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July 18, 2006

***Via Electronic and U.S. Mail***

Public Utility Commission  
Attn: Filing Center  
550 Capitol St. NE #215  
P.O. Box 2148  
Salem OR 97308-2148

Re: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY  
Request for a General Rate Revision  
**Docket Nos. UE 180/UE 181/UE 184**

Dear Filing Center:

Enclosed please find an original and six copies of the Direct Testimony of Randall J. Falkenberg on behalf of the Industrial Customers of Northwest Utilities ("ICNU") in the above-referenced docket numbers.

Please return one file-stamped copy of the document in the enclosed postage-prepaid envelope. Thank you for your assistance.

Sincerely,

/s/ Ruth A. Miller  
Ruth A. Miller

Enclosures

cc: Service List

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this day served the foregoing Direct Testimony of Randall J. Falkenberg on behalf of the Industrial Customers of Northwest Utilities upon the parties, on the service list, by causing the same to be deposited in the U.S. Mail, postage-prepaid.

Dated at Portland, Oregon, this 18th day of July, 2006.

/s/ Ruth A. Miller  
Ruth A. Miller

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**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UE 180/UE 181/UE 184**

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Annual Adjustments to Schedule 125 (2007 )  
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PORTLAND GENERAL ELECTRIC )  
COMPANY )  
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Request for a General Rate Revision relating )  
to the Port Westward plant (UE 184). )  
\_\_\_\_\_ )

**2007 RESOURCE VALUATION MECHANISM POWER COSTS**

**DIRECT TESTIMONY OF**

**RANDALL J. FALKENBERG**

**ON BEHALF OF**

**THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES**

**July 18, 2006**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** Randall J. Falkenberg, PMB 362, 8351 Roswell Road, Sandy Springs, Georgia  
3 30350.

4 **Q. WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU**  
5 **EMPLOYED?**

6 **A.** I am a utility rate and planning consultant holding the position of President and  
7 Principal with the firm of RFI Consulting, Inc. ("RFI"). I am appearing in this  
8 proceeding as a witness for the Industrial Customers of Northwest Utilities  
9 ("ICNU").

10 **Q. PLEASE BRIEFLY DESCRIBE THE NATURE OF THE CONSULTING**  
11 **SERVICES PROVIDED BY RFI.**

12 **A.** RFI provides consulting services in the electric utility industry. The firm provides  
13 expertise in electric restructuring, system planning, load forecasting, financial  
14 analysis, cost of service, revenue requirements, rate design, and fuel cost recovery  
15 issues.

## 16 I. QUALIFICATIONS

17 **Q. PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL**  
18 **EXPERIENCE.**

19 **A.** Exhibit ICNU/101 describes my education and experience within the utility  
20 industry. I have more than 25 years of experience in the industry. I have worked  
21 for utilities, both as an employee and as a consultant, and as a consultant to major  
22 corporations, state and federal governmental agencies, and public service  
23 commissions. I have been directly involved in a large number of rate cases and  
24 regulatory proceedings concerning the economics, rate treatment, and prudence of  
25 nuclear and non-nuclear generating plants.

1 During my employment with EBASCO Services in the late 1970s, I developed  
2 probabilistic production cost and reliability models used in studies for 20 utilities.  
3 I personally directed a number of marginal and avoided cost studies performed for  
4 compliance with the Public Utility Regulatory Policies Act of 1978 (“PURPA”).  
5 I also participated in a wide variety of consulting projects in the rate, planning,  
6 and forecasting areas.

7 In 1982, I accepted the position of Senior Consultant with Energy  
8 Management Associates (“EMA”). At EMA, I trained and consulted with  
9 planners and financial analysts at several utilities using the PROMOD III and  
10 PROSCREEN II planning models.

11 In 1984, I was a founder of J. Kennedy and Associates, Inc. (“Kennedy”).  
12 At that firm, I was responsible for consulting engagements in the areas of  
13 generation planning, reliability analysis, market price forecasting, stranded cost  
14 evaluation, and the rate treatment of new capacity additions. I presented expert  
15 testimony on these and other matters in more than 100 cases before the Federal  
16 Energy Regulatory Commission (“FERC”) and state regulatory commissions and  
17 courts in Arkansas, California, Connecticut, Florida, Georgia, Kentucky,  
18 Louisiana, Maryland, Michigan, Minnesota, New Mexico, New York, North  
19 Carolina, Ohio, Oregon, Pennsylvania, Texas, Utah, West Virginia, and  
20 Wyoming. Included in Exhibit ICNU/101 is a list of my appearances.

21 In January 2000, I founded RFI Consulting, Inc. with a comparable  
22 practice to the one I directed at Kennedy.

1 **Q. HAVE YOU PREVIOUSLY APPEARED IN ANY PROCEEDINGS**  
2 **BEFORE THE OREGON PUBLIC UTILITY COMMISSION?**

3 **A.** Yes. I filed testimony in five Portland General Electric (“PGE” or the  
4 “Company”) cases: UE 137 and UE 139 in 2002, UE 149 in 2003, UE 161 in  
5 2004, UE 165/UM 1187 and UE 172 in 2005. In those cases, I addressed PGE’s  
6 Resource Valuation Mechanism (“RVM”), and PGE’s request for a Power Cost  
7 Adjustment Mechanism (“PCAM”) and Hydro Generation Adjustment (“HGA”).  
8 I also filed testimony in several PacifiCorp proceedings in Oregon: UE 111, UE  
9 116, UM 995, UE 134, UM 1050, UE 170, and UE 179. In those cases, I  
10 addressed issues related to power cost modeling, PCAM, power cost deferrals,  
11 prudence of new resources, and multi-state jurisdictional allocation.

12 **Q. HAVE YOU APPEARED AS AN EXPERT IN OTHER PROCEEDINGS**  
13 **INVOLVING FUEL OR POWER COST ISSUES?**

14 **A.** Yes. I have been involved in a number of PacifiCorp proceedings in California,  
15 Utah, and Wyoming, where I testified concerning power cost issues. In Texas, I  
16 have also been involved in a number of power cost related cases. Finally, I have  
17 appeared in a number of other cases where fuel or purchased power costs were at  
18 issue. Exhibit ICNU/101 summarizes other cases in which I have appeared.

19 **II. INTRODUCTION AND SUMMARY**

20 **Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?**

21 **A.** ICNU has asked me to examine PGE’s proposed RVM update for the 2007 test  
22 year. I have identified certain problems in the PGE MONET study that overstate  
23 the Company’s projected power costs, and, consequently, the rates computed  
24 under Schedule 125.



1 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

2 **A.** I have concluded as follows:

3 1. PGE's RVM variable power cost estimate of \$813.8 million for 2007 is  
4 overstated. I recommend that PGE's power costs be reduced by \$10.8  
5 million. This results in total variable net power costs of \$803 million  
6 based on PGE's preliminary MONET studies.

7 2. I recommend adjustments to remove the effects of the Boardman outage  
8 from the 2007 RVM study. The Company has not established the root  
9 cause of this event, nor has PGE demonstrated prudence. The value of  
10 this adjustment is \$5.2 million.

11 3. The Colstrip plant has had an excessive number of outages over the past  
12 four years. I recommend an adjustment to impute a more reasonable level  
13 of performance for the facility. The value of this adjustment is \$4.6  
14 million.

15 **III. RVM NET VARIABLE POWER COST ISSUES**

16 **Q. WHAT ARE "NET VARIABLE POWER COSTS" AND WHY ARE THEY**  
17 **IMPORTANT TO THIS PROCEEDING?**

18 **A.** Net variable power costs are the variable production costs related to fuel and  
19 purchased power expenses, net of power sales revenue. In the context of this  
20 case, net variable power costs are estimated using PGE's MONET production cost  
21 model. Based on the Stipulation Concerning Power Costs in PGE's last general  
22 rate case, UE 115, updates to net variable power costs are reflected in changes to  
23 the rates under Schedule 125 parts A and B. According to the tariff:

24 The Part A and Part B revisions, shall reflect updates to the following:

- 25
- 26 • Applicable resources
  - 27 • Company market power purchases
  - 28 • Cost of fuel and transportation
  - 29 • Hydro operating constraints imposed by government agencies
  - 30 • Market power prices (including transmission to the Company)
  - 31 • Transmission and ancillary services
  - Retail load forecast

1 Schedule 125, Sheet No. 125-5.

2 **Q. WHAT INFORMATION, DOCUMENTS, AND DATA DID YOU REVIEW**  
3 **IN ORDER TO ANALYZE PGE'S POWER COSTS?**

4 **A.** I read PGE's direct testimony and discovery responses and examined the  
5 modeling assumptions used in PGE's MONET power cost model in order to make  
6 recommendations regarding the proper level of net variable power costs for 2007.

7 **Q. HAS PGE PRESENTED ITS FINAL MONET RUN IN THIS CASE?**

8 **A.** Not yet. The Company plans to continue to perform MONET updates as  
9 additional information becomes available. The changes I recommend to MONET  
10 should be made by the time of the Company's final MONET run. However, I  
11 have estimated the impact of my proposed adjustments based on the most current  
12 version of MONET and PGE discovery responses.

13 **Boardman Outage**

14 **Q. EXPLAIN THE ROLE OUTAGE RATES PLAY IN MONET.**

15 **A.** In MONET, thermal deration factors (also called outage rates) control the amount  
16 of generation available from thermal units. The more energy that is available  
17 from lower cost resources, the lower net power costs will be. If a generator has an  
18 average outage rate of 5%, MONET assumes a thermal deration factor of 95%.  
19 This means that only 95% of the unit's capacity is available to produce energy.  
20 The remaining capacity is assumed to be permanently on outage. The Company  
21 uses a compilation of outages over the most recent four-year historical period  
22 (2002 to 2005) to compute the outage rates for its thermal plants. The purpose of  
23 using a four-year average is to "normalize" or smooth out variations that might  
24 affect a single year.

1 **Q. ARE THERMAL OUTAGE RATES AN IMPORTANT DRIVER IN**  
2 **OVERALL NET POWER COSTS?**

3 **A.** Yes. Outage rates have a substantial impact on overall net power costs. The  
4 higher the outage rates, the higher overall net power costs will be. This is  
5 particularly true for PGE's Boardman and Colstrip plants. These coal plants are  
6 the lowest cost resources on the system, other than hydro.

7 **Q. DID PGE INCLUDE THE BOARDMAN OUTAGE IN ITS**  
8 **CALCULATION OF THE FOUR-YEAR AVERAGE OUTAGE RATE?**

9 **A.** Yes. The Company included the 70-day outage from October 23 to December 31,  
10 2005, in its calculation of the Boardman outage rates. See UE 181, PGE/100,  
11 Tooman-Niman-Schue/12-13.

12 **Q. DO YOU AGREE WITH THIS TREATMENT?**

13 **A.** No. The Company has already requested a deferral of Boardman outage costs in  
14 UM 1234. However, that case has not yet been decided. Further, UM 1234 has  
15 been bifurcated into two phases. If a deferral is allowed in Phase 1 of UM 1234,  
16 Phase 2 will deal with issues of prudence. In the instant case, there is no showing  
17 that PGE acted prudently with respect to the cause of the outage, and the  
18 Company has not even completed a root cause analysis regarding the outage.  
19 ICNU/102, Falkenberg/1. In fact, it appears the Company has not normally  
20 performed root cause analyses on generator outages. Id. Therefore, the cause of  
21 the outage is not even known at present. Further, if the Boardman outage is  
22 recovered in a deferral account, it should not be included in forced outage rates in  
23 this case. Finally, in UM 1234 the Company argued that the Boardman outage  
24 was a very rare and unusual event, and that outages as long as the Boardman

1 event represented only 0.24% of all generator outages. Re PGE, OPUC Docket  
2 No. UM 1234, PGE/300, Drennan-Tinker-Hager/5. If so, it is certainly debatable  
3 whether such an event should be assumed to occur once every four years for the  
4 purposes of determining forced outage rates, as would be the case under PGE's  
5 proposed treatment in this case.

6 **Q. WHAT IS YOUR RECOMMENDATION REGARDING THE**  
7 **BOARDMAN OUTAGE?**

8 **A.** It is premature to include it in the computation of the four-year average in this  
9 case. I recommend reversing the impact of that outage in computation of the  
10 outage rate for the plant. This reduces net power costs by \$5.2 million.

11 **Colstrip Outage Rate**

12 **Q. DISCUSS THE COLSTRIP OUTAGE RATE USED IN MONET.**

13 **A.** In MONET, the Company assumes Colstrip 3 and 4 will have an outage rate that  
14 represents a very poor level of performance for these units. Based on NERC  
15 statistics, the outage rates for Colstrip are 44% higher than the average outage rate  
16 for typical units of this size in NERC's peer group. This poor level of  
17 performance results in additional costs of \$4.6 million for PGE. My review of  
18 MONET inputs for prior years indicates this substandard performance has existed  
19 since at least RVM 2004.

20 **Q. HOW DID YOU COMPUTE THE NERC PEER GROUP OUTAGE RATE?**

21 **A.** In computing this outage I examined the NERC data for all coal plants sized 600-  
22 799 MW. In computing the forced outage rate, I also included NERC averages  
23 for maintenance outages and derations of these coal plants. This is a very

1 generous way of computing the outage rate because it includes deferrable outages  
2 and partial outages as part of the overall forced outage rate.

3 **Q. HOW DO YOU RECOMMEND THE COMMISSION RESPOND TO THIS**  
4 **PROBLEM?**

5  
6 **A.** Falling short of the NERC national average figure does not, by itself, demonstrate  
7 imprudence. However, very substandard performance, such as this, for an  
8 extended period of time clearly suggests the presence of a problem in the  
9 operation or management of this resource. To rectify this problem, I recommend  
10 the Commission impute the NERC average outage rate for comparable plants to  
11 Colstrip to provide the Company an incentive to improve its performance. This  
12 adjustment reduces net power costs by \$4.6 million, as discussed above.

13 **Q. WOULD USE OF THE NERC AVERAGE FOR BOARDMAN ALSO BE A**  
14 **REASONABLE APPROACH?**

15  
16 **A.** Yes. Absent the long outage of October 2005, the outage rates for the Boardman  
17 plant would be comparable to the NERC figures. The use of the NERC average  
18 as a benchmark for Boardman would also be a reasonable approach, and would  
19 produce an adjustment reasonably comparable to that I discussed above.

20 **Q. DOES THIS REPRESENT ALL OF THE ISSUES THAT ICNU HAS WITH**  
21 **PGE'S MONET MODEL INPUTS AND LOGIC?**

22 **A.** No. ICNU may present additional testimony regarding MONET's input and logic  
23 in testimony filed in the general rate case portion of this proceeding. Because the  
24 rates from RVM 2007 will likely be replaced by the rates from UE 180 on  
25 January 16, 2007, we have decided to only address certain issues in the rate case.  
26 Our silence regarding any other issues should not be regarded as indicating ICNU

1 is satisfied with MONET. However, given the limited time the rates from RVM  
2 2007 will be in effect, it is not cost effective for ICNU to pursue additional issues.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A.** Yes.

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**ICNU/101**

**RANDALL J. FALKENBERG QUALIFICATIONS**

**July 18, 2006**

## **QUALIFICATIONS OF RANDALL J. FALKENBERG, PRESIDENT**

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### **EDUCATIONAL BACKGROUND**

I received my Bachelor of Science degree with Honors in Physics and a minor in mathematics from Indiana University. I received a Master of Science degree in Physics from the University of Minnesota. My thesis research was in nuclear theory. At Minnesota I also did graduate work in engineering economics and econometrics. I have completed advanced study in power system reliability analysis.

### **PROFESSIONAL EXPERIENCE**

After graduating from the University of Minnesota in 1977, I was employed by Minnesota Power as a Rate Engineer. I designed and coordinated the Company's first load research program. I also performed load studies used in cost-of-service studies and assisted in rate design activities.

In 1978, I accepted the position of Research Analyst in the Marketing and Rates department of Puget Sound Power and Light Company. In that position, I prepared the two-year sales and revenue forecasts used in the Company's budgeting activities and developed methods to perform both near- and long-term load forecasting studies.

In 1979, I accepted the position of Consultant in the Utility Rate Department of Ebasco Service Inc. In 1980, I was promoted to Senior Consultant in the Energy Management Services Department. At Ebasco I performed and assisted in numerous studies in the areas of cost of service, load research, and utility planning. In particular, I was involved in studies concerning analysis of excess capacity, evaluation of the planning activities of a major utility on behalf of its public service commission, development of a methodology for computing avoided costs and cogeneration rates, long-term electricity price forecasts, and cost allocation studies.

At Ebasco, I specialized in the development of computer models used to simulate utility production costs, system reliability, and load patterns. I was the principal author of production costing software used by eighteen utility clients and public service commissions for evaluation of marginal costs, avoided costs and production costing analysis. I assisted over a dozen utilities in the performance of marginal and avoided cost studies related to the PURPA of 1978. In this capacity, I worked with utility planners and rate specialists in quantifying the rate and cost impact of generation expansion alternatives. This activity included estimating carrying costs, O&M expenses, and capital cost estimates for future generation.

In 1982 I accepted the position of Senior Consultant with Energy Management Associates, Inc. and was promoted to Lead Consultant in June 1983. At EMA I trained and consulted with planners and financial

**RFI CONSULTING, INC.**



## **QUALIFICATIONS OF RANDALL J. FALKENBERG, PRESIDENT**

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analysts at several utilities in applications of the PROMOD and PROSCREEN planning models. I assisted planners in applications of these models to the preparation of studies evaluating the revenue requirements and financial impact of generation expansion alternatives, alternate load growth patterns and alternate regulatory treatments of new baseload generation. I also assisted in EMA's educational seminars where utility personnel were trained in aspects of production cost modeling and other modern techniques of generation planning.

I became a Principal in Kennedy and Associates in 1984. Since then I have performed numerous economic studies and analyses of the expansion plans of several utilities. I have testified on several occasions regarding plant cancellation, power system reliability, phase-in of new generating plants, and the proper rate treatment of new generating capacity. In addition, I have been involved in many projects over the past several years concerning the modeling of market prices in various regional power markets.

In January 2000, I founded RFI Consulting, Inc. whose practice is comparable to that of my former firm, J. Kennedy and Associates, Inc.

The testimony that I present is based on widely accepted industry standard techniques and methodologies, and unless otherwise noted relies upon information obtained in discovery or other publicly available information sources of the type frequently cited and relied upon by electric utility industry experts. All of the analyses that I perform are consistent with my education, training and experience in the utility industry. Should the source of any information presented in my testimony be unclear to the reader, it will be provided it upon request by calling me at 770-379-0505.

### **PAPERS AND PRESENTATIONS**

**Mid-America Regulatory Commissioners Conference** - June 1984: "Nuclear Plant Rate Shock - Is Phase-In the Answer"

**Electric Consumers Resource Council** - Annual Seminar, September 1986: "Rate Shock, Excess Capacity and Phase-in"

**The Metallurgical Society** - Annual Convention, February 1987: "The Impact of Electric Pricing Trends on the Aluminum Industry"

**Public Utilities Fortnightly** - "Future Electricity Supply Adequacy: The Sky Is Not Falling" What Others Think, January 5, 1989 Issue

**Public Utilities Fortnightly** - "PoolCo and Market Dominance", December 1995 Issue

## QUALIFICATIONS OF RANDALL J. FALKENBERG, PRESIDENT

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### APPEARANCES

3/84	8924	KY	Airco Carbide	Louisville Gas & Electric	CWIP in rate base.
5/84	830470- EI	FL	Florida Industrial Power Users Group	Fla. Power Corp.	Phase-in of coal unit, fuel savings basis, cost allocation.
10/84	89-07-R	CT	Connecticut Ind. Energy Consumers	Connecticut Light & Power	Excess capacity.
11/84	R-842651	PA	Lehigh Valley	Pennsylvania Power Committee	Phase-in of nuclear unit. Power & Light Co.
2/85	I-840381 cancellation of	PA	Phila. Area Ind. Energy Users' Group	Electric Co.	Philadelphia Economics of nuclear generating units.
3/85	Case No. 9243	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Economics of cancelling fossil generating units.
3/85	R-842632	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Economics of pumped storage generating units, optimal res. margin, excess capacity.
3/85	3498-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Nuclear unit cancellation, load and energy forecasting, generation economics.
5/85	84-768- E-42T	WV	West Virginia Multiple Intervenors	Monongahela Power Co.	Economics - pumped storage generating units, reserve margin, excess capacity.
7/85	E-7, SUB 391	NC	Carolina Industrial Group for Fair Utility Rates	Duke Power Co.	Nuclear economics, fuel cost projections.
7/85	9299	KY	Kentucky Industrial Utility Consumers	Union Light, Heat & Power Co.	Interruptible rate design.
8/85	84-249-UAR		Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Prudence review.
1/86	85-09-12	CT	Connecticut Ind. Energy Consumers	Connecticut Light & Power Co.	Excess capacity, financial impact of phase-in nuclear plant.
1/86	R-850152	PA	Philadelphia Area Industrial Energy Users' Group	Philadelphia Electric Co.	Phase-in and economics of nuclear plant.
2/86	R-850220	PA	West Penn Power Industrial Intervenors	West Penn Power	Optimal reserve margins, prudence, off-system sales guarantee plan.
5/86	86-081- E-GI	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Generation planning study, economics prudence of a pumped storage hydroelectric unit.
5/86	3554-U	GA	Attorney General & Georgia Public	Georgia Power Co.	Cancellation of nuclear plant.

**Expert Testimony Appearances  
of  
Randall J. Falkenberg**

<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
			Service Commission Staff		
9/86	29327/28	NY	Occidental Chemical Corp.	Niagara Mohawk Power Co.	Avoided cost, production cost models.
9/86	E7-Sub 408	NC	NC Industrial Energy Committee	Duke Power Co.	Incentive fuel adjustment clause.
12/86 613	9437/	KY	Attorney General of Kentucky	Big Rivers Elect. Corp.	Power system reliability analysis, rate treatment of excess capacity.
5/87	86-524-E-SC	WV	West Virginia Energy Users' Group	Monongahela Power	Economics and rate treatment of Bath County pumped storage County Pumped Storage Plant.
6/87	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Prudence of River Bend Nuclear Plant.
6/87	PUC-87-013-RD E002/E-015 -PA-86-722	MN	Eveleth Mines & USX Corp.	Minnesota Power/Northern States	Sale of generating unit and reliability Power requirements.
7/87	Docket 9885	KY	Attorney General of Kentucky	Big Rivers Elec. Corp.	Financial workout plan for Big Rivers.
8/87	3673-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Nuclear plant prudence audit, Vogtle buyback expenses.
10/87	R-850220	PA	WPP Industrial Intervenors	West Penn Power	Need for power and economics, County Pumped Storage Plant
10/87	870220-EI	FL	Occidental Chemical	Fla. Power Corp.	Cost allocation methods and interruptible rate design.
10/87	870220-EI	FL	Occidental Chemical	Fla. Power Corp.	Nuclear plant performance.
1/88	Case No. 9934	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Review of the current status of Trimble County Unit 1.
3/88	870189-EI	FL	Occidental Chemical Corp.	Fla. Power Corp.	Methodology for evaluating interruptible load.
5/88	Case No. 10217	KY	National Southwire Aluminum Co., ALCAN Alum Co.	Big Rivers Elec. Corp.	Debt restructuring agreement.
7/88	Case No. 325224	LA Div. I 19th Judicial District	Louisiana Public Service Commission Staff	Gulf States Utilities	Prudence of River Bend Nuclear Plant.
10/88	3780-U	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Co.	Weather normalization gas sales and revenues.
10/88	3799-U	GA	Georgia Public Service Commission	United Cities Gas Co.	Weather normalization of gas sales and revenues.

**RFI CONSULTING, INC.**

**Expert Testimony Appearances  
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<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
			Staff		
12/88	88-171-EL-AIR 88-170-EL-AIR	OH OH	Ohio Industrial Energy Consumers	Toledo Edison Co., Cleveland Electric Illuminating Co.	Power system reliability reserve margin.
1/89	I-880052	PA	Philadelphia Area Industrial Energy Users' Group	Philadelphia Electric Co.	Nuclear plant outage, replacement fuel cost recovery.
2/89	10300	KY	Green River Steel K	Kentucky Util.	Contract termination clause and interruptible rates.
3/89	P-870216 283/284/286	PA	Armco Advanced Materials Corp., Allegheny Ludlum Corp.	West Penn Power	Reserve margin, avoided costs.
5/89	3741-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Prudence of fuel procurement.
8/89	3840-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Need and economics coal & nuclear capacity, power system planning.
10/89	2087	NM	Attorney General of New Mexico	Public Service Co. of New Mexico	Power system planning, economic and reliability analysis, nuclear planning, prudence.
10/89	89-128-U	AR	Arkansas Electric Energy Consumers	Arkansas Power Light Co.	Economic impact of asset transfer and stipulation and settlement agreement.
11/89	R-891364	PA	Philadelphia Area Industrial Energy Users' Group	Philadelphia Electric Co.	Sale/leaseback nuclear plant, excess capacity, phase-in delay imprudence.
1/90	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Sale/leaseback nuclear power plant.
4/90	89-1001-EL-AIR	OH	Industrial Energy Consumers	Ohio Edison Co.	Power supply reliability, excess capacity adjustment.
4/90	N/A	N.O.	New Orleans Business Counsel	New Orleans Public Service Co.	Municipalization of investor-owned utility, generation planning & reliability
7/90	3723-U	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Co.	weather normalization adjustment rider.
9/90	8278	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirements gas & electric, CWIP in rate base.
9/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Power system planning study.
12/90	U-9346	MI	Association of Businesses Advocating Tariff Equity (ABATE)	Consumers Power	DSM Policy Issues.

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<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
5/91	3979-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	DSM, load forecasting and IRP.
7/91	9945	TX	Office of Public Utility Counsel	El Paso Electric Co.	Power system planning, quantification of damages of imprudence, environmental cost of electricity
8/91	4007-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Integrated resource planning, regulatory risk assessment.
11/91	10200	TX	Office of Public Utility Counsel	Texas-New Mexico Utility Counsel	Imprudence disallowance. Power Co.
12/91	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Year-end sales and customer adjustment, jurisdictional allocation.
1/92	89-783-E-C	WVA	West Virginia Energy Users Group	Monongahela Power Co.	Avoided cost, reserve margin, power plant economics.
3/92	91-370	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Interruptible rates, design, cost allocation.
5/92	91890	FL	Occidental Chemical Corp.	Fla. Power Corp.	Incentive regulation, jurisdictional separation, interruptible rate design.
6/92	4131-U	GA	Georgia Textile Manufacturers Assn.	Georgia Power Co.	Integrated resource planning, DSM.
9/92	920324	FL	Florida Industrial Power Users Group	Tampa Electric Co.	Cost allocation, interruptible rates decoupling and DSM.
10/92	4132-U	GA	Georgia Textile Manufacturers Assn.	Georgia Power Co.	Residential conservation program certification.
10/92	11000	TX	Office of Public Utility Counsel	Houston Lighting and Power Co.	Certification of utility cogeneration project.
11/92	U-19904	LA	Louisiana Public Service Commission Staff	Entergy/Gulf States Utilities (Direct)	Production cost savings from merger.
11/92	8469	MD	Westvaco Corp.	Potomac Edison Co.	Cost allocation, revenue distribution.
11/92	920606	FL	Florida Industrial Power Users Group	Statewide Rulemaking	Decoupling, demand-side management, conservation, performance incentives.
12/92	R-009 22378	PA	Armco Advanced Materials	West Penn Power	Energy allocation of production costs.
1/93	8179	MD	Eastalco Aluminum/ Westvaco Corp.	Potomac Edison Co.	Economics of QF vs. combined cycle power plant.
2/93	92-E-0814 88-E-081	NY	Occidental Chemical Corp.	Niagara Mohawk Power Corp.	Special rates, wheeling.

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<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
3/93	U-19904	LA	Louisiana Public Service Commission Staff	Entergy/Gulf States Utilities (Surrebuttal)	Production cost savings from merger.
4/93	EC92 21000 ER92-806-000	FERC	Louisiana Public Service Commission Staff	Gulf States Utilities/Entergy	GSU Merger prodcution cost savings
6/93	930055-EU	FL	Florida Industrial Power Users' Group	Statewide Rulemaking	Stockholder incentives for off-system sales.
9/93	92-490, 92-490A, 90-360-C	KY	Kentucky Industrial Utility Customers & Attorney General	Big Rivers Elec. Corp.	Prudence of fuel procurement decisions.
9/93	4152-U	GA	Georgia Textile Manufacturers Assn.	Georgia Power Co.	Cost allocation of pollution control equipment.
4/94	E-015/GR-94-001	MN	Large Power Intervenors	Minn. Power Co.	Analysis of revenue req. and cost allocation issues.
4/94	93-465	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Review and critique proposed environmental surcharge.
4/94	4895-U	GA	Georgia Textile Manufacturers Assn.	Georgia Power Co	Purchased power agreement and fuel adjustment clause.
4/94	E-015/GR-94-001	MN	Large Power Intervenors	Minnesota Power Light Co.	Rev. requirements, incentive compensation.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Revenue annualization, ROE performance bonus, and cost allocation.
8/94	8652	MD	Westvaco Corp.	Potomac Edison Co.	Revenue requirements, ROE performance bonus, and revenue distribution.
1/95	94-332	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Company	Environmental surcharge.
1/95	94-996-EL-AIR	OH	Industrial Energy Users of Ohio	Ohio Power Company	Cost-of-service, rate design, demand allocation of power
3/95	E999-CI	MN	Large Power Intervenor	Minnesota Public Utilities Comm.	Environmental Costs Of electricity
4/95	95-060	KY	Kentucky Industrial Utility Customers	Kentucky Utilities Company	Six month review of CAAA surcharge.
11/95	I-940032	PA	The Industrial Energy Consumers of Pennsylvania	Statewide - all utilities	Direct Access vs. Poolco, market power.
11/95	95-455	KY	Kentucky Industrial	Kentucky Utilities	Clean Air Act Surcharge,
12/95	95-455	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Company	Clean Air Act Compliance Surcharge.
6/96	960409-EI	FL	Florida Industrial Power Users Group	Tampa Electric Co.	Polk County Power Plant Rate Treatment Issues.
3/97	R-973877	PA	PAIEUG.	PECO Energy	Stranded Costs & Market

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<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
					Prices.
3/97	970096-EQ	FL	FIPUG	Fla. Power Corp.	Buyout of QF Contract
6/97	R-973593	PA	PAIEUG	PECO Energy	Market Prices, Stranded Cost
7/97	R-973594	PA	PPLICA	PP&L	Market Prices, Stranded Cost
8/97	96-360-U	AR	AEEC	Entergy Ark. Inc.	Market Prices and Stranded Costs, Cost Allocation, Rate Design
10/97	6739-U	GA	GPSC Staff	Georgia Power	Planning Prudence of Pumped Storage Power Plant
10/97	R-974008 R-974009	PA	MIEUG PICA	Metropolitan Ed. PENELEC	Market Prices, Stranded Costs
11/97	R-973981	PA	WPPII	West Penn Power	Market Prices, Stranded Costs
11/97	R-974104	PA	DII	Duquesne Light Co.	Market Prices, Stranded Costs
2/98	APSC 97451 97452 97454	AR	AEEC	Generic Docket	Regulated vs. Market Rates, Rate Unbundling, Timetable for Competition.
7/98	APSC 87-166	AR	AEEC	Entergy Ark. Inc.	Nuclear decommissioning cost estimates & rate treatment.
9/98	97-035-01	UT	DPS and CCS	PacifiCorp	Net Power Cost Stipulation, Production Cost Model Audit
12/98	19270	TX	OPC	HL&P	Reliability, Load Forecasting
4/99	19512	TX	OPC	SPS	Fuel Reconciliation
4/99	99-02-05	CT	CIEC	CL&P	Stranded Costs, Market Prices
4/99	99-03-04	CT	CIEC	UI	Stranded Costs, Market Prices
6/99	20290	TX	OPC	CP&L	Fuel Reconciliation
7/99	99-03-36	CT	CIEC	CL&P	Interim Nuclear Recovery
7/99	98-0453	WV	WVEUG	AEP & APS	Stranded Costs, Market Prices
12/99	21111	TX	OPC	EGSI	Fuel Reconciliation
2/00	99-035-01	UT	CCS	PacifiCorp	Net Power Costs, Production Cost Modeling Issues
5/00	99-1658	OH	AK Steel	CG&E	Stranded Costs, Market Prices
6/00	UE-111	OR	ICNU	PacifiCorp	Net Power Costs, Production Cost Modeling Issues
9/00	22355	TX	OPC	Reliant Energy	Stranded cost
10/00	22350	TX	OPC	TXU Electric	Stranded cost

**RFI CONSULTING, INC.**

**Expert Testimony Appearances  
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<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
10/00	99-263-U	AR	Tyson Foods	SW Elec. Coop	Cost of Service
12/00	99-250-U	AR	Tyson Foods	Ozarks Elec. Coop	Cost of Service
01/01	00-099-U	AR	Tyson Foods	SWEPCO	Rate Unbundling
02/01	99-255-U	AR	Tyson Foods	Ark. Valley Coop	Rate Unbundling
03/01	UE-116	OR	ICNU	PacifiCorp	Net Power Costs
6/01	01-035-01	UT	DPS and CCS	PacifiCorp	Net Power Costs
7/01	A.01-03-026	CA	Roseburg FP	PacifiCorp	Net Power Costs
7/01	23550	TX	OPC	EGSI	Fuel Reconciliation
7/01	23950	TX	OPC	Reliant Energy	Price to beat fuel factor
8/01	24195	TX	OPC	CP&L	Price to beat fuel factor
8/01	24335	TX	OPC	WTU	Price to beat fuel factor
9/01	24449	TX	OPC	SWEPCO	Price to beat fuel factor
10/01	20000-EP 01-167	WY	WIEC	PacifiCorp	Power Cost Adjustment Excess Power Costs
2/02	UM-995	OR	ICNU	PacifiCorp	Cost of Hydro Deficit
2/02	00-01-37	UT	CCS	PacifiCorp	Certification of Peaking Plant
4/02	00-035-23	UT	CCS	PacifiCorp	Cost of Plant Outage, Excess Power Cost Stipulation.
4/02	01-084/296	AR	AEEC	Entergy Arkansas	Recovery of Ice Storm Costs
5/02	25802	TX	OPC	TXU Energy	Escalation of Fuel Factor
5/02	25840	TX	OPC	Reliant Energy	Escalation of Fuel Factor
5/02	25873	TX	OPC	Mutual Energy CPL	Escalation of Fuel Factor
5/02	25874	TX	OPC	Mutual Energy WTU	Escalation of Fuel Factor
5/02	25885	TX	OPC	First Choice	Escalation of Fuel Factor
7/02	UE-139	OR	ICNU	Portland General	Power Cost Modeling
8/02	UE-137	OP	ICNU	Portland General	Power Cost Adjustment Clause
10/02	RPU-02-03	IA	Maytag, et al	Interstate P&L	Hourly Cost of Service Model
11/02	20000-Er 02-184	WY	WIEC	PacifiCorp	Net Power Costs, Deferred Excess Power Cost
12/02	26933	TX	OPC	Reliant Energy	Escalation of Fuel Factor
12/02	26195	TX	OPC	Centerpoint Energy	Fuel Reconciliation
1/03	27167	TX	OPC	First Choice	Escalation of Fuel Factor
1/03	UE-134	OR	ICNU	PacifiCorp	West Valley CT Lease payment
1/03	27167	TX	OPC	First Choice	Escalation of Fuel Factor

**RFI CONSULTING, INC.**



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of  
Randall J. Falkenberg**

<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
1/03	26186	TX	OPC	SPS	Fuel Reconciliation
2/03	UE-02417	WA	ICNU	PacifiCorp	Rate Plan Stipulation, Deferred Power Costs
2/03	27320	TX	OPC	Reliant Energy	Escalation of Fuel Factor
2/03	27281	TX	OPC	TXU Energy	Escalation of Fuel Factor
2/03	27376	TX	OPC	CPL Retail Energy	Escalation of Fuel Factor
2/03	27377	TX	OPC	WTU Retail Energy	Escalation of Fuel Factor
3/03	27390	TX	OPC	First Choice	Escalation of Fuel Factor
4/03	27511	TX	OPC	First Choice	Escalation of Fuel Factor
4/03	27035	TX	OPC	AEP Texas Central	Fuel Reconciliation
05/03	03-028-U	AR	AEEC	Entergy Ark., Inc.	Power Sales Transaction
7/03	UE-149	OR	ICNU	Portland General	Power Cost Modeling
8/03	28191	TX	OPC	TXU Energy	Escalation of Fuel Factor
11/03	20000-ER -03-198	WY	WIEC	PacifiCorp	Net Power Costs
2/04	03-035-29	UT	CCS	PacifiCorp	Certification of CCCT Power Plant, RFP and Bid Evaluation
6/04	29526	TX	OPC	Centerpoint	Stranded cost true-up.
6/04	UE-161	OR	ICNU	Portland General	Power Cost Modeling
7/04	UM-1050	OR	ICNU	PacifiCorp	Jurisdictional Allocation
10/04	15392-U 15392-U	GA	Calpine	Georgia Power/ SEPCO	Fair Market Value of Combined Cycle Power Plant
12/04	04-035-42	UT	CCS	PacifiCorp	Net power costs
02/05	UE-165	OP	ICNU	Portland General	Hydro Adjustment Clause
05/05	UE-170	OR	ICNU	PacifiCorp	Power Cost Modeling
7/05	UE-172	OR	ICNU	Portland General	Power Cost Modeling
08/05	UE-173	OR	ICNU	PacifiCorp	Power Cost Adjustment
8/05	UE-050482	WA	ICNU	Avista	Power Cost modeling, Energy Recovery Mechanism
8/05	31056	TX	OPC	AEP Texas Central	Stranded cost true-up.
11/05	UE-05684	WA	ICNU	PacifiCorp	Power Cost modeling, Jurisdictional Allocation, PCA
2/06	05-116-U	AR	AEEC	Entergy Arkansas	Fuel Cost Recovery
4/06	UE-060181	WA	ICNU	Avista	Energy Cost Recovery Mechanism
5/06	22403-U	GA	GPSC Staff	Georgia Power	Fuel Cost Recovery Audit
6/06	UM 1234	OR	ICNU	Portland General	Deferral of outage costs

**RFI CONSULTING, INC.**

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UE 180/UE 181/UE 184**

In the Matter of )  
)  
PORTLAND GENERAL ELECTRIC )  
COMPANY )  
)  
Request for a General Rate Revision )  
(UE 180), )  
\_\_\_\_\_ )

In the Matter of )  
)  
PORTLAND GENERAL ELECTRIC )  
COMPANY )  
)  
Annual Adjustments to Schedule 125 (2007 )  
RVM Filing) (UE 181), )  
\_\_\_\_\_ )

In the Matter of )  
)  
PORTLAND GENERAL ELECTRIC )  
COMPANY )  
)  
Request for a General Rate Revision relating )  
to the Port Westward plant (UE 184). )  
\_\_\_\_\_ )

**ICNU/102**

**PGE RESPONSE TO ICNU'S DATA REQUEST 3.9**

**July 18, 2006**

May 16, 2006

TO: S. Bradley Van Cleve  
Davison Van Cleve, P.C.

FROM: Patrick G. Hager  
Manager, Regulatory Affairs

**PORTLAND GENERAL ELECTRIC  
UM 1234  
PGE Response to ICNU's Data Request 3.9  
Dated May 3, 2006  
Question No. 017**

**Request:**

**For all outages that occurred at Boardman since January 1, 1998 provide a copy of all "Root Cause Analysis" reports performed for or by the Company.**

**Response:**

PGE objects to this request on the basis of relevance. Root Cause Analyses from periods prior to the upgrade of the low pressure (LP) turbine in 2000 are not relevant since the applicable LPT1 rotor and associated stationary parts were installed in 2000. Without waiving objection, PGE responds as follows:

The root cause analyses for the LPT1 rotor failure are not complete. They will be provided to the parties upon their completion. PGE has not engaged outside parties to evaluate the root cause of other forced outages since they were not significant and the causes of the outage readily apparent.