

BEFORE THE ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF
OKLAHOMA GAS AND ELECTRIC COMPANY
FOR APPROVAL OF A GENERAL CHANGE IN
RATES, CHARGES AND TARIFFS

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) DOCKET NO. 16-052-U
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)

DIRECT TESTIMONY

OF

LARRY BLANK

ON BEHALF OF

ARKANSAS RIVER VALLEY ENERGY CONSUMERS

January 31, 2017

Direct Testimony of Larry Blank
On behalf of the Arkansas River Valley Energy Consumers
APSC 16-052-U
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I. IDENTIFICATION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Larry Blank. My business address is TAHOEconomics, LLC, 9120 Double Diamond Pkwy, Suite 3624, Reno, NV 89521. My email address is LB@tahoeconomics.com.

Q. WHERE ARE YOU EMPLOYED?

A. I am the principal of TAHOEconomics, LLC, ("Tahoe") a Nevada-registered consulting firm I founded in August 1999, specializing in most policy and ratemaking facets of regulated utility industries. I am also an Associate Professor of Economics and Associate Director with the Center for Public Utilities in the College of Business at New Mexico State University ("NMSU"). For the purposes of this proceeding, I have been engaged through Tahoe, the expert opinions expressed herein are my own, and nothing in this testimony necessarily reflects the opinions of NMSU.

Q. PLEASE PROVIDE A BRIEF SUMMARY OF YOUR BACKGROUND AS IT IS RELEVANT TO THIS TESTIMONY.

A. I have served the public in various capacities for over thirty (30) years. I received a Ph.D. in Economics from The University of Tennessee in 1994, specializing in Industrial Organization & Public Policy (including regulatory policy), Econometrics, and Finance. I previously served as an Economist with the National Regulatory Research Institute ("NRRI") at Ohio State University and later as the Manager of Regulatory Policy & Market Analysis with the Regulatory Operations Staff of the Nevada Public Utilities Commission. As a consultant, I have served a variety of clients including regulatory

1 agencies, utility customers, utility companies, and the U.S. Department of Energy as the
2 Project Director for technical assistance to the Energy Regulatory Commission in the
3 Philippines. I have served as an expert witness and/or advisor in over 150 rate cases and
4 rulemakings of various types. I have previously filed written testimony and/or prepared
5 rates-related filings in the following utility regulatory commission jurisdictions: Alaska,
6 Arizona, Arkansas, Colorado, Delaware, Hawaii, Montana, Nevada, New Mexico,
7 Oklahoma, Texas, Vermont, and the Federal Energy Regulatory Commission. I also
8 teach advanced graduate utility regulation to the Masters of Economics students at
9 NMSU who have elected to specialize in this profession, I direct an executive Graduate
10 Certificate Program in Public Utility Regulation & Economics, and I help deliver
11 nationally-recognized rate case training programs, which are attended by hundreds of
12 regulatory professionals from across the United States and are endorsed by the National
13 Association of Regulatory Utility Commissioners ("NARUC"). My resume is attached as
14 Exhibit LB-1.

15 **II. PURPOSE AND SUMMARY**

16 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

17 A. I am testifying on behalf of the Arkansas River Valley Energy Consumers ("ARVEC"),
18 an unincorporated association of manufacturers and other large electric power users,
19 located in the Fort Smith area. My testimony addresses the following components of the
20 electric rate case filing by Oklahoma Gas & Electric Company ("OG&E" or the
21 "Company"):

- 22 1. Magnitude and impact of OG&E's requested rate increase.

2. Cost of service allocation methodology.
3. Allocation of costs associated with wind assets.
4. Mitigation of revenue allocation.
5. Large Capital Additions Rider.
6. Rate design for the Power and Light (PL) TOU rate schedules.

Q. WHAT IS THE COMPANY'S GENERAL CHARACTERIZATION OF THE EXPECTED RATE IMPACT RESULTING FROM THEIR APPLICATION AND WHAT IS YOUR RESPONSE?

A. OG&E Witness Rowlett at page 3 of his Direct Testimony states that the requested annual increase of approximately \$16.5 million "reflects a 9.8% increase over the rates last set in 2011 or, in other words an increase of less than 2% per year." This is not a full representation of the requested increase because this percentage is calculated based on total revenues including pass-through fuel revenues and revenues from other riders. OG&E's application actually seeks an overall Base Rate increase of 17.87%, which includes the Company's proposal to increase large non-time-of-use commercial customers base rates by over 10%.

Q. BASED ON YOUR EXPERIENCE, DO YOU CONSIDER THE COMPANY'S REQUESTED INCREASE TO BE MATERIAL?

A. Yes, the Company's request is best described as a substantial rate increase which, if approved, is expected to have an adverse impact on customers.

Q. HOW DOES THE COMPANY DESCRIBE ITS PROPOSED COST ALLOCATION METHOD?

1 A. At p. 8 of his Direct Testimony, Mr. Rowlett states that OG&E's application uses the
2 4CP Average and Excess ("4CP A&E) cost allocation method for production plant. "The
3 Company believes that the 4CP A&E cost allocation methodology will be beneficial to
4 economic development and promote job creation...[and] such methodology most
5 correctly assigns costs among customers..."

6 **Q. DO YOU AGREE WITH MR. ROWLETT'S DESCRIPTION OF THE COST**
7 **ALLOCATION METHOD USED BY OG&E?**

8 A. Yes, As I have testified before the Arkansas Public Service Commission (APSC or
9 Commission) in other cases, I support the Company's use of this 4CP A&E methodology
10 which is also used in Oklahoma as well as many other jurisdictions. However, I disagree
11 that OG&E has utilized this methodology for all of their base rate production costs as the
12 Company did not use this method for costs related to the Company-owned wind assets.

13 **Q. WHAT ALLOCATION METHODOLOGY DID OG&E USE FOR THE COSTS**
14 **RELATED TO THEIR WIND POWER PRODUCTION ASSETS?**

15 A. OG&E used a production energy allocator for such costs rather than a production demand
16 allocator. This creates an inconsistency with the Oklahoma jurisdiction and results in
17 excess cost allocation to the Arkansas jurisdiction.

18 **Q. WHAT IS THE IMPACT OF THIS INCONSISTENCY OF WIND COST**
19 **ALLOCATION?**

20 A. The use of the production energy allocator, rather than the production demand allocator
21 (4CP A&E) used in Oklahoma for wind asset costs, over-allocates \$13,612,266 to
22 OG&E's rate base and allocates \$1,227,896 in excess expenses to the Arkansas
23 jurisdiction. This use of a production energy allocator would also result in double-

1 recovery because these amounts represent costs for which OG&E also requests recovery
2 in Oklahoma.

3 **Q. DOES OG&E DEVIATE FROM THE COST OF SERVICE STUDY RESULTS IN**
4 **DEVELOPING ITS PROPOSED BASE RATE REVENUES FOR EACH RATE**
5 **CLASS?**

6 A. Yes. As explained by Mr. Rowlett at page 15 of his Direct Testimony, at the Company's
7 proposed rates and revenue, OG&E has concluded that some customer classes would
8 experience increases that were too great. However, Mr. Rowlett further explains that
9 "OG&E believes that moving toward establishing rates to recover 100% of its cost of
10 service is appropriate" and "looks forward to working with [the parties] in this case to
11 develop a plan to move OG&E's rate design toward this goal."¹

12 **Q. WHAT OBSERVATIONS CAN YOU OFFER AT THIS TIME ON THE**
13 **ALLOCATION OF REVENUE CHANGES?**

14 A. I support implementation of cost-based rates that reflect cost of service results because it
15 is economically efficient to do so as explained by OG&E witnesses Smith and Scott in
16 their direct testimony. In this case, the APSC has the opportunity to adopt cost based
17 rates, based on the revenue requirement recommendations of ARVEC Witness Mark
18 Garrett, who recommends that the Commission order an overall rate decrease.
19 Therefore, my recommendation is for the Commission to establish cost based rates
20 at the revenue requirement recommended by ARVEC Witness Mark Garrett. However, I
21 reserve the right to offer additional testimony on this subject once I review the overall

¹ Rowlett Direct at p. 16, lines 1-10.

1 revenue requirement recommendations of Commission Staff, the Attorney General, and
2 other intervening parties.

3 **Q. WHY HAS THE COMPANY REQUESTED APPROVAL OF A LARGE**
4 **CAPITAL ADDITIONS RIDER ("LCA RIDER")?**

5 A. Based on explanations provided by Mr. Rowlett at pp. 8-9 of his Direct Testimony, it
6 appears that the Company intends to make capital investments which, when combined
7 with other cost increases, will result in annual revenue increases which exceed the four
8 percent cap on annual revenue increases established by the Arkansas Legislature in Act
9 725 for a utility's optional formula rate plan. The LCA rider would enable the Company
10 to circumvent the design of the formula rate plan and, effectively exceed the 4% annual
11 revenue increase cap. Based on the reasons I provide herein, the Commission should
12 deny OG&E's request for approval of an LCA Rider.

13 **Q. WHAT CHANGE DOES OG&E PROPOSE FOR THE POWER AND LIGHT**
14 **TIME OF USE RATE SCHEDULES?**

15 A. OG&E Witness Scott at p. 16 of his Direct Testimony explains "OG&E proposes to
16 integrate the Power and Light-TOU-D ("PL-TOU-D") and the Power and Light ("PL-
17 TOU-E") rate. In Docket No. 10-067-U, the PL-TOU tariff was divided into two separate
18 tariffs: PL-TOU-D and PL-TOU-E. OG&E proposes to simplify its PL-TOU tariff
19 offerings by integrating these tariffs. OG&E witness Wai will describe the impacts to
20 customers resulting from this change in his direct testimony."

21 **Q. DO YOU AGREE WITH THIS PROPOSED CHANGE?**

22 A. No. The integrated PL-TOU rate schedule proposed by OG&E is much closer in design
23 to the current PL-TOU-E rate schedule with a relatively low demand charge and a

relatively high energy charge. According to Mr. Wai's Direct Exhibit WHW-2, there are 69 customers currently taking service on PL-TOU-D and only 5 customers on PL-TOU-E. This change would be a movement away from cost based rate design and a significant change in the rate design for those 69 customers. I recommend the Commission deny this proposal.

III. MAGNITUDE AND IMPACT OF OG&E'S REQUESTED RATE INCREASE

Q. WHAT IS OG&E'S OVERALL REQUESTED INCREASE?

A. OG&E has requested an overall increase of approximately \$16.5 million, which as I explained above, is a 9.8% increase in total revenues, but a 17.87% INCREASE in base rate revenues. The rate class impacts on base rate revenues, as proposed by the Company, are provided in the following table.

(1) Customer Group	(2) OGE Proposed Base Revenue Change	(3) Current Base Revenue	(4) Total Proposed Base Revenue	(5) Total Base % Change
RS	\$ 10,426,083	\$ 33,381,686	\$ 43,807,769	31.23%
GS	\$ 2,598,627	\$ 9,921,131	\$ 12,519,758	26.19%
PL	\$ 2,821,556	\$ 26,853,167	\$ 29,674,723	10.51%
PL TOU	\$ 613,745	\$ 18,976,791	\$ 19,590,536	3.23%
AFL	\$ 18,000	\$ 57,921	\$ 75,921	31.08%
MP	\$ 20,000	\$ 61,809	\$ 81,809	32.36%
ML	\$ -	\$ 1,098,512	\$ 1,098,512	0.00%
OSL	\$ -	\$ 1,991,739	\$ 1,991,739	0.00%
Total Retail	\$ 16,498,011	\$ 92,342,756	\$ 108,840,767	17.87%

Q. HAS ARVEC MADE ADJUSTMENTS TO OG&E'S PROPOSED REVENUE REQUIREMENT THAT PROVIDE A DIFFERENT RESULT FOR OG&E'S CUSTOMER CLASSES?

1 A. Yes. Based on the adjustments sponsored by ARVEC Witness Mark Garrett in his Direct
2 Testimony, the Company requires an overall rate decrease to realize just and reasonable
3 rates.

4 **IV. COST OF SERVICE ALLOCATION METHODOLOGY**

5 **Q. DO YOU SUPPORT OG&E'S COST OF SERVICE STUDY METHODS AND**
6 **RATIONALES SPONSORED BY OG&E WITNESS SMITH FOR PRODUCTION**
7 **PLANT?**

8 A. OG&E has utilized the 4CP A&E method for production demand allocation. Not only is
9 this method consistent with many other jurisdictions, it is also consistent with OG&E's
10 current Oklahoma rate case filing in which the Company has requested that the 4CP A&E
11 allocation method be approved for its production plant. I support the 4CP A&E method
12 for production demand allocation

13 **Q. DOES THE ADOPTION OF A PRODUCTION DEMAND ALLOCATION**
14 **METHOD WHICH IS CONSISTENT WITH OG&E'S REQUESTED**
15 **PRODUCTION PLANT ALLOCATION IN OKLAHOMA BRING BENEFITS TO**
16 **ALL ARKANSAS CUSTOMERS?**

17 A. Yes, as shown by OG&E Witness Smith at p. 14 of his Direct Testimony, this reduces the
18 jurisdictional allocation to Arkansas by \$3.5 million relative to the Average and Peak
19 method often used in the past in Arkansas.

20 **Q. HAS OG&E USED THE 4CP A&E METHOD FOR ALL PRODUCTION COST**
21 **CATEGORIES?**

1 A. No. For some reason not mentioned by OG&E Witness Mr. Smith, the Company used an
2 energy allocator for the wind assets owned by OG&E. I will address this matter next.

3 **V. ALLOCATION OF COSTS ASSOCIATED WITH OG&E WIND ASSETS**

4 **Q. HOW HAS OG&E ALLOCATED ITS WIND-RELATED PLANT AND EXPENSE**
5 **ACCOUNTS?**

6 A. Based on my review of OG&E's electronic cost of service study, all wind-related plant
7 and expenses were allocated based on the production energy allocation ratios.

8 **Q. HOW DOES OG&E ALLOCATE THESE COSTS IN OKLAHOMA?**

9 A. It is my understanding that OG&E in the Oklahoma jurisdiction allocates costs associated
10 with its wind assets based on the production demand allocation ratios.

11 **Q. WHAT PROBLEM DOES OG&E'S PROPOSED ALLOCATION OF WIND**
12 **ENERGY PLANT AND EXPENSES CREATE FOR OG&E CUSTOMERS IN**
13 **ARKANSAS?**

14 A. If my understanding of the Oklahoma jurisdiction's treatment of the allocation of these
15 costs is correct, then the Company has not only over-allocated wind-related costs to
16 Arkansas, but would also actually double-collect those costs between the two
17 jurisdictions. Specifically, the use of the production energy allocator rather than the
18 production demand allocator (4CP A&E) used in Oklahoma for wind asset costs over-
19 allocates \$13,612,266 in rate base and \$1,227,896 in excess expenses to the Arkansas
20 jurisdiction. This would also result in double-recovery because these amounts represent
21 costs for which OG&E also seeks recovery in Oklahoma.

1 **Q. HAVE YOU COMPUTED ADJUSTMENTS TO CORRECT FOR THIS**
2 **DISCREPANCY?**

3 A. Yes. Use of the production demand allocator rather than the production energy allocator
4 for the Arkansas jurisdiction would result in a \$13,612,266 reduction in rate base and a
5 \$1,227,896 reduction in expenses (excluding income tax implications). These
6 adjustments have been added to the revenue requirement adjustments sponsored by
7 ARVEC witness Mark Garrett.

8 **Q. DO YOU AGREE WITH THE OKLAHOMA JURISDICTION TREATMENT OF**
9 **THESE WIND PLANT PRODUCTION COSTS?**

10 A. Yes. Wind production capacity levels are determined by customer demand on the system
11 and available load following capacity on the system, such as hydro, combustion turbine,
12 or storage capacity. Wind capacity is interdependent on other production capacity and
13 operationally works together with the entire fleet of generation technologies. Therefore, it
14 is inappropriate to single out wind-related costs with a different cost allocation
15 methodology. Wind production capacity is not driven by customer energy use. For these
16 reasons, the 4CP average and excess allocation methodology is as appropriate for wind
17 capacity costs as it is for the entire fleet of generation costs and should not be parceled
18 out of that fleet.

19 **Q. DOES THIS CORRECTION OF THE WIND COST ALLOCATION ALSO**
20 **AFFECT THE RETAIL CUSTOMER ALLOCATIONS?**

21 A. Yes, the production demand allocation methodology should also apply to the retail
22 customer class allocations.

1 **Q. WHAT IS YOUR RECOMMENDATION FOR THE COMMISSION**
2 **REGARDING THE OG&E OWNED WIND ASSETS?**

3 A. I recommend that the Commission determine that the Company should be consistent in
4 its application of the production demand allocation ratios to all generation capacity
5 including wind capacity related costs.

6 **Q. DO YOU HAVE ANY OTHER OBSERVATIONS REGARDING THE**
7 **COMPANY'S USE OF THE PRODUCTION ENERGY ALLOCATOR?**

8 A. Yes, OG&E Witness Smith at page 8 of his Direct Testimony states that the Company is
9 proposing to change the functional allocation for both generation step-up transformers and
10 generation radial ties. Specifically, he states that OG&E proposes to use "a production
11 energy allocator as opposed to a transmission demand allocator." I disagree with this in
12 that the appropriate method would be the production demand allocator, not energy
13 allocator. However, based on my review of the electronic cost of service model, it
14 appears as though the Company has used the demand allocator consistent with what I
15 would recommend.

16 **VI. MITIGATION OF REVENUE ALLOCATION**

17 **Q. HAS THE COMPANY FOLLOWED THE COST OF SERVICE RESULTS IN ITS**
18 **PROPOSED REVENUE ADJUSTMENTS FOR EACH RATE CLASS?**

19 A. No. As summarized on pp. 17-19 of OG&E Witness Scott's Direct Testimony, the
20 Company proposes to deviate from the cost of service results by reducing the increase for
21 residential and small general service customers and increasing the rates above cost of
22 service for the Power and Light customers.

1 **Q. DO YOU AGREE WITH OG&E'S PROPOSED DEVIATION OR MITIGATION?**

2 A. No. Based on ARVEC Witness Mark Garrett's testimony, OG&E is not in need of an
3 overall revenue increase and actually needs a revenue decrease to align rates with just and
4 reasonable levels. Therefore, OG&E should follow its cost of service study and
5 implement cost-based rates for all its customer classes.

6 **Q. IF THE COMMISSION SHOULD DETERMINE THAT A REVENUE INCREASE**
7 **IS JUSTIFIED, WHAT IS YOUR RECOMMENDATION TO ALIGN RATES**
8 **WITH COST OF SERVICE?**

9 A. My recommendation is to follow OG&E's cost of service study and implement rates in
10 accordance with the results of that study, however, I will reserve comment on any
11 mitigation of cost of service based rates until I review the overall revenue requirement
12 recommendations from Commission Staff, the Attorney General and the intervening
13 parties. I will have more to say on this subject in my surrebuttal testimony.

14 **VII. LARGE CAPITAL ADDITIONS RIDER ("LCA RIDER")**

15 **Q. HAVE YOU REVIEWED THE COMPANY'S REQUEST FOR THE APPROVAL**
16 **OF AN LCA RIDER?**

17 A. Yes, I have reviewed the proposed tariff schedule LCA, Large Capital Additions Rider,
18 and the testimony of Mr. Rowlett in support of this new LCA Rider. Mr. Rowlett's
19 rationale for this rider is that large projects may "threaten the FRP four (4) percent
20 bandwidth" and "run the risk of the Company falling outside of the four (4) percent

bandwidth.” “This would cause the Company to file a general rate case before the FRP five (5) year term has expired.”²

Q. DO YOU AGREE WITH THE PROPOSED LCA RIDER AND MR. ROWLETT’S LOGIC?

A. No. Mr. Rowlett’s logic effectively questions the wisdom of the annual four percent Formula Rate Plan (“FRP”) limitation established by the Arkansas Legislature in Act 725. OG&E’s LCA Rider appears to be an attempt by the Company to change the bounds set by the Legislature for utilities who elect to propose an FRP and is simply an attempt to circumvent the 4% annual cap on revenue increases set forth in the law. Furthermore, the Company’s logic makes it sound like the FRP is causing the need for the LCA. The fact is nobody is forcing OG&E to request an FRP. Moreover, if the Company chooses to implement an FRP, it has the option of filing a general rate case if necessary just as it always has done if it requires a revenue increase in excess of the 4% annual revenue cap increase .

Q. DO YOU HAVE OTHER CONCERNS REGARDING THE PROPOSED LCA RIDER?

A. Yes. The proposed LCA Rider is inconsistent with well-established, sound ratemaking principles that discourage piecemeal ratemaking as unjust because it attempts to allow rate adjustments due to new large investments without consideration of changes in other costs and revenues that have occurred over the same time period.

Q. WHY DOES THE PROPOSED LCA RIDER CONSTITUTE PIECEMEAL RATEMAKING?

² Rowlett Direct at p. 8.

1 A. A basic ratemaking principle is that utility rates are set to recover the cost levels of a
2 utility that exist at a given point in time, a test year. The test year provides a “snap-shot”
3 of the utility’s investment levels, operating revenues and expense, depreciation and taxes.
4 As time passes after the test period, these revenue and cost levels change. Some
5 operating expense levels may increase, but these increases are often offset to some degree
6 by increases in revenue levels from customer growth or from decreases in other expense
7 accounts from either new efficiencies gained or other cost-cutting measures. Likewise,
8 investment levels may increase with the addition of new plant, but these increases in
9 plant are generally offset to some degree with increasing accumulated depreciation and
10 plant retirements. If, after rates are set, the utility earns more than its authorized return
11 because either revenues increased and/or cost levels declined, the utility is allowed to
12 keep the difference. If conversely, the utility earns less than its authorized return either
13 because revenues declined and/or cost levels increased, the utility suffers the loss. This is
14 the ratemaking paradigm utilized throughout the country. An important part of this
15 paradigm is the risk element, the risk the utility assumes that it will not earn more, and
16 perhaps will earn less, than its authorized return. It is this element of risk embedded in
17 the paradigm that allows the utility’s return on equity to be set at levels above that of
18 risk-free capital. If, during the period new rates are in effect, a utility wants to earn its
19 authorized return, or more than its authorized return, it will have to operate its business in
20 an efficient manner. If a commission were to approve the recovery of one of these “at
21 risk” costs through a rider mechanism, it would need to also make a corresponding
22 downward adjustment to the utility’s return on equity to reflect the reduced amount of
23 risk now assumed by the utility.

1 **Q. WHERE SHOULD RATE ADJUSTMENTS BE MADE TO AVOID THE**
2 **CONCERNS CREATED BY THE PIECEMEAL CHARACTERISTICS OF THE**
3 **LCA RIDER?**

4 A. The appropriate place for OG&E to include plant additions is either through its FRP
5 filing or, if necessary, through a general rate case filing. These two options provide more
6 opportunity than ever afforded OG&E in the past to include new plant in rates.

7 **Q. WHAT IS YOUR RECOMMENDATION FOR THE COMMISSION ON THE**
8 **LCA RIDER?**

9 A. I recommend that the Commission deny OG&E's proposed LCA for the reasons I
10 provide above.

IVIII. RATE DESIGN FOR THE POWER AND LIGHT TOU SCHEDULES

12 **Q. HAVE YOU REVIEWED THE RATE DESIGNS PROPOSED BY THE**
13 **COMPANY FOR THE LARGE COMMERCIAL CUSTOMERS?**

14 A. Yes.

15 **Q. WHAT CHANGE IS THE COMPANY PROPOSING FOR THE LARGE**
16 **COMMERCIAL CUSTOMERS?**

17 A. The largest change is the dissolution of the Power and Light Time-of-Use Demand Rate
18 schedule ("PL-TOU-D") and the Power and Light Time-of-Use Energy Rate schedule
19 ("PL-TOU-E") by combining these two into a single PL-TOU rate schedule that is closer
20 in design to the current PL-TOU-E rate schedule.

21 **Q. DO YOU HAVE CONCERNS WITH THIS PROPOSAL?**

1 A. Yes. There are currently 69 customers under the PL-TOU-D rates and only 5 customers
2 under the PL-TOU-E rates.³ The 69 customers chose PL-TOU-D presumably because it
3 best fit their load profile. Suddenly forcing PL-TOU-D customers onto a rate design
4 more similar to PL-TOU-E could significantly increase their bills. Additional concern is
5 created by OG&E Witness Wai's workpapers in that they do not provide sufficient data
6 and formulae necessary to verify his impact analysis.

7 **Q. IS THE COMPANY'S PROPOSAL TO COMBINE THESE TWO RATE**
8 **SCHEDULES CONSISTENT WITH COST OF SERVICE?**

9 A. No. This proposed change is a move in the wrong direction in that cost of service
10 suggests there should be higher not lower demand charges.⁴ If design of rates are to be
11 changed, the Company should be increasing the demand charge to more closely match
12 cost of service consistent with statute and not forcing customers onto a rate design with a
13 lower demand charge.

14 **Q. WHAT IS YOUR RECOMMENDATION AT THIS TIME FOR THE PL-TOU**
15 **RATE DESIGN?**

16 A. I recommend that the Commission deny the Company's request to consolidate the PL-
17 TOU-D and PL-TOU-E customers into a single class because: (i) the Company has not
18 offered sufficient evidence or need to do so; (ii) the Company has not adequately
19 substantiated its customer impact analysis; (iii) the consolidation could cause significant
20 bill impacts for some customers; and (iv) the consolidation constitutes a movement away
21 from cost of service.

³ Wai's Direct Exhibit WHW-2.

⁴ See H-5-1, Unit Costs.

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

2 A. Yes.

3

CERTIFICATE OF SERVICE

I, Thomas P. Schroedter, do hereby certify that a copy of the foregoing has been served upon all parties of record by forwarding the same by electronic mail this 31st day of January 2017.

A handwritten signature in black ink, appearing to read 'T. Schroedter', is written over a horizontal line.

Thomas P. Schroedter

Larry Blank

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Resume

Education

Ph.D. in Economics, The University of Tennessee, Knoxville, August 1994.

B.S. in Economics/Mathematics, Bemidji State University, Minnesota, May 1989.

Fields of Concentration

Industrial Organization & Public Policy (including utility regulation)

Econometrics

Finance

Professional Experience

Principal Consultant, TAHOEconomics, LLC, August 1999 - Present. Clients have included Government Agencies, Utility Customers, and Utility Companies focusing on most aspects of regulatory policy development and rate regulation for public utilities. From Oct. 2001 – Jan. 2005, Dr. Blank also served as the Director of a US Department of Energy grant project assisting the newly formed Energy Regulatory Commission of the Philippines as that agency completely restructured national policy related to the regulation of the electricity industry.

Associate Professor of Economics, Department of Economics, Applied Statistics, & International Business, New Mexico State University (NMSU), August 2009 – Present. Currently teaching graduate-level public utility regulation, business and government, antitrust policy/economics, economic statistics, and microeconomics.

Associate Director, Center for Public Utilities, NMSU, January 2011 – Present. Electric Utility and Natural Gas Distribution ratemaking training. The Center's training is endorsed by the National Association of Regulatory Utility Commissioners (NARUC).

Manager of Regulatory Policy and Market Analysis, Regulatory Operations Staff, Public Utilities Commission of Nevada, October 1997 - August 1999.

Responsibilities: Directed a ten-person division with duties covering most aspects of utility regulation and competitive restructuring across all industries (primarily telecommunications, electric, and natural gas); implementation of the Telecommunications Act of 1996; division management of all rates and tariffs; lead management of staff's electric and natural gas

restructuring activities. Close coordination with legal division in litigated case preparation including lead negotiation experience.

Supervising Economist, Regulatory Operations Staff, Public Service Commission of Nevada, March 1996 - October 1997. Duties similar to those above.

Senior Associate, Center for Public Utilities, NMSU, August 2003 – December 2010.

Assistant Professor of Economics, Department of Economics & International Business, New Mexico State University (NMSU), August 2003 – August 2009.

Research Economist, National Regulatory Research Institute, The Ohio State University and the National Association of Regulatory Utility Commissioners (NARUC), September 1994 - March 1996.

Lecturer, School of Public Policy and Management, The Ohio State University (taught Graduate Public Finance).

Published Papers and Reports

“An Enhanced Two-Part Tariff Methodology When Demand Charges Are Not Used,” (with Doug Gegax). *The Electricity Journal*, Volume 29, No. 3 (2016).

“Residential Winners and Losers behind the Energy versus Customer Charge Debate,” (with Doug Gegax). *The Electricity Journal*, Vol. 27, No. 4 (2014).

“Benchmarking Electric Distribution Utilities in the Philippines,” (with Doug Gegax and Ben Widner). *Asian Social Science*, Vol. 8, No. 3 (2012).

“Objectively Designing Shared Savings Incentive Mechanisms: An Opportunity Cost Model for Electric Utility Efficiency Programs,” (with Doug Gegax). *The Electricity Journal*, Vol. 24, No. 9 (2011), pp. 31-40.

“Endogenous Regulatory Constraints and The Emergence of Hybrid Regulation,” (with John Mayo). *Review of Industrial Organization*, Vol. 35 (2009), pp. 233-255.

“Promotions as Coopetition in the Soft Drink Industry,” (with Mike Hyman and Michael Meade). *Academy of Marketing Studies Journal*, September, 2009.

“A Dynamic Model of Insurgency: The Case of the War in Iraq,” (with C.E. Enomoto, D. Gegax, T. McGuckin, and C. Simmons), *Peace Economics, Peace Science and Public Policy*, Vol. 14, No. 2, 2008.

"The Role of Regulation in Expanding Access to Electricity: Reform in the Philippines," (with Mk Shean), *Energy Update*, Issue No. 4, 2005.

"Open Entry and Local Telephone Rates: The Economics of IntraLATA Toll Competition," (with David Kaserman, John Mayo, and Simran Kahai), *Review of Industrial Organization*, Vol. 14, No. 4, June 2000, pp. 303-319.

"Dominant Firm Pricing with Competitive Entry and Regulation: The Case of IntraLATA Toll," (with David Kaserman and John Mayo), *Journal of Regulatory Economics*, Vol. 14, 1998, pp. 35-53.

"Concavity Assumptions in Regulatory Models and the Capital Waste Controversy," *Journal of Regulatory Economics*, Vol. 9, 1996, pp. 95-100.

"Key Antitrust Pricing Issues for Regulated Industries with Emerging Competition," *NRRI Quarterly Bulletin*, Vol. 17, No. 2, 1996, pp. 279-298.

"Telephone Vouchers: Experiences in Other Markets," *NRRI Quarterly Bulletin*, Vol. 16, No. 4, 1995, pp. 537-547.

Selected Reports:

Telecommunications Service Quality (with V.W. Davis, D. Landsbergen, R.W. Lawton, N. Zearfoss, and J. Hoag), National Regulatory Research Institute, The Ohio State University, Columbus, March 1996.

Telecommunication Infrastructure Investments and State Regulatory Reform: A Preliminary Look at the Data (with Vivian Davis and Catherine Reed), The National Regulatory Research Institute, The Ohio State University, Columbus, December 1994.

Considerations in Preparing and Reviewing Socioeconomic Impact Assessments for Low-Level Waste Disposal Facilities (with Mary English, Matthew Murray, and Zoe Hoyle), for the U.S. Department of Energy. National Low-Level Waste Management Program, EG&G Idaho, Inc., Idaho Falls, Idaho: August 1992.

Economic Impact of Chem-Nuclear Systems, Inc. on Barnwell County, South Carolina (with Matthew Murray), for the U.S. Department of Energy. Energy, Environment and Resources Center, The University of Tennessee, Knoxville, November 1990.

Working Papers

"The FERC's Vintage and Original Purpose Doctrine for Transmission Pricing:

Distorted Economics and Economic Distortions,” (with Doug Gegax).

“Can Regulators Stop the Tax Bleeding of Universal Service Support?” (with Bill Smith and Lucinda Blume).

“Benchmarking Administrative Support Staff at a major University.”

“Regulatory Lag by the Numbers: Considerations for Alternative Revenue Requirement Mechanisms”

Grants

U.S. Department of Energy, Technical Assistance to the Energy Regulatory Commission of the Philippines, January 2002 – January 2005.

U.S. Department of Energy, Sustainable Energy Development Program (Philippines), January 2005 – August 2005. Completed the Open Access Distribution Service Rules governing 140 electric distribution utilities.

Presentations and Conference Participation

Lead speaker at the Edison Electric Institute’s Advanced Ratemaking Course, University of Wisconsin, every July since 2011.

“Statistically Determining Proper Recovery of Demand-Related Costs through the Energy Charge,” and Discussant: *CRRRI University Advanced Workshop in Regulation and Competition*, Monterey, CA, June 2013.

“The FERC’s Vintage and Original Purpose Doctrine for Transmission Pricing: Distorted Economics and Economic Distortions,” and Discussant: *CRRRI University Advanced Workshop in Regulation and Competition*, Monterey, CA, June 2012.

“Objectively Designing Shared Savings Incentive Mechanisms: An Opportunity Cost Model for Electric Utility Efficiency Programs,” and Discussant: *CRRRI Rutgers University Advanced Workshop in Regulation and Competition*, Sky Top, PA, May 2011.

Presentation: **“Can Regulators Stop the Tax Bleeding of the Universal Service Fund?”** and Discussant: *CRRRI Rutgers University Advanced Workshop in Regulation and Competition*, Sky Top, PA, May 2008.

Presentation: **“Endogenous Regulatory Constraints and the Emergence of Hybrid Regulation,”** *Western Economic Association Meetings*, Seattle, WA, July 2007.

Presentation: "PUHCA Uncertainty...States," *Western Governors' Association Energy Summit*, Albuquerque, NM, April 15, 2004.

Discussant, *Advanced Workshop in Regulation and Competition*, Monterey, CA, July 6, 2000.

Presentation: "**Nevada Electric Restructuring**," *Western Risk Management & Claims Workshop*, Western Electric Power Institute, San Diego, CA, July 8, 1999.

Discussant, *Advanced Workshop in Regulation and Competition*, San Diego, CA, July 7-9, 1999.

Participant, *Danish Ministry Workshop on Telecommunications Interconnection*, Special invitation by the Danish Ministry of Research and Information Technology, London, UK, December 14-15, 1998.

Presentation: "**Regulatory Choice: Constraints and Inefficiency**," *Advanced Workshop in Regulation and Competition*, Monterey, CA, July 10, 1998.

Presentation: "**Regulatory Choice: Constraints and Inefficiency**," *The 73rd Annual Western Economic Association Conference*, June 29, 1998.

Discussant, *The 25th Annual Telecommunications Policy Research Conference (TPRC)*, Alexandria, VA, September 27-29, 1997.

Presentation: "**Electricity Restructuring Issues**," two presentations before the *Nevada State Senate Committee on Commerce and Labor*, February 1997.

Presentation: "**Regulating Market Penetration: A Higher-Powered Incentive Scheme for Local Exchange Companies**," *The Tenth NARUC Biennial Regulatory Information Conference*, Hosted by the National Regulatory Research Institute at The Ohio State University, Columbus, September 11, 1996.

Presentation: "**Regulating Market Penetration: A Higher-Powered Incentive Scheme for Local Telephone Companies**," *The Advanced Workshop in Regulation and Public Utility Economics*, Hosted by the Center for Research in Regulated Industries at Rutgers University, Lake George, NY, May 30, 1996.

Presentation: "**Balancing Seemingly Conflicting Goals through a Minimum Subscribership Plan: Economic Efficiency and the Risks Borne by Regulators**," *The 27th Annual Conference of the Institute of Public Utilities*, Williamsburg, VA, December 12, 1995.

Presentation: "**The Minimum Subscribership Plan (MSP): Quality, Prices, and Current Policy**," *The 23rd Annual Telecommunications Policy Research Conference (TPRC)*, Solomons,

MD, October 2, 1995.

Presentation: "**A Positive Theory of Price-Cap and Rate-of-Return Regulation: Substitutes or Complements?**" *Southern Economic Association Meetings*, Orlando, FL, November 22, 1994.

Journal Referee

Peace Economics, Peace Science and Public Policy, July 2011.

The American Economic Review, April 1995.

Case Participation

Electricity:

OK Corporation Commission, Cause No. PUD 201500208, "In the matter of Public Service Company of OK Application for Adjustment in Rates." Expert witness testimony on behalf of the Department of Defense, 2015.

AR PSC, Docket 15-015-U, "In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service." Expert witness testimony on behalf of the Hospitals and Higher Education Group, 2015.

CO PUC, Docket 14AL-0660E, "In the Matter of Advice Letter NO 1672-Electric Filed by Public Service Company of Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Rate Changes Effective July 18, 2014." Expert witness testimony on behalf of the Federal Executive Agencies, November 2014.

AK RCA, Docket No. U-13-184, "In the Matter of the Tariff Revision Designated as TA332-121 Filed by the Municipality of Anchorage D/B/A Municipal Light and Power Department." Expert witness testimony on behalf of the Federal Executive Agencies, May 2014.

AK RCA, Docket No. U-13-006, "In the Matter of the Tariff Revision Designated as TA326-121 Filed by the Municipality of Anchorage D/B/A Municipal Light and Power Department." Expert witness testimony on behalf of the Federal Executive Agencies, October 2013.

AR PSC, Docket No. 13-028-U, "In the matter of the application of Entergy Arkansas, Inc. for approval of changes in rates for retail electric service," expert witness testimony on behalf of Hospitals and Higher Education Group, August 2013.

AZ ACC, Docket No. E-01345A-11-0224, "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,” expert witness testimony on behalf of the Federal Executive Agencies, January 2012.

NM PRC, Case No. 11-00265-UT, “In the matter of Public Service Company of NM’s Renewable Energy Portfolio Procurement Plan for 2012,” direct and rebuttal testimony on renewable cost threshold and related matters, on behalf of Public Service Company of New Mexico, October 2011.

AK RCA, Docket No. U-10-31, “In the Matter of the Revenue Requirement and Cost-of-Service Studies Designated as TA304-121 and the Tariff Filing Designated as TA306-121 and TA309-121 Filed by the MUNICIPALITY OF ANCHORAGE D/B/A MUNICIPAL LIGHTAND POWER,” expert witness testimony on behalf of the Federal Executive Agencies, prepared December 2010.

AR PSC, Docket No. 08-137-U, “In the Matter of the Consideration of Innovative Approaches to Ratebase Rate of Return Ratemaking Including, but not Limited to, Annual Earnings Reviews, Formula Rates, and Incentive Rates for Jurisdictional Electric and Natural Gas Utilities,” expert witness testimony responding to the mechanisms related to this docket, 2010.

CO PSC, Docket No. 10M-245E, “In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365, ‘Clean Air-Clean Jobs Act’,” expert witness testimony responding to the fundamental ratemaking issues regarding compliance with the Clean Air-Clean Jobs Act, September 2010.

AR PSC, Docket No. 09-084-U, “In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service,” expert witness testimony responding to certain aspects of revenue requirement, cost-of-service, and rate design. Also, responding to the proposed Formula Rate Plan, Lost Contributions to Fixed Costs, and the Shared Savings mechanism, 2010.

CO PSC, Docket No. 09AL-299E, “In the Matter of Advice Letter No. 1535 by Public Service Company of Colorado to Revise Its Colorado PUC No. 7 Electric Tariff to Reflect Revised Rates and Rate Schedules to be Effective on June 5, 2009,” expert witness testimony responding to the Phase II issues contained in the revised rate design on behalf of the Federal Executive Agencies, December 2009.

CO PSC, Docket No. 09AL-299E, “In the Matter of Advice Letter No. 1535 by Public Service Company of Colorado to Revise Its Colorado PUC No. 7 Electric Tariff to Reflect Revised Rates and Rate Schedules to be Effective on June 5, 2009,” expert witness testimony responding to the Phase I issues contained in the proposed revenue requirements on behalf of the Federal Executive Agencies, September 2009.

NV PUC, Docket No. 08-12002, “Application of Nevada Power Company for authority to increase its annual revenue requirement for general rates charged to all classes of customers to recover 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,” expert witness testimony responding to certain aspects of the cost of service and rate design on behalf of The Board of Regents of the Nevada System of Higher Education, April 2009.

AZ ACC, Docket No. E-01345A-08-0172, “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,” expert witness testimony responding to certain aspects of the cost of service and rate design on behalf of the Federal Executive Agencies, January 2009.

FERC, Docket No. EL07-101-000, expert witness testimony assessing transmission rate design on behalf of American Electric Power Service Corporation, August 2007.

MD PSC, Case No. 9092, “In the Matter of the Application of PEPCO for Authority to Revise Rates,” conducted training and provided advisory services to the Maryland Commissioners and advisory staff (2007).

AR PSC, Docket No. 06-101-U, “In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service,” expert witness surrebuttal testimony responding to the cost of service study used by EAI, Staff, and interveners on behalf of the Federal Executive Agencies, March 2007.

Vermont Department of Public Service, Cost of Service analysis related to Green Mountain Power Corp.

Philippines ERC, design of Open Access Distribution Services Rules, 2005.

Philippines Energy Regulatory Commission, Project Director and key advisor for over three years on policy development related to industry restructuring and over 140 rate unbundling cases, 2001-2005.

Philippines Department of Energy and Energy Regulatory Board, Electricity Ratemaking Training and Rulemaking for Restructured Wholesale and Retail Electricity Industry (July 2000 – February 2001).

TX PUC, Docket No. 22349, Application of TX-NM Power Company for approval of unbundled cost of service rates (testimony filed). 1999-2000.

NV PUC, Docket No. 99-10049, Petition for Advisory Opinion, Rules that may or may not apply to master-metered mobile home parks after restructuring of electric and natural gas markets, (testimony), 1999.

NV PUC, Docket No. 99-4019, Utility.com, Inc., Application for Licensing as an Alternative Seller (testimony), 1999.

NV PUC, Docket No.s 98-12007 and 12009, Sierra Pacific Power Co. And Nevada Power Co. Applications for authorization to provide potentially competitive services through affiliates (testimony), 1998.

NV PUC, Docket No. 98-7023, Sierra Pacific Power Company and Nevada Power Company, Joint Application for Approval of Merger (testimony), 1998.

NV PUC, Docket No. 98-9038, Regulatory Operations Staff, Application to Designate Unbundled Services as Potentially Competitive (testimony), 1998.

NV PUC, Docket No. 98-8034, Nevada Power Company, Application to Designate Unbundled Services as Potentially Competitive (testimony), 1998.

NV PUC, Docket No. 97-10004, Nevada Power Company's Green Power Tariff (testimony), 1997.

NV PUC, Docket Nos. 97-11018 and 97-11028, Proposed Unbundling Methodologies of Sierra Pacific Power Co. and Nevada Power Co. (testimonies), 1997.

NV PUC, Docket No. 97-8001, Investigation of issues to be considered as a result of restructuring of electric industry (extensive comments and testimony on all restructuring issues including the development of new regulations), 1997 - 1999.

NV PUC, Docket No. 97-6008, Nevada Power Company's Resource Plan (evaluation of load forecasting), 1997.

NV PUC, Docket No. 97-5034, Rulemaking to establish standards of conduct and related requirements for distribution companies and affiliates, 1997.

NV PUC, Docket No. 96-7020, Nevada Power Company Deferred Energy Case (testimony), 1996.

NV PUC, Docket No. 96-6013 and 96-6014, Sierra Pacific Power Company tariff filing to allow negotiated contracts (testimony), 1996.

NV PUC, Docket No. 95-9022, Nevada Electric Restructuring Investigation (several extensive comments), 1996.

Natural Gas and Water Distribution:

AR PSC, Docket No. 15-098-U, "In the Matter of the Application of Centerpoint Energy Resources Corp., d/b/a Centerpoint Energy Arkansas Gas, for a General Change or Modification in its Rates, Charges and Tariffs." Expert witness testimony on behalf of the University of Arkansas, 2015-16.

AR PSC, Docket No. 15-011-U, "In the Matter of the Application of SourceGas Arkansas, Inc. for Approval of a General Change in Rates and Tariffs." Expert witness testimony on behalf of the University of Arkansas, 2015.

AR PSC, Docket No. 13-079-U, "In the Matter of the Application of SourceGas Arkansas Inc. for Approval of a General Change in Rates." Expert witness testimony on behalf of the University of Arkansas, May 2014.

NV PUC, Docket No. 12-11010, "Investigation and rulemaking to address a recovery mechanism for the accelerated replacement of gas infrastructure." Expert witness testimony on behalf of the Federal Executive Agencies, December 2012.

NM PRC, Case No. 11-00196-UT, "In the matter of the petition by New Mexico-American Water Co. for adjustment of water rates for its Clovis District." Expert witness testimony on behalf of the City of Clovis, November 2011.

NM PRC, Case Nos. 11-00085-UT and 11-00293-UT, Acquisition and financing of NM American Water Co. by EPCOR, Inc. Expert witness testimony on financing and customer hold-harmless on behalf of the City of Clovis, July-August 2011.

NM PRC, Case No. 08-00134-UT, "In the Matter of the Petition by New Mexico-American Water Company, Inc. for Adjustment of Water Rates for Its Clovis District," expert witness testimony responding to revenue requirements and rate design in the petition to adjust water rates on behalf of the City of Clovis, December 2008.

NM PRC, Case No. 08-00321-UT, "In the Matter of the Petition by New Mexico-American Water Company, Inc. for a Certificate of Convenience and Necessity and Other Authorizations Related to an Exploratory Test Well into the Lower Dockum Formation to Serve the Clovis District," expert witness testimony assessing accounting and regulatory treatment of the project costs associated with the proposed exploratory test well into the lower Dockum Formation to serve the Clovis district of New Mexico-American Water Company, Inc. ("NMAW" or "Company") on behalf of the City of Clovis, March 2009.

NV PUC, Docket No. 97-8002, Investigation into alternative forms of regulation for natural gas local distribution companies and alternative sellers of natural gas, and related matters (extensive comments and testimony on all restructuring issues including the development of new regulations), 1997.

NV PUC, Docket No. 97-5034, Rulemaking to establish standards of conduct and related requirements for distribution companies and affiliates, 1997.

Telecommunications:

MT PSC, Docket No. D2005.6.105, Investigation on Use of Federal Universal Service Funds (testimony filed on behalf of PSC advocacy staff), 2005.

NM PRC, Case No. 05-00094-UT, Qwest Corporation's Amended Alternative Form of Regulation Plan, (testimony filed on behalf of Qwest regarding computation and appropriateness of refund), 2005.

Line Extension Policy and Contribution in Aid of Construction, expert witness work on behalf of 3 Rivers Telephone Cooperative, before the Montana Eighteenth Judicial District Court, Cause No. DV-04-731, March 2006.

NV PUC, Docket No. 00-7012, Nevada Bell Petition for order commencing a proceeding to determine new costs and rates for unbundled network elements (testimony filed on behalf of wholesale customers), 2000.

FCC CC Docket No. 00-247, Petition for Arbitration, Developed Unbundled Costs and Interconnection Agreement on behalf of Virtual Hipster Corp., December 2000.

Case No. CV771923, Superior Court of the State of California (Santa Clara), Worldcom v. Co-net Communications, Oral Expert Witness Testimony on potential service development including cost and revenue estimates, damage estimate, standard of care in circuit disconnect, and other circuit contractual issues (deposition and oral testimony), April 2000.

NV PUC, Docket Nos. 98-10015 and 99-11007, Nevada Bell Arbitrations on the issue of reciprocal compensation and Internet service provider traffic, 1998.

NV PUC, Review of Interconnection and Resale Agreements between Incumbent Local Exchange Carriers and Competitors for approval in Nevada.

NV PUC, Docket No. 98-6005, Sprint of Nevada, Unbundled Network Element Costs (testimony), 1998.

NV PUC, Docket No. 98-6004, Nevada Bell, Unbundled Network Element Costs (testimony), 1998.

NV PUC, Docket No. 97-11017, Virtual Hipster Corp., Petition to terminate rural exemption of Churchill County Telephone Company (testimony), 1997.

NV PUC, Docket No. 96-8035, GTE, Depreciation Filing (testimony), 1997.

NV PUC, Docket No. 97-5027, Central Telephone Company-Nevada, tariff filing requesting an increase in directory assistance rates (testimony and cost analysis), 1997.

NV PUC, Docket No. 97-5018, Investigation into the impact of the Telecommunications Act of 1996 on Universal Service in Nevada (comments), 1997.

NV PUC, Docket No. 96-4041, Nevada Bell Petition on Confidential Nature of Telecommunications Cost Studies (testimony filed), 1996.

NV PUC, Docket No. 96-9035, Investigation into Procedures and Methodologies to Develop Costs for Bundled or Unbundled Telephone Services (comments, testimony and cost analysis), 1996.

NV PUC, Docket Nos. 96-3002 and 96-3003, Nevada Bell's Entry into a Plan of Alternative Regulation (testimony), 1996.