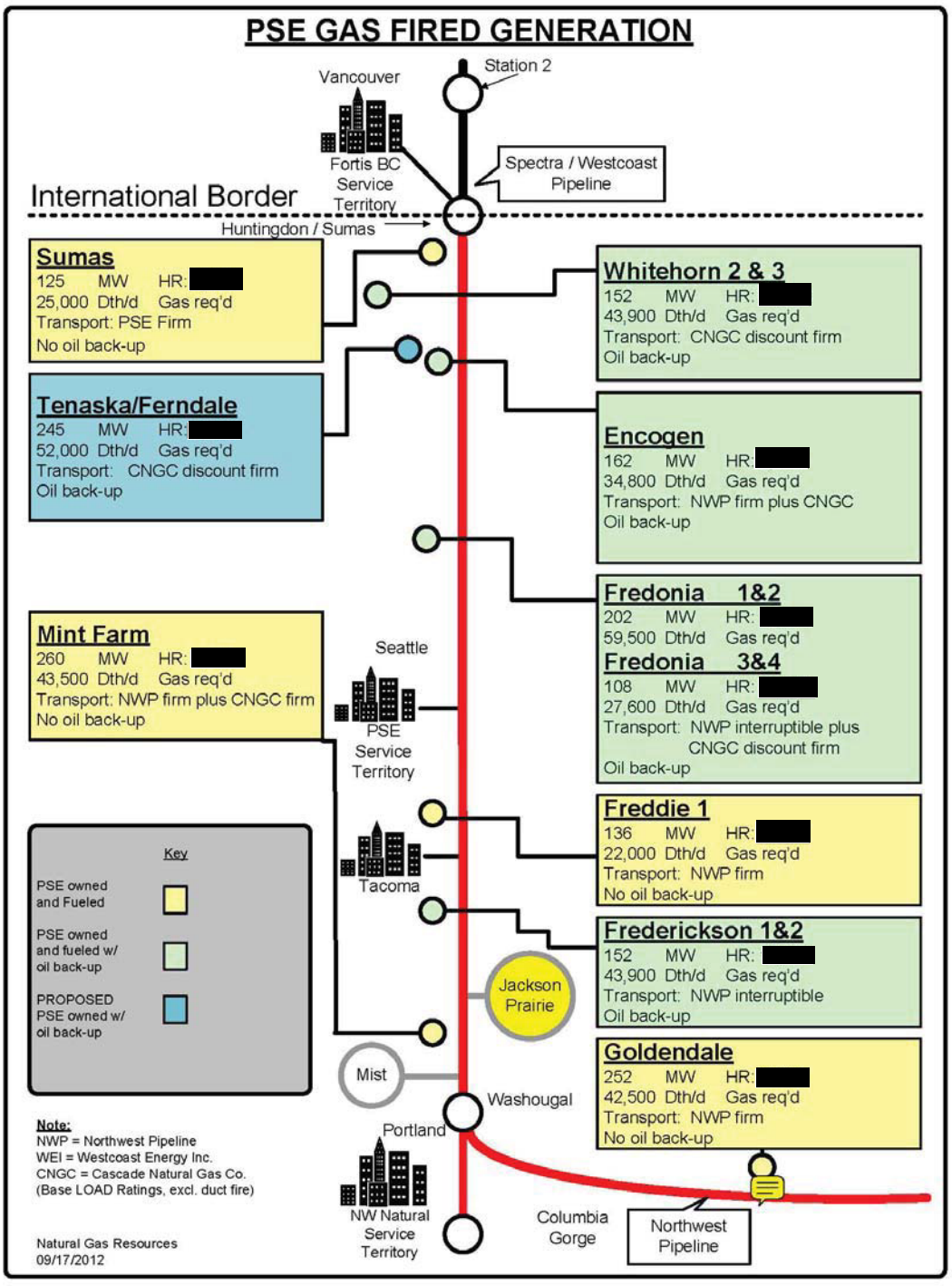
Figure 1. Estimated firm gas transportation costs on Cascade

Demand charge	[redacted]
Variable charge	[redacted]
In-kind fuel reimbursement	[redacted]
State Revenue Tax	[redacted]
Dispatching Services Charge	[redacted]

Fixed Gas Transport	2013
Cascade Reservation Charge ($/MMBtu-yr)	[redacted]
Total Capacity Needed (MMBtu / day)	[redacted]
Cascade Cost ($/yr)	[redacted]
Westcoast Reservation Charge ($/MMBtu-day)	[redacted]
Total Capacity Needed (MMBtu / day)	[redacted]
West Coast Reservation Charge ($)	[redacted]
Station 2 Basis differential gain ($)	[redacted]
West Coast Cost ($/yr)	**$ 867,362**

REDACTED VERSION

Figure 2. PSE gas-fired electric generation



REDACTED VERSION

Attachment I

Gas supply and delivery plan

2. Gas supply hedging strategy

Gas Supply Strategy

The Facility will be served by firm natural gas pipeline capacity originating from British Columbia, specifically the Sumas trading point that interconnects the Westcoast Energy Inc. pipeline with the Cascade distribution system. Therefore, PSE's natural gas price exposure will be tied to contracts forwardly traded at this delivery point. The heat rate optionality inherent in this power plant, and thus its dispatch protocol, will depend on the relationship between natural gas prices at Sumas and power prices at the Mid-Columbia ("Mid-C") trading hub.

The plant's heat rate driven dispatch characteristics will be added to PSE's existing portfolio, which is currently modeled in its risk system. Based on forward market heat rates, the model would assign monthly probabilistic run rates and gas supply requirements for the plant ranging from near zero to close to the maximum capacity of 58,200 MMBtu per day for two years forward.

Fixed Financial Gas vs. Fixed Financial with Underlying Commodity

Although Sumas is not a liquid trading point, there is enough liquidity to effectively trade fixed financial natural gas contracts for the next two to three years forward, based on the probabilistic run assumptions. Since the Facility is an efficient power generator with a medium heat rate vis-à-vis other power plants in the region, the plant is likely to be dispatched predominately from July through February annually when market heat rates tend to be highest. PSE would expect to see an increase in its natural gas short position in these months that will be managed through a combination of financial and physical gas purchases. However, with the volatility of market heat rates, a flexible gas management strategy is required to manage the cross-commodity risk. In the case where heat rates rise, PSE will keep and exercise the financial and physical hedges. In the case where heat rates fall, rendering the Facility uneconomic, PSE would sell the financial gas contract and purchase power at Mid-C.

These hedges reduce the uncertainty of both the financial cost and physical supply. Purchasing the financial gas hedge and the underlying physical natural gas supply at an index (floating) price may force PSE to not only sell off the financial gas hedge, when heat rates collapse, but also the physical supply. This adds operational risk, particularly if heat rates are highly volatile in a particular month and the financial hedge is taken on and off numerous times.

To further mitigate gas price risk, PSE will obtain firm capacity on the Westcoast system for approximately 50% of the Facility's gas supply demand. This capacity will give PSE access to gas at the "Station 2" trading hub in northern British Columbia as an alternative to exclusive reliance on supplies transported by third parties to the Sumas hub.

This approach of purchasing financial gas hedges and diversifying gas source is consistent with current PSE portfolio management practices.

Attachment J

Interconnection and transmission plan

Overview and Benefits

The Ferndale Generation Station ("Facility") interconnects with PSE's transmission system at Terrell Substation. The image below shows the general location of the Facility (see the star) in relation to PSE's transmission system and to the broader geographic area of Whatcom and Skagit Counties.

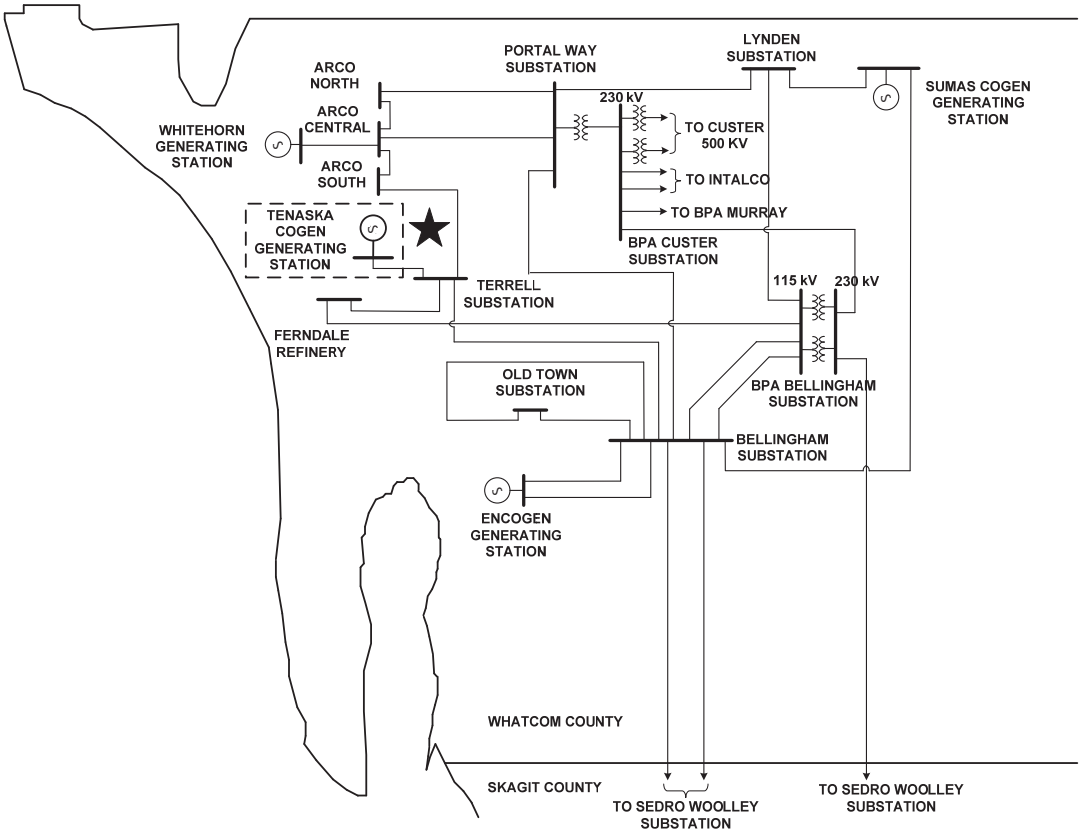


Figure 1: Location of the Facility relative to the PSE and BPA transmission system

The Facility is relatively close to PSE's loads in Whatcom County. This proximity provides local reliability benefits in the event of transmission outages elsewhere in the Whatcom County and system operation benefits when other generation in the county is not running.

In addition, the Facility provides reliability benefits to PSE and to the region when there are heavy south-to-north flows from the United States to British Columbia

and during Puget Sound Area and Northern Intertie ("PSANI") transmission congestion events. Dispatch of the Facility can also offset flows across the Northern Cascade Mountain transmission facilities during winter months, thereby reducing the risk of transmission curtailments.

The Facility is integrated into a Generation Runback and Trip Scheme ("Scheme"). The Scheme requires that generation be reduced in various ways when overloads are detected on two local transmission lines. Most generation facilities are integrated into one or more such Schemes. Historically, the actual operation of the Facility's Scheme has been rare.

Interconnection

Consistent with PSE's Open Access Transmission Tariff ("OATT"), Tenaska signed a standard Large Generator Interconnection Agreement (LGIA) with PSE in June 2009. Upon purchase of the Facility, the LGIA will be replaced with a new LGIA (to be executed by PSE Marketing and PSE Transmission Contracts) and the new LGIA will be reported to the Federal Energy Regulatory Commission ("FERC"). The stated generation capacity of the Facility in the existing LGIA is 280 MW winter and 245 MW summer. PSE Transmission Contracts has studied a request consistent with PSE's OATT to increase the generation capacity of the Facility and has determined that the Facility can operate up to 300 MW winter and 285 MW summer. The new LGIA between PSE Marketing and PSE Transmission Contracts will reflect a stated generation capacity of 300 MW winter and 285 MW summer.

Transmission

In order to secure network transmission capacity on PSE's transmission system, the Facility will be designated as a new Network Resource in accordance with PSE's Designated Network Resource ("DNR") process. The DNR process does not require any transmission studies but rather ownership of the Facility and will

be completed immediately upon purchase. The megawatt amount of network transmission capacity will be consistent with the megawatt amount contained in the new LGIA.

For off-system sales, PSE Marketing will follow PSE's undesignation procedures and purchase point-to-point transmission service to the extent that it is available. Off-system sales of energy may be limited from time to time when point-to-point transmission service is not available on other PSE posted transmission paths.

Attachment K

Regulatory and accounting matters

This exhibit addresses the following topics:

- Rate Recovery
- Income Statement Effects
- Other Miscellaneous Accounting

Rate Recovery

PSE will seek rate recovery for the Ferndale Cogeneration Station ("Facility") acquisition most likely through a Power Cost Only Rate Case ("PCORC") filing with the Washington Utilities and Transportation Commission ("WUTC"). The filing will most likely be made in December 2012 and regulatory approval of the rates is anticipated six months thereafter. The transaction closing date is targeted to be November 1, 2012. The filing may occur when the transaction closes. If necessary, costs may be updated during the filing.

The ownership and operating costs of the new facility not included in rates would be deferred, under RCW 80.80.060 similar to the approach taken with the acquisition of Mint Farm. The deferral would be impacted by the total amount expended on the facility and offset by reductions in market purchases.

The PCORC would seek prudence determination for the acquisition of the Facility as well as other potential resource acquisitions or contract restructurings.

Income Statement Effects

Provided the WUTC approves accounting and rate treatments proposed with respect to the Facility and as described above, the Company expects to recognize income for financial reporting purposes substantially as described in the Stand-Alone Project Financial Pro Forma (see Attachment D).

Other Miscellaneous Accounting

Property Accounting. PSE will capitalize its investment in the Facility as an electric utility plant fixed asset and depreciate the capitalized amount over its useful life beginning with the closing date. PSE will unitize the capital asset within a year of placing the unit in-service, segregating its original cost into appropriate retirement units of property categories.

Accounting for Initial Operating Inspections. To bring the Facility up to the operating standards of PSE, the Company will expend amounts to rehabilitate the physical condition of the Wooden Cooling Tower Structure which will be capitalized in accordance with Federal Energy Regulatory Commission Uniform System of Accounts. The facility will also require interconnection and transmission improvements, a firewall, and NERC and WECC compliance testing. These improvements will be capitalized under existing Units of Property (UOP) guidance. The cost for this work is in the Stand-Alone Project Financial Pro Forma identified as Turbine/Plant Upgrade (see Attachment D).

Useful Life. For depreciation forecast purposes at this time, PSE is using an estimate of the useful life of 27 years. The facility is proven combined cycle technology, similar to the Sumas Generating Station. PSE has determined it would be appropriate to define units of property for this Facility consistent with the units of property defined for the Sumas Generating Station.

Spare Parts. Purchase of spare parts, whether related to this specific transaction or from other parts suppliers, will be recorded in inventory and capitalized (if units of property) or otherwise expensed as the parts are installed and used per PSE accounting guidelines. The purchase of spare parts will be recorded at the lower of cost or market value.

Attachment L

Updates presented after the 2011 RFP

1. Presentations to PSE's Energy Management Committee

Ferndale Cogeneration Station

Presented to the Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Chris Bevil

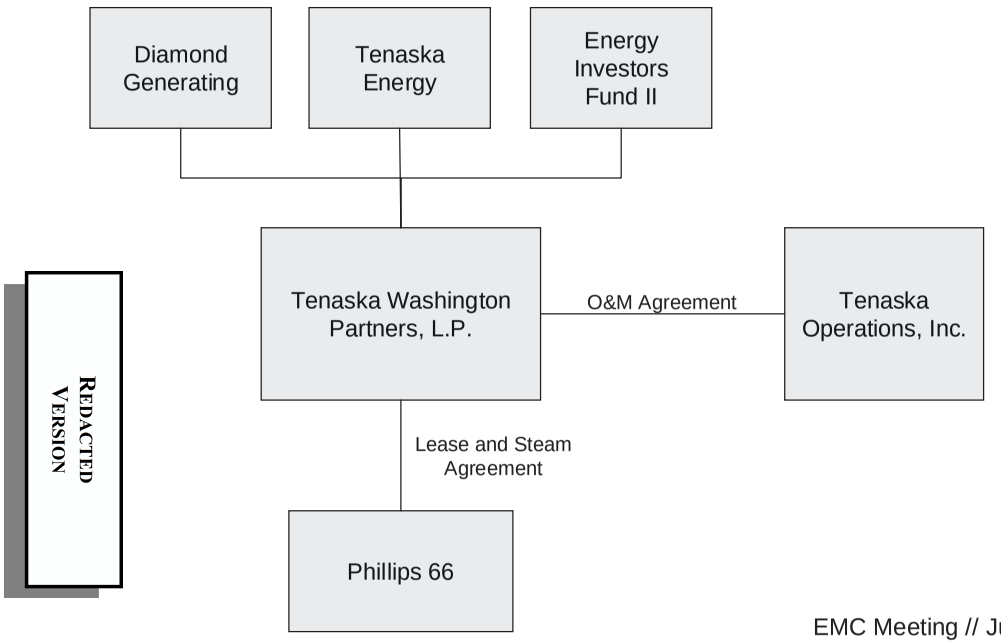
Manager, Resource Acquisitions

July 20, 2012

Description of Asset

Ferndale Cogeneration Station

- Located in Whatcom County, Washington
- 14-acre site within boundaries of Phillips 66 refinery
- 2x1 dual-fueled combined-cycle; (2)-GE 7EA gas turbines
- 280 MW capacity (winter rating); incl's 20 MW duct firing
- Heat Rate: [redacted] BTU/kWh (net annual avg.)
- 2.05 million gallon fuel oil storage tank
- Electrical interconnection – PSE
- Natural gas interconnection - Cascade
- On-line date: April 1994



Counterparties / Agreements

- Owner - Tenaska Washington Partners, L.P. ("TWP")
- Operator - Tenaska Operations, Inc
- Large Generator Interconnection Agreement ("LGIA") - Puget Sound Energy, Inc ("PSE")
- Land Lease & Steam Agreement - Phillips 66
- Natural Gas Service Firm Transportation Agreement – Cascade Natural Gas Corp

Other:

- Water Supply Agreement - Whatcom Co. PUD
- Tenaska affiliate owns 50-acre parcel for buffer

Proposed Transaction

Draft Letter of Intent ("LOI") and Term Sheet

- PSE acquires 100% ownership interest in project assets
- Seek to complete Definitive Agreements by October 1, 2012
- Purchase Price $84,000,000, paid at closing (receipt of all approvals and conditions precedent)
- PSE permitted but not obligated to make offers of employment to plant personnel
- Conditions to closing:
  - Customary conditions; including final title
  - Assignment of certain agreements; including Lease & Steam Agreement (as amended to accommodate PSE)
  - Emissions Performance Standard rule change

Transmission and interconnection

- Requires assignment of TWP's LGIA with PSE (winter capacity of 280 MW and summer capacity of 245 MW)
- PSE will designate the plant as a Dedicated Network Resource allowing the use of PSE network transmission service

Natural gas transportation and supply

- Requires assignment of TWP's 52,000 Dth/day of firm transportation on Cascade Natural Gas Company system from interconnect with Westcoast Energy at Sumas, WA
- Natural gas supply is generally readily available on long and short term firm basis at the Sumas trading point; thus Ferndale's fuel needs will be added to the Trade Floor's programmatic hedging strategy and managed in manner consistent with PSE's other gas-fired assets
- Ferndale can also be served with back-up fuel oil from the 2 million gallon on-site storage tank

Land Lease and Steam Agreement

- Requires assignment of the 49-year site Lease Agreement; Phillips 66 is compensated for the lease via provisions in the Steam Agreement, which will require modification
- Requires assignment of the Steam Agreement; up to 150,000 lb/hr of tolled steam can be requested by Phillips when Ferndale is operating.

Benefits & Risks

Benefits	Risks

▪ Project economics are favorable:
  ▪ Lowest cost in 5 of 5 scenarios
  ▪ Reduces risk in portfolio
  ▪ Analysis suggests significant portfolio benefits in combination with selected short listed resources
▪ PSE is familiar with this facility and its operations (held a 20-yr tolling agreement that expired Dec 31, 2011)
▪ Facility is interconnected to PSE's system providing load management and wind integration benefits, and no exposure to cost increases from 3rd party transmission providers.
▪ Firm gas transport on Cascade would be transferred to PSE as part of the purchase. Cost reduction may be possible through negotiation and extension of agreement.
▪ Facility uses proven, reliable GE 7EA gas turbines; plant has a solid operating history and has been well maintained
▪ Facility has dual-fuel capability
▪ Plant is expected to be economically viable beyond 19 years
▪ Counterparty is well-known with low execution risk
▪ Dispatchable units
	▪ Full due diligence for an owned asset has not been conducted
	▪ The State of Washington is considering amending and lowering the Emissions Performance Standard which may restrict PSE from acquiring the facility if it is unable to meet new standard
	▪ Costs to bring plant up to PSE's operating standards may vary from estimate (≈$3 million)

Ferndale Cogeneration Station Update

Presented to the Energy Management Committee ("EMC")

PUGET SOUND ENERGY

Michael Mullally

Financial Planning and Strategic Initiatives

August 16, 2012

Proposed Transaction

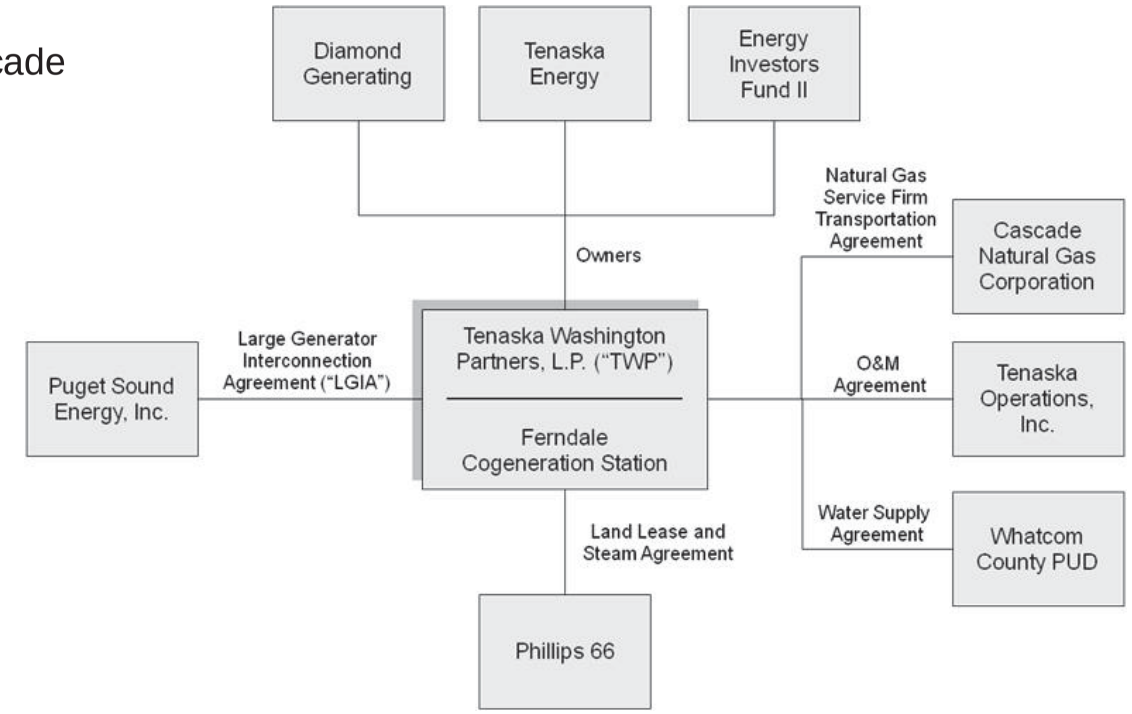
Letter of Intent ("LOI") and Term Sheet

- Executed August 3, 2012 between PSE and Tenaska Washington Partners, L.P. (TWP)
- PSE acquires 100% ownership interest in project assets
- Seek to complete Definitive Agreements by October 1, 2012
- Purchase Price $84,000,000, paid at closing (receipt of all approvals and conditions precedent)
- PSE permitted but not obligated to make offers of employment to plant personnel
- Tenaska Operations Inc. may enter agreement to operate and manage facility for 12 + months
- 50/50 split of Real Estate Excise Tax between PSE and TWP
- TWP responsible for Washington sales and use tax
- Conditions to closing:
  - Customary conditions; including final title
  - Assignment of certain agreements; including Lease & Steam Agreement (as amended to accommodate PSE)
  - Emissions Performance Standard rule change
- Regulatory approvals:
  - Federal Energy Regulatory Commission
  - Hart-Scott-Rodino Antitrust Improvements Act
  - WUTC Declaratory Order related to GHG Performance Standards Law

Description of Asset

Ferndale Cogeneration Station

- Located in Whatcom County, Washington
- 14-acre site within boundaries of Phillips 66 refinery
- 2x1 dual-fueled combined-cycle; (2)-GE 7EA gas turbines
- 280 MW capacity (winter rating); includes 20 MW duct firing
- Heat Rate: [redacted] BTU/kWh (net annual avg.)
- 2.05 million gallon fuel oil storage tank
- Electrical interconnection – PSE
- Natural gas interconnection - Cascade
- On-line date: April 1994



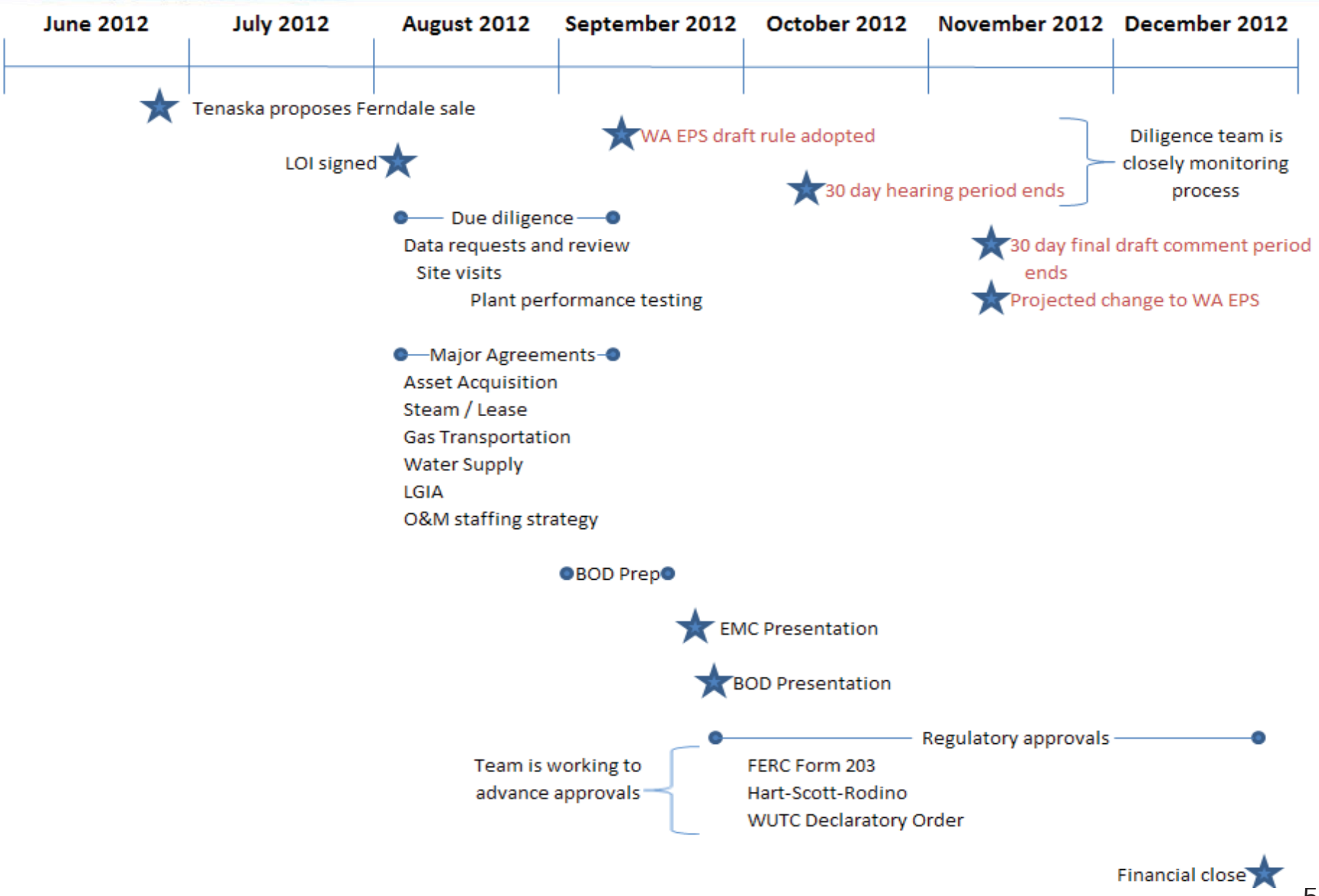
REDACTED VERSION

Critical Path Items

- Asset Acquisition Agreement
  - Tenaska generated original document; PSE staff and outside counsel to review and negotiate
- Land Lease / Steam Agreement
  - Phillips 66 owns Ferndale real estate
  - Provisions of the lease and steam agreements need modification
    - [redacted]
    - [redacted]
    - [redacted]
- Operations and Maintenance Plan
  - PSE considering a range of options to optimize O&M value
- Emissions Performance Standard
  - Current WA State limit under the EPS is 1,100 lbs of CO_2 / MWh
  - Commerce department undergoing review to modify limits
  - New, lower standard of ~975 lbs of CO_2 / MWh expected early September
    - 30 day review period
    - 30 day final draft comment period
    - New rule anticipated by mid-November
- Other Agreements – Gas Transportation, Water Supply, and LGIA

REDACTED VERSION

Acquisition Schedule



Capital Budget

REDACTED VERSION

Asset Description	Budget Estimate
Facility Purchase Price	**$ 84,000,000**
Real Estate Excise Tax	**$** [redacted]
Operating Standard Upgrades	**$** [redacted]
Security	$ [redacted]
Transaction & Due Diligence	**$** [redacted]
EPS Consultant	$ [redacted]
Corporate Communications	$ [redacted]
ALTA Survey	$ [redacted]
Title Insurance	$ [redacted]
Contingency	**$** [redacted]
Total Capital Costs	**$ 89,000,000**

Budget Notes

- Budget evaluated during RFP process indicated Ferndale was a least cost resource
- Capital estimates will be revised by 8/17/12
- O&M budget will be revised after operations visit 8/16/12 and may include different operating scenarios
- Contingency budget will be used for legal, regulatory filings, information technology, plant upgrades, internal labor / overheads, etc.
- Still many undefined costs that must be closely monitored

Interconnection / Transmission

- Benefits of ownership and operation
  - Provides local load service benefits to Whatcom County
    - Reliability benefits in the event of outages elsewhere in the county
    - Flexibility benefits when other generation (e.g., Ensearch) in the county isn't running
  - Reduces cross-Cascades power flows and risk of cross-Cascade transmission curtailments
  - Reduces risk of Puget Sound Area Northern Intertie (PSANI) curtailments when South-to-North power flows are heavy through the Puget Sound area
- Interconnection
  - Tenaska signed an LGIA with PSE (6/09) for the Ferndale Generating Facility – 280 MW winter, 245 MW summer (Due Diligence Team will confirm capacities – increases may need further study)
  - Upon purchase, the LGIA will be replaced with a new PSEM-PSEI LGIA and reported to FERC
  - Generators are required to meet PSE's technical specifications for interconnection
    - PSE is aware that generator excitation limiters need to be installed
    - Due Diligence Team will investigate this and any other potential compliance issues to determine mitigation solutions and estimated costs
- Transmission
  - Ferndale has operated and will operate as a PSE Designated Network Resource (i.e., unrestricted operation)
  - Transmission from the plant and through PSEI is sufficient for the existing LGIA

Attachment L

Updates presented after the 2011 RFP

2. Presentation to PSE's Board of Directors

Ferndale Cogeneration Station

Presented to the PSE Board of Directors

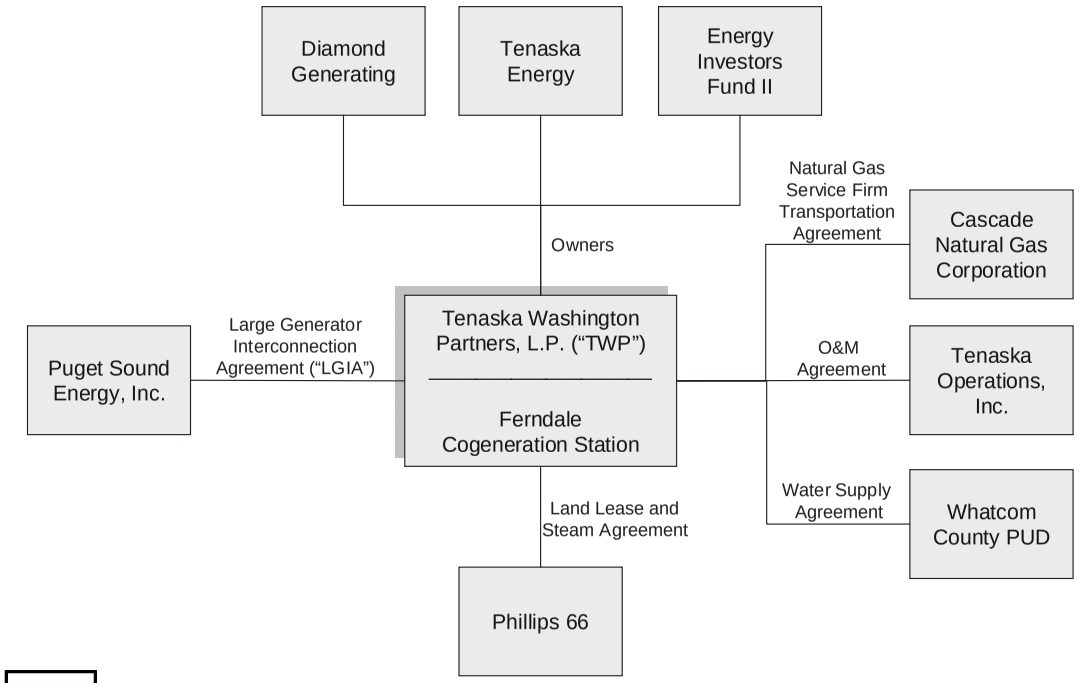
PUGET SOUND ENERGY

Roger Garratt

Director, Financial Planning & Strategic Initiatives

August 2, 2012

Ferndale Cogeneration Station



Facts & Specifications

- 2x1 dual-fueled combined-cycle; (2)-GE 7EA gas turbines
- 280 MW capacity (winter rating); including 20 MW duct firing
- Heat Rate: 8,382 BTU/kWh (net annual avg.)
- On-line date: April 1994
- Located in Whatcom County, Washington
  - 14-acre site within boundaries of Phillips 66 refinery
- 2.05 million gallon back-up fuel oil storage

CONFIDENTIAL PER WAC 480-07-160

Proposed Transaction

Draft Letter of Intent ("LOI") and Term Sheet

- PSE acquires 100% ownership interest in project assets
- Seek to complete Definitive Agreements by October 1, 2012
- Purchase Price $84,000,000, paid at closing (receipt of all approvals and conditions precedent)
- PSE permitted but not obligated to make offers of employment to plant personnel
- Conditions to closing:
  - Customary conditions; including final title
  - Assignment of certain agreements; including Lease & Steam Agreement (as amended to accommodate PSE)
  - No adverse Emissions Performance Standard rule change

REDACTED VERSION

Transmission and interconnection

- Requires assignment of TWP's LGIA with PSE (winter capacity of 280 MW and summer capacity of 245 MW)
- PSE will designate the plant as a Dedicated Network Resource allowing the use of PSE network transmission service

Natural gas transportation and supply

- Requires assignment of TWP's 52,000 Dth/day of firm transportation on Cascade Natural Gas Company system from interconnect with Westcoast Energy at Sumas, WA
- Natural gas supply is generally readily available on long and short term firm basis at the Sumas trading point; thus Ferndale's fuel needs will be added to the Trade Floor's programmatic hedging strategy and managed in manner consistent with PSE's other gas-fired assets
- Ferndale can also be served with back-up fuel oil from the 2 million gallon on-site storage tank

Land Lease and Steam Agreement

- [redacted]
- [redacted]

Benefits & Risks

Benefits	Risks
▪ Project economics are favorable ▪ PSE is familiar with this facility and its operations ▪ Interconnected to PSE's system ▪ Firm gas transport on Cascade ▪ Proven, reliable GE 7EA gas turbines ▪ Solid operating history and well maintained ▪ Dual-fuel capability ▪ Expected to be economically viable beyond 19 years ▪ Counterparty is well-known with low execution risk ▪ Dispatchable units	▪ Full due diligence for an asset acquisition not yet conducted ▪ The State of Washington is considering amending and lowering the Emissions Performance Standard which may restrict PSE from acquiring the facility ▪ Costs to bring plant up to PSE's operating standards may vary from estimate (≈$3 million)

Attachment L

Updates presented after the 2011 RFP

3. Presentations to the Washington Utilities and Transportation Commission

Ferndale Cogeneration Station Update

Presented to Washington Utilities and Transportation Commission ("WUTC") Staff

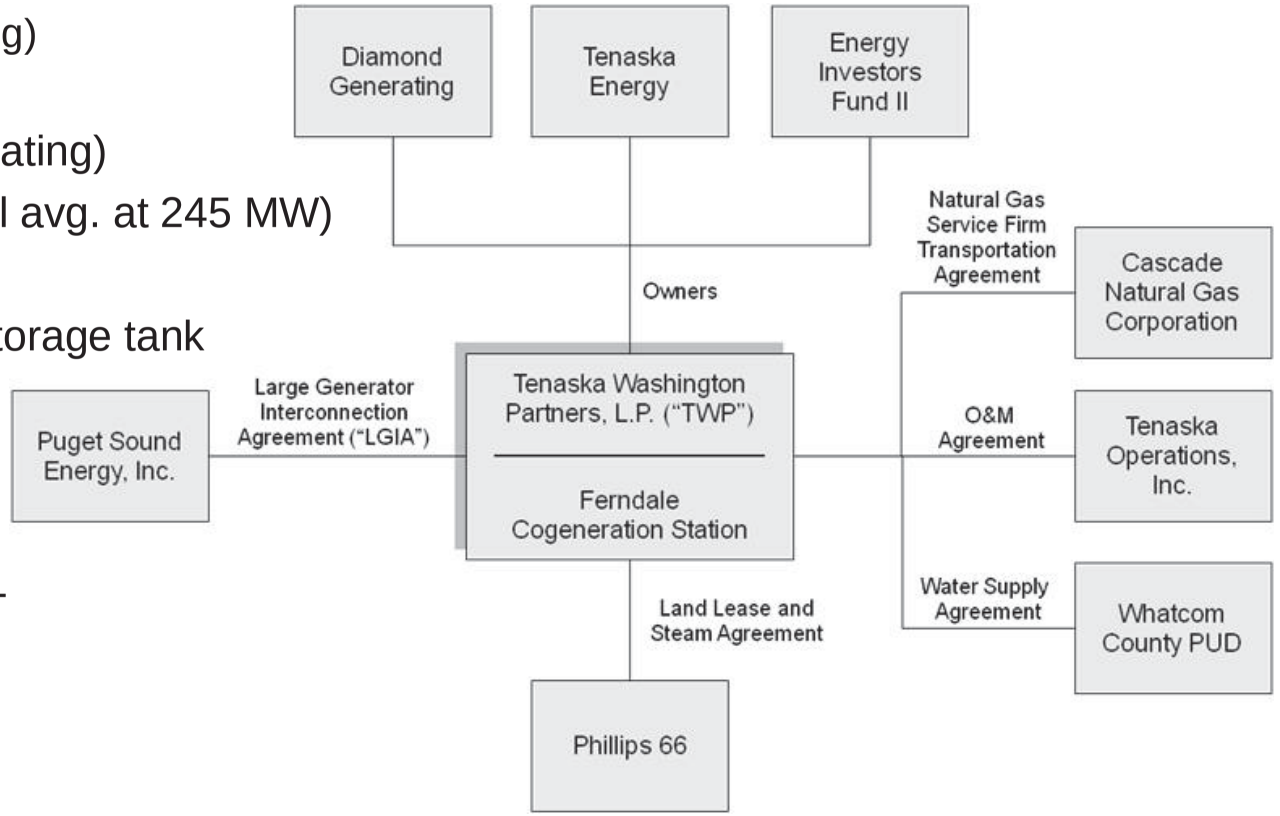
PUGET SOUND ENERGY

Resource Acquisition Team

August 30, 2012

Ferndale Cogeneration Station

- Located in Whatcom County, Washington
- 14-acre site within boundaries of Phillips 66 refinery
- 2x1 dual-fueled combustion turbine combined-cycle
  - (2) – GE 7EA gas turbines
  - (2) – HRSG (w/ duct firing)
  - (1) – GE steam turbine
- 280+ MW capacity (winter rating)
- 8,382 BTU/kWh (net annual avg. at 245 MW)
- 97% expected availability
- 2.05 million gallon fuel oil storage tank
- On-line date: April 1994
- PPA with PSE
  beginning April 8, 1994
  expired December 31, 2011



CONFIDENTIAL PER WAC 480-07-160

Proposed Transaction

Letter of Intent ("LOI") and Term Sheet

- Executed August 3, 2012 between PSE and Tenaska Washington Partners, L.P. ("TWP")
- PSE acquires 100% ownership interest in project assets
- Seek to complete Definitive Agreements by October 1, 2012
- $84,000,000 purchase price, paid at closing (receipt of all approvals and conditions precedent)
- 50/50 split of Real Estate Excise Tax between PSE and TWP
- TWP responsible for Washington Sales and Use Tax
- PSE permitted but not obligated to make offers of employment to plant personnel
- Conditions to closing:
  - Customary conditions; including final title
  - Assignment of certain agreements (as amended to accommodate PSE);
    - Land Lease & Steam Agreement – Phillips 66
    - Natural Gas Transportation Agreement – Cascade
    - Water Supply Agreement – Whatcom County PUD
  - Washington State Emissions Performance Standard ("EPS") rule change

- Regulatory approvals:
  - Federal Energy Regulatory Commission
  - Hart-Scott-Rodino Antitrust Improvements Act
  - WUTC Declaratory Order related to EPS

Critical Path Items

- Due diligence team findings and risk assessment
  - Pro forma financial projections and re-evaluation of alternatives
- Asset Acquisition Agreement – TWP
  - Tenaska generated original document; PSE staff and outside counsel to review and negotiate
- Land Lease & Steam Agreement – Phillips 66
  - [redacted]
  - [redacted]
- Operations & Maintenance ("O&M") plan
  - PSE considering a range of options to optimize O&M value
- Emissions Performance Standard ("EPS")
  - Current WA State limit under the EPS is 1,100 lbs of CO_2 / MWh
  - Commerce department undergoing review to modify limits
- Other Agreements:
  - Natural Gas Transportation
  - Water Supply
  - PSE Large Generator Interconnection Agreement ("LGIA")

REDACTED VERSION

Benefits & Risks

Benefits	Risks

▪ Project economics are favorable:
  ▪ Lowest cost in 5 of 5 scenarios
  ▪ Reduces risk in portfolio
  ▪ Analysis suggests significant portfolio benefits in combination with selected short listed resources
▪ PSE is familiar with this facility and its operations (held a 20-yr tolling agreement that expired Dec 31, 2011)
▪ Facility is interconnected to PSE's system providing load management and wind integration benefits, and no exposure to cost increases from 3rd party transmission providers.
▪ Firm gas transport on Cascade would be transferred to PSE as part of the purchase. Cost reduction may be possible through negotiation and extension of agreement.
▪ Facility uses proven, reliable GE 7EA gas turbines; plant has a solid operating history and has been well maintained
▪ Facility has dual-fuel capability
▪ Plant is expected to be economically viable beyond 19 years
▪ Counterparty is well-known with low execution risk
▪ Dispatchable units
	▪ Full due diligence for an owned asset has not been conducted
	▪ The State of Washington is considering amending and lowering the Emissions Performance Standard which may restrict PSE from acquiring the facility if it is unable to meet new standard
	▪ Costs to bring plant up to PSE's operating standards may vary from estimate (≈$3 million)

Resource Acquisition Update

Presented to Washington Utilities and Transportation Commission ("WUTC") Staff

PUGET SOUND ENERGY

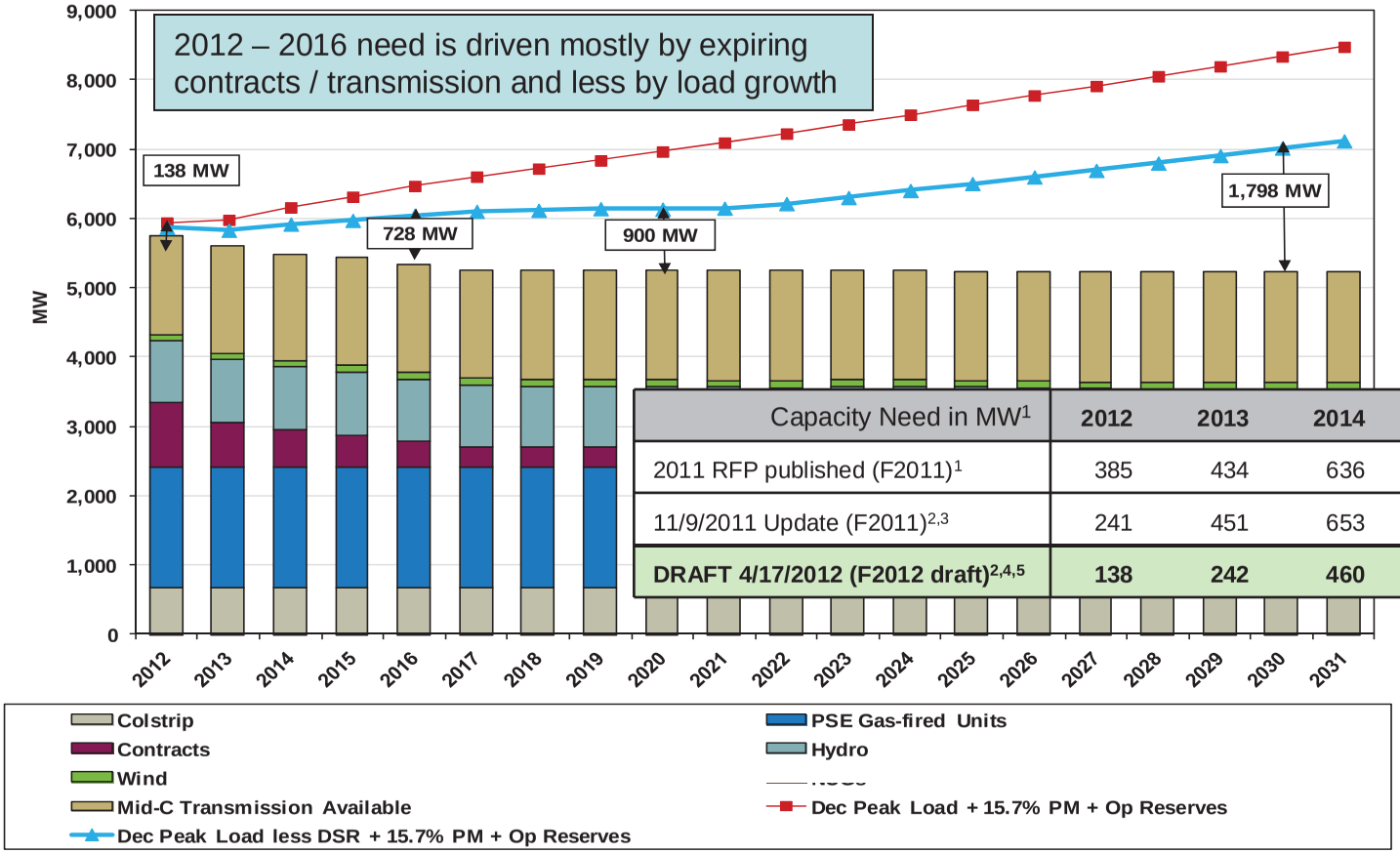
Resource Acquisition Team

August 30, 2012

Agenda

- Centralia Coal Transition PPA overview
- PSE resource need
- 2011 RFP
  - Products requested and proposals received
  - Phase I screening results
  - Phase II optimization, risk and due diligence results
  - RFP short list
- July 2012 Re-evaluation
  - PSE receives revised proposals
  - Re-evaluation and results
  - Revised short list
- Ferndale Cogeneration Station update

2011 RFP capacity need



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) Updated from 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 Request for Proposals ("2011 RFP")

PUGET SOUND ENERGY

- Proposals received
- Phase 1 results
- Phase 2 results and selections

RFP sought capacity resources to fill near-term need

- Approximately 400 MW capacity delivered to PSE's system on a firm basis by end of 2012; final revision in April 2012 with draft F2012 load forecast called for 138 MW by the end of 2012
- Preference for online or near-term resources; eligible resources will be online by or before 2015
- Preference for long-term resources with flexible contract start dates to align with PSE's need
- Market PPAs should be delivered to BPAT.PSEI to qualify for this RFP
- Renewable resources that are competitive with capacity resources or market

Note: PSE will consider all proposals, although some may contain fatal flaws.

Broad team of experts perform a thorough evaluation

	Evaluation team	Scope of review
Screening (Phase 1) *Nov 2011-March 2012*	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 2) *March-June 2012*	*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

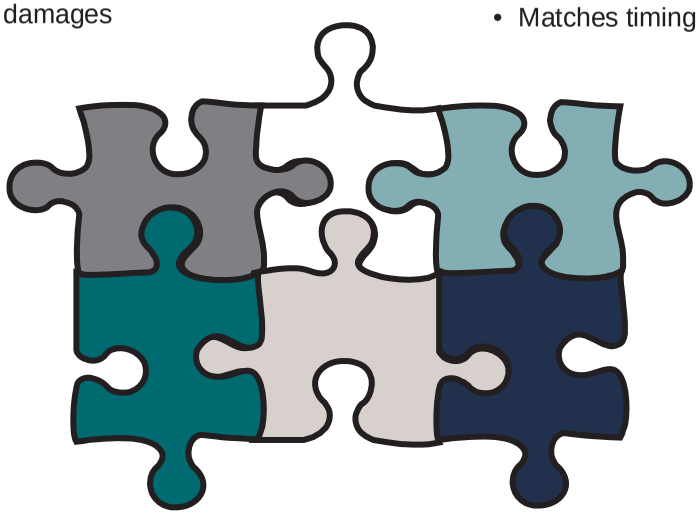
Evaluation criteria – Identify proposals with lowest reasonable cost and risk

Strategic and financial

- Offer viability: project and respondent's ability to deliver
- Appropriate credit support or liquidated damages offered by bidder
- No PSE credit support required

Compatibility with resource need

- Can be shaped to match PSE's need (gas) or resource shape matches PSE's need (wind)
- Firm delivery of capacity and energy to PSE's system.
- Matches timing of resource need; flexibility



Public benefits

- Economic benefit to the community
- Local support for the project
- Low environmental impact

Cost minimization

- Lower/ lowest portfolio revenue requirement while meeting capacity and RPS need

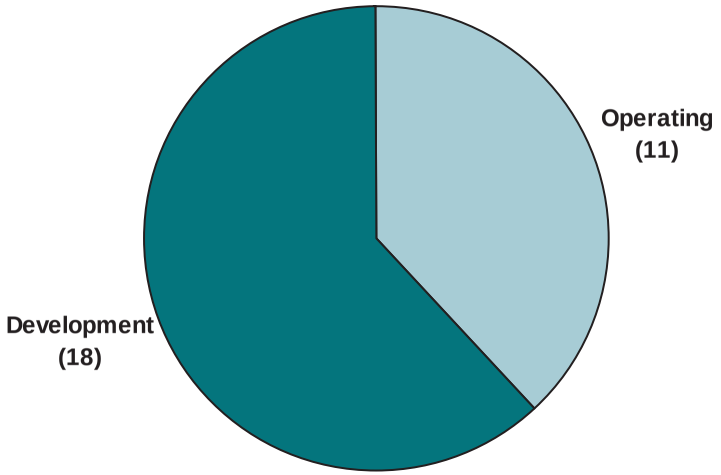
Risk management

- Commercially-proven technology with long-term reliability
- Reduces PSE's risk exposure to changes in power prices, environmental policies, fuel prices, hydro generation, etc.

See Exhibit A of the 2011 All Source RFP for complete evaluation criteria consistent with WAC 480-100-238 and 480-107-035.

Proposals received

	Proposals	MW
Renewable resources	**9**	**454**
Wind	4	369
Biomass	3	61
Solar-PV*	2	24
Thermal resources	**11**	**3,124**
Coal	1	500
Natural gas - CCGT	6	2,006
Natural gas - SCGT	1	179
Natural gas - CHP	1	29
Natural gas - Recip	1	110
Natural gas - GT	1	300
Other resources	**9**	**2,631**
Market PPA	4	400
Hydro	1	77
Cold fusion	1	1,880
Energy storage	2	251
Waste-to-energy*	1	23
Total*	**29**	**6,209**



Legend
Operating (11)
Wind (1)
Coal (1)
Natural gas - CCGT (4)
Market PPAs (4)
Waste-to-energy (1)
Development (18)
Wind (3)
Biomass (3)
Solar - PV (2)
Natural gas - CCGT (2)
Natural gas - SCGT (1)
Natural gas - CHP (1)
Natural gas - Recip (1)
Natural gas - GT (1)
Hydro (1)
Energy storage (2)
Cold fusion (1)

Screening results observations

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.

Proposals selected for Phase 2 evaluation

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

REDACTED VERSION

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

[1] *Refer to the 2011 RFP Evaluation Document for Phase 1 quantitative and qualitative results.*

[2] [redacted]

Key Considerations

- 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

Offers screened out due to significant qualitative risks[1]

REDACTED VERSION

Proposal	Rationale
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

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 least cost 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

REDACTED VERSION

	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

Optimization sensitivities

How sensitive are the results to price changes?

To better understand the optimization results, the quantitative evaluation team considered sensitivity analyses by making one change at a time.

The following were questions posed in that analysis:

REDACTED VERSION

- *Could we pay more for Coal Transition PPA (#11102)?*
- *Would a [redacted] (#11118) [redacted] price reduction change selections?*
- *Would a [redacted] (#11124) price reduction change selections?*
- *Would a [redacted] (#11103) offer price reduction change selections?*

Optimization sensitivities

How sensitive are the results to price changes?

- Coal Transition PPA would be least cost in 4 out of 5 scenarios even with higher PPA prices and significant reductions in prices of alternatives would be required to change the resource selections

REDACTED VERSION

Max % PPA price increase for continued selection? (or % (Decrease) to be selected)	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	Selected in X of 5 Scenarios
Coal Transition PPA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5

What % does PPA/ Ownership price need to be reduced to be selected?	Base	Base w/ New Gas	Base + CO2	Low Growth	High Prices	Selected in X of 5 Scenarios
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	5

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

Optimization sensitivities

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

- The Coal Transition PPA is least cost in 3 of 5 scenarios even if PSE could rely on short-term market purchases until 2015 and current contract opportunities are lost

REDACTED VERSION

	Start	Scenario: Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected in X of 5 Scenarios
[redacted] (#11103)	2014		X				1
PSE Self Build Peaker	2015					X	1
[redacted] (#11124)	2012		X		X		2
[redacted] (#11110)	2013	X	X				2
Coal Transition (Centralia) PPA	2012	X		X	X		3
[redacted] (#11123)	2014				X		1
[redacted] (#11123)	2014			X		X	2
[redacted] (#11123)	2016	X	X				2
[redacted] (#11118)	2012						0
[redacted] (#11117)	2013	X	X	X	X	X	5
Portfolio Cost ($000)		10,151,290	13,478,295	9,852,828	11,097,232	7,936,869	

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

2011 RFP short list as of June 12, 2012

REDACTED VERSION

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, but unit outages do not affect obligations of power deliveries ▪ 498 MW of long-term firm transmission secured for contract term ▪ Counterparty accepts current environmental costs/risks and is included in economics of PPA ▪ 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) Start: 2016 Term: [redacted] Size: [redacted] MW	▪ 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	▪ [redacted] ▪ [redacted]
Selected	[redacted] (#11124) Start: 2012 Term: [redacted] Size: [redacted] (20 MW non-firm)	▪ 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	▪ [redacted] ▪ [redacted] ▪ [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

Non-selected Phase 2 proposals as of June 12, 2012

Status	Proposal	Quantitative summary	Qualitative summary
Not selected	[redacted] (#11118) Start: 2012 Term: [redacted] Size: [redacted] MW	▪ 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: 2012 Modeled Start: 2014 Term: Ownership Size: [redacted] MW	▪ 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: 2016 Term: [redacted] Size: [redacted] MW	▪ 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 7% premium verses 40% for longer-term)	▪ [redacted] ▪ [redacted] ▪ [redacted]
Not selected	[redacted] (#11110) Start: 2013 Term: [redacted] Size: [redacted]	▪ Least cost in 3 of 5 scenarios ▪ Economic benefits are negative; short-term PPAs are may be better evaluated through hedging program	▪ [redacted]

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

2011 RFP conclusions

- PSE's RFP evaluation indicated that the Coal Transition PPA should be pursued first and immediately because the opportunity to pursue this resource may be lost if delayed.[1]

- Evaluating the 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.

[1] Senate Bill 5769 (the "Coal Transition Energy Bill") requires at least 500 MW to be placed under long-term contract by December 2012, or the MOA may be terminated. The Coal Transition Energy Bill provides certain exemptions to the Washington state Emissions Performance Standard to encourage the early closure of coal-fired plants in Washington. To be effective, the Coal Transition PPA requires pre-approval from the WUTC, a process that takes up to 180 days.

July 2012 Re-evaluation Process

PUGET SOUND ENERGY

- Revised RFP offers
- Re-evaluation results and revised resource selections

July 2012 Re-evaluation

Revised RFP offers as of July 5, 2012

REDACTED VERSION

Price refresh date	Type	Project / Owner	State	Capacity (MW)	Term	New price
5/30/2012	NatG-CCCT	[redacted] (#11117-r)	[redacted]	[redacted]	[redacted]	**(see note)***
5/17/2012	NatG-CCCT	[redacted] (#11103-r)	[redacted]	[redacted]	[redacted]	**$[redacted] million**
6/22/2012	NatG-CCCT	**Ferndale Ownership** (#11118-r) *Tenaska*	WA	280	Dec 2012	**$84 million**
7/5/2012	Coal Transition Power	**Coal Transition Power PPA (New Volumes)** (#11102-r) *TransAlta*	WA	Up to 380	12/1/14-12/31/25	**No Change**

(1) [redacted] *restructured their offer to a Nov-Feb product, reduced fixed charges, increased variable costs, and changed the fuel index to* [redacted]

(2) An ownership structure was not offered in the original proposal

July 2012 Re-evaluation

Project	Qualitative Advantages (+)	Qualitative Risks (-)
11102-r **Coal Transition Power PPA (Centralia)** TransAlta	▪ PPA economic benefits are favorable compared to alternatives ▪ Physical, long-term flat firm power PPA delivered to PSE's system ▪ Fixed price structure provides a hedge against rising power costs and stability compared to variability and uncertainty of natural gas tolling resource alternatives ▪ Firm power backed by physical asset, but unit outages do not affect obligations of power deliveries ▪ Existing resource with demonstrated reliable operating history avoids development risk and operational performance of new resources ▪ Capacity quantity ramps up over the term to match PSE for contract term; 280 MW directly interconnected to PSE's system, which avoids 3rd party transmission costs, and 100 MW BPA firm point-to-point transmission from C.W. Paul; in addition, PSE avoids supplying operating reserves (supplied by BPA) ▪ Counterparty accepts current environmental costs/risks and is included in economics of PPA ▪ New state law recognizes coal transition power as a public policy resource preference, which allows and provides incentives for long-term contracts ▪ Entering into PPA helps the State of Washington to achieve its greenhouse gas emission reduction goals ▪ Entering into PPA helps provide financial assistance to host communities ▪ Coal transition power has strong public, local community, environmental groups and government support ▪ Strong counterparty (BBB S&P credit rating) with long history of international owner/operator performance ▪ PPA requires pre-approval by WUTC before it becomes effective ▪ PSE is allowed to earn it authorized rate of return on the PPA and avoids putting capital at risk	▪ If market power prices drop over the long term compared to current market power price forecasts, then the PPA economics are not as attractive ▪ If new or changes in current law requires additional costs to be imposed on coal transition power, the parties have the right to either agree on new PPA price or terminate the PPA ▪ If the WUTC does not approve PPA petition filing, then PPA does not become effective and terminates

July 2012 Re-evaluation

Project	Qualitative Advantages (+)	Qualitative Risks (-)
11117-r [redacted]	[redacted]	[redacted]
11118-r **Ferndale Ownership** Tenaska	▪ Project economics are favorable ▪ PSE is familiar with this facility and its operations ▪ Facility is interconnected to PSE's system providing load management and wind integration benefits, and no exposure to cost increases from other transmission providers. ▪ Firm gas transport on Cascade would be transferred to PSE as part of the purchase. Cost reduction may be possible through negotiation and extension of agreement. ▪ Facility uses proven, reliable GE 7EA gas turbines; plant has a solid operating history and has been well maintained ▪ Facility has dual-fuel capability ▪ PSE expects to plant to be economically viable beyond 19 years ▪ Counterparty is well-known and low risk ▪ Dispatchable unit	▪ Full due diligence for an owned asset has not been conducted ▪ The State of Washington is considering amending and lowering the Emissions Performance Standard which may restrict PSE from acquiring the facility if it is unable to meet new standard ▪ Costs to bring plant up to PSE's operating standards may vary from estimate
11103-r [redacted]	[redacted]	[redacted]

REDACTED VERSION

Optimization Results

Coal Transition PPA least 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 the Ferndale Ownership is lowest cost and lowest risk compared to other alternatives.

REDACTED VERSION

	Scenario					
	Base	Base + CO2	Base w/ New Gas	High Prices	Low Growth	Selected
Ferndale Own (#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 [redacted] which is not enough to overcome the proposal's associated qualitative risks.

July 2012 Re-evaluation

PSE PUGET SOUND ENERGY

REDACTED VERSION

Re-evaluation screening results

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]	$ 29,878	[redacted]	1	2	[redacted]	1
[redacted] (#11123)	Index Price	2016	11	[redacted]	$ 17,876	[redacted]	2	0	[redacted]	5
Coal Transition PPA (#11102-r) New Volumes	PPA	2014	12	[redacted]	$ 114,488	[redacted]	3	0	[redacted]	9
[redacted] (#11123)	Index Price	2014	11	[redacted]	$ 15,174	[redacted]	4	0	[redacted]	4
Ferndale Purchase (#11118-r) Reprice	Ownership	2013	19	[redacted]	$ 96,126	[redacted]	5	0	[redacted]	6
[redacted] (#11117-r) [redacted]	Tolling	2013	10	[redacted]	$ 41,203	[redacted]	6	0	[redacted]	3
Ferndale Purchase (#11118-r) w/ West Coast costs	Ownership	2013	19	[redacted]	$ 65,680	[redacted]	7	0	[redacted]	8
Coal Transition PPA (#11102) RFP Volumes	PPA	2012	14	[redacted]	$ 75,367	[redacted]	8	0	[redacted]	10
[redacted] (#11118) [redacted]	Tolling	2012	11	[redacted]	$ 15,005	[redacted]	9	0	[redacted]	7
[redacted] (#11117)	Tolling	2013	6	[redacted]	$ 6,758	[redacted]	10	0.06	[redacted]	2
PSE Self Build Peaker (Frame Tech.)	Ownership	2015	35	[redacted]	$ 13,580	[redacted]	11	0.05	[redacted]	15
[redacted] (#11124)	Fixed Price	2013	10	[redacted]	$ (1,485)	[redacted]	12	(0.01)	[redacted]	11
[redacted] (#11103-r) [redacted]	Ownership	2014	29	[redacted]	$ (62,439)	[redacted]	13	(0.03)	[redacted]	16
[redacted] (#11124) Sensitivity	Fixed Price	2013	10	[redacted]	$ (5,387)	[redacted]	14	(0.02)	[redacted]	12
[redacted] (#11103) Original	Ownership	2014	29	[redacted]	$ (78,209)	[redacted]	15	(0.03)	[redacted]	17
[redacted] (#11123)	Fixed Price	2014	5	[redacted]	$ (5,013)	[redacted]	16	(0.09)	[redacted]	14
[redacted] (#11110)	Fixed Price	2013	5	[redacted]	$ (7,307)	[redacted]	17	(0.10)	[redacted]	13
[redacted] (#11116)	Fixed Price	2014	25	[redacted]	$ (19,022)	[redacted]	18	(0.13)	[redacted]	18
[redacted] (#11112)	Fatal Flaw									

REDACTED VERSION

Notes:

(1) Includes cost of West Coast pipeline capacity consistent with PSE's gas hedging strategy for combined cycle plants. During the 2011 RFP evaluation, PSE did not include firm pipeline gas transportation charges for gas plants with oil backup, such as the Ferndale plant (#11118).

(2) Coal Transition Power PPA (#11102) (RFP Volumes) includes additional BPA transmission costs to reflect PSE's 280 MW of firm transmission rights, but does not reflect risk of obtaining additional BPA transmission. Analysis includes equity component based on PSE's self build peaker.

(3) [redacted] revised term sheet did not identify the transmission capacity available to PSE's system. PSE modeled based on potential capacity identified by Iberdrola in prior discussion; however, this capacity doesn't match the unit output.

(4) After another review of the models, PSE staff found the [redacted] (#11123), [redacted] (#11110), [redacted] (#11117), [redacted] (#11103) offers were not reported in the RFP Document on page 35 based on the latest model revisions. The revisions corrected an overstatement of market purchase costs which includes the doubling up of transmission costs. Results shown here reflect the latest model revisions. These revisions were minor and would not have made an impact on the RFP decisions because more weight was placed on the PSM III optimization analysis results.

Exhibit No. ___(RG-6HC)
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2011 RFP Conclusions

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capacity (Deficit) / Surplus in MW:	(226)	(430)	(517)	(681)	(809)	(824)	(846)	(841)	(854)	(918)	(1,000)	(1,095)	(1,198)
Coal Transition PPA	-	180	280	380	380	380	380	380	380	380	380	380	300
Ferndale Ownership	265	265	265	265	265	265	265	265	265	265	265	265	265
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Remaining Capacity in MW:	**38**	**15**	**27**	**64**	**10**	**(5)**	**(27)**	**(22)**	**(135)**	**(199)**	**(356)**	**(450)**	**(634)**

REDACTED VERSION

- The Coal Transition PPA revised offer is least cost/risk resource with benefits including: (i) providing customers a hedge against higher prices; (ii) ramps to match PSE's capacity need; and (iii) consistent with energy policy in the State of Washington. Furthermore, the Coal Transition PPA will be pursued first and immediately because:
  - MOA between the state and TransAlta requires at least 500 MW of coal transition power to be placed under long-term contract by December 2012; otherwise MOA terminates
  - The Coal Transition PPA requires pre-approval from WUTC in order to be effective (up to a 180-day process)
  - Opportunity to pursue Coal Transition PPA may be lost if delayed

- The Ferndale Ownership offer is least cost/risk existing resource that is well-known to PSE and can be easily integrated into PSE's portfolio. The Ferndale acquisition will be pursued immediately because:
  - The WA State Emissions Performance Standard will be amended and PSE may be restricted from acquiring the facility if it is unable to meet new standard
  - Without long-term contracts to cover operating expenses, Tenaska may decide to mothball plant

- The [redacted] and [redacted] negotiations will be pursued at a later date due to the timing and will be re-evaluated as required to meet PSE's capacity need

Appendix

Models and metrics

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.)

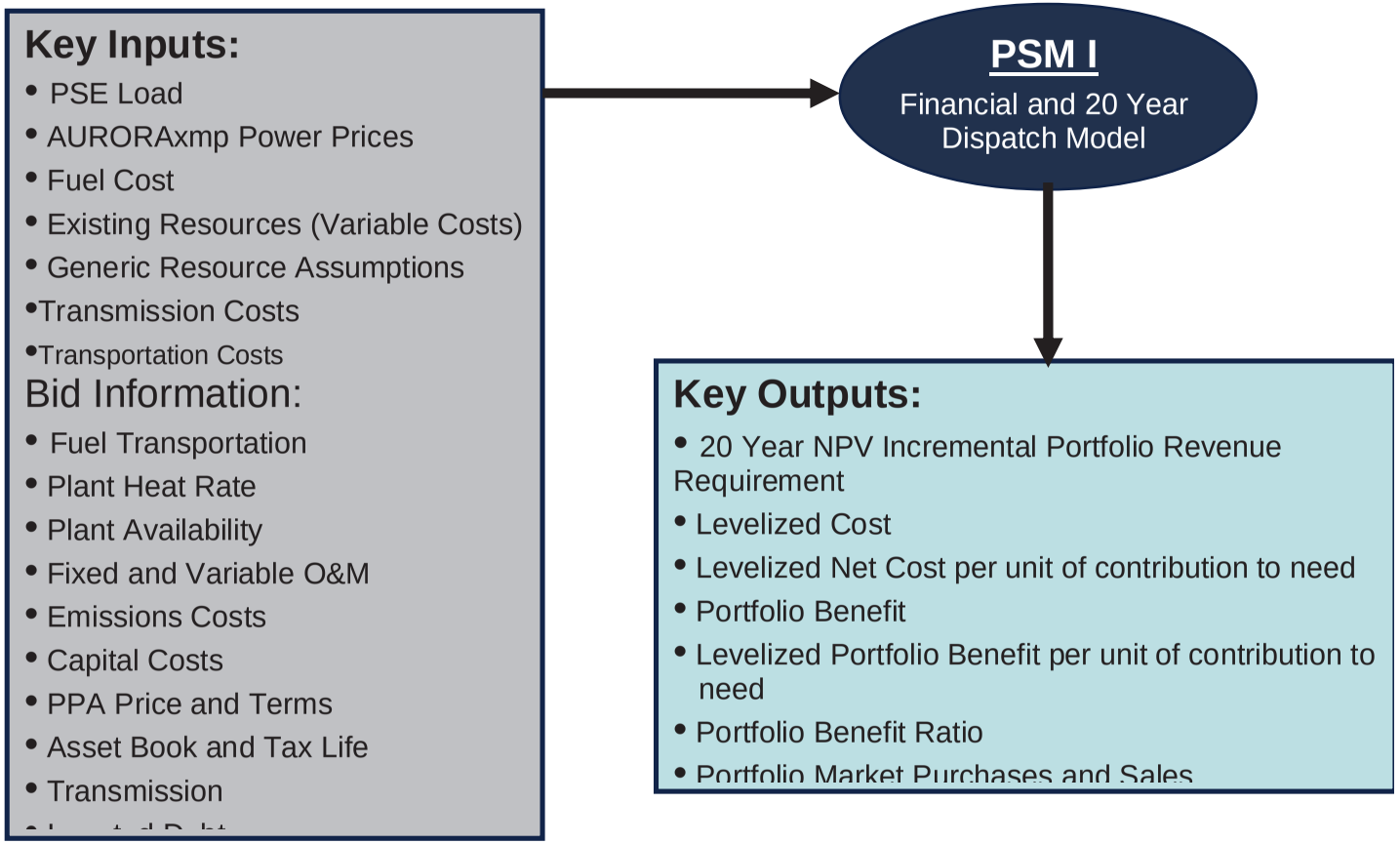
- **Levelized Cost** ($/MWh): the net present value of the proposed project's revenue requirement divided by the net present value of the proposed project's generation. (Lower is better. Useful for comparing projects that have the same or similar operating characteristics.)

- **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.)

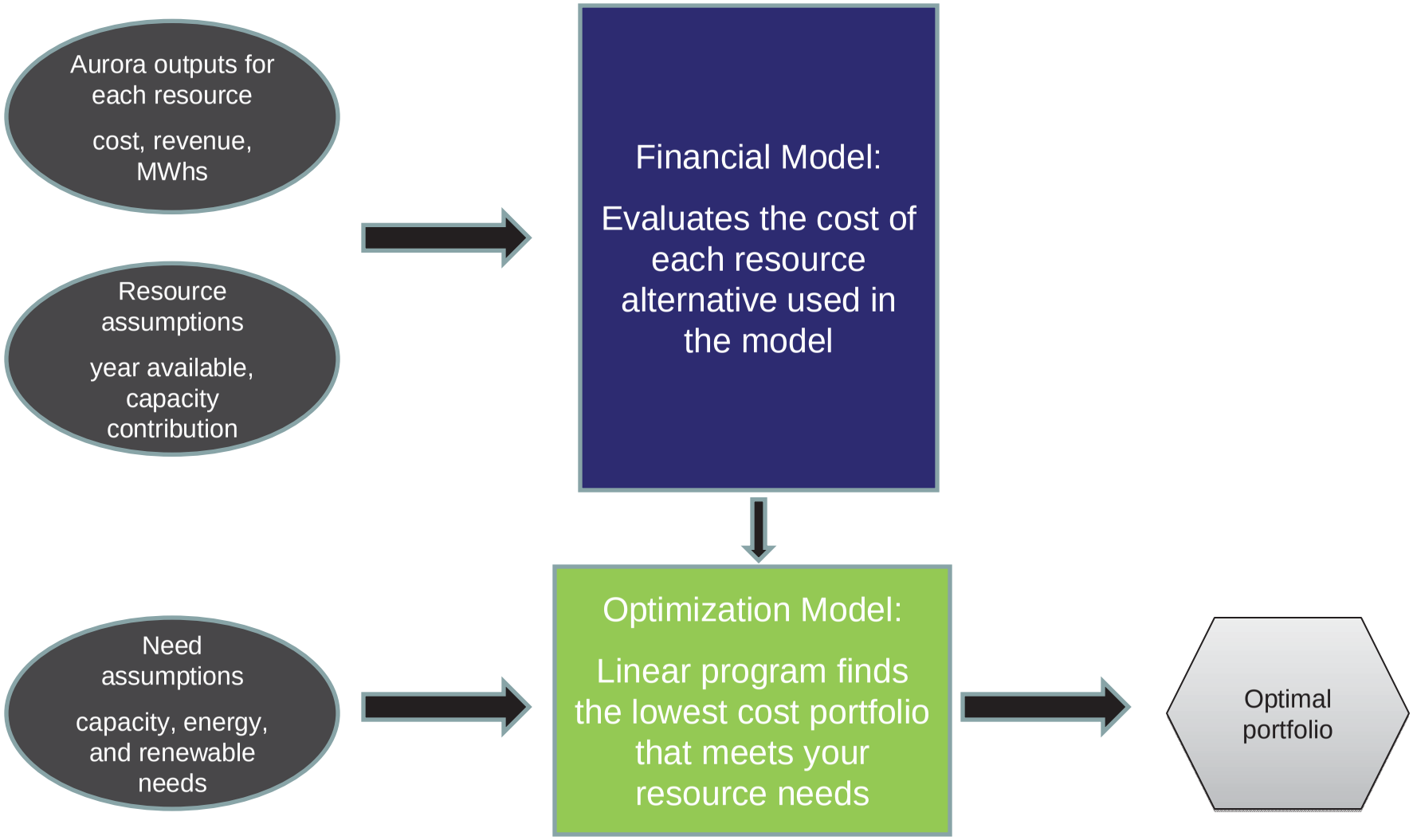
- **Levelized net cost per unit of contribution to need** ($/kW or $/REC): difference between the net present value project revenue requirement and the net present value market revenue of the project's generation divided by the net present value of the project's capacity contribution. If a renewable 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.)

PSM screening model



PSM III optimization model



Appendix

Scenarios and assumptions

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

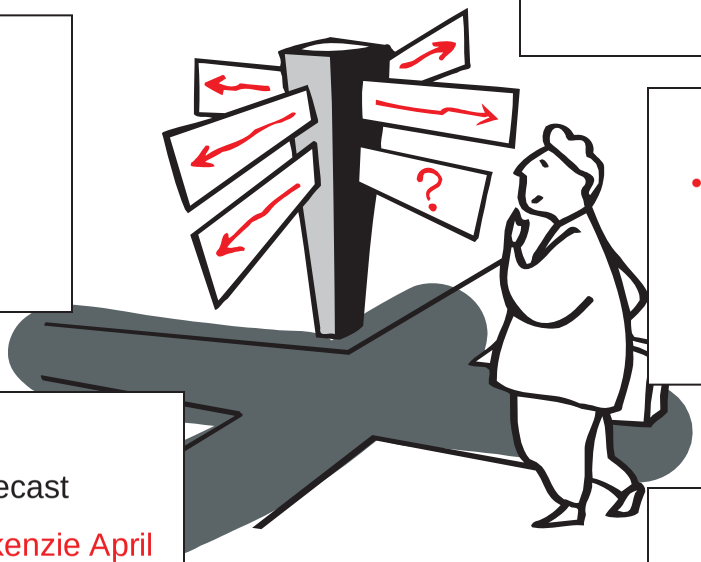
- PSE F2012 Base load forecast
- Mid Natural Gas Price
- Mid Regional Loads
- No CO_2 Price

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 + 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

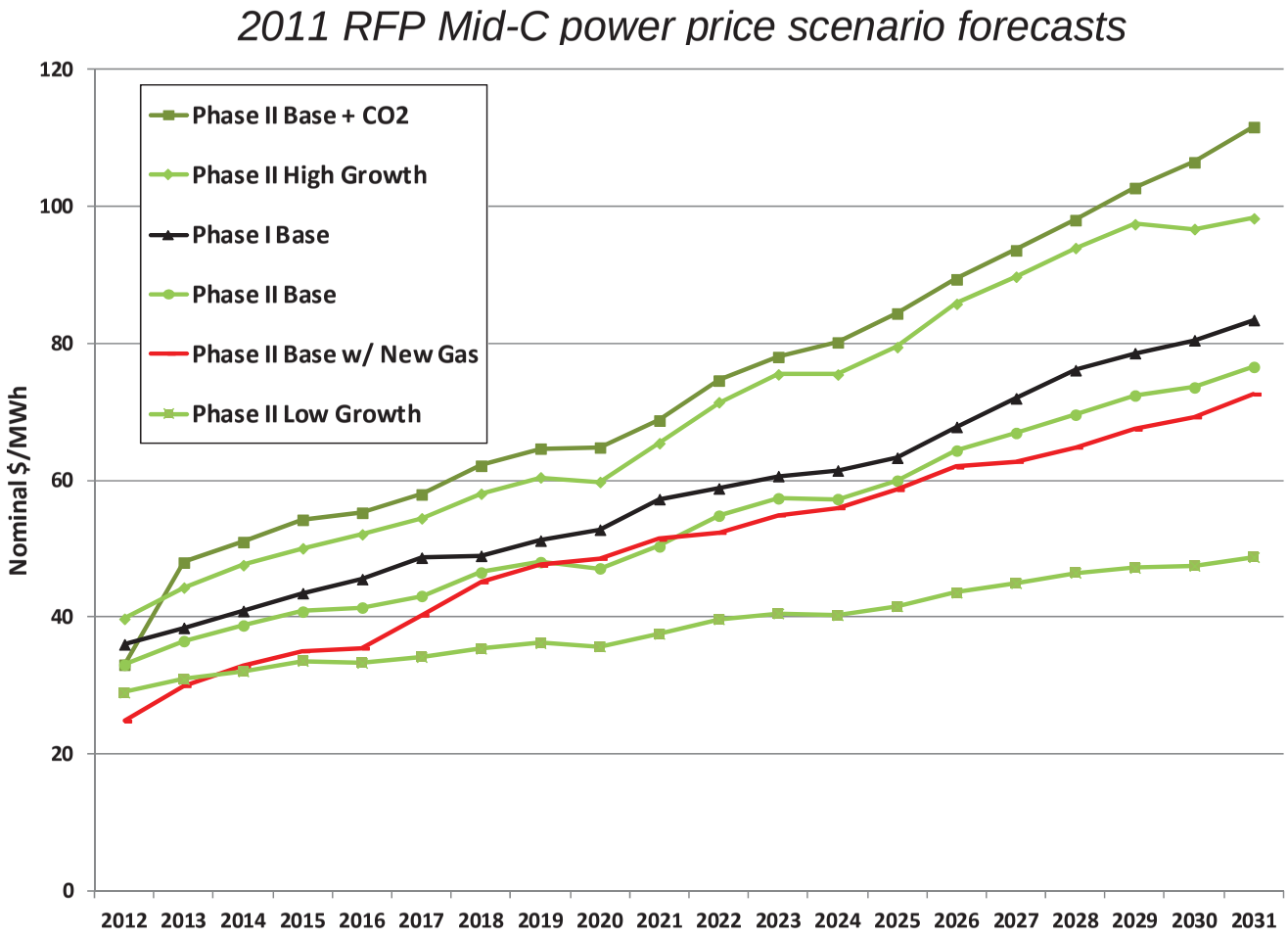
Notes:
(1) "Base w/ New Gas": New Wood Mackenzie gas prices as of late April 2012
(2) Lower regional population growth

Comparison of Sumas Hub gas price forecasts

REDACTED VERSION

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



Creating the "Base + CO2" scenario

REDACTED VERSION

	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	
2013	0	18	36.50	47.98	
2014	0	20	38.78	50.96	
2015	0	21	40.81	54.22	
2016	0	23	41.40	55.24	
2017	0	25	43.09	57.93	
2018	0	27	46.52	62.12	
2019	0	29	48.04	64.62	
2020	0	31	47.12	64.78	
2021	0	33	50.33	68.73	
2022	0	36	54.82	74.57	
2023	0	38	57.36	78.01	
2024	0	41	57.25	80.14	
2025	0	44	59.94	84.36	
2026	0	48	64.33	89.36	
2027	0	51	66.91	93.58	
2028	0	55	69.58	98.01	
2029	0	59	72.38	102.69	
2030	0	64	73.56	106.46	
2031	0	69	76.56	111.61	

The table shows:

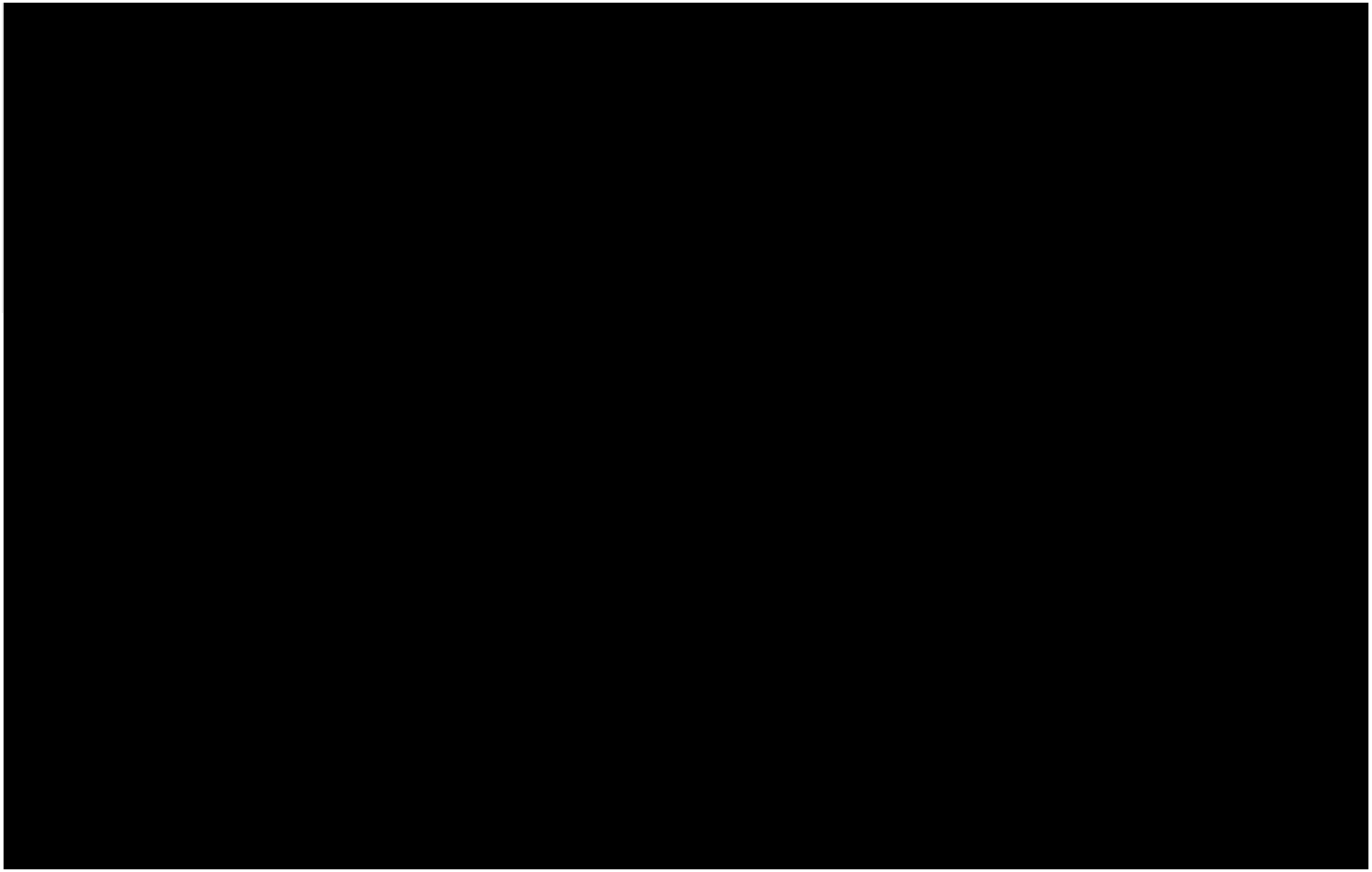
- CO_2 price used by PSE in "Base"[1] and "Base + CO2"[2] scenarios
- Mid-C power prices
- Adder included in the evaluation of the Coal Transition PPA, which is the difference in the Mid-C power prices between scenarios

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

Risk analysis in RFP Phase II Base scenario:

Annual Sumas Price Distribution

REDACTED VERSION



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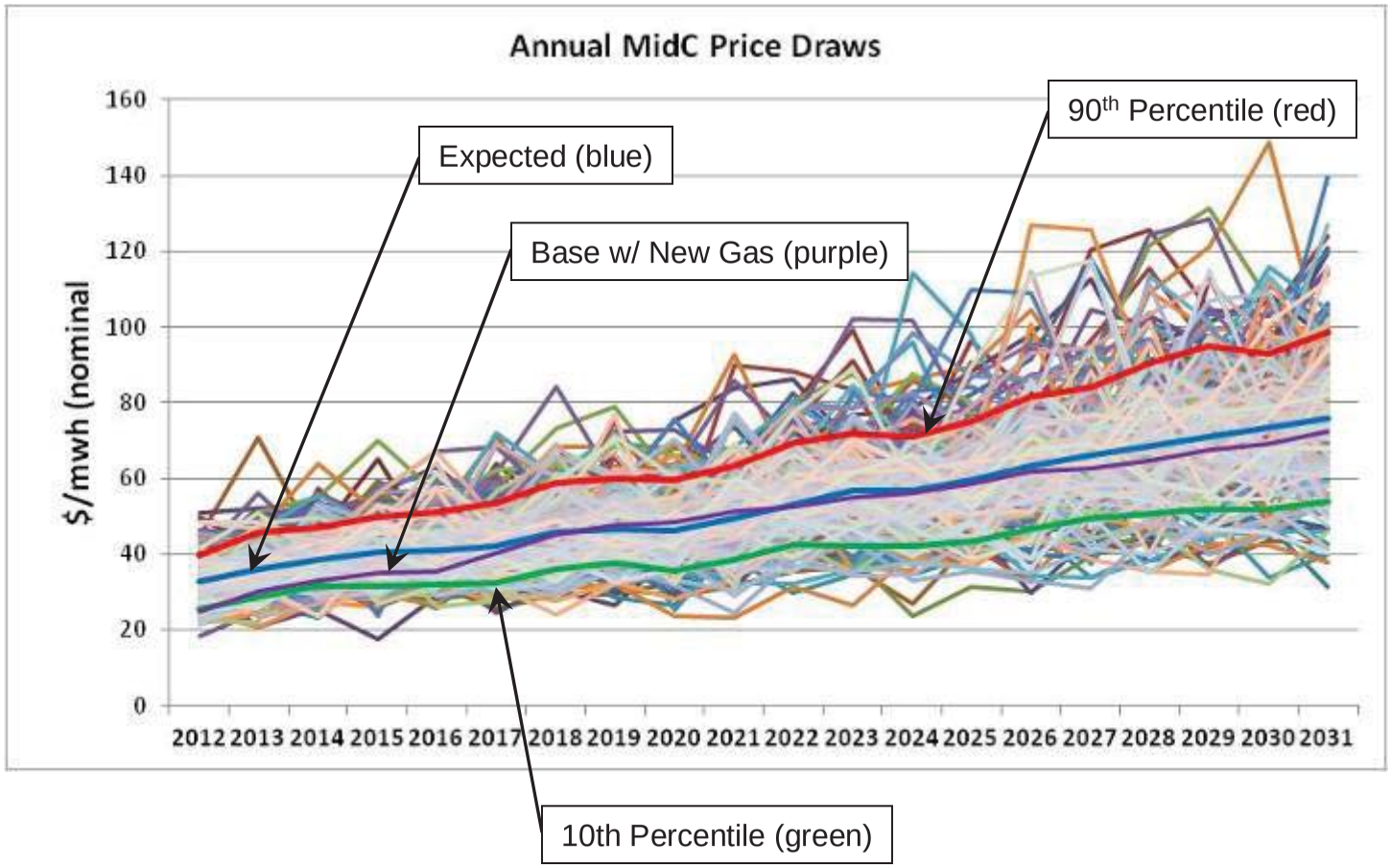
Risk analysis in RFP Phase II Base scenario:

Annual Mid-C Electric Price Distribution



Risk analysis in RFP Phase II Base scenario:

Historical distributions compared to RFP