

EXHIBIT NO. ___(CAP-1T)
DOCKET NO. UE-082128
WITNESS: CHRISTINE A. PHILIPPS

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

In the Matter of the Petition of

PUGET SOUND ENERGY, INC.

For a Determination of Emissions Compliance and
Proposed Accounting Treatment For the Mint Farm
Energy Center; or, Alternatively For an Accounting
Order

Docket No. UE-082128

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
CHRISTINE A. PHILIPPS
ON BEHALF OF PUGET SOUND ENERGY, INC.**

FEBRUARY 13, 2009

1 **PUGET SOUND ENERGY, INC.**

2 **PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF**
3 **CHRISTINE A. PHILIPPS**

4 **Q. Please state your name, business address, and position with Puget Sound**
5 **Energy, Inc.**

6 A. My name is Christine Philipps. My business address is 10885 NE Fourth Street,
7 Bellevue, WA 98004. I am the Director, Federal Regulatory Affairs for Puget
8 Sound Energy, Inc. (“PSE” or “the Company”).

9 **Q. Have you prepared an exhibit describing your education, relevant employment**
10 **experience, and other professional qualifications?**

11 A. Yes, I have. It is Exhibit No. ____ (CAP-2).

12 **Q. Please explain your duties as Director, Federal Regulatory Affairs for PSE.**

13 A. I am responsible for the strategy, policy and overall direction of the Company’s
14 interest regarding federal regulatory issues. I am responsible for leading the
15 implementation of the Company’s corporate compliance program including
16 monitoring operational compliance units and analyzing risk assessments based on
17 federal regulations. I have held this position at PSE since January 15, 2009. Prior
18 to that time, I was Manager of Resource Acquisition for PSE.

19 **Q. Please describe your prior duties as Manager of Resource Acquisition for PSE.**

1 A. I was responsible for acquiring long term electric generating resources for the
2 Company's supply portfolio. I led due diligence reviews including financial
3 feasibility analyses, engineering review, operations review, environmental review,
4 legal review and real estate review. I negotiated or participated in the negotiation
5 of commercial agreements across a range of resource additions. I was part of the
6 team that developed PSE's 2007 Integrated Resource Plan ("IRP") providing input
7 in the development of the capital costs for PSE's generic assumptions about future
8 resource costs, and reviewing the Company's existing electric resources and any
9 future acquisition activity that would impact PSE's resource need. I was involved
10 in PSE's 2008 request for proposals ("RFP") process, which developed from the
11 Company's 2007 IRP. I led the commercial negotiations for PSE's acquisition of
12 the Mint Farm Energy Center ("Mint Farm") from Wayzata Opportunities Fund,
13 LLC ("Wayzata") and Mint Farm Power LLC.

14 **Q. What is the nature of your testimony in this proceeding?**

15 A. My testimony (1) describes PSE's need to acquire electric generation resources such
16 as Mint Farm, based on the Company's 2007 IRP and (2) demonstrates that Mint
17 Farm is appropriate to meet the Company's need.

18 **Q. Please describe your role in the Company's 2007 IRP process.**

19 A. As mentioned above, one of my functions was to support and participate in the
20 Company's 2007 IRP planning process by providing insight into market trends as

1 well as factors influencing capital costs. I supported the information gathering
2 activity to identify the capital costs for a variety of potential resource additions to
3 be used in support of the generic resource cost assumptions for PSE's generic
4 resource portfolio. In addition to providing information for input assumptions, I
5 participated in discussions to develop the final resource strategy.

6 **Q. Please describe your role in PSE's 2008 RFP process.**

7 A. I actively participated as leader of the Company's 2008 RFP process. I also led the
8 business and commercial team, which was one of more than fifteen PSE teams
9 representing specific areas of expertise that participated in the weekly RFP
10 evaluation meetings. I reviewed all the proposals, along with my team, to
11 determine if there were any fatal flaws that may yield a project infeasible. Among
12 the more significant areas of focus for the proposed projects were: (1) price risk;
13 (2) transmission risk; (3) development/siting risk; (4) technology risk; and (5)
14 execution risk. I participated in the selection of the "candidate short list" at the
15 conclusion of Phase I of the evaluation process as well as the selection of the final
16 short list at the conclusion of Phase II in June 2008. Mint Farm was selected as one
17 of the projects on the final short list.

1 **Q. Did the Company’s 2007 IRP identify a need to acquire additional electric**
2 **resources?**

3 A. Yes. The 2007 IRP process identified a need to replace, renew and acquire nearly
4 700 average Megawatts (aMW) of electric resources by 2011, more than 1,600
5 aMW by 2015, and 2,570 aMW by 2025. The 2007 IRP *capacity* need was
6 identified to be nearly 2,300 Megawatts (“MW”) by 2015, and over 3,200 MW by
7 2020. Of the 2,300 MW of capacity need to be met by 2015, at least 1,234 MW of
8 capacity additions were projected to be from gas-fired combined cycle electric
9 generating plants.

10 **Q. Did the IRP identify the type of electric generation resources that PSE will**
11 **need to acquire to meet this need?**

12 A. Yes. The Company’s demand forecast and analysis of existing resources that was
13 applied in PSE’s IRP resulted in a forward-looking portfolio made up of the lowest
14 reasonable cost long-term resources. The IRP recognized that the bulk of these
15 resources will be gas-fired combined cycle combustion turbines (“CCCT”). In fact,
16 the single largest type of new energy resource reflected in the Company’s IRP is
17 from gas-fired CCCT plants like Mint Farm. A copy of PSE's 2007 IRP was filed
18 with the Petition in this docket, and Chapter 1: Executive Summary at I-4 to I-7 is
19 provided as Exhibit No. ___(CAP-3).

1 **Q. Please describe Mint Farm and its development history.**

2 A. The Mint Farm Energy Center is a modern, natural gas-fired combined cycle
3 generating facility. The maximum capacity of the plant is 311 MW when
4 everything is operating. The baseload capacity is rated at 260 MW, plus 37 MW of
5 duct fire capability, and under emergency circumstances, an incremental 14MW can
6 be produced through steam augmentation. The machine is clean, quiet, well
7 designed, and in near new condition. The generating facility is situated on
8 approximately 11.42 acres of land located within the Mint Farm Industrial Park in
9 Longview, Washington. The site was originally developed by Avista Power in
10 partnership with Steag AG, a large German power producer. Avista Power sold the
11 development assets to Mirant Corporation ("Mirant") in 2001. In August 2002,
12 construction on the partially completed facility was suspended due to Mirant's
13 financial distress and ultimate bankruptcy. The project was estimated to be 34%
14 complete. Wayzata Investment Partners, LLC, an affiliate of Wayzata, acquired the
15 project from Mirant in December 2005 for \$27 million through a bankruptcy
16 auction process. At the time of the acquisition by Wayzata, the assets had been laid
17 up by Stone and Webster. Wayzata completed construction in 2007 and began
18 commercial operation in January 2008. The station includes gas delivery facilities,
19 an electrical switchyard, certain real property, and other facilities. The plant's
20 turbines, fired by natural gas, employ "combined-cycle" technology that generates
21 electricity using both a natural gas cycle and a steam cycle. The process provides
22 higher operating efficiencies, lower fuel costs, and lower air emissions. The

1 primary plant equipment consists of a General Electric Frame 7FA model
2 combustion turbine and generator,¹ a Foster-Wheeler Heat Recovery Steam
3 Generator and a Siemens-Fuji KN steam turbine and generator. With a heat rate of
4 approximately 7,000 Btu per kWh, Mint Farm is one of the most efficient
5 generating facilities in the Western Electricity Coordinating Council region.

6 **Q. How does Mint Farm respond to the needs identified in the Company's 2007**
7 **IRP?**

8 A. The acquisition of Mint Farm is consistent with the strategy identified in PSE's
9 2007 IRP. The acquisition of Mint Farm provides the Company with a cost-
10 effective and environmentally sound way to generate power that helps reduce PSE's
11 resource deficit in the near term.

12 The combined cycle process at Mint Farm is a highly efficient process that provides
13 greater operating efficiencies, lower fuel costs, and lower emissions. The
14 operational flexibility of the plant provides the Company with the ability to
15 dispatch the plant when it is determined to be the most efficient, low cost and
16 reliable resource to meet system load or demand.

17 **Q. Did the Company's evaluation of the proposals submitted through the RFP**
18 **process demonstrate that Mint Farm is an appropriate resource to meet PSE's**

¹ The GE 7FA gas turbine is a mature, well understood machine with greater than 1,000 units installed around the world providing power at 98 percent reliability, and this one is nearly identical in design and operation to the machine currently in use at PSE's Goldendale Generating Facility.

1 **need for additional electric generation resources?**

2 A. Yes. Mint Farm was identified as a leading resource in the 2008 RFP process in
3 part for the following reasons: (1) Mint Farm's attractive price, at approximately
4 \$241 million or \$800/kW, which was one of the lowest cost resources identified in
5 the 2008 RFP; (2) Mint Farm's low heat rate of approximately 7,000 Btu/kWh,
6 which allows Mint Farm to dispatch more frequently (among the most efficient
7 CCCT plants in the WECC region); (3) Mint Farm's potential to provide ancillary
8 services such as load following; and (4) Mint Farm's greater transmission reliability
9 due to its location on the west side of the state. When compared to the other short-
10 listed projects submitted in response to PSE's RFP, Mint Farm was identified as
11 superior overall, when considering price, transmission, development and execution
12 risk along with operational flexibility.

13 **Q. Please explain what you mean by Mint Farm's "transmission reliability."**

14 A. As a west-side resource, Mint Farm provides not only needed energy but also
15 transmission reliability. The project holds long-term firm transmission on the BPA
16 line that delivers to PSE's load center at Covington. The Company is in the process
17 of moving Mint Farm out of BPA's balancing authority and into PSE's own
18 balancing authority to ensure greater control of the resource and potential for load
19 following and other ancillary services capabilities.
20 Early on in the review process, it was apparent that the firm transmission capacity
21 held by Mint Farm provided certainty and reduced risk to PSE and its customers.

1 As the region has become more transmission constrained, projects without firm
2 transmission capacity are likely to experience a reduced level of service. These
3 projects may not receive firm capacity until 2012/2013 at the earliest when BPA
4 estimates completion of the McNary/John Day infrastructure project.

5 **Q. Were there other aspects of the Mint Farm proposal that led PSE to conclude**
6 **that Mint Farm is an appropriate resource to meet PSE's need?**

7 A. Yes. The fact that Mint Farm was an existing plant with known and quantifiable
8 costs was also significant. Construction of new generating resources had
9 experienced significant price escalation due to the broader global energy market
10 and demand for key commodities such as steel and concrete. Capital costs for new
11 CCCT projects were estimated to be approximately 60% higher than the offered
12 price from Wayzata for Mint Farm. Further, during the due diligence period, there
13 was little room for price risk as Wayzata stated that the purchase price offer would
14 not change.

15 Additionally, Mint Farm is one of only two remaining merchant plants, and new
16 plants will require permitting review and approval. The permitting process for new
17 generating resources can be challenging and can result in lengthy processes of
18 review and appeal, as well as higher capital costs. It is estimated that it may take
19 approximately five years to permit and construct a new gas-fired generating facility.

20 Mint Farm also performed well in PSE's quantitative analysis of the proposals
21 submitted in the 2008 RFP. The prefiled direct testimony of Mr. W. James Elsea,

1 Exhibit No. ___(WJE-1), provides additional description of the quantitative
2 analysis of Mint Farm.

3 **Q. What steps did PSE take following the RFP process to acquire Mint Farm?**

4 A. I was assigned as lead negotiator in April 2008. As lead negotiator for the PSE
5 commercial team, I began discussions with Wayzata in May 2008 to acquire Mint
6 Farm.² A non-binding letter of intent was entered into between PSE and Wayzata
7 on June 5, 2008, at which point an exclusive 60-day due diligence period began.
8 Concurrent with the due diligence efforts, I also began negotiating the terms and
9 conditions of the Membership Interests Purchase Agreement. Definitive
10 agreements were executed September 24, 2008. Closing occurred December 5,
11 2008.

12 **Q. Please explain how PSE intends to utilize Mint Farm?**

13 A. As discussed in the prefiled direct testimony of Mr. A. Paul Bruning, Exhibit
14 No. ___(APB-1), Mint Farm is designed to run at a baseload capacity factor above
15 90%, and PSE intends to operate it in that manner whenever it is economically
16 feasible to do so. Mint Farm's actual operation will vary based on its ability to be

² Timing was precipitated by the fact that Wayzata's proposal stated it would expire in May 2008. Interestingly, most of the proposals received in PSE's 2008 RFP process included an expiration date, which in part may be attributable to rising market prices and participation in other RFPs that were running concurrently with PSE's. It was clear that RFP respondents wanted to pursue all available options to obtain the best and highest price.

1 economically dispatched, which is discussed in more detail in the prefiled direct
2 testimony of Mr. David Mills, Exhibit No. ___(DEM-1). Economic dispatch
3 typically increases the use of more efficient generating units which leads to better
4 fuel utilization, lower fuel usage, and reduced air emissions that would come from
5 less efficient generation. With Mint Farm's advanced gas turbine technology and
6 its low heat rate, the plant is among the most efficient in the WECC region.

7 **Q. Please summarize your testimony.**

8 A. In its 2007 IRP, PSE identified a need to acquire nearly 2,570 aMW of electric
9 resource generation by 2025. The bulk of these resources will be gas-fired CCCT
10 plants like Mint Farm. Mint Farm adds 311 MW of capacity and 247 aMW of
11 winter energy, which is a significant contribution to meeting PSE's 2012 January
12 energy need of 700 aMW and brings PSE closer to meeting its longer term energy
13 need.

14 **Q. Does that conclude your testimony?**

15 A. Yes, it does.