

EXHIBIT NO. _____ (EMM-1T)
DOCKET NO. _____
2003 POWER COST ONLY RATE CASE
WITNESS: ERIC M. MARKELL

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

Docket No. _____

v.

PUGET SOUND ENERGY, INC.,

Respondent.

DIRECT TESTIMONY OF
ERIC M. MARKELL
ON BEHALF OF PUGET SOUND ENERGY, INC.

OCTOBER 24, 2003

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I.	SUMMARY OF TESTIMONY	4
II.	PSE DETERMINED THAT IT NEEDS ADDITIONAL ELECTRIC RESOURCES	6
III.	PSE CONSIDERED DIFFERENT RESOURCE OPPORTUNITIES	9
	A. Overview of Process.....	9
	B. PSE Began the Resource Evaluation Process	14
	C. PSE Developed Five Evaluation Criteria	14
	D. PSE Considered Different Resource Opportunities	16
	1. Conservation Resources	16
	2. Generation Asset Resources	17
	3. Purchased Power Resources	24
	4. Self-Build Options.....	29
IV.	PSE FURTHER EVALUATED THE REMAINING RESOURCE CANDIDATES	33
	A. Overview	33
	B. The Due Diligence Efforts	34
	C. Remaining Generation Asset Candidates	34
	D. Remaining PPA Candidates	39
	E. The Hybrid Option	41
	F. Portfolio Screening Model Analysis	42
V.	RECOMMENDATION TO BOARD OF DIRECTORS FOR APPROVAL OF RESOURCE DECISION	43
VI.	DESCRIPTION OF THE FREDERICKSON 1 TRANSACTION AND FACILITY	47
	A. Transaction Overview	47
	B. Ownership History	49
	C. Facility Description	49

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

TABLE OF CONTENTS, CONTINUED

D. Transmission 51
E. Fuel Transportation and Management Strategy 52
F. Acquisition Costs and Financing 53
EXHIBIT LIST 53

1 **PUGET SOUND ENERGY, INC.**

2 **DIRECT TESTIMONY OF ERIC M. MARKELL**

3 **Q: Please state your name, business address and occupation.**

4 **A:** My name is Eric M. Markell. My business address is: 10885 NE 4th St., PSE 12N,
5 Bellevue WA 98004-5591. I am employed as the Senior Vice President of Energy
6 Resources for Puget Sound Energy, Inc. ("PSE" or "the Company").
7

8 **Q: What are your responsibilities in your current position?**

9 **A:** In addition to my other duties as Senior Vice President, I lead PSE's long-term
10 planning and resource acquisition teams. In this capacity, I am responsible for
11 ensuring that PSE plans for, acquires, and maintains sufficient generation resources to
12 meet our customers' long-term energy needs at a reasonable cost. **Ex. ____ (EMM-2)**
13 describes my professional responsibilities in more detail.
14

15 **Q: What are your educational background and previous work experience?**

16 **A:** My educational background and previous work experience are described in **Ex. ____**
17 **(EMM-2).**
18

19 **I. SUMMARY OF TESTIMONY**

20 **Q: Please summarize your testimony.**

21 **A:** PSE has entered into a set of agreements to purchase a 49.85% ownership interest in
22 the 249.3 (nominal) MW Frederickson 1 gas-fired generation facility that is located
23 near Spanaway, Washington and currently owned by Frederickson Power L.P.
24 ("FPLP"), an indirect wholly-owned subsidiary of EPCOR Utilities, Inc. ("EPCOR").
25 The transaction is the culmination of a robust planning and analytical process; a broad
26 review of available opportunities; extensive due diligence; and tough negotiations. In
27 my testimony, I will describe the process, consideration, and analyses that formed the
28

1 basis of our recommendation to PSE's Board of Directors to purchase an ownership
2 interest in this generation asset.

3
4 More specifically, my testimony covers several areas:

- 5
- 6 • **First**, I recap PSE's determination that it requires additional electric resources. I
7 provide a general assessment of the merchant power sector -- including the sector's
8 recent downturn that has created both challenges and opportunities for PSE.
 - 9 • **Second**, I describe the process that PSE followed to identify and evaluate several
10 types of resource opportunities. We assessed these opportunities using a structured
11 and methodical approach that culminated in the decision to acquire an ownership
12 interest in the Frederickson 1 project.
 - 13 • **Third**, I give an overview of our negotiations with the owners and developers of
14 the short-listed projects and the power purchase opportunities, and our subsequent
15 due diligence activities. These efforts led to the preparation of PSE's *Presentation*
16 *to Board of Directors Update on Electric Resource Strategy and Recommendation*
17 *for Frederickson 1 Acquisition* (October 7, 2003), which I have attached to my
18 testimony as **Ex. ____ (EMM-3HC)**.
 - 19 • **Finally**, I describe the negotiated terms and conditions under which PSE will
20 acquire an ownership interest in the Frederickson 1 project -- specifically the
21 49.85% ownership interest in FPLP's 249.3 MW Frederickson 1 gas-fired
22 generation facility. PSE prepared a memorandum to its Board of Directors that
23 summarizes the transaction. I have attached such memorandum to my testimony as
24 **Ex. ____ (EMM-4C/HC)**.
- 25
26
27
28

1 **Q: Have you been involved with other transactions for the negotiation and**
2 **acquisition of energy generation facilities?**

3 **A:** Yes. During my career, I have been actively involved with numerous transactions for
4 the negotiation and acquisition of gas-fired and other energy generation facilities
5 located throughout the United States. I am familiar with the wide range of business
6 issues that are involved with such transactions, including construction, operations,
7 engineering, bankruptcy, tax, and financing. Ex. ____ (EMM-2) discusses my
8 experience with such transactions in more detail.

9
10 **Q: With regard to the Frederickson 1 transaction, has PSE met the Commission's**
11 **regulatory standards for new resource acquisitions?**

12 **A:** Yes. Throughout the resource planning and acquisition processes, we have been
13 mindful of the Commission's regulatory standards and expectations, including the
14 prudence requirement that Mr. Gaines discusses in his testimony. See Ex. ____
15 (WAG-1T) at 13-14; Ex. ____ (WAG-6). We believe that the Company has satisfied
16 each element of this requirement with respect to the Frederickson 1 acquisition.

17
18 **II. PSE DETERMINED THAT IT NEEDS ADDITIONAL ELECTRIC**
19 **RESOURCES**

20 **Q: Has PSE recently defined and evaluated its electric resource needs?**

21 **A:** Yes. Mr. Gaines and Mr. Black speak to the resource planning processes that the
22 Company conducted from 2001 through the present. See Ex. ____ (CJB-1T)
23 (Testimony of Charles J. Black); Ex. ____ (WAG-1T) at 9-15 (Testimony of William
24 A. Gaines).

25
26 As Mr. Black discusses in his testimony, the processes and analyses that went into the
27 preparation of PSE's 2003 Least Cost Plan ("2003 LCP") resulted in a well-defined
28 and supported determination that PSE needs additional electric resources. Specifically,

1 and due primarily to the expiration of several power contracts, PSE estimates that it
2 will require, in the near-term (i.e., January 2005), approximately 476 aMW of
3 additional energy resources to meet its load obligations (before conservation) – which
4 requirement is forecast to increase to approximately 1,715 aMW in January 2013. *See*
5 **Ex. ____ (CJB-1T)** at 6-7; **Ex. ____ (CJB-5)**.

6
7 Given the growing needs that PSE identified, it became essential that PSE develop a
8 multi-staged, diversified strategy with a number of solutions to obtain the additional
9 electric resources that the Company requires. We have developed such a strategy and
10 are now in the process of implementing it. Our strategy contrasts with a “market-
11 dependent” approach – also called the “do-nothing” approach in PSE’s 2003 LCP –
12 that relies exclusively upon the short-term power market to meet the Company’s needs.
13 Ms. Ryan sets forth in her testimony the reasons why PSE cannot rely on that market
14 alone to obtain the resources it requires. *See Ex. ____ (JMR-1T)* at 11-21.

15
16 **Q: What has happened to merchant generation in the Pacific Northwest in the last**
17 **few years?**

18 **A:** The rapid decline in merchant generation activity has been a significant issue in the
19 Pacific Northwest power markets in the last few years. In the states of Washington,
20 Oregon and Idaho, over 26,800 MW of nameplate capacity had been planned for
21 completion just a few years ago. Of those planned capacity additions, however, only
22 184 MW reached completion in 2003. (Three projects representing 1,189 MW started
23 construction, but had work halted by their owners: Duke-Satsop (650 MW), Mirant-
24 Mint Farm (286 MW), and Calpine-Goldendale (253 MW).) Of the remaining
25 projects, it is extremely difficult to determine which will ultimately (if ever) obtain the
26 required permits, transmission service, gas supply, off-take contracts, dispatch protocol
27 agreements, and financing that would be necessary to assure their completion. *See*
28 *Planned Pacific Northwest Power Plant Additions, Ex. ____ (EMM-5)*.

1
2 Many of these planned projects had been intended for the merchant sector. With the
3 recent collapse of that sector, however, many merchant companies are no longer able to
4 finance their projects through expected sales into the short-term wholesale markets and
5 related trading activities. Recent discussions with some of these developers indicate
6 that these companies are essentially looking to PSE or other regional utilities for long-
7 term power contracts, and their balance sheets for credit support, in order to assist with
8 the financing, development, and completion of their projects. This seems to be the case
9 because capital providers will no longer support investment in business models that
10 rely on unpredictable revenue from spot market sales and trading activity. Further, the
11 uncertain nature of federal actions in the wake of the Western Power Market Crisis
12 adds additional risk to such business models. *See Ex. ____ (EMM-3HC)* at tab titled
13 "Review of Merchant Landscape."
14

15 **Q: What ramifications does the decline of the merchant generation sector have for**
16 **PSE?**

17 **A:** The decline of the merchant generation sector has a considerable impact on PSE, and
18 presents both challenges and opportunities. As Ms. Ryan discusses in her testimony,
19 the illiquidity issues in the power markets make it impossible for PSE to meet its
20 energy needs solely from those markets without assuming unacceptable risks. *See Ex.*
21 *____ (JMR-1T)* at 11-21.
22

23 On the other hand, the illiquid and depressed merchant generation sector creates some
24 possible opportunities for PSE. Many of the developers who built the last wave of
25 national projects suffered large losses; incurred sizable debt; and saw a significant
26 decline in their market capitalization. These companies have halted development
27 activity and are now trying to sell off existing plants in order to raise cash, reduce debt,
28 improve their capitalization, and reduce earnings drag and general uncertainty. As a

1 result, PSE may now have a window of opportunity in the region to buy already-built
2 generation projects at possible discounts to replacement cost. PSE considered such
3 opportunities during the resource evaluation process that I discuss later in my
4 testimony.

5
6 **III. PSE CONSIDERED DIFFERENT RESOURCE OPPORTUNITIES**

7 **A. Overview of Process**

8 **Q: Please summarize the process that PSE followed in identifying and evaluating**
9 **different resource opportunities.**

10 **A:** PSE employed a thorough and considered process to identify and evaluate several
11 types of electric resource opportunities. We assessed these opportunities and – based
12 upon our assessment -- decided to acquire an ownership interest in the Frederickson 1
13 facility as part of a broader, multi-stage diverse portfolio resource strategy. My
14 testimony and the exhibits that I sponsor discuss this process in detail.

15
16 **Q: Did PSE actively involve its Board of Directors during this process?**

17 **A:** Yes. During 2002 and 2003, PSE management gave regular updates to the Board of
18 Directors concerning PSE's planning and analysis activity, its need for additional
19 resources to meet its load obligations, and the options that were emerging to meet this
20 need. We gave presentations and presented materials at several Board meetings and
21 retreats. These presentations are summarized in attached Ex. ____ (EMM-6HC). The
22 materials that we presented to the Board are attached to my testimony as Exs. ____
23 (EMM-7) through ____ (EMM-17C/HC).

24
25 **Q: Why did PSE involve its Board to this extent?**

26 **A:** We involved our Board for several reasons. First, we wanted to assure both
27 understanding and alignment within the PSE management team about our planning
28

1 methods, our key assumptions, and the general approach we were using to define
2 resource needs that could be met by conservation and new supply sources.

3
4 Second, the Board must approve a corporate decision to acquire a significant new
5 resource. Accordingly, we wanted to involve the Board along the way so that it could
6 participate in the evaluation, comparison, and ultimate decision with respect to a
7 resource.

8
9 Third, we wanted ongoing feedback from the Board concerning our efforts. On various
10 occasions the Board asked PSE management to follow up on a subject. This feedback
11 proved helpful as we identified and evaluated the different options.

12
13 Finally, we were mindful of the Commission's regulatory standards and expectations
14 that I discussed earlier in my testimony. According to the Commission, if a utility
15 decides to acquire a particular resource, then it should (1) inform its board of directors
16 about the acquisition and its costs, and (2) involve the board in the decision process.
17 *See, e.g.,* Nineteenth Supplemental Order in Docket Nos. UE-920433, UE-920499, and
18 UE-921262 (consolidated), at 37 and 46; **Ex. ____ (WAG-6)**. I believe that we have
19 fully informed PSE's Board of Directors concerning the Frederickson I acquisition. I
20 also believe that we have fully involved the Board in the ultimate decision process.

21
22 **Q: Could you describe how PSE coordinated the resource evaluation process with the**
23 **preparation of the LCP?**

24 **A:** Yes. The resource evaluation process was closely tied to the least cost planning
25 process. The Company's planning activities influenced our identification and
26 evaluation of resource opportunities:
27
28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

- **First**, the planning process provided the analyses that led to the development of the Company's recommended planning standard. See Ex. ____ (CJB-1T) at Section V; Ex. ____ (CJB-3) at Chapters XI and XII (2003 LCP).
- **Second**, the planning process led to the development of the multi-stage, diversified resource strategy that PSE has begun to implement. See Ex. ____ (CJB-1T) at Sections VII and VIII; Ex. ____ (CJB-3) at Chapter XII.
- **Finally**, the Portfolio Screening Model that PSE developed to support and implement the planning process became the primary analytical tool by which PSE evaluated the resource options it identified and compared those options against a market-dependent approach. See Ex. ____ (CJB-1T) at Section IV.D.; Ex. ____ (CJB-3) at Chapter XI, pp. 15-35.

Q: What types of opportunities did PSE consider in the resource evaluation process?

A: PSE considered several possible ways to meet the resource needs that I discussed in Section II of my testimony. We did not, however, consider these opportunities to be mutually exclusive. We considered the opportunities both individually and (using a hybrid approach) in combination with other alternatives.

- **Conservation** – the acquisition of resources from conservation efforts.
- **Asset Acquisition Option**– the acquisition of one or more generation projects.
- **PPA Option** – the execution of one or more purchased power agreements.
- **Self-Build Option** – the construction by PSE of a new generation project.
- **Deferral Option** – the market-dependent approach that I discussed earlier.
- **Mixed or Hybrid Option** – a combination of two or more resource alternatives.

We defined several evaluation criteria and used them to identify, screen, and prioritize different resource alternatives. As I discussed earlier in my testimony, we involved

1 PSE's Board of Directors throughout this process and coordinated our resource
2 evaluation efforts with the ongoing preparation of the 2003 LCP.
3

4 **Q: Were practical considerations involved in considering these opportunities?**

5 **A:** Yes. We considered potential "execution risks" over which PSE may have little or no
6 control, and that may adversely impact the timing, magnitude, and ultimate
7 composition of PSE's resource portfolio. Execution risks are numerous; they run the
8 gamut from timely permit acquisition in the case of a development project, to financing
9 risks that potential partners might encounter in securing project financing, to the risks
10 posed by the bankruptcy process. These risks could have affected many of the supply
11 side alternatives that we were considering. For these reasons, we discussed with the
12 management team and the Board of Directors the potential for execution risks when
13 assembling a resource portfolio.
14

15 **Q: Please explain the risks that are posed by the bankruptcy process.**

16 **A:** There are both "pre-closing" and "post-closing" risks associated with the bankruptcy
17 process. PSE considered both types of risks during the resource evaluation process that
18 I discuss later in my testimony.
19

20 "Pre-closing" risks arise between the time that the parties execute a purchase and sale
21 agreement ("PSA") and the time that the transaction closes. For example, if a project
22 seller files for bankruptcy protection and decides during the pre-closing period that the
23 transaction is no longer beneficial, it could reject the PSA and not be required to close
24 the transaction. In that case, the buyer would be left without the project and only an
25 unsecured claim against the bankrupt seller for the buyer's damages. Further, the
26 transaction could be subject to higher offers under the bankruptcy court's purview –
27 and if such an offer were accepted and allowed to go forward, the buyer would lose the
28 value of the transaction and would suffer out-of-pocket and opportunity costs. Finally,

1 even if the seller assumes a PSA for a partially-completed project, the buyer would be
2 forced to rely upon a bankrupt entity to complete the project. My experience with
3 energy companies in the bankruptcy process is that the process can cause a
4 considerable drain on management's time and resources, which in turn makes
5 performance under construction and operating contracts that much more problematic.
6

7 "Post-closing risks" may also arise due to a seller's bankruptcy filing. After the sales
8 transaction closes, a seller (or its creditors) could seek to unwind a transaction that
9 occurred before the filing, based on a claim that the transaction was for less than
10 reasonably equivalent value. Further, if the project is only partially complete at the
11 time the PSA closes, then the seller could reject some or all of its obligations to
12 complete the project (such as engineering and construction obligations) or otherwise
13 slow the completion process through its efforts to reorganize. In addition, the
14 performance guarantees provided by key suppliers of equipment and construction
15 services frequently have expiration dates that lapse when a project has been
16 significantly delayed or if a change in asset ownership occurs that breaks the chain of
17 custody for equipment. In these situations, vendors often modify or truncate original
18 guarantees and demand additional large premium payments to extend such assurances.
19

20 Under these circumstances, purchasers of assets from financially distressed companies
21 face risks that they will become enmeshed in the seller's bankruptcy proceeding or that
22 the PSA will be reviewed in the future by parties seeking to maximize the value of the
23 debtor's estate. We considered these risks as examples of the execution risks that I
24 discussed above.
25
26
27
28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

B. PSE Began the Resource Evaluation Process

Q: What steps did PSE take to begin the resource evaluation process?

A: In early 2002, PSE's resource strategies team began to gather detailed information on the status of potential resource opportunities in the Pacific Northwest region. The team prepared the report titled *Overview of PSE Loads and Resources 2002-2010* that Mr. Gaines sponsors and discusses in his testimony. See Ex. ____ (WAG-1T) at 9-14; Ex. ____ (WAG-4) (report).

Then, in the summer of 2002, PSE retained Tenaska, Inc. ("Tenaska") -- an experienced developer and operator of power projects -- to help review and assess PSE's opportunities to self-build a generation resource. In August 2002, PSE retained as transaction advisor Navigant Consulting, Inc. ("Navigant") -- a leading advisor in electric asset transactions with a focus on strategy development and execution -- to assist the Company in the solicitation, analysis, and negotiation of a possible resource acquisition in the Pacific Northwest region. (Navigant also assisted in certain analytical tasks with respect to the 2003 LCP and the integration of conservation programs into the resource portfolio assessment.)

C. PSE Developed Five Evaluation Criteria

Q: Please summarize the criteria that PSE used to evaluate the different alternatives.

A: PSE developed five criteria that guided the Company in its evaluation of each alternative:

- **Compatibility with Need.** The new resource or resources had to assist the Company in meeting the short-term and long-term energy and capacity requirements of its system. In this context, PSE sought a resource or resources that would best help the Company to meet its planning standard. The Company

1 considered the fact that its generation resources should be seasonally balanced to
2 reflect load seasonality and to minimize the risk of excess seasonal capacity.

- 3 • **Cost Minimization.** The new resource or resources had to be consistent with the
4 Company's least cost planning principles. In this context, PSE pursued the lowest
5 cost resource options to help meet the Company's energy and capacity needs. The
6 Company considered the resource's price-value tradeoffs; the balance between the
7 resource's fixed and variable costs; the resource's associated transmission costs;
8 and the resource's associated revenue requirement impact.
- 9 • **Risk Management.** The new resource or resources had to provide a reasonable
10 balance between potential benefits and risks. Due to the seasonal load profile of
11 PSE's system, we had to balance the potential for a "resource surplus" position in
12 the summer with the potential for a "resource deficit" position in the winter. This
13 seasonal interaction had to be considered in the context of uncertainties relating to
14 projected power prices, hydro conditions, and gas prices. In addition, the Company
15 considered load growth, the lack of creditworthy counterparties, and PSE's
16 potential exposure to counterparty risk. Execution risks, as well as the risks
17 associated with the plant-specific performance reliability and flexibility of the
18 resource technology, were also considered under this criterion.
- 19 • **Public Benefits.** The new resource or resources had to contribute to certain public
20 considerations. These considerations included the contribution to regional energy
21 resource adequacy; the lowering of emissions levels such as carbon dioxide (CO₂)
22 and nitrous oxide (NO_x) through the operation of lower emission machines; the
23 promotion of energy efficiency; and the impact upon the development of renewable
24 energy resources that the 2003 LCP found valuable.
- 25 • **Strategic and Financial.** The new resource or resources had to be consistent with
26 certain strategic and financial considerations. These considerations included
27 consistency with the Washington State Energy Strategy (which Mr. Black discusses
28 in his testimony, *see* Ex. ____ (CJB-1T) at 35); the Company's strategy to secure

1 long-term resources to meet its load obligations as a vertically integrated and fully-
2 regulated utility; and the implications of the resource or resources on PSE's capital
3 structure and its ability to support operations.
4

5 **Q: Please describe how PSE developed the evaluation criteria.**

6 **A:** We began in September 2002 to develop a list of potential criteria. These potential
7 criteria included, in turn, a number of subcriteria and measures, such as fuel supply;
8 financial price and value; location; equipment technology; in-service dates and
9 scheduling; size/operation flexibility; resource mix; impact on revenue requirement;
10 counterparty risk; and security and control. By December 2002, we had organized
11 these criteria into financial measures of value and five main criteria. *See Financial*
12 *Prioritization of Opportunities, Ex. ____ (EMM-18HC) at 43; see also Ex. ____*
13 *(EMM-1T) at 24 (use of two financial metrics to evaluate resources). These five*
14 *criteria were then used in concert with the Portfolio Screening Model to assess the*
15 *potential options and portfolio approaches.*
16

17 **D. PSE Considered Different Resource Opportunities**

18 **1. Conservation Resources**

19 **Q: Did PSE consider conservation as a potential resource opportunity?**

20 **A:** Yes. PSE viewed conservation as a resource opportunity throughout the planning and
21 acquisition processes. As PSE began its least cost planning process, it assumed for
22 planning purposes that it could obtain 15 aMW of conservation per year at a reasonable
23 cost. As Mr. Black discusses in his testimony, PSE performed an extensive assessment
24 of conservation resource potential during the development of the August 2003 LCP
25 Update. *See Ex. ____ (CJB-1T) at 41. This analysis identified an estimated*
26 *“achievable potential” (not necessarily economic) of 328 aMW of cumulative electric*
27 *conservation savings over the 2004-2023 time period. Further analysis identified an*
28

1 "economic potential" of 276 aMW over 20 years, including an aggressive goal of
2 acquiring 203 aMW during 2004-2013.

3
4 I understand from those in charge of the conservation program at PSE that the
5 Company is in the process of working with stakeholders through the Conservation
6 Resources Advisory Group to develop targets and programs for 2004 and 2005.
7 Current program planning and implementation for electricity savings assume the
8 accelerated conservation investment scenario. Such targets and programs are
9 scheduled to be filed with the Commission on October 31, 2003.

10
11 **Q: How does conservation fit within PSE's approach to resource evaluation?**

12 **A:** The resource acquisition team has integrated conservation into the resource portfolio
13 evaluation process at the levels determined to be economically achievable in the 2002-
14 2003 least cost planning process. As Mr. Black discusses in his testimony, the least
15 cost planning process has confirmed that PSE cannot meet its resource needs through
16 conservation alone. See Ex. CJB-1T at 44.

17
18 **2. Generation Asset Resources**

19 **Q: Did PSE evaluate opportunities to acquire generation assets?**

20 **A:** Yes. Initially PSE assessed these opportunities on a "two-track" process. Track 1
21 centered on the development of a structured methodology to identify, evaluate, and
22 prioritize generation alternatives that existed in the Pacific Northwest region. Track 2
23 created a process for opportunistic discussions where developers might be willing to
24 transact at a discount to their sunk costs. However, although PSE made inquiries under
25 the Track 2 approach, we never located an opportunity that was sufficiently distressed
26 or that otherwise warranted a departure from the more structured Track 1 approach.

27
28 **Q: When did PSE seek proposals for the acquisition of generation projects?**

1 A: On September 16, 2002, PSE sent a letter to all 53 known project owners and
2 developers in the Pacific Northwest region, titled *Request for Expression of Interest for*
3 *Generation Facility* ("Asset Solicitation"). These owners and developers represented a
4 total of 71 projects in the region. I have attached the Asset Solicitation to my
5 testimony as Ex. ____ (EMM-19).
6

7 Q: **Please summarize the Asset Solicitation.**

8 A: In the Asset Solicitation, we notified the project owners and developers that PSE was
9 conducting its least cost planning process to evaluate its long-term power supply
10 requirements. We went on to state that the Company had preliminarily identified a
11 need for incremental baseload electric resources in the 200-300 aMW range on a yearly
12 basis, beginning in the fall of 2003. We acknowledged that recent developments in the
13 energy sector could provide near-term opportunities for the Company to acquire or
14 partner with owners of electric generation facilities that were either in service or in the
15 latter stages of development. We indicated that the Company would consider various
16 alternatives to meet the resource need that the Company had identified. The Asset
17 Solicitation requested responses from the owners and developers by September 30,
18 2002.
19

20 Q: **Did PSE receive responses to the Asset Solicitation?**

21 A: Yes. PSE received 32 responses to the Asset Solicitation. These responses represented
22 39 project proposals. *See Ex. ____ (EMM-18HC) at 12-13 (description of responses).*
23

24 Q: **What steps did PSE then take?**

25 A: We first attempted to negotiate confidentiality agreements with the owners and
26 developers that responded to the Asset Solicitation. Such agreements were necessary
27 because we sought confidential, detailed commercial and operational information in
28 order to evaluate their projects. In most cases, we were able to negotiate these

1 agreements and obtain the information we wanted. However, we could not come to
2 terms with certain owners and developers. Some of them withdrew their expressions
3 of interest when they learned that they had to provide us with confidential project
4 information. Other owners and developers did not respond (or did not respond fully) to
5 the information requests we sent, or expressed concerns regarding protection of their
6 information. Ultimately we evaluated just those projects whose owners or developers
7 provided the necessary project information and data that we requested.
8

9 **Q: Did PSE compare the projects using the evaluation criteria you described?**

10 **A:** Yes. For those projects whose owners and developers had been sufficiently
11 forthcoming, we prepared a report that discussed and compared the respective projects
12 using the five criteria that I mentioned above. We completed this work in early
13 December 2002. In our report, we identified 14 leading project candidates – 11 gas-
14 fueled projects and 3 wind projects – and attempted to rank them as possible
15 acquisition opportunities. The comparison and ranking that we performed are
16 described in attached Ex. ____ (EMM-18HC) at 5-7.
17

18 **Q: What did you do next?**

19 **A:** During December 2002 and January 2003, we held several meetings with the owners
20 and developers of these 14 projects. We wanted to more fully understand and evaluate
21 the opportunities that their projects represented. We also attempted to determine their
22 underlying business objectives with respect to their projects and the commercial issues
23 that they were confronting. Such issues included: (1) the lack of or potential loss of
24 transmission service; (2) contracts for gas transportation rights; (3) the availability of
25 construction financing; (4) the status of key equipment and vendor warranties; (5)
26 various partnering and dispatch protocol issues; (6) potential bankruptcy risks; and (7)
27 other issues.
28

1 Based upon these face-to-face discussions, the analysis that PSE performed, and
 2 information that PSE received in response to further information requests, we reduced
 3 the list of acquisition candidates to five gas-fired generation projects and three wind
 4 projects. See Ex. ____ (EMM-13C/HC) (Resource Acquisition Team Report). The
 5 gas-fired combustion turbine ("CCGT") projects were:

PLANT	OWNER	NOMINAL CAPACITY (MW) *	INTERCONNECTION

**HIGHLY CONFIDENTIAL
 INFORMATION REDACTED**

17 * Based on prevailing information provided by developer,
 18 subsequently adjusted for some plants, as due diligence
 19 progressed.

20 ** Possibility of direct transmission connect to PSE

21 By reducing the list of project candidates, however, PSE did not intend to close the
 22 door on discussions with any of the non-listed project owners or developers. We
 23 continued to talk with this group about their projects, and invited them to give us
 24 additional information and data (which in many cases they provided and continue to
 25 provide). Throughout the resource evaluation process, we remained open to receiving
 26 new information and data that might cause us to re-evaluate our assessments.

1 Q: Did PSE make any changes to the list of gas-fired projects?

2 A:

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18 Q: Please discuss PSE's determination with respect to the wind projects.

19 A: Though our discussions with the wind project developers concerning their proposed
20 terms, we determined that the economic viability of the wind projects was dependent to
21 a great extent upon the extension of production tax credits – which require federal
22 legislation. Another consideration was the likelihood that a project developer would
23 have sufficient taxable income to take full advantage of tax credits on a timely basis, or
24 in the alternative, be dependent upon finding third-party owners of the project for tax
25 purposes. An additional complicating factor was uncertainty over whether the
26 developers could obtain the necessary permits to build and operate the proposed wind
27 generating facilities.

28

1 Given these factors, we decided to do a focused review of wind opportunities through a
2 wind RFP process later in 2003, when we would be more likely to know whether
3 production tax credits and the necessary permits will be available. This RFP was filed
4 on August 25, 2003 for public comment and Commission review.
5

6 **Q: Did PSE consider a possible tax upon CO₂ emissions?**

7 **A:** Yes. This issue was discussed during the least cost planning process. *See Ex. ____*
8 **(CJB-1T)** at 43-44. However, there are no federal or Washington State taxes, statutes,
9 or regulations applicable to CO₂ emissions from electric generation facilities in
10 Washington State. For that reason, we did not factor a speculative tax or cost on CO₂
11 emissions into our resource evaluation.
12

13 **Q: Did PSE have an overriding consideration during its preliminary evaluation?**

14 **A:** Yes. Under the *Compatibility With Need* criterion, we were particularly concerned
15 with a project's expected in-service date. For our first "tranche" (or level) of supply,
16 we therefore focused our attention on projects that had expected commercial operation
17 dates ("COD's") before December 2004.
18

19 **Q: Why was it important that a project begin operation before December 2004?**

20 **A:** As I discussed earlier in my testimony, and as Mr. Black discusses in his testimony
21 (*see Ex. ____ (CJB-1T)* at 7), PSE had initially determined that its near-term resource
22 needs were in the 200-300 aMW range on a yearly basis. However, the scheduling and
23 completion estimates that the owners and developers gave could charitably be viewed
24 as optimistic – and the farther out the COD in a shrinking merchant market, the more
25 susceptible a project was likely to be to possible development and construction delays.
26

27 Further, many of the projects that we reviewed were in very preliminary stages of
28 development – which meant they had not yet obtained requisite permit approvals. In

1 Washington State, for example, a stationary thermal power plant with capacity greater
2 than 350 MW is subject to EFSEC licensing review and case-by-case approval by the
3 governor in the form of a Site Certification Agreement ("SCA"). (Smaller facilities do
4 not require an SCA but must still obtain applicable air quality, wastewater, land use,
5 construction, and other permits.) In many cases, however, the projects that we
6 reviewed did not possess all of the necessary development assets to proceed. For
7 example, owners and developers had not finished geotechnical review and site
8 preparation, did not possess permits to construct, and did not have committed
9 financing.

10
11 In this context, it is worth noting that many of the projects we reviewed with CODs
12 beyond December 2004 were essentially conceptual projects with no committed
13 financing and no "iron in the ground." Since these projects had made very little
14 progress with respect to creating critical development assets, their owners and
15 developers essentially looked to PSE -- either individually or in combination with
16 others -- to provide commercial arrangements that would allow them to finance and
17 complete future development activity but often at risk to PSE. This scenario offered
18 very little assurance of success upon which the Company could rely.

19
20 By contrast, projects with CODs before December 2004 were far more likely to reach
21 completion. These projects had already incurred development and construction
22 expense -- which meant that their remaining costs and completion risk would be less.
23 Further, the owners and developers of these projects appeared motivated to make
24 concessions during negotiations so that they could complete their plants and reduce
25 their losses with the hope of obtaining some future return of, and on, their investment.

26
27 For these reasons, and given PSE's near-term resource deficit, we determined that
28 projects with CODs well beyond 2004 were unlikely to meet our initial resource needs.

1 In order to meet its ongoing resource needs, however, the Company will consider
2 projects with CODs beyond 2004 as part of future resource solicitations. A general
3 plan for resource acquisition, including specifically wind resources, is described in the
4 RFP that is part of the Resource Acquisition Program that Mr. Black discusses in his
5 testimony. See Ex. ____ (CJB-1T) at 46; Ex. ____ (CJB-4).

6
7 **Q: How did PSE evaluate the different projects with respect to *Cost Minimization*?**

8 **A:** We used a staged process with two financial metrics as an initial screen to generate a
9 short list of candidate projects: (1) a market-based, commercial transaction evaluation
10 based on discounted cash flow analysis; and (2) a pro forma comparative revenue
11 requirement. The contemplated purchase prices were used as the capital cost for the
12 revenue requirement model, in which we tested the revenue requirement sensitivity to
13 various inputs. See Ex. ____ (EMM-18HC) at 10; Ex. ____ (EMM-20HC)
14 (discussion of other aspects of *Cost Minimization*). We subsequently performed a
15 more detailed portfolio analysis of the revenue requirement using the Portfolio
16 Screening Model, and later validated such results using the AURORA model. See Ex.
17 ____ (CJB-1T) at 46-47. I discuss this analysis later in my testimony.

18
19 **Q: Has PSE evaluated the projects using the other criteria?**

20 **A:** Yes. Ex. ____ (EMM-20HC) (*Summary of Non-Financial Screening Criteria*)
21 describes the application of the non-financial criteria to each of the five gas-fired
22 projects.

23
24 **3. Purchased Power Resources**

25 **Q: When did PSE seek proposals for purchased power agreements (“PPAs”)?**

26 **A:** On November 27, 2002, PSE sent a letter to 75 potential PPA providers in the region --
27 primarily project owners, developers, and utilities -- titled *Solicitation of Proposals for*
28

1 *Power Purchase Agreements* ("PPA Solicitation"). I have attached the PPA
2 Solicitation to my testimony as Ex. ____ (EMM-21).

3
4 **Q: Why did PSE issue the PPA Solicitation after the Asset Solicitation?**

5 **A:** At the outset, we understood that many of the project owners and developers would
6 also be interested in entering into a PPA. We deemed it tactically beneficial to obtain
7 as much information about available generating assets as possible before discussing a
8 PPA option with asset owners.

9
10 **Q: Please summarize the PPA Solicitation.**

11 **A:** PSE asked the recipients to respond by December 20, 2002, with proposals for firm,
12 long-term (20+ years) base-load resources with seasonal and other dispatch capabilities
13 in the 200-300 aMW range. The PPA Solicitation asked that these resources be
14 available for delivery as early as the fall of 2003.

15
16 **Q: Did PSE receive responses to the PPA Solicitation?**

17 **A:** Yes. PSE received 26 responses to the PPA Solicitation. These responses represented
18 46 PPA proposals with a wide variety of sizes, durations, and structures. These
19 proposals are summarized in the *PPA Evaluation Process* (January 14, 2003) that is
20 attached to my testimony as Ex. ____ (EMM-22HC).

21
22 **Q: What steps did PSE then take?**

23 **A:** We first grouped the PPA proposals and assessed each of them based on the following:

- 24
25 • **Completeness** – Did the proposal include all of the information that we had
26 requested?
27 • **Timing** – Did the proposal satisfy our request that delivery begin as early as the fall
28 of 2003? (This factor relates to the *Compatibility with Need* criterion.)

- 1 • **Location** – Was the power plant facility located outside a transmission-constrained
2 area? If not, could the owner of the facility secure firm transmission to PSE’s
3 control area? (This factor relates to the *Cost Minimization* criterion -- since PSE
4 currently faces transmission constraints, *see Ex. ____ (JMR-1T)* at 18-20 and map
5 at *Ex. ____ (JMR-10)*, we wanted to make sure that deliveries under the PPA to
6 our system could actually occur.)
- 7 • **Development Risk** – Was the facility to which the proposal was tied, if at all,
8 either operational at the time of PSE’s evaluation or expected to be completed by
9 December 2004? (This factor relates to the *Risk Management* criterion -- we
10 wanted to apply the same COD requirement that we used to evaluate possible asset
11 acquisitions. Also, certain “market-based” proposals were not tied to specific
12 generation facilities.)
- 13 • **Credit Risk** – Did the potential counterparty possess investment grade credit?
14 (This factor relates to the *Risk Management* criterion -- PSE has certain credit
15 requirements and expectations with respect to counterparties in the power markets,
16 *see Ex. ____ (JMR-1T)* at 13-18.)

17
18 Then, based on the application of the same five criteria that we used to evaluate the
19 generation proposals, we reduced the PPA candidates to a list of 20 products (12 tolling
20 arrangements and 8 fixed or index-priced PPAs) offered by 12 companies. In January
21 2003, we reduced this list even further, to a list composed of 11 products offered by 8
22 companies. We notified these companies and reconfirmed their proposals and terms.
23 *See PPA Evaluation Process Status Report* (January 29, 2003), *Ex. ____ (EMM-*
24 *23HC)*; *Power Resource Acquisition Team Weekly Progress Review* (February 5,
25 2003), *Ex. ____ (EMM-24HC)* at 4-8. As with the asset evaluation, however, we did
26 not intend the PPA evaluation to preclude further information exchange and
27 discussions with the candidates whose products did not appear on the January list. We
28 remained open to this interchange throughout our evaluation of the PPA candidates.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Q: Please explain the difference between a fixed-price PPA and a tolling PPA.

A: A fixed-price PPA provides for the purchase of energy at a specified volumetric price that is usually expressed on a \$/MWh basis. The parties to the PPA may agree to escalate the price during the contract term. Fixed-price PPAs are typically “unit-contingent,” which means that the PPA is tied to a specific asset; when the asset is operating, the seller will deliver energy that the purchaser must take at the fixed price. Fixed-price PPAs are usually tied to assets that have little or no fuel commodity price volatility, such as coal plants, wind plants, and nuclear plants.

In contrast, a tolling PPA is usually structured around a gas-fired facility. Since the purchaser must provide gas to the facility in order to receive power, the purchaser assumes the risk associated with a short exposure to natural gas. A tolling PPA often quotes a heat rate and a variable O&M component, which forms the basis for the dispatch decision. Such a PPA may provide for a fixed capacity payment -- usually quoted in \$/kW on a monthly or annual basis -- that contributes to the fixed expense of the operator or contracting party.

Q: Did PSE reach any preliminary observations on the PPA proposals?

A: Yes. We first noted the breadth and scope of the PPA proposals. They offered a wide range of delivery start dates (2003-2006); contract terms (5-25 years); technologies (gas, coal, wind, geothermal, and hydro); delivery locations (PSE’s transmission system, BPA, and other utility systems); and contract counterparties. The mix of pricing structures, product types, and contract terms is summarized in Ex. ____ (EMM-22HC) at 3.

We found that the more attractive PPA proposals were those that best achieved the supply adequacy -- that is, the total required capacity (200-300 aMW) and energy that

1 could be taken as baseload or displaced at PSE's option. However, the fixed-price
2 PPA proposals we received were not displaceable, whereas the tolling PPA proposals
3 we received were displaceable. None of the PPA proposals PSE received provided for
4 "real-time" dispatching, but the tolling PPAs did allow for some flexibility with regard
5 to uncertain market prices for electricity and natural gas. The more attractive proposals
6 also had dedicated generation that was sufficient to guarantee physical availability of
7 the contract quantities.

8
9 Finally, we preferred proposals that were based upon facilities located within PSE's
10 control area. Such a location would reduce transmission risk and reduce transmission
11 costs. Upon review of the PPA proposals, however, we determined that 75% of the
12 products offered did not hold firm transmission rights to PSE's control area.

13
14 **Q: How firm were the price quotes that PSE received in the PPA proposals?**

15 **A:** The PPA pricing terms that PSE received were not firm, but rather were indicative or
16 non-binding. Thus, the actual prices would vary depending upon volatility in the
17 wholesale power markets and the negotiation of definitive terms and conditions. PSE
18 would therefore need to confirm final prices in addition to a number of other terms and
19 conditions (including important control provisions over the subject asset) before
20 entering into a binding PPA or PPAs.

21
22 **Q: Regarding credit risk, has the financial condition of energy companies declined?**

23 **A:** Yes. The financial condition of many energy companies has deteriorated markedly in
24 the last few years. This is reflected in several recent ratings downgrades and
25 bankruptcy filings in the industry.

1 Q: Did these developments have implications for the PPA evaluation process?

2 A: Yes. As Ms. Ryan discusses in her testimony (*see Ex. ____ (JMR-1T)* at 14), PSE
3 generally will not contract with companies that have debt ratings below investment
4 grade. The ratings downgrades and bankruptcy filings add to the credit uncertainties
5 that currently plague the power markets – which in turn makes it difficult to find a
6 potential PPA counterparty that is financially healthy today. Long-term
7 creditworthiness of counterparties is of special concern for long-term agreements.

8
9 Market counterparties that do business with PSE require varying degrees of credit
10 support from PSE. Thus, if PSE were the purchaser under a PPA, PSE could need to
11 incur debt to post cash or a cash equivalent such as a letter of credit if the markets
12 moved the PPA “out of the money” – *i.e.*, if the PPA price exceeded the market price.
13 But if the market price moved away from (*i.e.*, exceeded) the PPA price, then the PPA
14 would become more valuable to PSE as the buyer – but less valuable to the seller. In
15 that situation, PSE could face risk exposure if the counterparty failed to post cash or
16 collateral to the benefit of PSE. And in the event of a bankruptcy filing by the
17 counterparty, the counterparty could move the bankruptcy court to reject out-of-market
18 contracts to reduce the financial burden upon the debtor’s estate. This is reported to
19 have occurred frequently in recent bankruptcy filings by regulated and unregulated
20 power companies. For these reasons, PSE needs to constantly assess its counterparties
21 in the power markets, but also recognize the fact that the Company itself is constantly
22 being evaluated as a potential counterparty.

23
24 **4. Self-Build Options**

25 Q: Please summarize PSE’s activities with respect to its Self-Build Option.

26 A: In the fall of 2002, PSE asked Tenaska to assess and report on alternatives for self-
27 development of a generation project or projects. Thereafter Tenaska prepared a report
28

1 ("Tenaska Report" or "Report") titled *Assessment and Report on Self-Build Generation*
2 *Alternative for Puget Sound Energy's 2002-2003 Least Cost Plan*. PSE attached the
3 Report as Appendix H to the 2003 LCP. See Ex. ____ (CJB-3) at Appendix H. The
4 same Report is attached to my testimony as Ex. ____ (EMM-25). See also Ex. ____
5 (EMM-26) (Tenaska Memorandum Re "LM 6000 4x1 Configuration at
6 Frederickson").

7
8 The Tenaska Report included detailed information on the various aspects of project
9 self-development -- including design, siting, permitting, equipment procurement,
10 construction, startup, operation, and maintenance. The Report also provided estimates
11 of generic project development costs and time schedules as well as an overview of
12 then-current market conditions that affected the price and availability of combustion
13 turbines and engineering, procurement, and construction ("EPC") services.

14
15 **Q: How did PSE select potential sites for a self-developed project?**

16 **A:** The Company did not want to build new generation in locations where the ability to
17 deliver power to serve retail load was uncertain. This meant that potential generation
18 sites had to be located west of the Cascades due to the trans-Cascades constraints that
19 exist on the regional transmission system. See Ex. ____ (JMR-1T) at 18-20; Ex. ____
20 (JMR-9); Ex. ____ (JMR-10). There are also north-to-south constraints that exist in
21 Western Washington, which removed locations in Whatcom and Skagit Counties from
22 consideration.

23
24 The search therefore focused on 24 potential sites in PSE's service territory in King,
25 Pierce, and Thurston counties. PSE compiled a list of sites based on their ability to
26 meet applicable zoning requirements. Site inspections and financial analysis followed.
27
28

1 Tenaska analyzed all of this information to arrive at estimated generic costs for three
2 equipment configurations on two possible sites in PSE's service area: (1) the Dieringer
3 site (a substation near the White River hydro plant), and (2) the Frederickson site (a
4 location with two gas turbine peaking units that has room for expansion). *See Ex. ____*
5 **(EMM-25)** at 11-12 and 18. The Frederickson site is located adjacent to the
6 Frederickson 1 plant that I discuss later in my testimony.

7
8 **Q: Did Tenaska estimate the costs associated with the self-build alternative?**

9 **A:** Yes. The total costs were estimated to range from \$209 million to \$420.8 million.
10 Expressed as an amount per kw of capacity constructed, Tenaska estimated that the
11 costs would range from \$710 to \$784 per kw for the General Electric 7F technology up
12 to a cost of \$1,083 per kw for the LM6000 configuration. *See Ex. ____ (EMM-25)* at
13 13; *Ex. ____ (EMM-26)* at 1.

14
15 **Q: What were some of the other conclusions that Tenaska drew?**

16 **A:** The Tenaska Report determined that certain design and construction issues have a
17 significant potential effect on specific cost components. For example, EPC costs –
18 typically the single largest cost component of a construction project -- vary
19 considerably under different conditions. Tenaska determined that permitting issues,
20 project scheduling, gas transportation, and interconnection costs are unique for each
21 facility and site. Tenaska also found that sites that are located farther away from PSE's
22 customers have greater costs for gas transportation, electric transmission, and water.
23 *See generally Power Resource Acquisition Team Summary of Tenaska Report*
24 *(February 19, 2003), Ex. ____ (EMM-27).*

25
26 Therefore, while generic cost-to-build estimates allow a general comparison among
27 different options, and represent an important input to planning models, the
28 development of a project-specific cost estimate requires a much more detailed

1 assessment that considers (among other things) specific design and construction
2 variables; engineering reports for construction; transmission upgrade studies;
3 negotiations with municipalities for services and taxes; and so-called "soft costs," e.g.,
4 costs other than EPC costs.
5

6 **Q: Please describe the capital and power cost methodology in the Tenaska Report.**

7 **A:** As described in the Report (*see Ex. ____ (EMM-25)* at 8), Tenaska looked at two self-
8 build alternatives for PSE's existing Frederickson site and one equipment configuration
9 for its Dieringer site. The estimates for plant performance, capital and operating costs,
10 permitting and construction schedules were integrated to calculate total installed capital
11 costs (in \$MM and \$/kW) and all-in power costs (in \$/MWh).
12

13 **Q: How did the Self-Build Option compare to the Asset Acquisition Option?**

14 **A:** Based on the work that Tenaska had performed, PSE concluded that the leading
15 acquisition candidates were equal or superior to the Self-Build Option, and did not
16 carry the risks that were associated with the self-build alternative. Although PSE
17 would not receive power from a self-built project for at least 4-5 years, the top two
18 acquisition candidates that we evaluated are operating today – and thus can help PSE
19 with its near-term resource needs. Further, from the standpoint of *Cost Minimization*,
20 the pool of acquisition candidates offered comparable or lesser-cost alternatives to the
21 site-specific self-build options, but with greatly-reduced or zero risk of construction
22 cost overruns. Finally, the reduction (if any) in market exposure risk caused by the
23 construction of a physical plant, and any associated public or strategic benefits, would
24 be no better than any of the top acquisition candidates we considered. *See Ex. ____*
25 **(EMM-3HC)** at 80.
26
27
28

1 **IV. PSE FURTHER EVALUATED THE REMAINING RESOURCE CANDIDATES**

2 **A. Overview**

3 **Q: Please describe the next steps that PSE took to evaluate the remaining resource**
4 **candidates.**

5 **A:** PSE developed a "short list" of candidates under both the Asset Acquisition Option and
6 the PPA Option, and compared those candidates to the self-build alternative. As I
7 discussed earlier in my testimony, in applying the five evaluation criteria that the
8 Company had developed, PSE determined that the Self-Build Option was equal to or
9 less attractive than the Asset Acquisition Option under each criterion. We discontinued
10 further evaluation of the Self-Build Option on that basis, which left the two other
11 Options for further consideration. *See Ex. ____ (EMM-3HC).*

12
13 PSE then engaged in preliminary due diligence with respect to the remaining asset
14 acquisition and PPA alternatives, together with the hybrid approach. I discuss those
15 activities later in my testimony.

16
17 **Q: Did PSE continue to analyze the economics of the remaining alternatives?**

18 **A:** Yes. Using the initial screening framework that I discussed earlier in my testimony,
19 PSE continued to analyze and update the economics of the five leading asset
20 acquisition alternatives as new information became available. These alternatives were
21 then reduced to three alternatives, which we analyzed in greater detail using the
22 Portfolio Screening Model that I discuss later in my testimony.

23
24 We also revisited the leading PPA opportunities and selected two candidates for more
25 detailed analysis, along with possible hybrid portfolios. We used the Portfolio
26 Screening Model for this purpose. I discuss these analyses and our use of the Portfolio
27 Screening Model later in my testimony.

1 **B. The Due Diligence Efforts**

2 **Q: What is due diligence?**

3 **A:** Due diligence is the process by which a party investigates and evaluates a potential
4 investment. This often involves the examination of business operations, engineering
5 design, equipment performance, environmental conditions, permit status, and human
6 resources practices, and the verification of other material facts. Due diligence may also
7 assess factors that affect the future operation of a potential acquisition and the
8 prospects that the acquisition will perform as expected. *See generally Due Diligence*
9 *Training* (April 11, 2003), Ex. ____ (EMM-28HC/AC).

10
11 In this context, it is worth noting that many of the investigative and evaluation
12 activities performed during the due diligence process are akin to the activities involved
13 in developing a self-build project or purchasing a partially-completed project. These
14 activities may include the review of project design, site surveys, permits, equipment
15 specifications, EPC and O&M costs, and power plant performance tests.

16
17 **Q: Did the due diligence that PSE conducted provide useful project information?**

18 **A:** Yes. As a result of its due diligence efforts, PSE was able to identify issues with
19 respect to the projects, which enabled the Company to successfully negotiate
20 concessions from the owners and developers of the short-listed projects that PSE
21 reviewed. The details relating to this review process, and the concessions that PSE
22 obtained during the negotiating process, are discussed in Ex. ____ (EMM-3HC) under
23 the tab "Due Diligence on Priority Targets."

24
25 **C. Remaining Generation Asset Candidates**

26 **Q: Did PSE further evaluate the _____ projects?**

27 **A:**

28 **HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

Q: Did PSE further evaluate the [redacted] and Frederickson 1 projects?

A: Yes. PSE conducted due diligence and further evaluated each project. I discuss in this section of my testimony the Company's evaluation of each project and the conclusions we reached.

Q: What did PSE determine with respect to the [redacted] project?

A:

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1 Q: What did PSE determine with respect to the facility?

2 A:

3

4

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

5

6

7

8 Q: Please describe how PSE reached this decision with respect to the facility.

9 A:

10

11

12

13

14

15

16

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

17

18

19

20

21

22

23

24

25

26

27

28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

Q: Please discuss PSE's evaluation of the Frederickson 1 facility.

A:

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

D. Remaining PPA Candidates

Q: Did PSE further evaluate the remaining PPA candidates?

A: Yes. PSE evaluated the top PPA opportunities in parallel with our evaluation of the top three acquisition candidates. During June and July 2003, we revisited the original PPA evaluation that we had done in January 2003, with the intent of identifying the top tolling PPA and fixed-price PPA candidates. With the exception of the toll based on the [redacted] project, we analyzed the original top 20 PPA candidates using current market information.

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

Q: What conclusions did PSE reach after it evaluated the top PPA candidates?

A:

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

Q: Please explain the issue of imputed debt with respect to the PPA analysis.

A: S&P and other rating agencies treat long-term contractual obligations -- including fixed payment obligations under PPAs -- as a liability on the balance sheet. Thus, S&P will "impute" debt to the balance sheet equivalent to the net present value of the stream of capacity payments, or in the case of a fixed-price contract, half of the total fixed cost of the contract multiplied by a factor based upon the company's existing contractual position (the current factor for PSE is 40 percent). In order to maintain an equivalent capital structure from a coverage ratio perspective, equity must be issued to offset the imputed debt. The return on this equity is in turn added to the cost profile of the contract. Ex. ____ (EMM-30C) describes the basis for S&P's calculation and the methodology that it employs.

E. The Hybrid Option

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Q: Did PSE consider the Hybrid Option as part of the evaluation process?

A: Yes. We considered how a combination of alternatives might be the best approach to meeting PSE's growing resource needs. In February 2003, we presented materials to PSE's Board of Directors regarding the concepts and possible benefits associated with a diversified hybrid portfolio. *See Ex. ____ (EMM-13C/HC).*

Q: Which combinations did PSE consider?

A: PSE considered three hybrid portfolios around the

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

**HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

F. Portfolio Screening Model Analysis

Q: Please explain how PSE used the Portfolio Screening Model.

A: PSE used the Portfolio Screening Model in a manner consistent with the Model's use in the least cost planning process. PSE assumed that conservation would be set at the accelerated level identified in the August 2003 Update to the 2003 LCP. *See Ex. _____ (CJB-4)* at 41-43. Additionally, PSE assumed that the renewable goal of 10% of customer demand by 2013 would be made up with wind power generation (including the 150 MW from the wind RFP that was filed on August 25, 2003 for public comment and Commission review). Finally, PSE specified resource additions in the portfolios (including leading generation acquisition candidates, leading PPAs, or hybrid combinations), using generic mixed-thermal generation assets to make up any remaining need on a going-forward basis.

Q: What was PSE's objective in using the Portfolio Screening Model?

A: PSE used the Portfolio Screening Model to analyze expected costs to customers on a 20-year net present value ("NPV") basis. As Mr. Black discusses in his testimony (*see Ex. _____ (CJB-1T)* at 19-20), the expected cost to customers of a portfolio combines the revenue requirement of the new generating resources (including the generation assets, PPAs, or hybrid combinations) with the variable costs of the existing portfolio, the net market activity generated by the portfolio, and the end effects.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Q: Did the Portfolio Screening Model provide any other analytical outputs?

A: Yes. Building upon the work performed during the least cost planning process, PSE used the Portfolio Screening Model to run Monte Carlo simulations in order to assess the distribution of the NPV of the expected cost to customers and the underlying components based on the uncertainty associated with power prices, gas prices, and hydro availability. *See Ex. ____ (CJB-3)* at Chapter XI, Section E, at 17-23. We ran 250 iterations of power prices, gas prices, and hydro conditions in the Monte Carlo simulation using a consistent set of uncertainty values for all of the portfolios analyzed. This analysis produced probability distributions of outcomes as opposed to expected value point estimates.

Q: What were the results of the Portfolio Screening Model analysis?

A: The results are described in Ex. ____ (EMM-3HC) under the tab "Comprehensive Assessment."

V. RECOMMENDATION TO BOARD OF DIRECTORS FOR APPROVAL OF RESOURCE DECISION

Q: Please summarize PSE management's recommendation to the Board of Directors.

A: PSE management made a presentation to the Company's Board of Directors at the Board's October 7, 2003 meeting. *See Ex. ____ (EMM-3HC)*. At the Board meeting, we provided an update on the implementation of the electric resource strategy as developed through the least cost planning process (including conservation, renewable resources, and thermal generation). We also requested authorization from the Board to purchase a 125 MW to 137.5 MW share (or 49.85 percent ownership interest) in FPLP's Frederickson 1 gas-fired, power generation facility that is located near Spanaway, Washington. The acquisition is contingent upon (among other closing conditions) an acceptable Commission order in this proceeding.

1
2 Following our presentation, the Board unanimously granted authorization to proceed
3 with the Frederickson 1 acquisition. *See Minutes of October 7, 2003 Board of*
4 *Directors' Meeting, Ex. ____ (EMM-33HC).*

5
6 **Q: Why did PSE management arrive at this recommendation?**

7 **A:** Based upon our evaluation of the Asset Acquisition, PPA, and Self-Build Options, we
8 concluded that the Frederickson 1 acquisition represented the least cost alternative
9 considering all factors. The Frederickson 1 acquisition provides a quality resource that
10 is consistent with the portfolio planning level adopted for the 2003 LCP. The
11 Frederickson 1 acquisition represents a modest first step towards meeting PSE's power
12 supply needs.

13
14 In her testimony, Ms. Ryan discusses several additional benefits that are associated
15 with the Frederickson 1 acquisition. *See Ex. ____ (JMR-1T) at 22-24.* Other benefits
16 include:

- 17
- 18 • **An incremental resource addition that maintains portfolio flexibility** – The
19 Frederickson 1 facility leaves open options for renewable resource technologies,
20 including wind as well as other gas-fired generation projects.
 - 21 • **A high-efficiency machine** – The Frederickson 1 facility is a high-efficiency
22 thermal plant that incorporates Best Available Control Technology (“BACT”)
23 emission controls.
 - 24 • **A manageable financing plan** -- I discuss later in my testimony how the Company
25 intends to finance the acquisition.
 - 26 • **A reliable operator** – An EPCOR affiliate will operate the Frederickson 1 facility
27 under the direction of a joint owners' committee. *See Ex. ____ (EMM-34)*
28 *(Ranking of EPCOR Fossil-Fired Plants by the Canadian Electricity Association).*

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

- **A creditworthy partner** – EPCOR’s long-term debt is rated BBB+ by Standard and Poors.
- **No construction and completion risks** – The Frederickson 1 facility is complete and operating.
- **A virtually-new, commercially-proven plant** – The Frederickson 1 facility had only * operating hours as of June 30, 2003, and PSE was able to acquire the facility at a significant discount to replacement cost.
- **Dispatching flexibility** – This flexibility has the potential to add incremental system reliability value to the acquisition.
- **Potential transmission savings** – PSE and its customers will realize significant savings if the Company is able to directly interconnect the Frederickson 1 facility to PSE’s system.

Q: What impact does the Frederickson 1 acquisition have on PSE’s portfolio?

A: In addition to the many other benefits that I discuss in my testimony, an essential impact upon the portfolio is to exchange purchase power risk for exposure to gas price risk. This exchange is in our customers’ best interest. As illustrated in the 2003 LCP, uncertainty in power prices is far greater than uncertainty in gas prices on an historical basis. A fundamental driver of this divergence of market risks is the fact that power cannot be stored, whereas significant storage in the nation’s natural gas system helps dampen gas price volatility. Additionally, by owning an interest in a plant, PSE can fix the heat rate at which the gas is converted to power, which eliminates the market volatility in implied heat rate. For these reasons, PSE believes that the Frederickson 1 acquisition will reduce our customers’ exposure to price volatility and will ultimately lead to greater rate stability. *See generally* Ex. ____ (CJB-3) at Chapter XI, Section E, at 17-23; Ex. ____ (EMM-35) (same).

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Q: Did PSE review the costs and risks of a market-dependent approach?

A: Yes. PSE compared a 5-year market-dependent strategy (including accelerated conservation) to an asset-based strategy that included the Frederickson 1 plant. Please see Ex. ____ (EMM-3HC) at the tab "Comprehensive Assessment" for the details of this comparison.

PSE concluded that, while an approach that depends solely upon the short-term power markets may be lower cost on an expected value basis, it carries unacceptable risks when compared to an asset-based strategy. The Monte Carlo simulation showed that, in a worst case scenario, and based upon the 250 iterations we performed, PSE would be exposed to approximately \$500 million in additional costs with the market-dependent strategy on a 5-year NPV basis. This difference in expected cost is almost entirely attributable to the difference of the cost of purchased power. See Ex. ____ (EMM-36C).

Q: Did management review with the Board other elements of the resource strategy?

A: Yes. As I discussed earlier in my testimony, at the October 2003 Board meeting we reviewed PSE's strategy for acquiring conservation and other supply resources, and provided updates on conservation, renewable resources, and other thermal project prospects. See Ex. ____ (EMM-3HC) at 4-11; Ex. ____ (EMM-33HC). The Board endorsed this diversified strategy.

1 **VI. DESCRIPTION OF THE FREDERICKSON 1 TRANSACTION AND**
2 **FACILITY**

3 **A. Transaction Overview**

4 **Q: Who currently owns the Frederickson 1 generating facility?**

5 **A:** FPLP currently owns the facility as I discussed earlier in my testimony. FPLP is an
6 indirect wholly-owned subsidiary of EPCOR Utilities Inc., a Canadian corporation.

7
8 **Q: Please describe the transaction under which PSE will acquire its ownership**
9 **interest.**

10 **A:** FPLP will form a limited liability company ("LLC") at or shortly before the Closing.
11 This LLC will receive, as a contribution from FPLP, the entire Frederickson Unit No. 1
12 facility ("Facility") – which will be followed by the sale of 49.85% of such interests in
13 the LLC (the "Interests") to PSE. Immediately after the sale, the LLC will be
14 dissolved; an undivided 50.15% interest in the Facility will be distributed to FPLP; and
15 an undivided 49.85% interest in the Facility will be distributed to PSE. As a result of
16 this transaction, PSE will hold, going forward, a 49.85% undivided interest as a tenant-
17 in-common in and to: (1) the Facility, including a proposed 25MW expansion; and (2)
18 the Facility's share of such assets that are proposed to be common to the Frederickson
19 2 facility (e.g., a 290 MW development project that, if constructed, will be located
20 adjacent to the Facility). See Ex. ____ (EMM-4C/HC) at 10-11 (Diagram of
21 Transaction).

22 **Q: What will the contractual relationships be after the transaction closes?**

23 **A:** Please refer to Ex. ____ (EMM-4C/HC) at 12-13 (Diagram of Principal
24 Relationships), which depicts the key contractual relationships for the Facility.
25
26
27
28

1 **Q: What are the principal documents in the transaction?**

2 **A:** The transaction will be consummated pursuant to the terms and conditions in a
3 Purchase and Sale Agreement (the "PSA") between PSE and FPLP. The PSA is
4 attached to my testimony as Ex. ____ (EMM-37C/HC). In addition, the parties will
5 upon closing enter into a Joint Ownership Agreement (the "JOA") that will set forth the
6 terms that will govern the parties' respective interests in the Facility on a prospective
7 basis. See Ex. ____ (EMM-38C/HC).

8
9 FPLP's share of the Facility output is committed on a long-term basis (approximately
10 19 years remaining term) under contracts (collectively the "PUD Contracts") with three
11 Public Utility Districts: Benton, Grays Harbor and Franklin (collectively the "PUDs").
12 After the sale occurs, PSE will be responsible for providing gas to the Facility to
13 generate its share of the output. PSE, FPLP and the PUDs will enter into "Dispatch
14 Protocols" that will determine how the Facility is operated for the multiple owners.
15 (These protocols exist now and it is anticipated that they will be amended slightly to
16 facilitate real-time dispatch and address system reliability events.)

17
18 Also upon closing, FPLP and PSE will enter into an Operations and Maintenance
19 Agreement (the "O&M Agreement") with Frederickson Power Operations Inc.
20 ("FPO"), an affiliate of FPLP that will act as the Facility operator. See Ex. ____
21 (EMM-39C/HC). FPLP and PSE will enter into various other agreements upon
22 closing that set forth the terms and conditions upon which PSE and FPLP, as the
23 owners of the Facility, will interact with the Frederickson 2 facility (if constructed) that
24 I discussed earlier in my testimony. See *Shared Services Agreement*, Ex. ____ (EMM-
25 40C/HC). While FPLP has undertaken initial development work in connection with
26 the Frederickson 2 facility, there is no assurance at this time that such facility will be
27 constructed.

1 **Q: When will the transaction close?**

2 **A:** Both PSE and FPLP desire to close this transaction as soon as possible. The
3 transaction is contingent, among other conditions, upon PSE obtaining a favorable
4 order from the Commission that approves the inclusion of acquisition and operating
5 costs in rates. Closing is expected as soon as possible after a favorable Commission
6 determination, but in any event must occur no later than June 17, 2004.

7
8 **B. Ownership History**

9 **Q: Please describe the ownership history of the Facility.**

10 **A:** The Tenaska Company originally developed the Facility under a long-term power
11 purchase agreement with BPA. BPA acquired the project development rights and paid
12 the Tenaska Company to terminate its power purchase agreement. BPA then sold the
13 project assets and rights to WestCoast Energy (later acquired by Duke Energy North
14 America), which in turn sold a 40% indirect interest in the Facility to affiliates of
15 EPCOR. Duke and EPCOR proceeded to complete development and construction of
16 the project. Duke then sold its remaining position in the project to affiliates of
17 EPCOR. The Facility was completed and placed into commercial service in August
18 2002.

19
20 **C. Facility Description**

21 **Q: Please describe the Facility.**

22 **A:** As I discussed earlier in my testimony, the Facility is a nominal 249.3 MW natural gas
23 fired, combined-cycle power plant that is located near Spanaway, Washington. *See Ex.*
24 *_____ (EMM-41HC)* (location of Frederickson 1 project). The Facility is a stand-alone
25 combined-cycle combustion turbine project with no steam host. The Facility's
26 combustion turbine is a single GE 7241FA that produces a nominal 172 MW in a
27 simple-cycle mode, and is equipped with inlet air evaporative cooling to increase
28 output during high ambient temperatures. Combustion turbine exhaust gases in excess

1 of 1,100F flow into a Nooter Erickson duct-fired heat recovery steam generator
2 ("HRSG"). The HRSG is configured with three steam levels, including reheat.
3 Nitrogen oxide emissions are controlled by dry low NOx combustors and selective
4 catalytic reduction utilizing aqueous ammonia injection. An oxidation catalyst controls
5 carbon monoxide emissions. The Facility's steam turbine is a GE 120 MW condensing
6 unit with low-pressure admission.

7
8 **Q: What is the Facility's water supply?**

9 **A:** The Facility is supplied with municipal water from Tacoma Public Utilities. The
10 Facility will use a recirculating cooling system that employs mechanically-induced
11 draft evaporating cooling towers to provide cooling water for condenser cooling. The
12 Facility's water treatment plant is sized for 500 gallons per minute, which is
13 significantly more than the Facility's current needs. Waste water is disposed of in the
14 City of Tacoma sewer system.

15
16 **Q: Does FPLP have plans to alter the Facility?**

17 **A:** Yes. FPLP has begun engineering a project that will increase the Facility's capacity by
18 approximately 25 MW. This increased capacity is currently scheduled to come on line
19 in the first quarter of 2004, at an expected total cost of * million. PSE will pay
20 49.85% of the upgrade cost and will receive a proportionate share of the increased
21 output.

*** HIGHLY CONFIDENTIAL
INFORMATION REDACTED**

22 As I discussed earlier in my testimony, FPLP has also initiated the development of a
23 second unit adjacent to the Facility ("Frederickson 2"). If completed, the Frederickson
24 2 plant would use similar equipment and have similar characteristics, although we
25 expect it to be slightly larger than the Facility. PSE will have no ownership rights in
26 the Frederickson 2 plant.
27
28

D. Transmission

Q: How is the Facility electrically interconnected?

A: A 230 kV underground line from the plant switchyard to BPA's South Tacoma substation electrically interconnects the Facility to the regional transmission system. PSE has made an OASIS request with BPA for 138 MW of new point-to-point transmission ("PTP") service to deliver PSE's electrical output from the Facility to a point of delivery at BPA's Covington Substation, which if granted will make PSE eligible for BPA's short distance discount. Transmission service will be provided under BPA's open access transmission tariff ("OATT"). The term of the PTP service will be for two years, but the OATT includes a first right for rollover for additional term, i.e. an "evergreen" clause. BPA has verbally advised PSE that firm transmission capacity is available, but has not yet offered service. An official offer is expected shortly and is a condition precedent to closing the transaction with FPLP. The financial proforma that is attached to my testimony as Ex. ____ (EMM-42C/HC) (*Proforma Summary of Costs of Acquisition*) assumes BPA PTP service for the life of the Facility.

It may be possible to place PSE's portion of the Facility's electric output into the Company's control area, which would save certain ancillary service charges that would otherwise have to be paid to BPA. The capital investment required to implement this change is estimated at approximately \$100,000.00. If it occurs, PSE's customers would realize net savings of approximately \$300,000.00 per year. BPA would have to consent to this change, however.

As an additional opportunity, PSE may be able to directly connect the Facility with the PSE transmission system – which would save all BPA transmission charges that are related to the Facility. The capital investment required to implement this connection is

1 estimated at approximately \$10,000,000.00. If such connection occurs, PSE's
2 customers would realize net savings of approximately \$500,000.00 per year. Again,
3 BPA would have to give its consent to this arrangement.
4

5 **E. Fuel Transportation and Management Strategy**

6 **Q: What gas transportation arrangements are associated with the transaction?**

7 **A:** The transaction contemplates two long-term firm transportation agreements: (1) an
8 agreement with Duke Energy Gas Transmission ("DEGT", formerly Westcoast
9 Transmission Company); and (2) an agreement on the Evergreen Expansion of
10 Williams' Northwest Pipeline ("NWP").
11

12 The term of the DEGT agreement begins on November 1, 2003, and continues through
13 to October 31, 2014. There are renewal rights at the termination of the agreement. The
14 receipt point is Compressor Station No. 2, and the delivery point is the export delivery
15 point at the interconnection of DEGT and NWP, at Huntingdon, British Columbia.
16 The contract demand is approximately 22,100 Dth per day.
17

18 **Q: What are the plans for gas supply associated with the Facility?**

19 **A:** Our plan is to integrate the gas position associated with the Facility into the overall gas
20 position of PSE's power portfolio. *See Fuel Management Strategy, Ex. ____ (EMM-*
21 *43C)*. At present, PSE plans to manage the gas position within the electric portfolio on
22 a short-term basis (12-24 months) until such time as longer-term gas purchase
23 opportunities become more attractive.
24
25
26
27
28

1 **F. Acquisition Costs and Financing**

2 **Q: What are the costs of acquiring the Facility?**

3 **A:** Please see Ex. ____ (EMM-42C/HC) for a description of the costs associated with
4 acquiring the Facility.
5

6 **Q: How does PSE propose to finance the Frederickson 1 acquisition?**

7 **A:** The permanent financing will most likely be senior secured notes (secured by a
8 mortgage on electric and/or gas property) and/or the sale of common stock. The
9 acquisition will initially be funded using proceeds from the Company's existing short-
10 term credit facilities or a new bridge line of credit established for such purpose. The
11 bridge line or liquidity facilities will be repaid using the proceeds of permanent
12 financing when conditions for issuing such financing are favorable in the capital
13 markets.
14

15 **Q: Are you sponsoring any exhibits in this proceeding?**

16 **A:** Yes. I am sponsoring the following exhibits, which are attached to my testimony:
17

18 **EXHIBIT LIST**

19

	Description of Exhibit	Exhibit Number
20	EMM-1T	Testimony of Eric M. Markell
21	EMM-2	Description of Eric M. Markell's responsibilities, current position, and educational background
22	EMM-3HC	<i>Presentation to Board of Directors Update on Electric Resource Strategy and Recommendation for Fredrickson 1 Acquisition (October 7, 2003)</i>
23	EMM-4C/HC	Memorandum to PSE Board of Directors summarizing Frederickson 1 transaction
24		
25		
26		
27		
28		

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

	Description of Exhibit	Exhibit Number
EMM-5	<i>Planned Pacific Northwest Power Plant Additions</i>	
EMM-6HC	Summary of presentations to PSE Board of Directors	
EMM-7	<i>Load and Resource Outlook/New Resource Opportunities</i>	
EMM-8HC	<i>Progress Report Generation Planning</i>	
EMM-9HC	<i>Power Resource Acquisition Team Weekly Progress Review (November 6, 2002)</i>	
EMM-10HC	<i>Resource Acquisition Opportunity Review (January 6, 2003)</i>	
EMM-11	<i>Discussion of Business Context</i>	
EMM-12	<i>Least Cost Plan Report</i>	
EMM-13C/HC	<i>Resource Acquisition Team Report</i>	
EMM-14C/HC	<i>Resource Planning and Acquisition Update to the PSE Board of Directors (March 7, 2003)</i>	
EMM-15HC	<i>Resource Acquisition Update to the PSE Board of Director (April 16, 2003)</i>	
EMM-16HC	<i>Resource Planning and Acquisition Update (July 8, 2003)</i>	
EMM-17C/HC	<i>Energy Resources Group 5-Year Capital and Expense Plan (September 2003)</i>	
EMM-18HC	<i>Financial Prioritization of Opportunities (December 4, 2002)</i>	
EMM-19	<i>Request for Expression of Interest for Generation Facility (September 16, 2002)</i>	
EMM-20HC	<i>Summary of Non-Financial Screening Criteria</i>	
EMM-21	<i>Solicitation of Proposals for Power Purchase Agreements (November 27, 2002)</i>	
EMM-22HC	<i>PPA Evaluation Process (January 14, 2003)</i>	

* HIGHLY CONFIDENTIAL
INFORMATION REDACTED

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

	Description of Exhibit	Exhibit Number
EMM-23HC	<i>PPA Evaluation Process Status Report (January 29, 2003)</i>	
EMM-24HC	<i>Power Resource Acquisition Team Weekly Progress Review (February 5, 2003)</i>	
EMM-25	<i>Assessment and Report on Self-Build Generation Alternative for Puget Sound Energy's 2002-2003 Least Cost Plan</i>	
EMM-26	Tenaska Memorandum re "LM 6000 4x1 Configuration at Frederickson"	
EMM-27	<i>Power Resource Acquisition Team Summary of Tenaska Report (February 19, 2003)</i>	
EMM-28HC/AC	<i>Due Diligence Training (April 11, 2003)</i>	
EMM-29HC	Frederickson 1 - Comparison of Initial Offer to Final Price	
EMM-30C	Basis and methodology for S&P's calculation of imputed debt	
EMM-31HC	* Comparison	
EMM-32HC	* Comparison	
EMM-33HC	<i>Minutes of October 7, 2003 Board of Directors Meeting</i>	
EMM-34	<i>Ranking of EPCOR Fossil-Fired Plants by the Canadian Electricity Association</i>	
EMM-35	Excerpts from 2003 LCP - "Probabalistic Analysis of Risk Factors"	
EMM-36C	Market-Dependent Comparison	
EMM-37C/HC	Terms and Conditions of FPLP PSA	
EMM-38C/HC	Joint Ownership Agreement	
EMM-39C/HC	O&M Agreement	
EMM-40C/HC	<i>Shared Services Agreement</i>	
EMM-41HC	Location of Frederickson 1 project	
EMM-42C/HC	<i>Proforma Summary of Costs of Acquisition</i>	

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

	Description of Exhibit	Exhibit Number
EMM-43C	<i>Fuel Management Strategy</i>	

Q: Does this conclude your testimony?

A: Yes.