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**PUBLIC UTILITY COMMISSION  
OF OREGON**

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**UM 1443**

**STAFF OPENING TESTIMONY OF**

**Ed Durrenberger**

**In the Matter of  
PUBLIC UTILITY COMMISSION OF OREGON  
Investigation to determine if PORTLAND GENERAL  
ELECTRIC's rate revision has been consistent with  
the methodologies and calculations required by  
Order No. 05-584.**

**October 27, 2009**

CASE: UM 1443  
WITNESS: Ed Durrenberger

**PUBLIC UTILITY COMMISSION  
OF  
OREGON**

**STAFF EXHIBIT 100**

**Direct Testimony**

**October 27, 2009**

1 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS**  
2 **ADDRESS.**

3 A. My name is Ed Durrenberger, I am a Senior Utility Analyst in the Electric and  
4 Natural Gas Division for the Public Utility Commission of Oregon. My business  
5 address is 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551.

6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK**  
7 **EXPERIENCE.**

8 A. My Witness Qualification Statement is found in Exhibit Staff/101.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. The Commission initiated Docket UM 1443 to investigate whether Portland  
11 General Electric (PGE or company) properly calculated its avoided cost prices  
12 in the current Schedule 201 using methodologies prescribed in Commission  
13 Order No. 05-584. This testimony will focus entirely on whether the company  
14 used the methods described in the Order, if the inputs used to calculate the  
15 rate were appropriate and if the conclusion reached accurately reflects the rate  
16 that has been filed and is consistent with previous similar avoided cost rate  
17 updates that the company has made and the Commission has adopted under  
18 the same methodologies. In addition I will comment on the appropriateness of  
19 allowing an update to some of the inputs as PGE has proposed in its opening  
20 testimony. Finally I will discuss the implications of PGE updating the action  
21 plan based on a draft Integrated Resource Plan (IRP) and generally the effect  
22 is has to a small "qualifying facility" (QF) entering into a long term power  
23 purchase agreement and to PGE customers.

1 **Q. DID YOU PREPARE AN EXHIBIT FOR THIS DOCKET?**

2 A. No, I have not prepared any exhibits.

3 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

4 A. My testimony is organized as follows:

5 Issue 1, -----Did the avoided cost filing conform with Order 05-584  
6 methodologies?..... **Error! Bookmark not defined.**

7 Issue 2, -----Are the pricing forecasts used in the filing consistent with  
8 forward pricing that was available at the time the filing was  
9 made?

10 Issue **Error! Bookmark not defined.** Are the conclusions reached  
11 by applying the forward pricing to the calculation methods  
12 accurate and consistent with the determination of avoided costs  
13 as approved by the Commission in previous filings, under these  
14 same provisions.?

15 Issue 4 What are the implications of the company updating the  
16 plan based on a draft IRP and how does it affect parties to the  
17 filing?  
18

**ISSUE 1**

19 **Q. DID THE PGE FILING COMFORM WITH THE METHODS DESCRIBED IN**  
20 **ORDER NO. 05-584?**

21 A. The avoided cost methodologies described in the order require that the utility  
22 file to update avoided cost rates within 30 days of the Commission  
23 acknowledging the IRP and at least every 2 years. In this case, the company's  
24 filing updates rates that were last updated in 2007, thus meeting the two-year  
25 update requirement.

26 Once it has been established that the avoided costs need to be updated, there  
27 needs to be a determination of the appropriate rate based of the company's  
28 individual circumstances regarding the need for new generation resources.

1        Avoided costs are the incremental costs to an electric utility of electric energy  
2        or capacity, or both, that the utility would incur if it were to generate energy  
3        itself or purchase the power from another source but for the purchase from the  
4        QF. If PGE is in a position where it is cannot meet its energy commitments by  
5        using its own generation resources, long term power contracts and from other  
6        power purchasing arrangements, it is resource deficient. Otherwise it is in a  
7        position of resource sufficiency. The Order methodology directs that when a  
8        utility is resource sufficient, avoided costs are based of forward market power  
9        pricing. At the time in the future when the power commitments for retail load  
10       and long term sales are such that PGE can no longer meet all the needs with  
11       its own generating resources, long term power purchase agreements and  
12       market power purchases and needs to add a major resource, the company is  
13       resource deficient. When a utility is resource deficient, avoided energy and  
14       capacity values are based on the cost of the proxy resource which, in Order  
15       No. 05-584, is the fixed and variable costs of a combined cycle combustion  
16       turbine (CCCT) that is fueled with natural gas.

17       PGE filed sufficiency period avoided costs based on forward cost curves that  
18       are similar to what are used in their annual power cost update. The method  
19       that was used in the determining sufficiency based avoided costs is consistent  
20       with the order and with how the previous sufficiency based avoided cost rates  
21       were priced. During the deficiency period the method used to come up with  
22       avoided costs, based on fixed and variable proxy resources costs follows the

1 order and was the same method used to develop the deficiency period avoided  
2 costs as in the previous filing.

## 3 ISSUE 2

### 4 **Q. DID THE FORWARD PRICING INPUTS APPEAR REASONABLE AND** 5 **CONSISTENT WITH PRICING AVAILABLE AT THE TIME OF THE FILING?**

6 A. The forward energy price curve used for pricing sufficiency based avoided  
7 costs was developed by the company based on information from the PGE  
8 trading floor and, farther out in year 2012, on an annual power cost projection  
9 shaped in manner consistent 2010 price projections. I reviewed the forward  
10 power cost pricing and compared PGE's power cost projections to a similar  
11 independent forward power price projection I obtained by EMR. Although I was  
12 unable to duplicate the high degree of monthly resolution that PGE's forward  
13 curve contained, I found the company pricing to be generally consistent with  
14 my forward pricing data going out through 2012.

15 During resource deficiency, the projection of natural gas pricing is a  
16 determinant of avoided costs. PGE states that the future natural gas pricing it  
17 developed came from commercially available forward price curves that had  
18 been adjusted for transportation costs. I compared PGE gas costs to the  
19 forward gas fuel market cost projections from the Northwest Power and  
20 Conservation Council's Sixth Power Plan. My conclusion was that the PGE's  
21 gas pricing appeared a little higher than the Council's projections but did not  
22 appear unreasonable.

**ISSUE 3****Q. ARE THE AVOIDED COST PRICES FILED USING THE COMMISSION APPROVED METHODS AND COMPANY-DETERMINED INPUTS REASONABLE?**

A. The avoided cost rates that PGE developed pursuant to Order 05-584 and using updated forward price curves for power purchases and natural gas are lower during the resource sufficiency period than the previous rates and slightly higher than previously during the later deficiency period. The reason for the initial lower sufficiency rates is that forward power costs are depressed due to the drop off in demand from the current recession and dramatically lower natural gas prices due to both the recession and a change in the amount of known reserves.

Although a decrease in avoided cost rates has caught many parties to this docket by surprise, I find that the timing of the rate filing is consistent with requirements in the order and that the methods PGE used to price avoided costs comply with the order. I further find that the forward energy pricing is within the range of pricing that could be reasonably forecast at the time of the filing. The avoided costs appear to represent the costs that the utility would incur for power that it generated itself or purchased from others were it not to purchase it from a PURPA QF under an avoided cost power purchase agreement.

**ISSUE 4**

1 **Q. WHAT ARE THE IMPLICATIONS TO AVOIDED COST RATES OF THE**  
2 **COMPANY UPDATING THE ACTION PLAN AS IT DID BASED ON THE**  
3 **RESULTS OF A DRAFT IRP?**

4 A. PGE updated the future date at which it determined itself to be resource  
5 deficient by using the results of a draft IRP in its avoided cost filing. The filing  
6 determined that the company would remain sufficient until the beginning of  
7 2013 rather than 2012 as had been in the previous avoided cost filing. This  
8 means the relatively low market based sufficiency pricing will be in place for an  
9 additional year as of this filing. I am concerned about the draft IRP action plan  
10 update being used for two reasons. First, the plan has not yet been formally  
11 filed much less studied and evaluated by the Commission or other parties and  
12 may not be acknowledged as written. Thus, contracts entered into under this  
13 draft plan could disadvantage either small QFs by their receiving lower than  
14 avoided cost rates if the sufficiency period is too long. Or customers could end  
15 up paying more than they otherwise would for power if the sufficiency period is  
16 too short. Second, there is possibility that the avoided cost rate could change  
17 significantly with the filing after the acknowledgement of the IRP and I believe  
18 that this creates a climate of uncertainty that could hinder small QF  
19 development. I acknowledge that previous avoided cost filings have been  
20 adopted based on draft IRP action plans and that parties did not appear to  
21 have raised this as an issue at that time. However, new avoided costs rates  
22 will need to be filed again within the next year upon filing and eventual  
23 acknowledgement of the PGE IRP. The solution to this dilemma is to require



1 that significant changes to the action plan, such as are proposed here where  
2 the sufficiency/deficiency point is to be moved an entire year, be filed and  
3 receive acknowledgement by the Commission prior to the utility filing avoided  
4 costs. This provision was envisioned in the Commission's IRP Order No. 07-  
5 002 guideline 3(f).

6 **Q. DO YOU HAVE ANY OTHER COMMENTS TO MAKE ABOUT THE PGE**  
7 **AVOIDED COST FILING?**

8 A. Yes, PGE, in its direct testimony in UM 1443 proposed updating the natural  
9 gas pricing forward price curve in the course of this investigation. The  
10 company proposes the change to make the gas prices in the filing consistent  
11 with prices used in the IRP and indicated that it would increase avoided cost  
12 pricing a small amount in the resource deficiency period when pricing is based  
13 on the fixed and variable cost of the proxy resource.

14 **Q. DO YOU AGREE WITH THE PGE PROPOSAL TO UPDATE THE GAS**  
15 **PRICES AS DESCRIBED IN THEIR TESTIMONY?**

16 A. No. The avoided cost filing should not be changed by updating a gas curve but  
17 should use pricing information that was available at the time of the filing. To  
18 selectively update one curve and not all curves in the course of the  
19 investigation into the appropriateness of the filed rates is inappropriate.

20 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

21 A. Yes.

CASE: UE 1443  
WITNESS: Ed Durrenberger

**PUBLIC UTILITY COMMISSION  
OF  
OREGON**

**STAFF EXHIBIT 101**

**Witness Qualification Statement**

**October 27, 2009**

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**WITNESS QUALIFICATION STATEMENT**

**NAME:** Ed Durrenberger

**EMPLOYER:** Public Utility Commission of Oregon

**TITLE:** Senior Utility Analyst, Electric and Natural Gas Division

**ADDRESS:** 550 Capitol St. NE, Ste. 215, Salem, Oregon 97301

**EDUCATION:** B.S. Mechanical Engineering  
Oregon State University, Corvallis, Oregon

**EXPERIENCE:** I have been employed at the Public Utility Commission of Oregon since February of 2004. My current responsibilities include staff research, analysis and technical support on a wide range of electric and natural gas cost recovery issues with an emphasis on electricity and fuel costs.

**OTHER EXPERIENCE:** I worked for over twenty years in industrial boiler plant engineering, maintenance and operations. In this capacity I managed plant operations, fuel supplies and utilities, environmental compliance issues and all aspects of boiler machinery design, installation and repair. I have also worked as a production manager and machine shop manager for an ISO certified high tech equipment manufacturer servicing the silicon wafer fabrication and biomedical business sectors.

1 **CERTIFICATE OF SERVICE**

2 I certify that on October 27, 2009 I served the foregoing STAFF OPENING  
3 TESTIMONY upon the parties in this proceeding by electronic mail and by sending a true, exact  
4 and full copy by regular mail, postage prepaid, or by hand-delivery/shuttle, to the parties  
5 accepting paper service.

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