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Via Electronic Mail puc.filingcenter@state.or.us
And Overnight Mail

July 24, 2009

Public Utility Commission of Oregon
550 Capitol Street NE, Suite 215
Salem, Oregon 97310
Attn: Filing Center


Re: Case No. UE-210

Dear Sir or Madam:

Please find enclosed the original and five (5) copies of DIRECT TESTIMONY AND EXHIBITS OF KEVIN C. HIGGINS ON BEHALF OF THE FRED MEYERS STORES AND QUALITY FOOD CENTERS, DIVISIONS OF KROGER CO. e-filed today in the above referenced matter.

Copies have been served on all parties of record. Please place this document of file.

Very truly yours,


Michael L. Kurtz, Esq.
Kurt J. Boehm, Esq.
BOEHM, KURTZ & LOWRY

MLKkew
Enclosure
cc: Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that true copy of the foregoing was served via electronic mail (when available) and regular U.S. Mail (unless otherwise noted), this 24TH day of July, 2009.

<u>ACTIONS</u>	<u>SERVICE LIST (Parties)</u>	<u>SCHEDULE</u>
W=Waive Paper service	C=Confidential HC=Highly Confidential	<u>Sort by Last Name</u> <u>Sort by Company Name</u>
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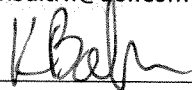
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Kurt J. Boehm, Esq.

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

In the Matter of PacifiCorp's)
Filing of Revised Tariff Schedules) **Docket No. UE-210**
For Electric Service in Oregon)

Direct Testimony of Kevin C. Higgins

on behalf of

Fred Meyer Stores

July 24, 2009

DIRECT TESTIMONY OF KEVIN C. HIGGINS

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Introduction

Q. Please state your name and business address.

A. Kevin C. Higgins, 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. On whose behalf are you testifying in this phase of the proceeding?

A. My testimony is being sponsored by Fred Meyer Stores (“Fred Meyer”). Fred Meyer purchases more than 60 million kWh annually from PacifiCorp in Oregon. Fred Meyer takes service from PacifiCorp under Schedules 28, 30 and 48.

Q. Please describe your professional experience and qualifications.

A. My academic background is in economics, and I have completed all coursework and field examinations toward a Ph.D. in Economics at the University of Utah. In addition, I have served on the adjunct faculties of both the University of Utah and Westminster College, where I taught undergraduate and graduate courses in economics. I joined Energy Strategies in 1995, where I assist private and public sector clients in the areas of energy-related economic and policy analysis, including evaluation of electric and gas utility rate matters.

1 Prior to joining Energy Strategies, I held policy positions in state and local
2 government. From 1983 to 1990, I was economist, then assistant director, for the
3 Utah Energy Office, where I helped develop and implement state energy policy.
4 From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County
5 Commission, where I was responsible for development and implementation of a
6 broad spectrum of public policy at the local government level.

7 **Q. Have you ever testified before this Commission?**

8 A. Yes. I have testified in several prior proceedings in Oregon, including the
9 two most recent PacifiCorp Transition Adjustment Mechanism cases, UE-207
10 (2009) and UE-199 (2008). I have also participated in three PacifiCorp general
11 rate cases, UE-179 (2006), UE-170 (2005), and UE-147 (2003). In addition, I
12 testified in the Portland General Electric (“PGE”) general cases, UE-197 (2008)
13 and UE-180 (2006), as well as in the PGE restructuring proceeding, UE-115
14 (2001).

15 **Q. Have you participated in any workshop processes sponsored by this**
16 **Commission?**

17 A. Yes. In 2003, I was an active participant in the collaborative process
18 initiated by the Commission to examine direct access issues in Oregon, UM-1081.

19 **Q. Have you testified before utility regulatory commissions in other states?**

20 A. Yes. I have testified in over one hundred proceedings on the subjects of
21 utility rates and regulatory policy before state utility regulators in Alaska,
22 Arizona, Arkansas, Colorado, Georgia, Idaho, Illinois, Indiana, Kansas,
23 Kentucky, Michigan, Minnesota, Missouri, Montana, Nevada, New Mexico, New

1 York, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Virginia,
2 Washington, West Virginia, and Wyoming.

3 A more detailed description of my qualifications is contained in FM
4 Exhibit 101, attached to my direct testimony.

5
6 **Overview and Conclusions**

7 **Q. What is the purpose of your testimony in this proceeding?**

8 A. My testimony addresses: (1) the rate design of Schedule 200 for demand-
9 billed customers, and (2) the treatment of line losses in the calculation of the
10 Schedule 294 and 295 Transition Adjustment calculations.

11 **Q. Please summarize your recommendations to the Commission.**

12 A. I offer the following recommendations:

13 (1) I recommend that the design of the “new” Schedule 200 being
14 proposed in this case be modified to incorporate a demand charge for those rate
15 schedules that are demand-billed. Concomitant with this rate design change, I am
16 recommending that direct access customers pay the new Schedule 200,¹ but not
17 pay the new Schedule 201. In association with this change, only the cost of
18 Schedule 201 would be subtracted from the estimated market price of electricity
19 to determine the Schedule 294 and 295 Transition Adjustment rates.

20 (2) I disagree with PacifiCorp’s treatment of line losses in the calculation
21 of Schedules 294 and 295. In calculating these schedules, the Company has
22 chosen to apply the line loss calculation to the price of cost-of-service power,

¹ With one exception, as explained in Footnote 3 on page 11.

1 converting it to a lower, “upstream” price. In my opinion, the comparison is
2 taking place at the wrong end of the transaction. Retail customers take service
3 downstream. Therefore, the Company’s cost-of-service prices should not be
4 adjusted downward for losses; rather, the market price should be adjusted upward
5 for losses. This change will produce slightly different, but more accurate,
6 transition adjustment results relative to the Company’s treatment.

7 (3) The line loss factor of 4.48 percent that PacifiCorp applies in the
8 calculation of the Schedule 294 and 295 Transition Adjustments strikes me as
9 unusually low for retail delivery, as it appears to exclude line losses for primary
10 and secondary delivery. It is possible that the Company is accounting for primary
11 and secondary line losses elsewhere in the transition adjustment calculation;
12 however at this time I have come to the tentative conclusion that the line loss
13 factor being used is incorrect. I am continuing to evaluate this question.

14
15 **Schedule 200 Rate Design**

16 **Q. What change is PacifiCorp proposing for Schedule 200?**

17 A. Schedule 200 recovers generation-related costs. In this proceeding,
18 PacifiCorp is proposing to split this schedule into two new schedules: (1) a new
19 Schedule 201, which would recover Net Power Costs; and (2) a new version of
20 Schedule 200, Cost-Based Supply Service, which would collect all other
21 generation-related costs. This change is incorporated in the stipulation filed in
22 Docket No. UE-199 in May 2009.

1 **Q. What is the practical effect of this unbundling of Schedule 200 into two**
2 **components?**

3 A. Currently, the net power cost portion of Schedule 200 is updated annually
4 during each Transition Adjustment Mechanism (“TAM”) proceeding. With the
5 proposed new unbundling, the new Schedule 201, Net Power Costs Supply
6 Service Adjustment, will continue to be updated with each Transition Adjustment
7 Mechanism (“TAM”) proceeding. However, the new Schedule 200 – generation
8 exclusive of net power costs – will not change in between rate cases, just as this
9 portion of the current Schedule 200 does not currently change during TAM
10 proceedings.

11 **Q. What is your rate design proposal for the “new” version of Schedule 200?**

12 A. With the new Schedule 200 remaining fixed between rate cases, it presents
13 an opportunity to improve its rate design. Currently, Schedule 200 is designed
14 exclusively as an energy charge, even though the generation-related costs
15 recovered in Schedule 200 include some demand-related costs. Consequently,
16 there is no demand charge levied for recovery of generation-related costs in
17 PacifiCorp’s Oregon service territory. Given that a portion of generation-related
18 cost is demand-related, the absence of a demand charge creates a misalignment of
19 costs and charges. To remedy this misalignment, I recommend adoption of a
20 demand charge in the new Schedule 200 for those rate schedules that are demand-
21 billed, with an offsetting reduction in the energy charge that is revenue-neutral
22 within each rate schedule.

23 **Q. What portion of PacifiCorp’s generation-related costs is demand-related?**

1 A. According to the Company's cost-of-service study, about 16 percent of the
2 Company's generation-related costs are demand-related. The percentage varies
3 somewhat across rate schedules. Although the overall percentage strikes me as
4 very low relative to other utility cost analyses I have reviewed, I am not
5 challenging the Company's results for purposes of this proceeding.

6 **Q. From a customer's perspective, why should it matter if PacifiCorp has a rate
7 design that does not fully recover its demand-related costs through demand-
8 related charges?**

9 A. If a utility's demand-related charges are below the cost of demand, it must
10 recover its class revenue requirement by over-recovering its costs in another area,
11 most typically through levying an energy charge that is above unit energy costs,
12 which is the case here. For a given rate schedule, when demand-related charges
13 are set below demand-related cost, and the energy charge is set above energy cost,
14 those customers with relatively-higher load factors are required to subsidize the
15 costs of the lower-load-factor customers within the rate class.

16 **Q. Why is it important for rate design to be representative of underlying cost
17 causation?**

18 A. Aligning rate design with underlying cost causation improves efficiency
19 because it sends proper price signals. For example, setting demand-related
20 charges below the cost of demand understates the economic cost of demand-
21 related assets, which in turn distorts consumption decisions, and calls forth a
22 greater level of investment in fixed assets than is economically desirable.

1 At the same time, aligning rate design with underlying cost causation is
2 important for ensuring equity among customers, because properly aligning
3 charges with costs minimizes cross-subsidies among customers. As I stated above,
4 if demand costs are understated in utility rates, the costs are made up elsewhere –
5 typically in energy rates.

6 **Q. What specific rate design proposal do you recommend?**

7 A. I recommend using PacifiCorp's cost-of-service analysis to identify the
8 share of demand-related generation costs for each rate schedule that is demand-
9 billed (generally, all rate schedules except 4, 33, and Lighting). These demand-
10 related costs would then be recovered in the new version of Schedule 200 through
11 a demand charge. The remainder of the Schedule 200 revenue requirement would
12 be recovered through an energy charge. The Schedule 201 revenue requirement
13 would be recovered solely through an energy charge, as proposed by PacifiCorp.

14 The proportion of each rate schedule's share of demand-related generation
15 costs from the Company's cost-of-service study is presented in Exhibit FM 102. I
16 then use this information in Exhibit FM 103 to present a sample Schedule 200
17 result applicable to Schedule 30-Secondary using the revenue requirement
18 proposed by the Company in this proceeding. Of course, if the final approved
19 revenue requirement is different from what the Company has requested in its
20 application, then the final Schedule 200 rate for Schedule 30-Secondary will
21 differ from the results in my example.

22 **Q. Why are you recommending this rate design change at this time?**

1 A. As I indicated above, I believe the adoption of a new Schedule 200
2 presents an opportunity to improve its rate design. With the current Schedule 200,
3 it has not been practical to incorporate a demand charge, because doing so would
4 have complicated the calculation of the Schedule 294 and 295 transition
5 adjustments, which are expressed in cents per kilowatt-hour. As the new version
6 of Schedule 200 will remain fixed between rate cases, a demand charge can be
7 introduced into the rate, and the transition adjustment calculation can proceed
8 using the new Schedule 201 rates, which remains expressed solely as an energy
9 charge.

10 **Q. What are the implications of your proposal for the mechanics of the Schedule**
11 **294 and 295 Transition Adjustment calculations?**

12 A. My proposal has some implications for the mechanics of the calculation,
13 but does not impact the net results of it. If the new version of Schedule 200
14 incorporates a demand charge, as I propose, then the mechanics of the Schedule
15 294 and 295 Transition Adjustments should be modified such that direct access
16 customers pay Schedule 200, while simultaneously excluding Schedule 200 from
17 the calculation of the Schedule 294 and 295 Transition Adjustment. At the same
18 time, direct access customers would not pay for Schedule 201 (consistent with
19 PacifiCorp's proposal); Schedule 201 would continue to be included in the
20 calculation of the Schedule 294 and 295 Transition Adjustment. By making this
21 modification, we avoid the complication of subtracting Schedule 200,
22 denominated partly as a demand charge, from the estimated market price of
23 electricity, which is denominated in kilowatt-hours.

1 While the modification I am proposing may seem counterintuitive at first,
2 its mechanics would produce a result that is equivalent to the current Transition
3 Adjustment, while at the same time being neutral to the shopping decision.

4 **Q. Please provide a more detailed explanation of this point.**

5 A. Let's start with some background. The purpose of the Schedule 294 and
6 295 Transition Adjustments is to provide the appropriate credit or charge for
7 customers who choose direct access service. Schedule 294 is applied to customers
8 who choose a one-year direct access option, whereas Schedule 295 is applied to
9 customers who choose a three-year direct access option.

10 The logical premise behind the Transition Adjustment is to credit or
11 charge direct access customers the difference between PacifiCorp's regulated
12 generation price and the estimated market value of the electricity that is freed up
13 when a customer chooses direct access service. This is calculated by subtracting
14 the former from the latter. If the result is a positive number, the difference is
15 applied as a Schedule 294 (or 295) credit to the direct access customer. If the
16 result is a negative number, the difference is applied as a charge to the direct
17 access customer.

18 In this manner, the current Schedule 200 rates directly impact direct access
19 customers, even though direct access customers are not charged the Schedule 200
20 rate. This impact occurs because the Schedule 200 costs are subtracted from the
21 estimated market value of electricity freed-up from direct access to determine the
22 Schedule 294 and 295 Transition Adjustments, as described above. Consequently,
23 a \$.001/kWh increase in Schedule 200 rates produces a \$.001/kWh increase in

1 rates for direct access customers, just as it produces a \$.001/kWh increase in rates
2 for non-shopping customers. Mathematically: (a) not charging the direct access
3 customer for Schedule 200 while subtracting Schedule 200 from the market value
4 of electricity to determine Schedule 294 rates is the same as (b) charging the
5 direct access customer for Schedule 200 and not subtracting Schedule 200 from
6 the market value of electricity to determine Schedule 294 rates.²

7 The upshot is that my proposed modification produces a Transition
8 Adjustment result that is equivalent to the current method, while passing on the
9 net effect of my proposed Schedule 200 rate design change to all demand-billed
10 customers, irrespective of whether the customer takes direct access service or
11 cost-of-service rates. For this reason, my proposal is neutral with respect to the
12 customer's decision regarding whether to take direct access service.

13 **Q. Please summarize the difference between the Company's proposed treatment**
14 **of Schedules 200 and 201 relative to the Transition Adjustment and your**
15 **proposed treatment.**

16 Under its current proposal, PacifiCorp does not intend to charge direct
17 access customers for either Schedule 200 or Schedule 201. PacifiCorp would then
18 subtract the cost of both Schedule 200 and Schedule 201 from the estimated
19 market price of electricity to determine the Schedule 294 and 295 rates. In
20 comparison, under my proposal, direct access customers would pay Schedule

² To see this point, assume the market value of electricity = \$.05/kWh and Schedule 200 = \$.03/kWh. The direct access customer pays the same net charges to PacifiCorp whether the customer pays \$0 for Schedule 200 and receives a Schedule 294 credit = \$.05/kWh - \$.03/kWh = \$.02/kWh; or pays a Schedule 200 charge = \$.03/kWh and receives a Schedule 294 credit = \$.05/kWh - \$0 = \$.05/kWh.

1 200,³ but not pay Schedule 201. Then, only the cost of Schedule 201 would be
2 subtracted from the estimated market price of electricity to determine the
3 Schedule 294 and 295 rates.

4 **Q. Are there any ancillary benefits to adopting your proposed modification?**

5 A. Yes. A year such as 2009, in which both a TAM proceeding and general
6 rate case occur, presents a special difficulty for the direct access shopping
7 window: the shopping window is opened and closed before the end of 2009 but
8 the final Schedule 200 values will not be known until the final order in the rate
9 case, which may not occur until 2010. If Schedule 200 is included in the Schedule
10 294/295 Transition Adjustment calculation, this creates the prospect of an after-
11 the-fact adjustment to the Transition Adjustment, causing uncertainty for
12 customers contemplating direct access.

13 In contrast, if my modification is adopted, the Schedule 294/295
14 Transition Adjustments will be “locked down” prior to the direct access window.
15 And the determination of Schedule 200 as part of the final rate case order will not
16 create uncertainty regarding the shopping decision: Schedule 200 will be
17 excluded from the transition adjustment and it will be paid by both shoppers and
18 non-shoppers at the time it goes into effect.

³ There would be one exception to this: Direct access customers taking service under a Schedule 295 (multi-year option) rate established prior to 2009 should remain exempt from Schedule 200, consistent with the manner in which the Transition Adjustments were calculated in previous years.

1 **Treatment of Line Losses in Calculating Schedules 294 and 295**

2 **Q. How does PacifiCorp treat line losses in the calculation of Schedules 294 and**
3 **295?**

4 A. In calculating Schedules 294 and 295, it is necessary to subtract the price
5 of cost-of-service power from the estimated market price of power. However,
6 cost-of-service power is priced at the point of delivery to the customer, whereas
7 the market price of power is priced at a market hub and has not yet incurred line
8 losses. Consequently, it is necessary to make a line loss adjustment in order to
9 subtract one price from the other on an “apples-to-apples” basis.

10 PacifiCorp has chosen to apply the line loss adjustment to the price of
11 cost-of-service power, converting it to a lower, “upstream” price. This “upstream”
12 price is then subtracted from the estimated market price of power, which is also
13 an “upstream” price. Thus, the comparison is “apples-to-apples.”

14 **Q. Do you agree with the Company’s treatment of line losses in the calculation**
15 **of Schedules 294 and 295?**

16 A. No. Although the Company’s comparison is “apples-to-apples,” in my
17 opinion, the comparison is taking place at the wrong end of the transaction. Retail
18 customers take service downstream. Therefore, the Company’s cost-of-service
19 prices should not be adjusted downward for losses; rather, the market price should
20 be adjusted upward for losses. This change will produce slightly different, but
21 more accurate, transition adjustment results relative to the Company’s treatment.

22 **Q. What line loss factor does PacifiCorp apply in calculating Schedules 294 and**
23 **295?**

1 A. PacifiCorp uses a line loss factor of 4.48 percent.

2 **Q. Do you concur with the use of this line loss factor?**

3 A. This line loss factor strikes me as unusually low for retail delivery, as it
4 appears to exclude line losses for primary and secondary delivery. It is possible
5 that the Company is accounting for primary and secondary line losses elsewhere
6 in the transition adjustment calculation; however at this time I have come to the
7 tentative conclusion that the line loss factor is incorrect as applied. I am
8 continuing to evaluate this question.

9 **Q. If the Commission does not adopt your recommended change to the line loss**
10 **treatment in the calculation of Schedules 294 and 295, do you have any**
11 **additional comments or recommendations on this topic?**

12 A. Yes. If the Commission does not accept my recommended treatment of
13 line losses, but does adopt my recommended treatment of Schedule 200, then the
14 Company's current application of its line loss adjustment to the total cost of
15 service generation price should continue; that is, even if Schedule 200 is removed
16 from the transition adjustment calculation as I recommend, the Schedule 200
17 average price should continue to be included in the line loss adjustment, given the
18 Company's practice of converting its delivered price into an upstream value.
19 Failure to include the Schedule 200 average price in the line loss adjustment in
20 this situation would cause an understatement of the Transition Adjustment credit
21 (or overstatement of the Transition Adjustment charge).

1 However, if the Commission adopts my proposed application of the line
2 loss adjustment to the estimated market value of energy, as discussed above, then
3 this issue is moot.

4 **Q. Does this conclude your direct testimony?**

5 **A. Yes, it does.**

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

**In the Matter of PacifiCorp's)
Filing of Revised Tariff Schedules)
For Electric Service in Oregon)**

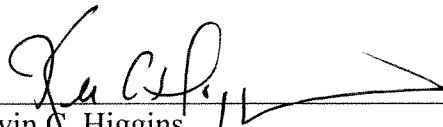
Docket No. UE-210

AFFIDAVIT OF KEVIN C. HIGGINS

STATE OF UTAH)
)
COUNTY OF SALT LAKE)

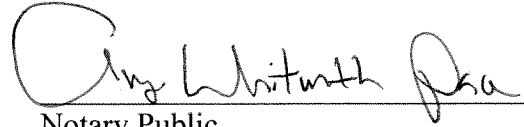
Kevin C. Higgins, being first duly sworn, deposes and states that:

1. He is a Principal with Energy Strategies, L.L.C., in Salt Lake City, Utah;
2. He is the witness who sponsors the testimony entitled "Direct Testimony of Kevin C. Higgins."
3. Said testimony was prepared by him and under his direction and supervision;
4. If inquiries were made as to the facts and schedules in said testimony he would respond as therein set forth; and
5. The aforesaid testimony and schedules are true and correct to the best of his knowledge, information and belief.

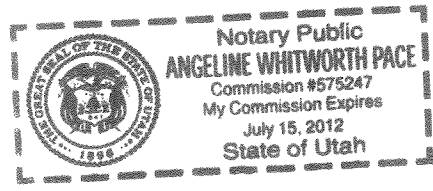


Kevin C. Higgins

Subscribed and sworn to or affirmed before me this 22nd day of July, 2009, by Kevin C. Higgins.



Notary Public



KEVIN C. HIGGINS
Principal, Energy Strategies, L.L.C.
215 South State St., Suite 200, Salt Lake City, UT 84111

Vitae

PROFESSIONAL EXPERIENCE

Principal, Energy Strategies, L.L.C., Salt Lake City, Utah, January 2000 to present. Responsible for energy-related economic and policy analysis, regulatory intervention, and strategic negotiation on behalf of industrial, commercial, and public sector interests. Previously Senior Associate, February 1995 to December 1999.

Adjunct Instructor in Economics, Westminster College, Salt Lake City, Utah, September 1981 to May 1982; September 1987 to May 1995. Taught in the economics and M.B.A. programs. Awarded Adjunct Professor of the Year, Gore School of Business, 1990-91.

Chief of Staff to the Chairman, Salt Lake County Board of Commissioners, Salt Lake City, Utah, January 1991 to January 1995. Senior executive responsibility for all matters of county government, including formulation and execution of public policy, delivery of approximately 140 government services, budget adoption and fiscal management (over \$300 million), strategic planning, coordination with elected officials, and communication with consultants and media.

Assistant Director, Utah Energy Office, Utah Department of Natural Resources, Salt Lake City, Utah, August 1985 to January 1991. Directed the agency's resource development section, which provided energy policy analysis to the Governor, implemented state energy development policy, coordinated state energy data collection and dissemination, and managed energy technology demonstration programs. Position responsibilities included policy formulation and implementation, design and administration of energy technology demonstration programs, strategic management of the agency's interventions before the Utah Public Service Commission, budget preparation, and staff development. Supervised a staff of economists, engineers, and policy analysts, and served as lead economist on selected projects.

Utility Economist, Utah Energy Office, January 1985 to August 1985. Provided policy and economic analysis pertaining to energy conservation and resource development, with an emphasis on utility issues. Testified before the state Public Service Commission as an expert witness in cases related to the above.

Acting Assistant Director, Utah Energy Office, June 1984 to January 1985. Same responsibilities as Assistant Director identified above.

Research Economist, Utah Energy Office, October 1983 to June 1984. Provided economic analysis pertaining to renewable energy resource development and utility issues. Experience includes preparation of testimony, development of strategy, and appearance as an expert witness for the Energy Office before the Utah PSC.

Operations Research Assistant, Corporate Modeling and Operations Research Department, Utah Power and Light Company, Salt Lake City, Utah, May 1983 to September 1983. Primary area of responsibility: designing and conducting energy load forecasts.

Instructor in Economics, University of Utah, Salt Lake City, Utah, January 1982 to April 1983. Taught intermediate microeconomics, principles of macroeconomics, and economics as a social science.

Teacher, Vernon-Verona-Sherrill School District, Verona, New York, September 1976 to June 1978.

EDUCATION

Ph.D. Candidate, Economics, University of Utah (coursework and field exams completed, 1981).

Fields of Specialization: Public Finance, Urban and Regional Economics, Economic Development, International Economics, History of Economic Doctrines.

Bachelor of Science, Education, State University of New York at Plattsburgh, 1976 (cum laude).

Danish International Studies Program, University of Copenhagen, 1975.

SCHOLARSHIPS AND FELLOWSHIPS

University Research Fellow, University of Utah, Salt Lake City, Utah 1982 to 1983.

Research Fellow, Institute of Human Resources Management, University of Utah, 1980 to 1982.

Teaching Fellow, Economics Department, University of Utah, 1978 to 1980.

New York State Regents Scholar, 1972 to 1976.

EXPERT TESTIMONY

“In The Matter of the Application of Rocky Mountain Power to Establish an Avoided Cost Methodology for Customers That Do Not Qualify for Tariff Schedule 37 – Avoided Cost Purchases from Qualifying Facilities,” **Wyoming** Public Service Commission, Docket No. 20000-342-EA-09. Direct testimony submitted July 21, 2004.

“In the Matter of PacifiCorp, dba Pacific Power, 2010 Transition Adjustment Mechanism,” Public Utility Commission of **Oregon**, Docket No. UE-207. Reply testimony submitted July 14, 2009.

“In The Matter of the Application of The Detroit Edison Company for Authority to Increase Its Rates, Amend Its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy,” **Michigan** Public Service Commission, Case No. U-15768. Direct testimony submitted July 9, 2009.

“In the Matter of the Investigation of Westar Energy, Inc., and Kansas Gas and Electric Company to Consider the Issue of Rate Consolidation and Resulting Rate Design,” **Kansas** Corporation Commission,” Docket No. 09-WSEE-641-GIE. Direct testimony submitted June 26, 2009.

“Illinois Commerce Commission on Its Own Motion vs Commonwealth Edison Company, Investigation of Rate Design Pursuant to Section 9-250 of the Public Utilities Act,” **Illinois** Commerce Commission, Docket No. 08-0532. Direct testimony submitted May 22, 2009.

“In the Matter of the Application of Duke Energy Kentucky, Inc. for Approval of Energy Efficiency Plan, Including an Energy Efficiency Rider and Portfolio of Energy Efficiency Programs,” **Kentucky** Public Service Commission, Case No. 2008-00495. Direct testimony submitted May 11, 2009.

“In the Matter of the Application by Nevada Power Company d/b/a NV Energy, filed Pursuant to NRS§704.110(3) and NRS §704.110(4) for Authority to Increase Its Annual Revenue Requirement for General Rates Charged to All Classes of Customers, Begin to Recover the Costs of Acquiring the Bighorn Power Plant, Constructing the Clark Peakers, Environmental Retrofits and Other Generating, Transmission and Distribution Plant Additions, to Reflect Changes in Cost of Service and for Relief Properly Related Thereto, Public Utilities Commission of **Nevada**, Docket No. 08-12002. Direct testimony submitted April 14, 2009 (revenue requirement) and April 21, 2009 (cost of service/rate design). Cross examined May 6, 2009.

“Verified Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission to Approve an Alternative Regulatory Plan Pursuant to the Ind. Code 8-1-2.5, *Et Seq.*, for the Implementation of an Electric Distribution System “SmartGrid” and Advanced

Metering Infrastructure, Distribution Automation Investments, and a Distribution Renewable Generation Demonstration Project and Associated Accounting and Rate Recovery Mechanisms, Including a Ratemaking Proposal to Update Distribution Rates Annually and a “Lost Revenue” Recovery Mechanism, in Accordance with Ind. Code 8-1-2-42(a) and 8-1-2.5-1 *Et Seq.* and Preliminary Approval of the Estimated Costs and Scheduled Deployment of the Company’s SmartGrid Initiative,” **Indiana** Utility Regulatory Commission, Cause No. 43501. Direct testimony submitted February 27, 2009.

“In The Matter of the Application of Duke Energy Ohio for an Increase in Electric Distribution Rates,” Public Utilities Commission of **Ohio**, Case No. 08-709-EL-AIR; “In the Matter of the Application of Duke Energy Ohio for Tariff Approval,” Case No. 08-710-EL-ATA; “In the Matter of the Application of Duke Energy Ohio for Approval to Change Accounting Methods,” Case No. 08-711-EL-AAM. Direct testimony submitted February 26, 2009.

“In The Matter of the Amended Application of Rocky Mountain Power for Approval of a General Rate Increase of Approximately \$28.8 Million per Year (6.1 Percent Overall Average Increase)”, **Wyoming** Public Service Commission, Docket No. 20000-333-ER-08. Direct testimony submitted January 30, 2009. Summary of cross answer testimony submitted February 27, 2009. Settlement testimony submitted March 13, 2009. Cross examined March 24, 2009.

“In the Matter of the Application of Dayton Power and Light Company for Approval of Its Electric Security Plan,” Public Utilities Commission of **Ohio**, Case No. 08-1094-EL-SSO; “In the Matter of the Application of Dayton Power and Light Company for Approval of Revised Tariffs, Case No. 08-1095-EL-ATA; “In the Matter of the Application of Dayton Power and Light Company for Approval of Certain Accounting Authority Pursuant to Ohio Rev. Code §4905.13,” Case No. 08-1096-EL-AAM; In the Matter of the Application of Dayton Power and Light Company for Approval of Its Amended Corporate Separation Plan, Case No. 08-1097-EL-UNC. Direct testimony submitted January 26, 2009. Deposed February 6, 2009. Testimony withdrawn pursuant to stipulation filed February 24, 2009.

“Application of Oncor Electric Delivery Company LLC for Authority to Change Rates,” Public Utility Commission of **Texas**, SOAH Docket No. 473-08-3681, PUC Docket No. 35717. Direct testimony submitted November 26, 2008. Cross examined February 3, 2009.

“In the Matter of the Application of Columbus Southern Power Company for Approval of Its Electric Security Plan; An Amendment to Its Corporate Separation Plan; and the Sale of Certain Generating Assets”, Public Utilities Commission of **Ohio**, Case No. 08-917-EL-SSO; “In the Matter of the Application of Ohio Power Company for Approval of Its Electric Security Plan; and an Amendment to Its Corporate Separation Plan,” Case No. 08-918-EL-SSO. Direct testimony submitted October 31, 2008. Cross examined November 25, 2008.

“Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Base

Rates,” **Kentucky** Public Service Commission, Case No. 2008-00252. Direct testimony submitted October 28, 2008.

“Application of Kentucky Utilities Company for an Adjustment of Base Rates,” **Kentucky** Public Service Commission, Case No. 2008-00251. Direct testimony submitted October 28, 2008.

“In the Matter of the Application of Idaho Power Company for Authority to Increase its Rates and Charges for Electric Service,” **Idaho** Public Utilities Commission, Case No. IPC-E-08-10. Direct testimony submitted October 24, 2008. Rebuttal testimony submitted December 3, 2008. Cross examined December 19, 2008.

“In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 08-035-38. Direct testimony submitted October 7, 2008 (test period) and February 12, 2009 (revenue requirement). Cross examined October 28, 2008 (test period).

“In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Establish a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan,” Public Utility Commission of **Ohio**, Case No. 08-935-EL-SSO. Direct testimony submitted September 29, 2008. Deposed October 13, 2008. Cross examined October 21, 2008.

“In the Matter of the Application of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes In Their Charges for Electric Service,” State Corporation Commission of **Kansas**, Docket No. 08-WSEE-1041-RTS. Direct testimony submitted September 29, 2008. Cross Answer testimony submitted October 8, 2008.

“In the Matter of Appalachian Power Company’s Application for Increase in Electric Rates,” **Virginia** State Corporation Commission, Case No. PUE-2008-00046. Direct testimony submitted September 26, 2008.

“In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Accounting Modifications with Reconciliation Mechanism and Tariffs for Generation Service,” Public Utility Commission of **Ohio**, Case No. 08-936-EL-SSO. Direct testimony submitted September 9, 2008. Deposed September 16, 2008.

“In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such

Return,” **Arizona** Corporation Commission, Docket No. E-01345A-08-0172. Direct testimony submitted August 29, 2008 (interim rates), December 19, 2008 (revenue requirement), January 9, 2009 (cost of service, rate design), and July 1, 2009 (settlement agreement). Cross examined September 16, 2008 (interim rates).

“Verified Joint Petition of Duke Energy Indiana, Inc., Indianapolis Power & Light Company, Northern Indiana Public Service Company and Vectren Energy Delivery of Indiana, Inc. for Approval, if and to the Extent Required, of Certain Changes in Operations That Are Likely To Result from the Midwest Independent System Operator, Inc.’s Implementation of Revisions to Its Open Access Transmission and Energy Markets Tariff to Establish a Co-Optimized, Competitive Market for Energy and Ancillary Services Market; and for Timely Recovery of Costs Associated with Joint Petitioners’ Participation in Such Ancillary Services Market,” **Indiana** Utility Regulatory Commission, Cause No. 43426. Direct testimony submitted August 6, 2008. Direct testimony in opposition to Settlement Agreement submitted November 12, 2008. Testimony withdrawn pursuant to stipulation.

“In The Matter of the Application of The Detroit Edison Company for Authority to Increase Its Rates, Amend Its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority,” **Michigan** Public Service Commission, Case No. U-15244. Direct testimony submitted July 15, 2008. Rebuttal testimony submitted August 8, 2008.

“Portland General Electric General Rate Case Filing,” Public Utility Commission of **Oregon**, Docket No. UE-197. Direct testimony submitted July 9, 2008. Surrebuttal testimony submitted September 15, 2008.

“In the Matter of PacifiCorp, dba Pacific Power, 2009 Transition Adjustment Mechanism, Schedule 200, Cost-Based Supply Service,” Public Utility Commission of **Oregon**, Docket No. UE-199. Reply testimony submitted June 23, 2008. Joint testimony in support of stipulation submitted September 4, 2008.

“2008 Puget Sound Energy General Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-072300 and UG-072301. Response testimony submitted May 30, 2008. Cross-Answer testimony submitted July 3, 2008. Joint testimony in support of partial stipulations submitted July 3, 2008 (gas rate spread/rate design), August 12, 2008 (electric rate spread/rate design), and August 28, 2008 (revenue requirements). Cross examined September 3, 2008.

“Verified Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission to Approve an Alternative Regulatory Plan Pursuant to the Ind. Code 8-1-2.5, Et Seq., for the Offering of Energy Efficiency Conservation, Demand Response, and Demand-Side Management Programs and Associated Rate Treatment Including Incentives Pursuant to a Revised Standard Contract Rider No. 66 in Accordance with Ind. Code 8-1-2.5-1Et Seq. and 8-

1-2-42(a); Authority to Defer Program Costs Associated with Its Energy Efficiency Portfolio of Programs; Authority to Implement New and Enhanced Energy Efficiency Programs in Its Energy Efficiency Portfolio of Programs; and Approval of a Modification of the Fuel Adjustment Clause Earnings and Expense Tests,” **Indiana** Utility Regulatory Commission, Cause No. 43374. Direct testimony submitted May 21, 2008. Testimony withdrawn pursuant to stipulation.

“Cinergy Corp., Duke Energy Ohio, Inc., Cinergy Power Investments, Inc., Generating Facilities LLCs,” **Federal Energy Regulatory Commission**, Docket No. EC-08-78-000. Affidavit filed May 14, 2008.

“Application of Entergy Gulf States, Inc. for Authority to Change Rates and to Reconcile Fuel Costs, Public Utility Commission of **Texas**, Docket No. 34800 [SOAH Docket No. 473-08-0334]. Direct testimony submitted April 11, 2008. Testimony withdrawn pursuant to stipulation.

“Central Illinois Light Company d/b/a AmerenCILCO Proposed General Increase in Electric Delivery Service Rates, Central Illinois Public Service Company d/b/a AmerenCIPS Proposed General Increase in Electric Delivery Service Rates, Illinois Power Company d/b/a/ AmerenIP Proposed General Increase in Electric Delivery Service Rates, Central Illinois Light Company d/b/a AmerenCILCO, Proposed General Increase in Gas Delivery Service Rates, Central Illinois Public Service Company d/b/a AmerenCIPS Proposed General Increase in Gas Delivery Service Rates, Illinois Power Company d/b/a/ AmerenIP Proposed General Increase in Gas Delivery Service Rates,” **Illinois** Commerce Commission, Docket Nos. 07-0585, 07-0586, 07-0587, 07-0588, 07-0589, 07-0590. Direct testimony submitted March 14, 2008. Rebuttal testimony submitted April 8, 2008.

“In the Matter of the Application of Public Service Company of Colorado for Authority to Implement an Enhanced Demand Side Management Cost Adjustment Mechanism to Include Current Recovery and Incentives,” **Colorado** Public Utilities Commission, Docket No. 07A-420E. Answer testimony submitted March 10, 2008. Cross examined April 25, 2008.

“An Investigation of the Energy and Regulatory Issues in Section 50 of Kentucky’s 2007 Energy Act,” **Kentucky** Public Service Commission, Administrative Case No. 2007-00477. Direct testimony submitted February 29, 2008. Supplemental direct testimony submitted April 1, 2008. Cross examined April 30, 2008.

In the Matter of the Application of Tucson Electric Power Company for the Establishment of Just and Reasonable Rates and Charges Designed to Realize a Reasonable Rate of Return on the Fair Value of Its Operations throughout the State of Arizona, **Arizona** Corporation Commission, Docket No. E-01933A-07-0402. Direct testimony submitted February 29, 2008 (revenue requirement), March 14, 2008 (rate design), and June 12, 2008 (settlement agreement). Cross examined July 14, 2008.

“Commonwealth Edison Company Proposed General Increase in Electric Rates,” **Illinois** Commerce Commission, Docket No. 07-0566. Direct testimony submitted February 11, 2008. Rebuttal testimony submitted April 8, 2008.

“In the Matter of the Application of Questar Gas Company to File a General Rate Case,” **Utah** Public Service Commission, Docket No. 07-057-13. Direct testimony submitted January 28, 2008 (test period), March 31, 2008 (rate of return), April 21, 2008 (revenue requirement), and August 18, 2008 (cost of service, rate spread, rate design). Rebuttal testimony submitted September 22, 2008 (cost of service, rate spread, rate design). Surrebuttal testimony submitted May 12, 2008 (rate of return) and October 7, 2008 (cost of service, rate spread, rate design). Cross examined February 8, 2008 (test period), May 21, 2008 (rate of return), and October 15, 2008 (cost of service, rate spread, rate design).

“In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations, Consisting of a General Rate Increase of Approximately \$161.2 Million Per Year, and for Approval of a New Large Load Surcharge,” **Utah** Public Service Commission, Docket No. 07-035-93. Direct testimony submitted January 25, 2008 (test period), April 7, 2008 (revenue requirement), and July 21, 2008 (cost of service, rate design). Rebuttal testimony submitted September 3, 2008 (cost of service, rate design). Surrebuttal testimony submitted May 23, 2008 (revenue requirement) and September 24, 2008 (cost of service, rate design). Cross examined February 7, 2008 (test period).

“In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Increase Rates for Distribution Service, Modify Certain Accounting Practices and for Tariff Approvals,” Public Utilities Commission of **Ohio**, Case Nos. 07-551-EL-AIR, 07-552-EL-ATA, 07-553-EL-AAM, and 07-554-EL-UNC. Direct testimony submitted January 10, 2008.

“In the Matter of the Application of Rocky Mountain Power for Authority to Increase Its Retail Electric Utility Service Rates in Wyoming, Consisting of a General Rate Increase of Approximately \$36.1 Million per Year, and for Approval of a New Renewable Resource Mechanism and Marginal Cost Pricing Tariff,” **Wyoming** Public Service Commission, Docket No. 20000-277-ER-07. Direct testimony submitted January 7, 2008. Cross examined March 6, 2008.

“In the Matter of the Application of Idaho Power Company for Authority to Increase Its Rates and Charges for Electric Service to Electric Customers in the State of Idaho,” **Idaho** Public Utilities Commission, Case No. IPC-E-07-8. Direct testimony submitted December 10, 2007. Cross examined January 23, 2008.

“In The Matter of the Application of Consumers Energy Company for Authority to Increase Its Rates for the Generation and Distribution Of Electricity and Other Relief,” **Michigan** Public Service Commission, Case No. U-15245. Direct testimony submitted November 6, 2007. Rebuttal testimony submitted November 20, 2007.

“In the Matter of Montana-Dakota Utilities Co., Application for Authority to Establish Increased Rates for Electric Service,” **Montana** Public Service Commission, Docket No. D2007.7.79. Direct testimony submitted October 24, 2007.

“In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice Notice No. 334,” **New Mexico** Public Regulation Commission, Case No. 07-0077-UT. Direct testimony submitted October 22, 2007. Rebuttal testimony submitted November 19, 2007. Cross examined December 12, 2007.

“In The Matter of Georgia Power Company’s 2007 Rate Case,” **Georgia** Public Service Commission, Docket No. 25060-U. Direct testimony submitted October 22, 2007. Cross examined November 7, 2007.

“In the Matter of the Application of Rocky Mountain Power for an Accounting Order to Defer the Costs Related to the MidAmerican Energy Holdings Company Transaction,” **Utah** Public Service Commission, Docket No. 07-035-04; “In the Matter of the Application of Rocky Mountain Power, a Division of PacifiCorp, for a Deferred Accounting Order To Defer the Costs of Loans Made to Grid West, the Regional Transmission Organization,” Docket No. 06-035-163; “In the Matter of the Application of Rocky Mountain Power for an Accounting Order for Costs related to the Flooding of the Powerdale Hydro Facility,” Docket No. 07-035-14. Direct testimony submitted September 10, 2007. Surrebuttal testimony submitted October 22, 2007. Cross examined October 30, 2007.

“In the Matter of General Adjustment of Electric Rates of East Kentucky Power Cooperative, Inc.,” **Kentucky** Public Service Commission, Case No. 2006-00472. Direct testimony submitted July 6, 2007. Supplemental direct testimony submitted March 14, 2008.

“In the Matter of the Application of Sempra Energy Solutions for a Certificate of Convenience and Necessity for Competitive Retail Electric Service,” **Arizona** Corporation Commission, Docket No. E-03964A-06-0168. Direct testimony submitted July 3, 2007. Rebuttal testimony submitted January 17, 2008.

“Application of Public Service Company of Oklahoma for a Determination that Additional Electric Generating Capacity Will Be Used and Useful,” **Oklahoma** Corporation Commission, Cause No. PUD 200500516; “Application of Public Service Company of Oklahoma for a Determination that Additional Baseload Electric Generating Capacity Will Be Used and Useful,” Cause No. PUD 200600030; “In the Matter of the Application of Oklahoma Gas and Electric

Company for an Order Granting Pre-Approval to Construct Red Rock Generating Facility and Authorizing a Recovery Rider,” Cause No. PUD200700012. Responsive testimony submitted May 21, 2007. Cross examined July 26, 2007.

“Application of Nevada Power Company for Authority to Increase Its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers and for Relief Properly Related Thereto,” Public Utilities Commission of **Nevada**, Docket No. 06-11022. Direct testimony submitted March 14, 2007 (Phase III – revenue requirements) and March 19, 2007 (Phase IV – rate design). Cross examined April 10, 2007 (Phase III – revenue requirements) and April 16, 2007 (Phase IV – rate design).

“In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service,” **Arkansas** Public Service Commission, Docket No. 06-101-U. Direct testimony submitted February 5, 2007. Surrebuttal testimony submitted March 26, 2007.

“Monongahela Power Company and The Potomac Edison Company, both d/b/a Allegheny Power – Rule 42T Application to Increase Electric Rates and Charges,” Public Service Commission of **West Virginia**, Case No. 06-0960-E-42T; “Monongahela Power Company and The Potomac Edison Company, both d/b/a Allegheny Power – Information Required for Change of Depreciation Rates Pursuant to Rule 20,” Case No. 06-1426-E-D. Direct and rebuttal testimony submitted January 22, 2007.

“In the Matter of the Tariffs of Aquila, Inc., d/b/a Aquila Networks-MPS and Aquila Networks-L&P Increasing Electric Rates for the Services Provided to Customers in the Aquila Networks-MPS and Aquila Networks-L&P Missouri Service Areas,” **Missouri** Public Service Commission, Case No. ER-2007-0004. Direct testimony submitted January 18, 2007 (revenue requirements) and January 25, 2007 (revenue apportionment). Supplemental direct testimony submitted February 27, 2007.

“In the Matter of the Filing by Tucson Electric Power Company to Amend Decision No. 62103, **Arizona** Corporation Commission, Docket No. E-01933A-05-0650. Direct testimony submitted January 8, 2007. Surrebuttal testimony filed February 8, 2007. Cross examined March 8, 2007.

“In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company’s Missouri Service Area,” **Missouri** Public Service Commission, Case No. ER-2007-0002. Direct testimony submitted December 15, 2006 (revenue requirements) and December 29, 2006 (fuel adjustment clause/cost-of-service/rate design). Rebuttal testimony submitted February 5, 2007 (cost-of-service). Surrebuttal testimony submitted February 27, 2007. Cross examined March 21, 2007.

“In the Matter of Application of The Union Light, Heat and Power Company d/b/a Duke Energy Kentucky, Inc. for an Adjustment of Electric Rates,” **Kentucky** Public Service Commission, Case No. 2006-00172. Direct testimony submitted September 13, 2006.

“In the Matter of Appalachian Power Company’s Application for Increase in Electric Rates,” **Virginia** State Corporation Commission, Case No. PUE-2006-00065. Direct testimony submitted September 1, 2006. Cross examined December 7, 2006.

“In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and to Amend Decision No. 67744, **Arizona** Corporation Commission,” Docket No. E-01345A-05-0816. Direct testimony submitted August 18, 2006 (revenue requirements) and September 1, 2006 (cost-of-service/rate design). Surrebuttal testimony submitted September 27, 2006. Cross examined November 7, 2006.

“Re: The Tariff Sheets Filed by Public Service Company of Colorado with Advice Letter No 1454 – Electric,” **Colorado** Public Utilities Commission, Docket No. 06S-234EG. Answer testimony submitted August 18, 2006.

“Portland General Electric General Rate Case Filing,” Public Utility Commission of **Oregon**, Docket No. UE-180. Direct testimony submitted August 9, 2006. Joint testimony regarding stipulation submitted August 22, 2006.

“2006 Puget Sound Energy General Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-060266 and UG-060267. Response testimony submitted July 19, 2006. Joint testimony regarding stipulation submitted August 23, 2006.

“In the Matter of PacifiCorp, dba Pacific Power & Light Company, Request for a General Rate Increase in the Company’s Oregon Annual Revenues,” Public Utility Commission of **Oregon**, Docket No. UE-179. Direct testimony submitted July 12, 2006. Joint testimony regarding stipulation submitted August 21, 2006.

“Petition of Metropolitan Edison Company for Approval of a Rate Transition Plan,” **Pennsylvania** Public Utilities Commission, Docket Nos. P-00062213 and R-00061366; “Petition of Pennsylvania Electric Company for Approval of a Rate Transition Plan,” Docket Nos. P-0062214 and R-00061367; Merger Savings Remand Proceeding, Docket Nos. A-110300F0095 and A-110400F0040. Direct testimony submitted July 10, 2006. Rebuttal testimony submitted August 8, 2006. Surrebuttal testimony submitted August 18, 2006. Cross examined August 30, 2006.

“In the Matter of the Application of PacifiCorp for approval of its Proposed Electric Rate Schedules & Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 06-035-21. Direct testimony submitted June 9, 2006 (Test Period). Surrebuttal testimony submitted July 14, 2006.

“Joint Application of Questar Gas Company, the Division of Public Utilities, and Utah Clean Energy for the Approval of the Conservation Enabling Tariff Adjustment Option and Accounting Orders,” **Utah** Public Service Commission, Docket No. 05-057-T01. Direct testimony submitted May 15, 2006. Rebuttal testimony submitted August 8, 2007. Cross examined September 19, 2007.

“Central Illinois Light Company d/b/a AmerenCILCO, Central Illinois Public Service Company d/b/a AmerenCIPS, Illinois Power Company d/b/a AmerenIP, Proposed General Increase in Rates for Delivery Service (Tariffs Filed December 27, 2005),” **Illinois** Commerce Commission, Docket Nos. 06-0070, 06-0071, 06-0072. Direct testimony submitted March 26, 2006. Rebuttal testimony submitted June 27, 2006.

“In the Matter of Appalachian Power Company and Wheeling Power Company, both dba American Electric Power,” Public Service Commission of **West Virginia**, Case No. 05-1278-E-PC-PW-42T. Direct and rebuttal testimony submitted March 8, 2006.

“In the Matter of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota,” **Minnesota** Public Utilities Commission, Docket No. G-002/GR-05-1428. Direct testimony submitted March 2, 2006. Rebuttal testimony submitted March 30, 2006. Cross examined April 25, 2006.

“In the Matter of the Application of Arizona Public Service Company for an Emergency Interim Rate Increase and for an Interim Amendment to Decision No. 67744,” **Arizona** Corporation Commission, Docket No. E-01345A-06-0009. Direct testimony submitted February 28, 2006. Cross examined March 23, 2006.

“In the Matter of the Applications of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in Their Charges for Electric Service,” State Corporation Commission of **Kansas**, Case No. 05-WSEE-981-RTS. Direct testimony submitted September 9, 2005. Cross examined October 28, 2005.

“In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Recover Costs Associated with the Construction and Ultimate Operation of an Integrated Combined Cycle Electric Generating Facility,” Public Utilities Commission of **Ohio**,” Case No. 05-376-EL-UNC. Direct testimony submitted July 15, 2005. Cross examined August 12, 2005.

“In the Matter of the Filing of General Rate Case Information by Tucson Electric Power Company Pursuant to Decision No. 62103,” **Arizona** Corporation Commission, Docket No. E-01933A-04-0408. Direct testimony submitted June 24, 2005.

“In the Matter of Application of The Detroit Edison Company to Unbundle and Realign Its Rate Schedules for Jurisdictional Retail Sales of Electricity,” **Michigan** Public Service Commission, Case No. U-14399. Direct testimony submitted June 9, 2005. Rebuttal testimony submitted July 1, 2005.

“In the Matter of the Application of Consumers Energy Company for Authority to Increase Its Rates for the Generation and Distribution of Electricity and Other Relief,” **Michigan** Public Service Commission, Case No. U-14347. Direct testimony submitted June 3, 2005. Rebuttal testimony submitted June 17, 2005.

“In the Matter of Pacific Power & Light, Request for a General Rate Increase in the Company’s Oregon Annual Revenues,” Public Utility Commission of **Oregon**, Docket No. UE 170. Direct testimony submitted May 9, 2005. Surrebuttal testimony submitted June 27, 2005. Joint testimony regarding partial stipulations submitted June 2005, July 2005, and August 2005.

“In the Matter of the Application of Trico Electric Cooperative, Inc. for a Rate Increase,” **Arizona** Corporation Commission, Docket No. E-01461A-04-0607. Direct testimony submitted April 13, 2005. Surrebuttal testimony submitted May 16, 2005. Cross examined May 26, 2005.

“In the Matter of the Application of PacifiCorp for Approval of its Proposed Electric Service Schedules and Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 04-035-42. Direct testimony submitted January 7, 2005.

“In the Matter of the Application by Golden Valley Electric Association, Inc., for Authority to Implement Simplified Rate Filing Procedures and Adjust Rates,” Regulatory Commission of **Alaska**, Docket No. U-4-33. Direct testimony submitted November 5, 2004. Cross examined February 8, 2005.

“Advice Letter No. 1411 - Public Service Company of Colorado Electric Phase II General Rate Case,” **Colorado** Public Utilities Commission, Docket No. 04S-164E. Direct testimony submitted October 12, 2004. Cross-answer testimony submitted December 13, 2004. Testimony withdrawn January 18, 2005, following Applicant’s withdrawal of testimony pertaining to TOU rates.

“In the Matter of Georgia Power Company’s 2004 Rate Case,” **Georgia** Public Service Commission, Docket No. 18300-U. Direct testimony submitted October 8, 2004. Cross examined October 27, 2004.

“2004 Puget Sound Energy General Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-040641 and UG-040640. Response testimony submitted September 23, 2004. Cross-answer testimony submitted November 3, 2004. Joint testimony regarding stipulation submitted December 6, 2004.

“In the Matter of the Application of PacifiCorp for an Investigation of Interjurisdictional Issues,” **Utah** Public Service Commission, Docket No. 02-035-04. Direct testimony submitted July 15, 2004. Cross examined July 19, 2004.

“In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Kentucky Utilities Company,” **Kentucky** Public Service Commission, Case No. 2003-00434. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

“In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Louisville Gas and Electric Company,” **Kentucky** Public Service Commission, Case No. 2003-00433. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

“In the Matter of the Application of Idaho Power Company for Authority to Increase Its Interim and Base Rates and Charges for Electric Service,” **Idaho** Public Utilities Commission, Case No. IPC-E-03-13. Direct testimony submitted February 20, 2004. Rebuttal testimony submitted March 19, 2004. Cross examined April 1, 2004.

“In the Matter of the Applications of the Ohio Edison Company, the Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Continue and Modify Certain Regulatory Accounting Practices and Procedures, for Tariff Approvals and to Establish Rates and Other Charges, Including Regulatory Transition Charges Following the Market Development Period,” Public Utilities Commission of **Ohio**, Case No. 03-2144-EL-ATA. Direct testimony submitted February 6, 2004. Cross examined February 18, 2004.

“In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, To Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and For Approval of Purchased Power Contract,” **Arizona** Corporation Commission, Docket No. E-01345A-03-0437. Direct testimony submitted February 3, 2004. Rebuttal testimony submitted March 30, 2004. Direct testimony regarding stipulation submitted

September 27, 2004. Responsive / Clarifying testimony regarding stipulation submitted October 25, 2004. Cross examined November 8-10, 2004 and November 29-December 3, 2004.

“In the Matter of Application of the Detroit Edison Company to Increase Rates, Amend Its Rate Schedules Governing the Distribution and Supply of Electric Energy, etc.,” **Michigan** Public Service Commission, Case No. U-13808. Direct testimony submitted December 12, 2003 (interim request) and March 5, 2004 (general rate case).

“In the Matter of PacifiCorp’s Filing of Revised Tariff Schedules,” Public Utility Commission of **Oregon**, Docket No. UE-147. Joint testimony regarding stipulation submitted August 21, 2003.

“Petition of PSI Energy, Inc. for Authority to Increase Its Rates and Charges for Electric Service, etc.,” **Indiana** Utility Regulatory Commission, Cause No. 42359. Direct testimony submitted August 19, 2003. Cross examined November 5, 2003.

“In the Matter of the Application of Consumers Energy Company for a Financing Order Approving the Securitization of Certain of its Qualified Cost,” **Michigan** Public Service Commission, Case No. U-13715. Direct testimony submitted April 8, 2003. Cross examined April 23, 2003.

“In the Matter of the Application of Arizona Public Service Company for Approval of Adjustment Mechanisms,” **Arizona** Corporation Commission, Docket No. E-01345A-02-0403. Direct testimony submitted February 13, 2003. Surrebuttal testimony submitted March 20, 2003. Cross examined April 8, 2003.

“Re: The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado, Advice Letter No. 1373 – Electric, Advice Letter No. 593 – Gas, Advice Letter No. 80 – Steam,” **Colorado** Public Utilities Commission, Docket No. 02S-315 EG. Direct testimony submitted November 22, 2002. Cross-answer testimony submitted January 24, 2003.

“In the Matter of the Application of The Detroit Edison Company to Implement the Commission’s Stranded Cost Recovery Procedure and for Approval of Net Stranded Cost Recovery Charges,” **Michigan** Public Service Commission, Case No. U-13350. Direct testimony submitted November 12, 2002.

“Application of South Carolina Electric & Gas Company: Adjustments in the Company’s Electric Rate Schedules and Tariffs,” Public Service Commission of **South Carolina**, Docket No. 2002-223-E. Direct testimony submitted November 8, 2002. Surrebuttal testimony submitted November 18, 2002. Cross examined November 21, 2002.

“In the Matter of the Application of Questar Gas Company for a General Increase in Rates and Charges,” **Utah** Public Service Commission, Docket No. 02-057-02. Direct testimony submitted August 30, 2002. Rebuttal testimony submitted October 4, 2002.

“The Kroger Co. v. Dynegy Power Marketing, Inc.,” **Federal Energy Regulatory Commission**, EL02-119-000. Confidential affidavit filed August 13, 2002.

“In the matter of the application of Consumers Energy Company for determination of net stranded costs and for approval of net stranded cost recovery charges,” **Michigan** Public Service Commission, Case No. U-13380. Direct testimony submitted August 9, 2002. Rebuttal testimony submitted August 30, 2002. Cross examined September 10, 2002.

“In the Matter of the Application of Public Service Company of Colorado for an Order to Revise Its Incentive Cost Adjustment,” **Colorado** Public Utilities Commission, Docket 02A-158E. Direct testimony submitted April 18, 2002.

“In the Matter of the Generic Proceedings Concerning Electric Restructuring Issues,” **Arizona** Corporation Commission, Docket No. E-00000A-02-0051, “In the Matter of Arizona Public Service Company’s Request for Variance of Certain Requirements of A.A.C. R14-2-1606,” Docket No. E-01345A-01-0822, “In the Matter of the Generic Proceeding Concerning the Arizona Independent Scheduling Administrator,” Docket No. E-00000A-01-0630, “In the Matter of Tucson Electric Power Company’s Application for a Variance of Certain Electric Competition Rules Compliance Dates,” Docket No. E-01933A-02-0069, “In the Matter of the Application of Tucson Electric Power Company for Approval of its Stranded Cost Recovery,” Docket No. E-01933A-98-0471. Direct testimony submitted March 29, 2002 (APS variance request); May 29, 2002 (APS Track A proceeding/market power issues); and July 28, 2003 (Arizona ISA). Rebuttal testimony submitted August 29, 2003 (Arizona ISA). Cross examined June 21, 2002 (APS Track A proceeding/market power issues) and September 12, 2003 (Arizona ISA).

“In the Matter of Savannah Electric & Power Company’s 2001 Rate Case,” **Georgia** Public Service Commission, Docket No. 14618-U. Direct testimony submitted March 15, 2002. Cross examined March 28, 2002.

“Nevada Power Company’s 2001 Deferred Energy Case,” Public Utilities Commission of **Nevada**, PUCN 01-11029. Direct testimony submitted February 7, 2002. Cross examined February 21, 2002.

“2001 Puget Sound Energy Interim Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-011570 and UE-011571. Direct testimony submitted January 30, 2002. Cross examined February 20, 2002.

“In the Matter of Georgia Power Company’s 2001 Rate Case,” **Georgia** Public Service Commission, Docket No. 14000-U. Direct testimony submitted October 12, 2001. Cross examined October 24, 2001.

“In the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 01-35-01. Direct testimony submitted June 15, 2001. Rebuttal testimony submitted August 31, 2001.

“In the Matter of Portland General Electric Company’s Proposal to Restructure and Reprice Its Services in Accordance with the Provisions of SB 1149,” Public Utility Commission of **Oregon**, Docket No. UE-115. Direct testimony submitted February 20, 2001. Rebuttal testimony submitted May 4, 2001. Joint testimony regarding stipulation submitted July 27, 2001.

“In the Matter of the Application of APS Energy Services, Inc. for Declaratory Order or Waiver of the Electric Competition Rules,” **Arizona** Corporation Commission, Docket No.E-01933A-00-0486. Direct testimony submitted July 24, 2000.

“In the Matter of the Application of Questar Gas Company for an Increase in Rates and Charges,” **Utah** Public Service Commission, Docket No. 99-057-20. Direct testimony submitted April 19, 2000. Rebuttal testimony submitted May 24, 2000. Surrebuttal testimony submitted May 31, 2000. Cross examined June 6 & 8, 2000.

“In the Matter of the Application of Columbus Southern Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1729-EL-ETP; “In the Matter of the Application of Ohio Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1730-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected May 2, 2000.

“In the Matter of the Application of FirstEnergy Corp. on Behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company for Approval of Their Transition Plans and for Authorization to Collect Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1212-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected April 11, 2000.

“2000 Pricing Process,” **Salt River Project** Board of Directors, oral comments provided March 6, 2000 and April 10, 2000.

“Tucson Electric Power Company vs. Cyprus Sierrita Corporation,” **Arizona** Corporation Commission, Docket No. E-000001-99-0243. Direct testimony submitted October 25, 1999. Cross examined November 4, 1999.

“Application of Hildale City and Intermountain Municipal Gas Association for an Order Granting Access for Transportation of Interstate Natural Gas over the Pipelines of Questar Gas Company for Hildale, Utah,” **Utah** Public Service Commission, Docket No. 98-057-01. Rebuttal testimony submitted August 30, 1999.

“In the Matter of the Application by Arizona Electric Power Cooperative, Inc. for Approval of Its Filing as to Regulatory Assets and Transition Revenues,” **Arizona** Corporation Commission, Docket No. E-01773A-98-0470. Direct testimony submitted July 30, 1999. Cross examined February 28, 2000.

“In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; “In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01933A-97-0772; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted June 30, 1999. Rebuttal testimony submitted August 6, 1999. Cross examined August 11-13, 1999.

“In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01345A-98-0473; “In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01345A-97-0773; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted June 4, 1999. Rebuttal testimony submitted July 12, 1999. Cross examined July 14, 1999.

“In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; “In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01933A-97-0772; “In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery,” Docket No. E-01345A-98-0473; “In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01345A-97-0773; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted November 30, 1998.

“Hearings on Pricing,” **Salt River Project** Board of Directors, written and oral comments provided November 9, 1998.

“Hearings on Customer Choice,” **Salt River Project** Board of Directors, written and oral comments provided June 22, 1998; June 29, 1998; July 9, 1998; August 7, 1998; and August 14, 1998.

“In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” **Arizona** Corporation Commission, Docket No. U-0000-94-165. Direct and rebuttal testimony filed January 21, 1998. Second rebuttal testimony filed February 4, 1998. Cross examined February 25, 1998.

“In the Matter of Consolidated Edison Company of New York, Inc.’s Plans for (1) Electric Rate/Restructuring Pursuant to Opinion No. 96-12; and (2) the Formation of a Holding Company Pursuant to PSL, Sections 70, 108, and 110, and Certain Related Transactions,” **New York** Public Service Commission, Case 96-E-0897. Direct testimony filed April 9, 1997. Cross examined May 5, 1997.

“In the Matter of the Petition of Sunnyside Cogeneration Associates for Enforcement of Contract Provisions,” **Utah** Public Service Commission, Docket No. 96-2018-01; “In the Matter of the Application of Rocky Mountain Power for an Order Approving an Amendment to Its Power Purchase Agreement with Sunnyside Cogeneration Associates,” Docket Nos. 05-035-46, and 07-035-99. Direct testimony submitted July 8, 1996. Oral testimony provided March 18, 2008.

“In the Matter of the Application of PacifiCorp, dba Pacific Power & Light Company, for Approval of Revised Tariff Schedules and an Alternative Form of Regulation Plan,” **Wyoming** Public Service Commission, Docket No. 2000-ER-95-99. Direct testimony submitted April 8, 1996.

“In the Matter of the Application of Mountain Fuel Supply Company for an Increase in Rates and Charges,” **Utah** Public Service Commission, Case No. 95-057-02. Direct testimony submitted June 19, 1995. Rebuttal testimony submitted July 25, 1995. Surrebuttal testimony submitted August 7, 1995.

“In the Matter of the Investigation of the Reasonableness of the Rates and Tariffs of Mountain Fuel Supply Company,” **Utah** Public Service Commission, Case No. 89-057-15. Direct testimony submitted July 1990. Surrebuttal testimony submitted August 1990.

“In the Matter of the Review of the Rates of Utah Power and Light Company pursuant to The Order in Case No. 87-035-27,” **Utah** Public Service Commission, Case No. 89-035-10. Rebuttal testimony submitted November 15, 1989. Cross examined December 1, 1989 (rate schedule changes for state facilities).

“In the Matter of the Application of Utah Power & Light Company and PC/UP&L Merging Corp. (to be renamed PacifiCorp) for an Order Authorizing the Merger of Utah Power & Light

Company and PacifiCorp into PC/UP&L Merging Corp. and Authorizing the Issuance of Securities, Adoption of Tariffs, and Transfer of Certificates of Public Convenience and Necessity and Authorities in Connection Therewith,” **Utah** Public Service Commission, Case No. 87-035-27; Direct testimony submitted April 11, 1988. Cross examined May 12, 1988 (economic impact of UP&L merger with PacifiCorp).

“In the Matter of the Application of Mountain Fuel Supply Company for Approval of Interruptible Industrial Transportation Rates,” **Utah** Public Service Commission, Case No. 86-057-07. Direct testimony submitted January 15, 1988. Cross examined March 30, 1988.

“In the Matter of the Application of Utah Power and Light Company for an Order Approving a Power Purchase Agreement,” **Utah** Public Service Commission, Case No. 87-035-18. Oral testimony delivered July 8, 1987.

“Cogeneration: Small Power Production,” **Federal Energy Regulatory Commission**, Docket No. RM87-12-000. Statement on behalf of State of Utah delivered March 27, 1987, in San Francisco.

“In the Matter of the Investigation of Rates for Backup, Maintenance, Supplementary, and Standby Power for Utah Power and Light Company,” **Utah** Public Service Commission, Case No. 86-035-13. Direct testimony submitted January 5, 1987. Case settled by stipulation approved August 1987.

“In the Matter of the Application of Sunnyside Cogeneration Associates for Approval of the Cogeneration Power Purchase Agreement,” **Utah** Public Service Commission, Case No. 86-2018-01. Rebuttal testimony submitted July 16, 1986. Cross examined July 17, 1986.

“In the Matter of the Investigation of Demand-Side Alternatives to Capacity Expansion for Electric Utilities,” **Utah** Public Service Commission, Case No. 84-999-20. Direct testimony submitted June 17, 1985. Rebuttal testimony submitted July 29, 1985. Cross examined August 19, 1985.

“In the Matter of the Implementation of Rules Governing Cogeneration and Small Power Production in Utah,” **Utah** Public Service Commission, Case No. 80-999-06, pp. 1293-1318. Direct testimony submitted January 13, 1984 (avoided costs), May 9, 1986 (security for levelized contracts) and November 17, 1986 (avoided costs). Cross-examined February 29, 1984 (avoided costs), April 11, 1985 (standard form contracts), May 22-23, 1986 (security for levelized contracts) and December 16-17, 1986 (avoided costs).

OTHER RELATED ACTIVITY

Participant, Wyoming Load Growth Collaborative, March 2008 to present.

Participant, Oregon Direct Access Task Force (UM 1081), May 2003 to November 2003.

Participant, Michigan Stranded Cost Collaborative, March 2003 to March 2004.

Member, Arizona Electric Competition Advisory Group, December 2002 to present.

Board of Directors, ex-officio, Desert STAR RTO, September 1999 to February 2002.

Member, Advisory Committee, Desert STAR RTO, September 1999 to February 2002. Acting Chairman, October 2000 to February 2002.

Board of Directors, Arizona Independent Scheduling Administrator Association, October 1998 to present.

Acting Chairman, Operating Committee, Arizona Independent Scheduling Administrator Association, October 1998 to June 1999.

Member, Desert Star ISO Investigation Working Groups: Operations, Pricing, and Governance, April 1997 to December 1999. Legal & Negotiating Committee, April 1999 to December 1999.

Participant, Independent System Operator and Spot Market Working Group, Arizona Corporation Commission, April 1997 to September 1997.

Participant, Unbundled Services and Standard Offer Working Group, Arizona Corporation Commission, April 1997 to October 1997.

Participant, Customer Selection Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Stranded Cost Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Electric System Reliability & Safety Working Group, Arizona Corporation Commission, November 1996 to September 1998.

Chairman, Salt Palace Renovation and Expansion Committee, Salt Lake County/State of Utah/Salt Lake City, multi-government entity responsible for implementation of planning,

design, finance, and construction of an \$85 million renovation of the Salt Palace Convention Center, Salt Lake City, Utah, May 1991 to December 1994.

State of Utah Representative, Committee on Regional Electric Power Cooperation, a joint effort of the Western Interstate Energy Board and the Western Conference of Public Service Commissioners, January 1987 to December 1990.

Member, Utah Governor's Economic Coordinating Committee, January 1987 to December 1990.

Chairman, Standard Contract Task Force, established by Utah Public Service Commission to address contractual problems relating to qualifying facility sales under PURPA, March 1986 to December 1990.

Chairman, Load Management and Energy Conservation Task Force, Utah Public Service Commission, August 1985 to December 1990.

Alternate Delegate for Utah, Western Interstate Energy Board, Denver, Colorado, August 1985 to December 1990.

Articles Editor, Economic Forum, September 1980 to August 1981.

Derivation of Demand-Related Generation Costs

PACIFICORP
 STATE OF OREGON
 Combined GRC and TAM

December 31, 2010 Unbundled Revenue Requirement Allocation by Rate Schedule

Line	Description	(A) Residential (sec)	(B) General Service (sec)	(C) General Service (pri)	(D) General Service (sec)	(E) General Service (pri)	(F) General Service (sec)	(G) General Service (pri)	(H) Large Power Service (sec)	(I) Large Power Service (pri)	(J) (tm)	(K) Irrigation Sch 41	(L) Street Light Sch 51, 53, 54
1	Total Operating Revenues	\$915,181	\$90,790	\$99	\$124,369	\$1,123	\$73,370	\$5,318	\$35,927	\$77,376	\$17,402	\$14,323	\$3,489
2	MWH	12,680,407	1,012,789	1,152	2,026,816	18,249	\$1,284,715	93,931	649,091	1,589,921	404,889	136,792	26,217
3	Functionalized 20 Year Full Marginal Costs - Class \$												
4	Generation - Demand	\$148,195	\$11,530	\$14	\$25,636	\$223	\$15,523	\$1,098	\$7,816	\$16,662	\$3,590	\$1,894	\$0
5	Generation - Energy	\$768,041	\$61,713	\$68	\$123,501	\$1,077	\$78,282	\$5,543	\$39,551	\$93,827	\$23,365	\$8,335	\$1,552
6	Transmission	\$202,854	\$15,917	\$19	\$34,449	\$300	\$21,101	\$1,493	\$10,653	\$23,341	\$5,240	\$2,491	\$106
7	Distribution	\$372,038	\$52,312	\$21	\$35,272	\$305	\$16,404	\$1,038	\$6,347	\$7,387	\$0	\$11,884	\$6,279
8	Customer - Billing	\$18,233	\$2,257	\$1	\$328	\$2	\$26	\$2	\$29	\$21	\$0	\$94	\$2
9	Customer - Metering	\$18,842	\$2,830	\$41	\$921	\$61	\$229	\$66	\$46	\$118	\$86	\$304	\$2
10	Customer - Other	\$7,310	\$897	\$0	\$151	\$1	\$33	\$2	\$23	\$16	\$0	\$42	\$12
11	Total	\$1,535,514	\$147,456	\$164	\$220,257	\$1,868	\$131,598	\$9,242	\$64,446	\$141,393	\$32,282	\$25,045	\$7,984
12													
13	Functional Revenue Requirement Allocation Factors												
14	Functionalized 20 Year Full Marginal Costs - Class % of Total												
15	Generation - Demand	100.00%	7.78%	0.01%	17.30%	0.15%	10.47%	0.74%	5.27%	11.26%	2.42%	1.28%	0.00%
16	Generation - Energy	100.00%	8.04%	0.01%	16.08%	0.14%	10.19%	0.72%	5.15%	12.22%	3.04%	1.09%	0.20%
17	Transmission	100.00%	7.85%	0.01%	16.98%	0.15%	10.40%	0.74%	5.24%	11.51%	2.58%	1.23%	0.05%
18	Distribution	100.00%	14.06%	0.01%	9.48%	0.06%	4.41%	0.28%	1.71%	1.99%	0.00%	3.19%	1.69%
19	Ancillary Services	100.00%	7.99%	0.01%	16.28%	0.14%	10.24%	0.72%	5.17%	12.06%	2.94%	1.12%	0.17%
20	Customer - Billing	100.00%	12.38%	0.01%	4.80%	0.01%	0.14%	0.01%	0.16%	0.12%	0.00%	0.51%	0.18%
21	Customer - Metering	100.00%	15.02%	0.22%	4.89%	0.32%	1.22%	0.35%	0.24%	0.63%	0.46%	1.62%	0.01%
22	Customer - Other	100.00%	12.27%	0.01%	2.06%	0.01%	0.45%	0.03%	0.31%	0.83%	0.01%	0.57%	0.17%
23	Embedded DSM - (mWh)	100.00%	7.99%	0.01%	15.98%	0.14%	10.13%	0.74%	5.12%	12.54%	3.19%	1.08%	0.21%
24	Regulatory & Franchise Taxes (Revenue)	100.00%	9.92%	0.01%	13.59%	0.12%	8.02%	0.58%	3.93%	8.45%	1.90%	1.57%	0.38%
25													
26	Classification of Generation Costs for Each Rate Class												
27	Demand-Related	16.17%	15.74%	17.08%	17.19%	17.15%	16.53%	16.53%	16.50%	15.10%	13.32%	18.52%	0.00%
28	Energy-Related	83.83%	84.26%	82.92%	82.81%	82.85%	83.45%	83.47%	83.50%	84.90%	86.68%	81.48%	100.00%
29	Functionalized Class Revenue Requirement - (Target)												
30	Generation - Demand	\$99,015	\$7,704	\$9	\$17,128	\$149	\$10,371	\$734	\$5,222	\$11,146	\$2,399	\$1,265	\$0
31	Generation - Energy	\$313,157	\$41,233	\$45	\$82,516	\$720	\$52,303	\$3,704	\$26,426	\$62,689	\$15,611	\$5,569	\$1,037
32	Transmission	\$75,967	\$5,961	\$7	\$12,901	\$112	\$7,902	\$559	\$3,982	\$8,741	\$1,962	\$953	\$40
33	Distribution	\$246,801	\$34,703	\$14	\$23,398	\$136	\$10,882	\$688	\$4,211	\$4,900	\$0	\$7,884	\$4,165
34	Ancillary Services	\$10,758	\$860	\$1	\$1,751	\$15	\$1,101	\$78	\$556	\$1,298	\$316	\$120	\$18
35	Customer - Billing	\$11,737	\$1,453	\$1	\$211	\$11	\$17	\$1	\$19	\$14	\$0	\$60	\$21
36	Customer - Metering	\$28,029	\$4,210	\$62	\$1,370	\$90	\$431	\$99	\$69	\$176	\$128	\$453	\$3
37	Customer - Other	\$13,088	\$1,605	\$1	\$270	\$1	\$59	\$4	\$40	\$29	\$1	\$75	\$22
38	Embedded DSM - (mWh)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
39	Regulatory & Franchise Taxes	\$23,859	\$2,362	\$3	\$3,242	\$29	\$1,913	\$132	\$937	\$2,017	\$454	\$373	\$81
40	Total	\$1,022,411	\$100,095	\$142	\$142,788	\$1,234	\$84,889	\$6,005	\$41,462	\$91,010	\$20,871	\$16,733	\$5,397
41													
42	Ratio of Operating Rev to Revenue Requirement - (Targ	89.51%	90.70%	69.86%	87.10%	89.58%	86.43%	88.57%	86.65%	85.02%	83.38%	85.60%	64.64%
43	(Line 1 / Line 36)												
44	Increase or (Decrease)	\$107,229	\$9,305	\$43	\$18,419	\$131	\$11,520	\$687	\$5,535	\$13,635	\$3,469	\$2,409	\$1,909
45	(Line 36 - Line 1)												
46	Percent Increase (Decrease)	11.72%	10.25%	43.14%	14.81%	11.64%	15.70%	12.91%	15.41%	17.62%	19.94%	16.82%	54.71%
47	(Line 41 / Line 1)												

Data Source: Exhibit PPE 905 adjusted to separate the generation function into demand and energy related costs.

Example of Fred Meyer's Recommended Schedule 200 Demand Charge Using Schedule 30 - Secondary

Schedule No. 30/730 Large General Service - (Secondary)	Customer Accounting		Normalized		Forecast		Present		Proposed	
	Units	7/07-6/08	Units	7/07-6/08	1/10 - 12/10	Units	1/10 - 12/10	Price	Price	Dollars
Transmission & Ancillary Services Charge										
per kW	3,595,762	3,595,762	3,595,762	3,595,762	3,534,295 kW	3,534,295 kW	\$1.38	\$1.43	\$4,877,327	\$5,054,042
Distribution Charge										
Basic Charge										
Load Size ≤ 200 kW, per month	162	162	162	162	155 bill	155 bill	\$319.00	\$393.00	\$49,342	\$60,788
Load Size 201-300 kW, per month	2,838	2,838	2,838	2,838	2,716 bill	2,716 bill	\$99.00	\$123.00	\$268,849	\$334,024
Load Size > 300 kW, per month	7,035	7,035	7,035	7,035	6,740 bill	6,740 bill	\$258.00	\$320.00	\$1,738,822	\$2,156,679
Load Size Charge										
≤ 200 kW	14,976	14,976	14,976	14,976	14,627 kW	14,627 kW	No Charge	No Charge		
201-300 kW, per kW	728,118	728,118	728,118	728,118	714,392 kW	714,392 kW	\$1.10	\$1.35	\$785,831	\$964,429
>300 kW, per kW	3,470,928	3,470,928	3,470,928	3,470,928	3,411,992 kW	3,411,992 kW	\$0.55	\$0.70	\$1,876,596	\$2,388,394
Demand Charge, per kW	3,595,762	3,595,762	3,595,762	3,595,762	3,534,295 kW	3,534,295 kW	\$2.49	\$3.09	\$8,800,395	\$10,920,972
Reactive Power Charge, per kvar	721,399	721,399	721,399	721,399	713,631 kvar	713,631 kvar	65.00 ¢	65.00 ¢	\$463,860	\$463,860
Energy Charge										
Schedule 200										
Demand Charge, per kW	3,595,762	3,595,762	3,595,762	3,595,762	3,534,295 kW	3,534,295 kW		\$2.93		\$10,355,484
1st 20,000 kWh, per kWh	194,371,807	194,371,807	194,371,807	194,371,807	190,869,386 kWh	190,869,386 kWh	4.552 ¢	2.178 ¢	\$8,688,374	\$4,157,135
All additional kWh, per kWh	1,115,243,559	1,115,243,559	1,115,243,559	1,115,243,559	1,093,845,348 kWh	1,093,845,348 kWh	3.947 ¢	1.942 ¢	\$43,174,076	\$21,242,477
Schedule 201										
1st 20,000 kWh, per kWh	194,371,807	194,371,807	194,371,807	194,371,807	190,869,386 kWh	190,869,386 kWh		2.351 ¢		\$4,487,339
All additional kWh, per kWh	1,115,243,559	1,115,243,559	1,115,243,559	1,115,243,559	1,093,845,348 kWh	1,093,845,348 kWh		2.039 ¢		\$22,303,507
Subtotal										
Renewable Adjustment Clause, per kWh	1,309,615,366	1,309,615,366	1,309,615,366	1,309,615,366	1,284,714,734 kWh	1,284,714,734 kWh	0.218 ¢	0.000 ¢	\$70,723,472	\$84,889,130
Klamath Rate Reconciliation Surcharge, per kWh	1,309,615,366	1,309,615,366	1,309,615,366	1,309,615,366	1,284,714,734 kWh	1,284,714,734 kWh	-0.012 ¢	0.000 ¢	\$2,800,678	\$0
Total										
	1,309,615,366	1,309,615,366	1,309,615,366	1,309,615,366	1,284,714,734 kWh	1,284,714,734 kWh	Change	Change	\$73,369,984	\$84,889,130
										\$11,519,146

Data Source: Exhibit PPL 1003 rate design worksheet.