

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

Kristen K. Mayes – Chairman
Gary Pierce
Sandra D. Kennedy
Paul Newman
Bob Stump

**IN THE MATTER OF THE APPLICATION OF)
UNS GAS, INC. FOR THE ESTABLISHMENT OF)
JUST AND REASONABLE RATES AND CHARGES)
DESIGNED TO REALIZE A REASONABLE RATE) DOCKET No. G-04204A-08-0571
OF RETURN ON FAIR VALUE OF THE)
PROPERTIES OF UNS GAS, INC. DEVOTED TO)
ITS OPERATIONS THROUGHOUT THE STATE)
OF ARIZONA)**

DIRECT TESTIMONY

OF

FRANK W. RADIGAN

**ON BEHALF OF
RESIDENTIAL UTILITY CONSUMER OFFICE OF ARIZONA**

**Phoenix, Arizona
June 8, 2009**

**DIRECT TESTIMONY OF FRANK W. RADIGAN
EXECUTIVE SUMMARY**

- 1) The Company’s proposed cost of service study uses a Commission accepted method to allocate costs. The Company has proposed to allocate costs on an across the board basis except for the CARES customers who receive no increase. In these uncertain economic times an equal sharing of the rate increase is reasonable. The proposed revenue allocation is shown on Exhibit 3 and summarized below:

Class of Service	Present Revenue	Proposed Revenue	Proposed Increase	Proposed Percent Increase
Residential Service	\$36,600,943	\$37,190,974	\$590,030	1.6%
Commercial Gas Service	\$9,910,680	\$10,076,399	\$165,720	1.7%
Industrial Gas Service	\$246,712	\$250,838	\$4,125	1.7%
Public Authority Gas Service	\$1,778,118	\$1,807,850	\$29,732	1.7%
Special Gas Light Service	\$66,940	\$68,059	\$1,119	1.7%
Irrigation Service	\$33,865	\$34,431	\$566	1.7%
Transportation Customers	\$3,036,509	\$3,086,270	\$49,761	1.6%
Total	\$51,673,767	\$52,514,821	\$841,054	1.6%

- 2) The Company’s proposal not to increase the rates for the CARES customers is reasonable and abides by recent Commission treatment to these customers of holding them harmless from rate increase.
- 3) The Company’s proposed rate design that would phase in a 71% increase in the residential customer charge over three years should be rejected. Instead, the proposed increase in the customer charges for what the Company describes as Year 1 are reasonable as they increase

rates towards the indicated cost of service but do not overly increase rates. My proposed customer charges are summarized in the table below.

	Present	Proposed	Increase	% Increase
Residential	\$ 8.50	\$ 10.00	\$ 1.50	18%
Small Commercial & Industrial	13.50	15.50	2.00	15%
Large Commercial and Industrial	100.00	105.00	5.00	5%
Irrigation Service	13.50	15.50	2.00	15%

- 4) The impact for a Residential Customer from this proposed revenue allocation and rate design is as follows. The customer charge is proposed to increase from \$8.50 per month to \$10 per month and the commodity charge is proposed to decrease slightly from \$0.3270 per therm to \$0.3027 per therm. The average bill for the Residential Class is 45 therms per month and a customer with such average usage will see an increase of 1.7%, which is the class average increase. Detailed bill impacts from each class are shown on Schedule H-4 of Exhibit 3 to my testimony.

1 **I. INTRODUCTION**

2 **Q. Please state your name, position and business address.**

3 A. Frank W. Radigan. I am a principal in the Hudson River Energy Company, a
4 consulting firm providing services to the utility industry and specializing in the fields
5 of rates, planning, and utility economics. My office address is 237 Schoolhouse
6 Road, Albany, New York 12203.

7

8 **Q. Would you please summarize your education and business experience?**

9 A. I received a Bachelor of Science degree in Chemical Engineering from Clarkson
10 College of Technology in Potsdam, New York (now Clarkson University) in 1981. I
11 received a Certificate in Regulatory Economics from the State University of New
12 York at Albany in 1990. From 1981 through February 1997, I served on the Staff of
13 the New York State Public Service Commission in the Rates and System Planning
14 sections of the Power Division and in the Rates Section of the Energy and Water
15 Division. My responsibilities included resource planning and the analysis of rates,
16 depreciation rates and tariffs of electric, gas, water and steam utilities in the State
17 and encompassed rate design and performing embedded and marginal cost of service
18 studies as well as depreciation studies.

19

20 Before leaving the Commission, I was responsible for directing all engineering staff
21 during major proceedings including those relating to rates, integrated resource
22 planning and environmental impact studies. In February 1997, I left the Commission

1 and joined the firm of Louis Berger & Associates as a Senior Energy Consultant. In
2 December 1998, I formed my own Company.

3

4 In my 27 years of experience, I have testified as an expert witness in utility rate
5 proceedings on more than 80 occasions before various utility regulatory bodies
6 including the Arizona Corporation Commission, the Connecticut Department of
7 Utility Control, the Maryland Public Service Commission, the Massachusetts
8 Department of Telecommunications and Energy, the Michigan Public Service
9 Commission, the New York State Public Service Commission, the New York State
10 Department of Taxation and Finance, the Nevada Public Utilities Commission, the
11 Public Utilities Commission of Ohio, the Rhode Island Public Utilities Commission,
12 the Vermont Public Service Board, and the Federal Energy Regulatory Commission.

13

14 I currently advise a variety of Regulatory Commissions, consumer advocates,
15 municipal utilities and industrial customers concerning rate matters, including
16 wholesale electricity rates and electric transmission rates. A summary of my
17 qualifications and experience is included as Exhibit 1.

18

19 **Q. On whose behalf are you appearing?**

20 A. I am appearing on behalf of the Residential Utility Consumer Office of Arizona
21 (“RUCO”).

22

23 **Q. Have you previously testified before the Arizona Corporation Commission?**

1 A. Yes. I have testified before the Commission previously on four occasions. I
2 testified before the Commission in the most recent UNS Electric, Inc. rate case
3 (Docket No. E-04204A-06-0783), the most recent Tucson Electric Power Company
4 rate case (Docket No. E-01933A-07-0402), the most recent Southwest Gas Company
5 rate case (Docket No. G-01551A-07-0504) and the most recent Arizona Public
6 Service Company rate case (Docket No. E-01345A-08-0172).

7
8 **Q. What is the purpose of the testimony you are presenting?**

9 A. I have been asked to discuss the reasonableness of UNS Gas, Inc.'s (UNS or the
10 Company) proposed cost of service allocation and rate design.

11

12 **Q. Could you please summarize your testimony?**

13 A. Yes, based on my review of the filing I have the following conclusions and
14 recommendations:

15 1) The Company's proposed cost of service study uses a Commission accepted
16 method to allocate costs. The Company has proposed to allocate costs on an across
17 the board basis except for the CARES customers who receive no increase. In these
18 uncertain economic times an equal sharing of the rate increase is reasonable.

19

20 2) The Company's proposed rate design that would phase in a 71% increase in the
21 residential customer charge over three years should be rejected. Instead, the
22 proposed increase in the customer charges for what the Company describes as Year 1
23 are reasonable as they increase rates towards the indicated cost of service but do not
24 overly increase rates.

1 3) The Company's proposal not to increase the rates for the CARES customers is
2 reasonable and abides by recent Commission treatment to these customers of holding
3 them harmless from rate increase.

4

5 **Q. Could you please comment on the Company's cost of service study and revenue**
6 **allocation?**

7 A. Yes. The Cost of Service Study was prepared and presented by Company Witness
8 Bentley Erdwurm and is described in his pre-filed testimony at pages 9-14. Mr.
9 Erdwurm performed a traditional embedded cost of service study using the
10 Proportional Responsibility method. This method uses the respective class' share
11 of total load in each of the twelve months for the test-year to develop an
12 allocation factor to assign costs. (Erdwurm PFT, page 17) The Proportional
13 Responsibility method drives many significant costs in the class cost-of-service
14 study model (Ibid). The Proportional Responsibility Method has been used in other
15 recent rate case filings before the Commission including the Company's last rate
16 case (Ibid). I have reviewed the allocation factors used in the study and the
17 supporting data used to develop them. The results of the cost of service study are
18 presented below:

19

20

21

22

23

1

UNS Gas, Inc. Cost of Service Study Results		
	Rate of Return	Indexed Rate of Return
Residential	5.6%	0.87
Total Commercial	11.5%	1.80
Total Industrial	1.4%	0.23
Total Public Authority	7.4%	1.16
Special Gas Light Service	32.3%	5.08
Irrigation	9.2%	1.44
Total Company	6.4%	1.00

2

3

4

5

6

7

8

Q. Could you please comment on the Company's proposed rate design?

9

A. Yes, as noted by Company Witness Erdwurm the Company's primary objectives in rate design is to more equitably collect its fixed costs (Erdwurm PFT page 18).

10

11

12

13

14

15

16

17

18

19

UNS proposes an increase in monthly customer charges to levels that better match the true customer-related costs, as indicated by the class cost-of-service study (Ibid). As Mr. Erdwurm he is seeking to move the customer costs towards the "bare-bones" customer charge. "Bare-bones" customer charges restrict the customer classification to metering, meter-reading, service (service drop) to the specific customer, customer service and billing (Ibid). According to the study, the "bare bones" monthly customer charges are calculated to be \$18.15 for residential service, approximately \$19.00 for small commercial/industrial customers and approximately \$220.00 for large commercial/industrial customers (Ibid).

1 Under Mr. Erdwurm's proposal for residential service, the increases will be phased-in
2 over three years. Upon approval of this rate case the customer charge will increase
3 from \$8.50 per month to \$10 per month. One year after rates are approved the
4 customer charge will automatically increase from \$10 to \$12 per month and two years
5 after rates are approved in this case the customer charge will automatically increase
6 from \$12 to \$14 per month. Even after the three year phase in Mr. Erdwurm argues
7 that the residential customer charge will still be below the "bare-bones" customer
8 charge of \$18.15. Customer charges for non-residential classes generally also are
9 raised closer to levels indicated by the class cost-of-service study but there is no
10 automatic phase in of cost increases. (Erdwurm PFT pages 18-19).

11

12 **Q. Do you agree with Mr. Erdwurm's proposal on the Residential Customer**
13 **Charge?**

14 A. No. While the proposed customer charges are cost-based, the company has ignored
15 the rate design principles of rate stability. Automatic rate increases are generally not
16 appreciated by customers and this is especially true when it comes to rate increases
17 that can be viewed as a large increase. Mr. Erdwurm's automatic rate increase in the
18 second and third year will increase a small customer's bill by 40%. Outside of a rate
19 case this large of an increase will undoubtedly cause an increase in customer
20 complaints.

21

22 **Q. Mr. Erdwurm argues that the very nature of UNS' service territory causes**
23 **problems that must be addressed though the customer charge, can you**
24 **comment on that?**

1 A. Yes. In his testimony Mr. Erdwurm states given that natural gas usage is largely
2 driven largely by weather, the Company's current rates have resulted in customers in
3 cooler areas (i.e., districts with more heating degree days like Flagstaff)
4 subsidizing those living in warmer areas (i.e., districts with less heating degree
5 days like Lake Havasu City). He states that customers in the coldest corners of
6 the service territory – those affected most by rising costs on the volumetric, gas
7 commodity portion of their bills during home heating season – have borne the
8 additional burden of subsidizing the fixed cost of serving customers who spend their
9 winters in far more moderate climates (Erdwurm PFT pages 20 and 21). This
10 argument is a red herring. Mr. Erdwurm's analysis only looks at the net margin
11 from sales from small and large customers and notes that a large customer
12 contributes more than a small. Large customers, however, also are served by large
13 mains and can contribute more to peak indicating that it costs more to serve them.
14 This can only be done through a cost of service study. If Mr. Erdwurm truly
15 believes that UNS should have District rates, then he should present a study which
16 actually studies if there are cost differences to serve the two Districts.

17

18 **Q. Mr. Erdwurm argues that recovery of fixed costs in the customer charge as**
19 **compared to the volumetric charge is preferred, do you disagree?**

20 A. From the utility perspective that is true as they want to be able to recover most of
21 their fixed costs up front. That said, however, in the rate case the Company's rates
22 are designed to recover the total revenue requirement. Thus, the only risk to the
23 Company is between rate cases if customer usage changes to due warmer than

1 normal weather or customer conservation. On the other hand, there can be colder
2 than average weather and customer growth can occur and this would help the
3 Company. Thus, a balance must be reached that treats the Company and the
4 customer fairly.

5
6 **Q. What do you recommend be done with the customer charges?**

7 A. A reasonable balance is one that recognizes 1) the customer cost indicated by the
8 cost of service study, 2) rate stability for customers and 3) increasing the amount of
9 money recovered though the fixed charge. To this end I recommend that the
10 Company's proposed customer charge for year one allowed to become effective with
11 no automatic increases allowed. Any further changes to the customer charge would
12 be analyzed again in the next rate case. A summary of the present and proposed
13 customer charges are presented in the table below.

14

	Present	Proposed	Increase	% Increase
Residential	\$ 8.50	\$ 10.00	\$ 1.50	18%
Small Commercial & Industrial	13.50	15.50	2.00	15%
Large Commercial and Industrial	100.00	105.00	5.00	5%
Irrigation Service	13.50	15.50	2.00	15%

15

16

17 While the percentage increase appears relatively high given the RUCO is
18 recommending a 1.6% overall increase, the dollar increases are low, however, with a
19 residential customer's bill increase by only \$1.50 per month. In addition, for each
20 class the average customer receives a reasonable increase. For example, the average
21 usage for a residential customer 45 therms per month and this customer will see an

1 increase in their bill of 1.7% which is almost equal to the overall average increase
2 being given to the Company of 1.6%.

3

4 **Q. Please discuss the bill impact of your proposed rates for the Residential Class.**

5 A. The customer charge is proposed to increase from \$8.50 per month to \$10 per month
6 and the commodity charge is proposed to decrease slightly from \$0.3270 per therm
7 to \$0.3027 per therm. The average bill for this class is 45 therms per month and a
8 customer with such average usage will see an increase of 1.7% which is the class
9 average increase. Typical bills for the full range of residential usage are included in
10 Exhibit 3 (RUCO UNS Gas Schedule H, Schedule H-4, page 1).

11

12 **Q. Please discuss the bill impact of your proposed rates for the Small Commercial**
13 **Class (C-20).**

14 A. The customer charge is proposed to increase from \$13.50 per month to \$15.50 per
15 month and the commodity charge is proposed to decrease slightly from \$0.2638 per
16 therm to \$0.2600 per therm. The average bill for this class is 214 therms per month,
17 and a customer with that usage will see an increase of 1.7% which is the class
18 average increase.

19

20 **Q. Please discuss the bill impact of your proposed rates for the Large Volume**
21 **Industrial (I-32).**

22 A. The customer charge is proposed to increase from \$100.50 per month to \$105.00 per
23 month and the commodity charge is proposed to increase slightly from \$0.0952 per

1 therm to \$0.0966 per therm. The average bill for this class is approximately 20,000
2 therms per month, and a customer with that usage will see an increase of 1.7%,
3 which is the class average increase.

4

5 **Q. Please discuss the bill impact of your proposed rates for the CARES Residential**
6 **Customers (R-12).**

7 A. The Company has proposed to retain the CARES pricing plan, and proposes to
8 hold the customer charge and the non-commodity volumetric charges at the
9 current levels (Erdwurm PTF page 26). I agree this has been the adopted
10 method in the recent TEP rate case and what staff proposed in the ongoing
11 Arizona Public Service rate case. As shown on Exhibit 3, Schedule H-4, page
12 2, these customers will see no increase.

13

14 **Q, Does this conclude your testimony?**

15 A. Yes.

16

17

18

Exhibit 1
Resume of Frank W. Radigan

FRANK W. RADIGAN

EDUCATION

B.S., Chemical Engineering -- Clarkson University, Potsdam, New York (1981)

Certificate in Regulatory Economics -- State University of New York at Albany (1990)

SUMMARY OF PROFESSIONAL EXPERIENCE

1998–Present **Principal, Hudson River Energy Group, Albany, NY** -- Provide research, technical evaluation, due diligence, reporting, and expert witness testimony on electric, steam, gas and water utilities. Provide expertise in electric supply planning, economics, regulation, wholesale supply and industry restructuring issues. Perform analysis of rate adequacy, rate unbundling, cost-of-service studies, rate design, rate structure and multi-year rate agreements. Perform depreciation studies, conservation studies and proposes feasible conservation programs.

1997–1998 **Manager Energy Planning, Louis Berger & Associates, Albany, NY** – Advised clients on rate setting, rate design, rate unbundling and performance based ratemaking. Served a wide variety of clients in dealing with complexities of deregulation and restructuring, including OATT pricing, resource adequacy, asset valuation in divestiture auctions, transmission planning policies and power supply.

1981–1997 **Senior Valuation Engineer, New York State Public Service Commission, Albany, NY** – Starting as a Junior Engineer and working progressively through the ranks, served on the Staff of the New York State Department of Public Service in the Rates and System Planning Sections of the Power Division and in the Rates Section of the Gas and Water Division. Responsibilities included the analysis of rates, rate design and tariffs of electric, gas, water and steam utilities in the State and performing embedded and marginal cost of service studies. Before leaving the Commission, was responsible for directing all engineering staff during major rate proceedings.

FIELDS OF SPECIALIZATION

Electric power restructuring, wholesale and retail wheeling rates, analysis of load pockets and market power, divestiture, generation planning, power supply agreements and expert witness testimony, retail access, cost of service studies, rate unbundling, rate design and depreciation studies.

PROJECT HIGHLIGHTS

Wholesale Commodity Markets

Transmission Expansion Planning – Various Utilities -- Member of Transmission Expansion Advisory Committee in the New England Power Pool – the Committee is charged with the study of transmission expansion needs in the deregulated New England electric market. Ongoing

Locational Based Pricing – Reading Municipal Light Department -- Using GE multi-area production simulation model (MAPS), analyzed New England wholesale power market to cost differences between various generators and load centers. 2003

Merchant Plant Analysis – Confidential client – Using GE multi-area production simulation model (MAPS), analyzed New York City wholesale power market to determine economics of restructuring PURPA era contract to market priced contract. 2002

Market Price Forecasting – El Paso Merchant Energy – Analyzed New England power market using MAPS for purpose of pricing natural gas supply in order to ensure that plant was dispatched at 70% capacity factor as required under its gas supply contract. 2002

Market Price Analysis – Novo Windpower – Analyzed hourly market price data in New York for each load zone in State in order to optimize location of new wind power projects. 2002

Gas Aggregation – Village of Ilion – Advised client on costs/benefits of aggregating residential gas customers for purpose of gas purchasing. 2002

Gas Procurement – Albany County, New York – Assisted client in analysis of economics of existing gas purchase contract; negotiated termination of contract; designing request for proposal for new natural gas supply. 2000

HQ Prudence Review – Selected by Vermont Public Service Board to perform prudence review power supply contract between Hydro Quebec and Central Vermont Public Service Corporation. 1998

Wholesale Power Supply – Prepared comprehensive RFP to optimize power supply for Solvay municipal utility by complementing existing low cost power supplies in order to entice new industrial load to locate within Village. 1997

Analysis of Load Pockets and Market Power – Performed analysis of load pockets and market power in New York State; determined physical and financial measures that could mitigate market power. 1996

Study of IPP Contracts and Impacts in New York – Performed study to determine rate impacts of power purchase contracts entered into by investor owned utilities and independent power producers (IPPs); separately measured rate impacts resulting from statewide excess-capacity; determined level of non-optimal reserves for each utility. 1995

Power Purchase Contract Policies and Procedures – Directed NYSPSC Staff teams in formulation of short- and long-run avoided cost estimates (LRACs) using production simulation model (PROMOD); forecasted load and capacity requirements; developed utility buy-back rates; presented expert witness testimony on buy-back rate estimates and calculation methodologies, thereby implementing curtailment of IPPs as allowed under PURPA. 1990-1994

Integrated Resource Planning - Led NYSPSC Staff team's examination of each utility's IRP process and examination of impacts of processes and regulatory policies influencing the decision making process. 1994

Intrastate Wheeling Commission Transmission Analysis and Assessment – Chairman of NYSPSC Proceeding to examine plans for meeting future electricity needs in New York State. Addressed measures for estimating and allocating costs of wheeling, including embedded cost, short-run marginal cost and long run incremental cost methods. 1990

Rate Setting

Rate Case Cost of Service Study – Stowe Electric Department, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the Vermont Public Service Board. 2009

Rate Case Cost of Service Study – Village of Greene, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the New York Public Service Commission. 2008

Rate Case Cost of Service Study – Village of Bath, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the New York Public Service Commission. 2008

Rate Case Cost of Service Study – Village of Richmondville, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the New York Public Service Commission. 2008

Economic Development Rate – Massena Electric Department – For municipal electric utility, developed tariffs for economic development rates for new or expanded load.

Rate Case Cost of Service Study – Village of Hamilton, NY – For small municipal electric utility, prepared full cost of service study before the New York Public Service Commission. 2004

Rate Study – Pascoag Utility District – Reviewed the application of the Power Authority of the State of New York to increase rates to its wholesale power customers. 2003

Rate Study - Kennebunk Power and Light Department – Performed rate study of new multi-year wholesale power contract against existing rates to determine impact on overall revenue recovery and cash flows of utility. 2003

Rate Case Cost of Service Study – Village of Arcade, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the New York Public Service Commission. 2003

Rate Case Cost of Service Study – Village of Philadelphia, NY – For small municipal electric utility, assisted in the preparation full cost of service study before the New York Public Service Commission. 2003

Rate Case Cost of Service Study – Village of Hamilton, NY – For small municipal electric utility, prepared full cost of service study before the New York Public Service Commission. 2004

Rate Case Cost of Service Study – Fillmore Gas Company – For small natural gas local distribution company, performing cost of service study for internal budget controls and formal rate case before the New York Public Service Commission. 2003

Rate Case Cost of Service Study – Rowlands Hollow Water Works – For small water company, performing cost of service study for internal budget controls and formal rate case before the New York Public Service Commission. 2003

Standby Rates – Independent Power Producers of New York – Analyzed reasonableness of proposed standby rates of Niagara Mohawk Power Corporation; proposed alternate rate designs; participated in settlement negotiations for new rates. 2002

Economic Development Rates – Pascoag Utility District – Designed new cost based economic development rates charged to large industrial customer contemplating locating within the municipality. 2002

Municipalization Study – Kennebunk Power and Light Department – Performed economic analysis of municipal utility serving remaining portions of Village not already served; performed valuation of the plant currently owned by Central Maine Power. 2001

Water Rate Study – Pascoag Utility District – Performed cost of service study for water utility; presented alternate methods of funding revenue requirement. 2001

Pole Attachment Rates – Middleborough Gas and Electric Department – Designed cost based pole attachment rates charged to CATV customers. 2000

ISO Service Tariff -- On behalf of three municipal utilities, analyzed cost basis and proposed rate design of ISO

Service Tariffs. 2000

Pole Attachment Rates – City of Farmington, New Mexico municipal electric department – Designed cost based pole attachment rates for CATV customers. 1999

OATT Rates – On behalf of four municipal utilities in New England – Developed cost based annual revenue requirements for regional network transmission rates; represent utilities before ISO New England committees on transmission rate setting issues. 1998-2004

Consolidated Edison Restructuring – Member NYSPSC Staff team – Negotiated major restructuring settlement with Consolidated Edison, which decreased utility's rates by \$700 million over five years; implemented retail access program; performed rate unbundling; divestiture of utility generation and the allowance of the formation of a holding company; accelerated depreciation of generation; established customer education programs on restructuring; established service quality and service reliability incentive to ensure that provision of electric service will diminish as competitive market emerges. The agreement served as the template for restructuring in New York. 1997

Cost-of-service Review and Rate Unbundling – Performed rate unbundling of retail rates of Orange & Rockland Utilities, Inc. to facilitate delivery of New York Power Authority energy to customer located in Orange & Rockland's service territory. 1992

Vintage Year Salvage and Study - Managed joint study of staff from Rochester Gas and Electric Corporation and NYSPSC to determine feasibility of using vintage year salvage accounting for determining future salvage rates. 1985

Environmental Issues

Energy Conservation Study – **Pascoag Utility District – Designed energy conservation rebate program based on cost benefit study of various alternatives. Program funded through State mandated collection of energy conservation monies from ratepayers. 2002**

Clean Air Act Lawsuit – New York State Attorney General – Investigated modifications made at coal fired generating units of New York utilities to determine whether major modifications were made with obtaining pre-construction permits as required by the prevention of Significant Deterioration (PSD) provisions of the Act. 1999-2002.

Environmental Impact Study and Simulation Modeling Analysis – Analyzed potential environmental impacts of restructuring electric industry in NY using production simulation model PROMOD. 1996

Renewable Resources – Project Leader in NYSPSC proceeding regarding development and implementation of utility plans to promote use of renewable resources. 1995

Environmental and Economic Impacts Study – Directed study of pool-wide power plant dispatch with environmental adders to determine environmental and economic effects of dispatching electric power plants with monetized environmental adders. 1994

Clean Air Impact Study – Directed study of effects of the Clean Air Act of 1990. Measured statewide cost savings if catalytic reduction control facilities were elected to comply with 1990 Clean Air Act Amendments; installed components on units in metropolitan NY region. 1994

Environmental Externalities and Socioeconomic Impacts Study – Managed NYSPSC proceeding to determine whether to incorporate environmental costs into Long-Run Avoided Costs for the State's electric utilities. Study purposes: explore the socioeconomic impacts of electric production as compared with DSM; monetize environmental impacts of electricity. 1993

EXPERT WITNESS TESTIMONY

Case 08-E-0539 – Consolidated Edison – Electric Rates -- On behalf of County of Westchester testified to the reasonableness of the Company's proposal to increase retail electric rates by \$854 million. 2008

Docket No. 08-07-04 – United Illuminating – On behalf of the Connecticut Office of Consumer's Counsel examined the reasonableness of the Company's proposed construction budget. 2008

Docket No. 08-06036 – Spring Creek Utilities - On behalf of the Nevada Attorney General's Bureau of Consumer Protection testified on the overall revenue requirement, the cost allocation and amortization of a new financial accounting system, the appropriate level of rate case expense, allocation of corporate salaries, recovery of property taxes, and rate design. 2008

D.P.U. 8-35 – New England Gas Company – On behalf of the Massachusetts Attorney General testified to the reasonableness of the Company's request to increase rates in light of the terms of a previous settlement, the level of expenses being charged from the parent Company to the affiliate, the proposed increase in depreciation expense and the proposed revenue allocation and rate design. 2008

Docket No. 08-96 – Artesian Water Company - on behalf of the Staff of the Delaware Public Service Commission examined the reasonableness of the Company's cost of service study and proposed revenue allocation and rate design. 2008

Docket No. E-01345A-08-0172 – Arizona Public Service – on behalf of the on behalf of the Arizona Corporation Commission examined the reasonableness of the Company's embedded cost of service study, proposed revenue allocation, proposed rate design and proposal regarding demand side management cost recovery. 2009

Docket No. 05-03-17PH02 – Southern Connecticut Gas Company – on behalf of the Connecticut Office of Consumer's Counsel examined the reasonableness of the Company's embedded costs of service study and proposed revenue allocation and rate design. 2008

Docket No. 06-03-04PH02 – Connecticut Natural Gas Corporation – on behalf of the Connecticut Office of Consumer's Counsel examined the reasonableness of the Company's embedded cost of service study and proposed revenue allocation and rate design. 2008

Docket No. G-01551A-07-0504 – Southwest Gas Corporation – on behalf of the Arizona Corporation Commission examined the reasonableness of the Company's embedded cost of service study, proposed revenue allocation, proposed rate design and proposals regarding revenue decoupling. 2008

Docket No. E-01933A-07-0402 – Tucson Electric Power Company – on behalf of the Arizona Corporation Commission examined the reasonableness of the Company's embedded cost of service study, proposed revenue allocation, proposed rate design and proposals regarding mandatory time of use rates. 2008

Docket No. 07-09030 – Southwest Gas Corporation – on behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed depreciation rates. 2008

Civil Action 05-C-457-1 – Dominion Hope – on behalf of former employee of the utility examined the utility's hedging and sales for resale practices between affiliates. 2008

Case 07-829-GA-AIR – Dominion East Ohio – on behalf of the Office of the Ohio Consumer's Counsel examined the reasonableness of the Company's embedded cost of service study, proposed revenue allocation and rate design and examined the reasonableness of proposals on revenue decoupling and straight fixed variable rate design. 2008

Case 07-S-1315 – Consolidated Edison Steam Rates -- On behalf of County of Westchester testified to the reasonableness of the method of allocating costs between the utility's steam system and its electric system. 2008

Case No. 9134 – Green Ridge Utilities, Inc. – on behalf of the Maryland Office of People's Counsel examined the reasonableness of the utility's proposed rate application including the appropriate cost allocation and amortization period for expenses incurred to develop and implement Project Phoenix (a new software and financial accounting system project), the appropriate level of rate case expense, the requested rate of return and the appropriate level and allocation for common expenses from the parent company. 2008

Case No. 9135 -- Provinces Utilities, Inc. – on behalf of the Maryland Office of People's Counsel examined the reasonableness of the utility's proposed rate application including the appropriate cost allocation and amortization period for expenses incurred to develop and implement Project Phoenix (a new software and financial accounting system project), the appropriate level of rate case expense, the requested rate of return and the appropriate level and allocation for common expenses from the parent company. 2008

Case 07-M-0906 – Energy East and Iberdola – On behalf of Nucor Steel, Auburn, Inc. examined the reasonableness of the proposed Acquisition of Energy East Corporation by Iberdola merger. 2008

Case 07-E-0523 – Consolidated Edison – Electric Rates -- On behalf of County of Westchester testified to the reasonableness of the Company's proposal to increase retail electric rates by over \$1.2 billion or 33%. 2007

Docket Nos. ER07-459-002, ER07-513-002, and EL07-11-002 – Vermont Transco -- on behalf of the Vermont Towns of Stowe and Hardwick, and the Villages of Hyde Park, Johnson and Morrisville on whether the direct assignment and rate impacts of a proposed transmission line were with current policy of the Federal Energy Regulatory Commission 2007

Docket No. 07-05-19 – Aquarion Water Company – On behalf of the Connecticut Office of Peoples Counsel examined the reasonableness of the utility's proposed revenue allocation, rate design, weather normalization and depreciation rates 2007

Docket No. E-04204A-06-0783 – UNS Electric – On behalf of the Arizona Corporation Commission testified on the reasonableness of the utility's proposed revenue allocation and rate design. 2007

Docket Nos. 06-11022 and 06-11023 – Nevada Power Company – On behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed depreciation rates and expense levels. 2007

Case 06-G-1186 – KeySpan Delivery Long Island – on behalf of the Counties of Nassau and Suffolk analyzed the Company's proposed rate design and its for amortization of costs for expenditures relating to Manufactured Gas Plants. 2007

Case 06-M-0878 – National Grid and KeySpan Corporation -- on behalf of the Counties of Nassau and Suffolk analyzed the public benefit of the proposed merger, customer service, demand side management programs, rate relief as it relates to competition and customer choice, the repowering of the existing generating stations on Long Island, and the remediation of contamination caused by Manufactured Gas Plants. 2007

Docket No. 06-07-08 – Connecticut Water Company – On behalf of the Connecticut Department of Utility Control examined the reasonableness of the utility's proposed depreciation rates, revenue allocation and rate design. 2006

Docket No. EL07-11-000 – Vermont Transco -- on behalf of the Vermont Towns of Stowe and Hardwick, and the Villages of Hyde Park, Johnson and Morrisville evaluated whether the proposed and subsequently abandoned allocation of costs for the Lamoille County Project was reasonable and whether the direct assignment and rate impacts of a proposed transmission line were with current policy of the Federal Energy Regulatory Commission.

2006

Case 05-S-1376 – Consolidated Edison – Steam Rates -- On behalf of County of Westchester testified to the reasonableness of the method of allocating costs between the utility's steam system and its electric system. 2006

Docket No. 06-48-000 – Braintree Electric Light Department – On behalf of the municipal utility presented an cost of service study used to calculate the annual revenue requirement for a generating station that was deemed to be required for reliability purposes. 2006

Case 05-E-1222 – New York State Electric and Gas Corporation – On behalf of Nucor Steel, Auburn, Inc. examined the reasonableness of the utility's proposed average service lives, forecast net salvage figures, and proposal to switch from whole life to remaining life method. 2006

Docket No. 05-10004 – Sierra Pacific Power Company – On behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed electric depreciation rates and expense levels. 2006

Docket No. 05-10006 – Sierra Pacific Power Company – On behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed gas depreciation rates and expense levels. 2006

Docket No. ER06-17-000 – ISO New England, Inc. – On behalf of a group of municipal utilities in Massachusetts prepared an affidavit on the reasonableness of proposed changes to the Regional Network Service transmission revenue requirements rate setting formula. 2005

Case 04-E-0572 – Consolidated Edison – Electric Rate – On behalf of the County of Westchester testified to the reasonableness of the Company's revenue allocation amongst service classes and the company's fully allocated embedded cost of service study. 2004

Docket No. 04-02-14 – Aquarion Water Company – On behalf of the Connecticut Department of Utility Control examined the reasonableness of the utility's proposed depreciation rates, weather normalization proposal and certain operation and maintenance expense forecasts. 2004

Docket No. U-13691 – Detroit Thermal, LLC – On behalf of the Henry Ford Health Systems testified on the reasonableness of the utility's proposed default tariffs for steam service. 2004

Docket No. 04-3011 – Southwest Gas Corporation – On behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed depreciation rates and expense levels. 2004

Docket No. ER03-563-030 -- Devon Power, LLC, *et al.* – On behalf of the Wellesley Municipal Light Plant filed a prepared affidavit with FERC with respect the proposal of ISO New England, Inc. to establish a locational Installed Capability market in New England. 2004

Docket No. 03-10002 – Nevada Power Company – On behalf of the Staff of the Nevada Public Utilities Commission testified on the reasonableness of the utility's proposed depreciation rates and expense levels. 2004

Case 03-E-0765 – Rochester Gas and Electric Corporation - Before the New York Public Service Commission submitted testimony on rate design, rate unbundling, depreciation, commodity supply and reasonableness and ratemaking treatment of proceeds from the sale of a nuclear generating plant. 2003

New York State Department of Taxation and Finance Versus Brooklyn Navy Yard Cogeneration Partners – Testified on behalf of independent power producer in income tax case regarding tax payments associated with gas used to produce electricity. Testimony focused on ratemaking policies and practices in New York State. 2003

Docket No. 2930 – Narragansett Electric – Before the Rhode Island Public Utilities Commission submitted testimony on the reasonableness of the utility’s proposed shared savings filing and its implications for the overall reasonableness of the Company’s distribution rates. 2003

Docket No. 03-07-01 – Connecticut Light and Power Company – Before the Connecticut Department of Public Utility Control testified to the recovery of “federally mandated” wholesale power costs. 2003

Docket No. ER03-1274-000 – Boston Edison Company – Before the Federal Energy Regulatory Commission submitted affidavit on the reasonableness of the utility’s proposed depreciation rates and expense levels. 2003

Case 210293 – Corning Incorporated – Before the New York Public Service Commission submitted an affidavit on certain actions of New York State Electric & Gas Corporation regarding the wholesale price of power in New York and the utility’s billing practices as they relate to flex rate contracts. 2003

Case 332311 – Nucor Steel Auburn, Inc. – Before the New York State Public Service Commission submitted an affidavit on certain actions of New York State Electric & Gas Corporation regarding the wholesale price of power in New York and the utility’s billing practices as they relate to flex rate contracts. 2003

Case 6455/03 – Prepared affidavit for consideration by the Supreme Court of the State of New York as to the purpose, need and fuel choice for the Jamaica Bay Energy Center (Jamaica Bay) as it related to good utility planning practice for meeting the energy needs of utility customers. 2003

Case 00-M-0504 – New York State Electric and Gas Corporation – Reviewed reasonableness of utility’s fully allocated embedded cost of service study and proposed unbundled delivery rates. 2002

Docket No. TX96-4-001 – On behalf of the Suffolk County Electrical Agency proposed unbundled embedded cost rates for wheeling of wholesale power across distribution facilities. 2002

Case 00-E-1208 – Consolidated Edison: Electric Rate Restructuring – On behalf of Westchester County, addressed reasonableness of having differentiated delivery services rates for New York City and Westchester. 2001

Case 01-E-0359 – Petition of New York State Electric & Gas – Multi-Year Electric Price Protection Plan – Addressed reasonableness of Price Protection Plan (PPP); presented alternative rate plan that called for 20% decrease in utility’s base rates. 2001

Case 01-E-0011 – Joint Petition of Co-Owners of Nine Mile Nuclear Station – Addressed the reasonableness of the proposed nuclear asset sale and the ratemaking treatment of the after gain sale proposed by NYSEG. 2001

Docket No. EL00-62-005 – ISO New England Inc. – Submitted affidavit on reasonableness of ISO’s proposed \$4.75/kW/month Installed Capability Deficiency Charge. June 2001

Docket No. EL00-62-005 – ISO New England Inc. – Submitted affidavit on reasonableness of proposed \$0.17/kW/month Installed Capability Deficiency Charge. January 2001

Docket No. 2861 – Pascoag Fire District: Standard Offer, Charge, Transition Charge and Transmission Charge – Testified on elements of individual charges, procedures for calculation and reasons for changes from previous filed rates. 2001

Case 96-E-0891 – New York State Electric & Gas: Retail Access Credit Phase – On behalf of a large industrial customer, testified on cost of service considerations regarding NYSEG’s earnings performance under the terms of a multi-year rate plan and the appropriate level of Retail Access Credit for customers seeking alternate service from alternate suppliers. 2000

Docket No. ER99-978-000 – Boston Edison Company: Open Access Transmission Tariff – Testified on design,

revenue requirement, and reasonableness of proposed formula rates proposed by Boston Edison Company for calculating charges for local network transmission service under open access tariff. 1999

Docket Nos. OA97-237-000, et. al. – New England Power Pool: OATT – Testified on design, revenue requirement, and reasonableness of proposed formula rate for transmission service; testified to proposed rates, charges, terms and conditions for ancillary services. 1999

Docket No. 2688 – Pascoag Fire District: Electric Rates – Testified on elements of savings resulting from renegotiation of contract with wholesale power supplier and presented analysis that justified need for and amount of base rate increase. 1998

New York State Department of Taxation and Finance Versus Zapco Energy Tactics Corporation – Testified on behalf of independent power producer in income tax case regarding tax payments associated with electric interconnection equipment. Testimony focused on policies and practices faced in doing business in New York State. 1998

Docket No. 2516 – Pascoag Fire District: Utility Restructuring – Testified on manner and means for utility's restructuring in compliance with Rhode Island Utility Restructuring Act of 1996. Testimony presented a methodology for calculating stranded cost charge, unbundled rates, and new terms and conditions of electric services in deregulated environment. 1997

Case 94-E-0334 – Consolidated Edison: Electric Rates – Led Staff team in review of utility's multi-year rate filing seeking increased rates of \$400 million. Directed team in review of resource planning, power purchase contract administration, and fuel and purchased power expenses and testified on reasonableness of company's actions regarding buy-out of contract with an independent power producer and renegotiation of contract with another independent power producer. Lead negotiations for multi-year settlement and performance-based ratemaking package that resulted in a three-year rate freeze. 1994

Case 93-G-0996 – Consolidated Edison: Gas Rates – Testified on reasonableness of utility's proposed depreciation rates. 1994

Case 93-S-0997 – Consolidated Edison: Steam Rates – Testified on reasonableness of utility's resource planning for steam utility system. 1994

Case 93-S-0997 and 93-G-0996 – Consolidated Edison: Steam Rates – Testified on reasonableness of multi-year rate plan proposed by the utility. 1994

Case 94-E-0098 – Niagara Mohawk: Electric Rates – Reviewed utility's management of its portfolio of power purchase contracts with independent power producers for the reasonableness of recovery of costs in retail rates. 1994

Case 93-E-0807 – Consolidated Edison: Electric Rates – Testified on rate recovery mechanism for costs associated with termination of five contracts with independent power producers. 1993

Case 92-E-0814 – Petition for Approval of Curtailment Procedures – Testified on methodology for estimating amount of power required to be curtailed and staff's estimate of curtailment. 1992

Case 90-S-0938 – Consolidated Edison: Steam Rates – Testified on reasonableness of utility's embedded cost of service study, and proposed revenue re-allocation and rate design. 1991

Case 91-E-0462 – Consolidated Edison: Electric Rates – Implementation of partial pass-through fuel adjustment incentive clause. 1991

Case 90-E-0647 – Rochester Gas and Electric: Electric Rates – Analysis and estimation of monthly fuel and

purchased power costs for use in utility's performance based partial pass-through fuel adjustment clause. 1990

Case 29433 – Central Hudson Gas and Electric: Electric Rates – Analysis of utility's construction budgeting process, rate year electric plant in service forecast, lease revenue forecast, forecast and rate treatment of profits from sales of wholesale power and estimation of fuel and purchased power expenses for use in the utility's partial pass-through fuel adjustment clause. 1987

Case 29674 – Rochester Gas and Electric: Electric Rates – Review of utility's historic and forecast O&M expenditure levels forecast and rate treatment of profits from wholesale power, and estimation of fuel and purchased power expenses, and price out of incremental revenues from increased retail sales. 1987

Case 29195 – Central Hudson Gas and Electric: Electric Rates – Review of utility's construction budgeting process, analysis of rate year electric plant in service, forecast and rate treatment of profits from sales of wholesale power, and estimation of fuel and purchased power expenses. 1986

Case 29046 – Orange and Rockland Utilities: Electric Rates – Testified on the reasonableness of the utility's proposed depreciation rates and expense levels. 1985

Case 28313 – Central Hudson Gas and Electric: Electric Rates – Review of utility's construction budgeting process; analysis of rate year electric plant in service forecast; review of rate year operations and maintenance expense forecast; forecast and rate treatment of profits from sales of wholesale power; estimation of fuel and purchased power expenses. 1984

Case 28316 – Rochester Gas and Electric: Steam Rates – Price out of steam sales including the review of historic sales growth, usage patterns and forecast number of customers. 1984

PRESENTATIONS

National Association of State Utility Consumer Advocates Annual Conference, 2008 – Speaker on a case study of “Smart Metering”

Multiple Intervenors Annual Conference – What Will Impact Market Prices? 1998, Syracuse, New York – Speaker on the impact that deregulation would have on market prices for large industrial customers.

IBC Conference – Successful Strategies for Negotiating Purchased Power Contracts, 1997, Washington, DC – Speaker on NY power purchase contract policies, ratepayer valuation, contract approval process and policy on recovery of buyout costs.

Gas Daily Conference – Fueling the Future: Gas' Role in Private Power Projects, 1992, Houston, Texas – Panel member addressing changing power supply requirements of electric utilities.

MEMBERSHIPS/ASSOCIATIONS

Member Municipal Electric Utility Association, Northeast Public Power Association and New York State ISO.

Exhibit 2
RUCO Proof of Revenues

Line No.	Class of Service	Billed BD (for Jul 2007 - Nov 2007) (A)	Billed BD (for Dec 2007 - Jun 2008) (B)	Total TY Unadjusted Billing Units (C)	Rates as of Jul 2007 - Nov 2007 (D)	Existing Rates as of Dec 1, 2007 (E)	Current Unadjusted Billed Revenues (F)	Allocation of Booked to Billed Revenue Difference (G)	Unadjusted Revenues (H)
				(A + B)			(F + G)	(F + G)	
							(F / Col. H, L.49)*Col. H, L.49		
Residential Service (R10)									
1	Customer Charge	625,116	882,107	1,507,223	\$7.00	\$8.50	\$11,873,722		
2	Distribution Margin Therms	13,683,976	57,039,061	70,723,037	\$0.3004	\$0.3270	\$22,762,439		
3	TOTAL R10						<u>\$34,636,161</u>	<u>\$231,128</u>	<u>\$34,867,289</u>
Residential Service Cares (R12)									
4	Customer Charge	32,616	48,322	80,938	\$7.00	\$7.00	\$566,566		
5	Distribution Margin Therms - Summer	421,429	246,155	667,584	\$0.3004	\$0.3270	\$207,090		
6	Distribution Margin Therms - Winter Non Discot	34,578	358,932	393,511	\$0.3004	\$0.3270	\$127,758		
7	Distribution Margin Therms - Winter Discount	212,411	2,204,870	2,417,281	\$0.1504	\$0.1770	\$422,209		
	TOTAL R12						<u>\$1,323,623</u>	<u>\$8,833</u>	<u>\$1,332,455</u>
Small Volume Commercial Service (C20)									
8	Customer Charge	56,440	80,641	137,081	\$11.00	\$13.50	\$1,709,494		
9	Distribution Margin Therms	8,070,305	22,048,952	30,119,256	\$0.2420	\$0.2638	\$7,769,527		
10	TOTAL R20						<u>\$9,479,021</u>	<u>\$63,254</u>	<u>\$9,542,274</u>
Large Volume Commercial Service (C22)									
11	Customer Charge	83	99	182	\$85.00	\$100.00	\$16,955		
12	Distribution Margin Therms	473,791	968,787	1,442,578	\$0.1551	\$0.1718	\$239,923		
13	TOTAL R22						<u>\$256,878</u>	<u>\$1,714</u>	<u>\$258,592</u>
Large Volume Commercial Transportation Service (C22)									
14	Customer Charge	65	60	125	\$85.00	\$100.00	\$11,525		
15	Distribution Margin Therms	1,613,646	1,730,988	3,344,634	\$0.1551	\$0.1718	\$547,660		
16	TOTAL R22						<u>\$559,185</u>	<u>\$3,731</u>	<u>\$562,917</u>
Small Volume Industrial Service (I-30)									
17	Customer Charge	76	136	212	\$11.00	\$13.50	\$2,672		
18	Distribution Margin Therms	111,336	391,243	502,579	\$0.2122	\$0.2356	\$115,802		
19	TOTAL I30						<u>\$118,474</u>	<u>\$791</u>	<u>\$119,265</u>
Large Volume Industrial Service (I-32)									
20	Customer Charge	31	37	68	\$85.00	\$100.00	\$6,335		
21	Distribution Margin Therms	460,636	785,611	1,246,247	\$0.0864	\$0.0952	\$114,589		
22	TOTAL I32						<u>\$120,924</u>	<u>\$807</u>	<u>\$121,731</u>
Large Volume Industrial Transportation Service (I-32)									
23	Customer Charge	50	91	141	\$85.00	\$100.00	\$13,350		
24	Distribution Margin Therms	4,420,876	7,022,697	11,443,573	\$0.0864	\$0.0952	\$1,050,524		
25	TOTAL I32						<u>\$1,063,874</u>	<u>\$7,099</u>	<u>\$1,070,974</u>

Line No.	Class of Service	Billed BD (for Jul 2007 - Nov 2007)	Billed BD (for Dec 2007 - Jun 2008)	Total TY Unadjusted Billing Units	Rates as of Jul 2007 - Nov 2007	Existing Rates as of Dec 1, 2007	Current Unadjusted Billed Revenues	Allocation of Booked to Billed Revenue Difference	Unadjusted Revenues	
Small Volume Public Authority (PA-40)										
26	Customer Charge	5,288	7,459	12,747	\$11.00	\$13.50	\$158,865			
27	Customer Charge - CNG	35	47	82	\$30.00	\$30.00	\$2,460			
28	Distribution Margin Therms	960,064	4,837,614	5,797,679	\$0.2351	\$0.2593	\$1,480,105			
29	TOTAL PA40						<u>\$1,641,429</u>	<u>\$10,953</u>	<u>\$1,652,382</u>	
Large Volume Public Authority (PA-42)										
30	Customer Charge	25	35	60	\$85.00	\$100.00	\$5,625			
31	Distribution Margin Therms	319,860	905,213	1,225,072	\$0.1084	\$0.1198	\$143,117			
32	TOTAL PA42						<u>\$148,742</u>	<u>\$993</u>	<u>\$149,735</u>	
Large Volume Public Authority Transportation Service (PA-42)										
33	Customer Charge	30	56	86	\$85.00	\$100.00	\$8,150			
34	Distribution Margin Therms	1,309,069	3,818,141	5,127,210	\$0.1084	\$0.1198	\$599,316			
35	TOTAL PA42						<u>\$607,466</u>	<u>\$4,054</u>	<u>\$611,520</u>	
Special Gas Light Service (PA-44)										
36	Customer Charge Lighting Group A	45	63	108	\$13.57	\$15.17	\$1,566			
37	Customer Charge Lighting Group B	1,495	2,093	3,588	\$16.28	\$18.20	\$62,431			
38	TOTAL PA44	53,421	91,985	145,406			<u>\$63,998</u>	<u>\$427</u>	<u>\$64,425</u>	
Irrigation Service (IR-60)										
39	Customer Charge	25	35	60	\$11.00	\$13.50	\$748			
40	Distribution Margin Therms	88,197	16,069	104,267	\$0.2876	\$0.3192	\$30,495			
41	TOTAL IR60						<u>\$31,242</u>	<u>\$208</u>	<u>\$31,451</u>	
T1 Contract Customers										
42	Customer Charge	15	21	36	\$85.00	\$100.00	\$3,375			
43	Distribution Margin Therms	1,668,664	5,895,627	7,564,291	\$0.0867	\$0.0867	\$655,582			
44	TOTAL IR60						<u>\$658,957</u>	<u>\$0</u>	<u>\$658,957</u>	
T2 - Customer										
45	Customer Charge	5	7	12	\$85.00	\$100.00	\$1,125			
46	Distribution Margin Therms	311,964	839,169	1,151,133	\$0.0544	\$0.0544	\$62,652			
47	TOTAL IR60						<u>\$63,777</u>	<u>\$0</u>	<u>\$63,777</u>	
48	Customers	719,910	1,019,167	1,739,077						
49	Therms	34,214,222	109,201,115	143,415,337						
50	Revenue						<u>\$50,773,751</u>	<u>\$333,992</u>	<u>\$51,107,743</u>	
50					Revenue Requirement Model		\$51,107,743			
51					Difference		(\$333,992)			
52							\$333,992			
	Valencia is charge a monthly Reservation Charge of \$4,472.77 Rate per Therm of .0078							\$50,051,018		

Line No.	Class of Service	Total TY Unadjusted Billing Units	Existing Rates as of Dec 1, 2007	Unadjusted Revenues	Revenue Annualization	Revenue Annualization Adjustment
Residential Service (R10)						
1	Customer Charge	1,507,223	\$8.50		\$12,811,396	
2	Distribution Margin Therms	70,723,037	\$0.3270		\$23,126,433	
3	TOTAL R10			<u>\$34,867,289</u>	<u>\$35,937,829</u>	<u>\$1,070,540</u>
Residential Service Cares (R12)						
4	Customer Charge	80,938	\$7.00		\$566,566	
5	Distribution Margin Therms - Summer	667,584	\$0.3270		\$218,300	
6	Distribution Margin Therms - Winter	393,511	\$0.3270		\$128,678	
7	Distribution Margin Therms - Winter	2,417,281	\$0.1770		\$427,859	
	TOTAL R12			<u>\$1,332,455</u>	<u>\$1,341,403</u>	<u>\$8,947</u>
Small Volume Commercial Service (C20)						
8	Customer Charge	137,081	\$13.50		\$1,850,594	
9	Distribution Margin Therms	30,119,256	\$0.2638		\$7,945,460	
10	TOTAL R20			<u>\$9,542,274</u>	<u>\$9,796,053</u>	<u>\$253,779</u>
Large Volume Commercial Service (C22)						
11	Customer Charge	182	\$100.00		\$18,200	
12	Distribution Margin Therms	1,442,578	\$0.1718		\$247,835	
13	TOTAL R22			<u>\$258,592</u>	<u>\$266,035</u>	<u>\$7,443</u>
Large Volume Commercial Transportation Service						
14	Customer Charge	125	\$100.00		\$12,500	
15	Distribution Margin Therms	3,344,634	\$0.1718		\$574,608	
16	TOTAL R22			<u>\$562,917</u>	<u>\$587,108</u>	<u>\$24,191</u>
Small Volume Industrial Service (I-30)						
16	Customer Charge	212	\$13.50		\$2,862	
17	Distribution Margin Therms	502,579	\$0.2356		\$118,408	
18	TOTAL I30			<u>\$119,265</u>	<u>\$121,270</u>	<u>\$2,005</u>
Large Volume Industrial Service (I-32)						
19	Customer Charge	68	\$100.00		\$6,800	
20	Distribution Margin Therms	1,246,247	\$0.0952		\$118,643	
21	TOTAL I32			<u>\$121,731</u>	<u>\$125,443</u>	<u>\$3,712</u>
Large Volume Industrial Transportation Service						
22	Customer Charge	141	\$100.00		\$14,100	
23	Distribution Margin Therms	11,443,573	\$0.0952		\$1,089,428	
24	TOTAL I32			<u>\$1,070,974</u>	<u>\$1,103,528</u>	<u>\$32,554</u>
Small Volume Public Authority (PA-40)						
25	Customer Charge	12,747	\$13.50		\$172,085	
26	Customer Charge - CNG	82	\$30.00		\$2,460	
27	Distribution Margin Therms	5,797,679	\$0.2593		\$1,503,338	
28	TOTAL PA40			<u>\$1,652,382</u>	<u>\$1,677,883</u>	<u>\$25,500</u>
Large Volume Public Authority (PA-42)						
29	Customer Charge	60	\$100.00		\$6,000	
30	Distribution Margin Therms	1,225,072	\$0.1198		\$146,764	
31	TOTAL PA42			<u>\$149,735</u>	<u>\$152,764</u>	<u>\$3,029</u>

Line No.	Class of Service	Total TY Unadjusted Billing Units	Existing Rates as of Dec 1, 2007	Unadjusted Revenues	Revenue Annualization	Revenue Annualization Adjustment
Large Volume Public Authority Transportation Service						
32	Customer Charge	86	\$100.00		\$8,600	
33	Distribution Margin Therms	5,127,210	\$0.1198		\$614,240	
34	TOTAL PA42			<u>\$611,520</u>	<u>\$622,840</u>	<u>\$11,320</u>
Special Gas Light Service (PA-44)						
35	Customer Charge Lighting Group A	108	\$15.17		\$1,638	
36	Customer Charge Lighting Group B	3,588	\$18.20		\$65,302	
37	TOTAL PA44	145,406		<u>\$64,425</u>	<u>\$66,940</u>	<u>\$2,515</u>
Irrigation Service (IR-60)						
38	Customer Charge	60	\$13.50		\$810	
39	Distribution Margin Therms	104,267	\$0.3192		\$33,282	
40	TOTAL IR60			<u>\$31,451</u>	<u>\$34,092</u>	<u>\$2,641</u>
T1 Contract Customers						
41	Customer Charge	36	\$100.00		\$3,600	
42	Distribution Margin Therms	7,564,291	\$0.0867		\$655,582	
43	TOTAL IR60			<u>\$658,957</u>	<u>\$659,182</u>	<u>\$225</u>
T2 - Customer						
44	Customer Charge	12	\$100.00		\$1,200	
45	Distribution Margin Therms	1,151,133	\$0.0544		\$62,652	
46	TOTAL IR60			<u>\$63,777</u>	<u>\$63,852</u>	<u>\$75</u>
47	Customers	1,739,077				
48	Therms	140,998,057				
49	Revenue			<u>\$51,107,743</u>	<u>\$52,556,220</u>	<u>\$1,448,476</u>

Line No.	Class of Service	Total TY Unadjusted Billing Units	Existing Rates as of Dec 1, 2007	Unadjusted Revenues	Revenue Annualization	Revenue Annualization Adjustment	UNSG Adj. for Customer Annualization	UNSG Adj. for Weather Normalization	Adjusted Billing units	TY Adjusted Revenues	Total Customer & Weather Revenue Adjustment
Residential Service (R10)											
1	Customer Charge	1,507,223	\$8.50		\$12,811,396		0		1,507,223	\$12,811,396	
2	Distribution Margin Therms	70,723,037	\$0.3270		\$23,126,433		0	(1,993,041)	68,729,996	\$22,474,709	
3	TOTAL R10			<u>\$34,867,289</u>	<u>\$35,937,829</u>	<u>\$1,070,540</u>				<u>\$35,286,104</u>	\$651,725
Residential Service Cares (R12)											
4	Customer Charge	80,938	\$7.00		\$566,566		0		80,938	\$566,566	
5	Distribution Margin Therms - Summer	667,584	\$0.3270		\$218,300		0	(52,587)	614,997	\$201,104	
6	Distribution Margin Therms - Winter	393,511	\$0.3270		\$128,678		0	(6,624)	386,887	\$126,512	
7	Distribution Margin Therms - Winter	2,417,281	\$0.1770		\$427,859		0	(40,688)	2,376,593	\$420,657	
	TOTAL R12			<u>\$1,332,455</u>	<u>\$1,341,403</u>	<u>\$8,947</u>			<u>3,378,478</u>	<u>\$1,314,839</u>	\$26,564
Small Volume Commercial Service (C20)											
8	Customer Charge	137,081	\$13.50		\$1,850,594		0		137,081	\$1,850,594	
9	Distribution Margin Therms	30,119,256	\$0.2638		\$7,945,460		0	(557,223)	29,562,033	\$7,798,464	
10	TOTAL R20			<u>\$9,542,274</u>	<u>\$9,796,053</u>	<u>\$253,779</u>				<u>\$9,649,058</u>	\$146,996
Large Volume Commercial Service (C22)											
11	Customer Charge	182	\$100.00		\$18,200		0		182	\$18,200	
12	Distribution Margin Therms	1,442,578	\$0.1718		\$247,835		0	(25,686)	1,416,892	\$243,422	
13	TOTAL R22			<u>\$258,592</u>	<u>\$266,035</u>	<u>\$7,443</u>				<u>\$261,622</u>	\$4,413
Large Volume Commercial Transportation Service (C22)											
14	Customer Charge	125	\$100.00		\$12,500		0		125	\$12,500	
15	Distribution Margin Therms	3,344,634	\$0.1718		\$574,608		0	0	3,344,634	\$574,608	
16	TOTAL R22			<u>\$562,917</u>	<u>\$587,108</u>	<u>\$24,191</u>				<u>\$587,108</u>	\$0
Small Volume Industrial Service (I-30)											
16	Customer Charge	212	\$13.50		\$2,862		0		212	\$2,862	
17	Distribution Margin Therms	502,579	\$0.2356		\$118,408		0	0	502,579	\$118,408	
18	TOTAL I30			<u>\$119,265</u>	<u>\$121,270</u>	<u>\$2,005</u>				<u>\$121,270</u>	\$0
Large Volume Industrial Service (I-32)											
19	Customer Charge	68	\$100.00		\$6,800		0		68	\$6,800	
20	Distribution Margin Therms	1,246,247	\$0.0952		\$118,643		0	0	1,246,247	\$118,643	
21	TOTAL I32			<u>\$121,731</u>	<u>\$125,443</u>	<u>\$3,712</u>				<u>\$125,443</u>	\$0
Large Volume Industrial Transportation Service (I-32)											
22	Customer Charge	141	\$100.00		\$14,100		0		141	\$14,100	
23	Distribution Margin Therms	11,443,573	\$0.0952		\$1,089,428		0	0	11,443,573	\$1,089,428	
24	TOTAL I32			<u>\$1,070,974</u>	<u>\$1,103,528</u>	<u>\$32,554</u>				<u>\$1,103,528</u>	\$0
Small Volume Public Authority (PA-40)											
25	Customer Charge	12,747	\$13.50		\$172,085		0		12,747	\$172,085	
26	Customer Charge - CNG	82	\$30.00		\$2,460		0		82	\$2,460	
27	Distribution Margin Therms	5,797,679	\$0.2593		\$1,503,338		0	(187,359)	5,610,320	\$1,454,756	
28	TOTAL PA40			<u>\$1,652,382</u>	<u>\$1,677,883</u>	<u>\$25,500</u>				<u>\$1,629,301</u>	\$48,582
Large Volume Public Authority (PA-42)											
29	Customer Charge	60	\$100.00		\$6,000		0		60	\$6,000	
30	Distribution Margin Therms	1,225,072	\$0.1198		\$146,764		0	(32,942)	1,192,130	\$142,817	
31	TOTAL PA42			<u>\$149,735</u>	<u>\$152,764</u>	<u>\$3,029</u>				<u>\$148,817</u>	\$3,947
Large Volume Public Authority Transportation Service (PA-42)											
32	Customer Charge	86	\$100.00		\$8,600		0		86	\$8,600	
33	Distribution Margin Therms	5,127,210	\$0.1198		\$614,240		0	0	5,127,210	\$614,240	

Line No.	Class of Service	Total TY Unadjusted Billing Units	Existing Rates as of Dec 1, 2007	Unadjusted Revenues	Revenue Annualization	Revenue Annualization Adjustment	UNSG Adj. for Customer Annualization	UNSG Adj. for Weather Normalization	Adjusted Billing units	TY Adjusted Revenues	Total Customer & Weather Revenue Adjustment
34	TOTAL PA42			<u>\$611,520</u>	<u>\$622,840</u>	<u>\$11,320</u>				<u>\$622,840</u>	\$0
	Special Gas Light Service (PA-44)										
35	Customer Charge Lighting Group A	108	\$15.17		\$1,638		0		108	\$1,638	
36	Customer Charge Lighting Group B	3,588	\$18.20		<u>\$65,302</u>		0	0	3,588	<u>\$65,302</u>	
37	TOTAL PA44	145,406		<u>\$64,425</u>	<u>\$66,940</u>	<u>\$2,515</u>			145,406	<u>\$66,940</u>	\$0
	Irrigation Service (IR-60)										
38	Customer Charge	60	\$13.50		\$810				60	\$810	
39	Distribution Margin Therms	104,267	\$0.3192		<u>\$33,282</u>		0	(712)	103,554	<u>\$33,055</u>	
40	TOTAL IR60			<u>\$31,451</u>	<u>\$34,092</u>	<u>\$2,641</u>			0	<u>\$33,865</u>	\$227
	T1 Contract Customers										
41	Customer Charge	36	\$100.00		\$3,600		0		36	\$3,600	
42	Distribution Margin Therms	7,564,291	\$0.0867		<u>\$655,582</u>		0	0	7,564,291	<u>\$655,582</u>	
43	TOTAL IR60			<u>\$658,957</u>	<u>\$659,182</u>	<u>\$225</u>	-			<u>\$659,182</u>	\$0
	T2 - Customer										
44	Customer Charge	12	\$100.00		\$1,200		0		12	\$1,200	
45	Distribution Margin Therms	1,151,133	\$0.0544		<u>\$62,652</u>		0	0	1,151,133	<u>\$62,652</u>	
46	TOTAL IR60			<u>\$63,777</u>	<u>\$63,852</u>	<u>\$75</u>				<u>\$63,852</u>	\$0
47	Customers	1,739,041					-		1,739,041		
48	Therms	133,433,766					-	(2,896,863)	140,518,475		
49	Revenue			<u>\$51,107,743</u>	<u>\$52,556,220</u>	<u>\$1,448,476 #</u>				<u>\$51,673,767</u>	<u>\$882,453</u>

Line No.	Class of Service	Existing Rates as of Dec 1, 2007	Adjusted Billing units	TY Adjusted Revenues	Proposed Increase	Total Revenue Requirement	New Rates	Total Revenue Requirement	Percentage Increase
Year 1									
Residential Service (R10)									
1	Customer Charge	\$8.50	1,507,223	\$12,811,396			\$10.00	\$15,072,230	17.65%
2	Distribution Margin Therms	\$0.3270	68,729,996	\$22,474,709			\$0.3027	\$20,803,904	
3	TOTAL R10			\$35,286,104	\$590,030	\$35,876,134		\$35,876,134	1.67%
\$0									
Residential Service Cares (R12)									
4	Customer Charge	\$7.00	80,938	\$566,566			\$7.00	\$566,566	0.00%
5	Distribution Margin Therms - Summer	\$0.3270	614,997	\$201,104			\$0.3270	\$201,104	
6	Distribution Margin Therms - Winter	\$0.3270	386,887	\$126,512			\$0.3270	\$126,512	
7	Distribution Margin Therms - Winter	\$0.1770	2,376,593	\$420,657			\$0.1770	\$420,657	
	TOTAL R12			\$1,314,839	\$0	\$1,314,839		\$1,314,839	0.00%
Small Volume Commercial Service (C20)									
8	Customer Charge	\$13.50	137,081	\$1,850,594			\$15.50	\$2,124,756	14.81%
9	Distribution Margin Therms	\$0.2638	29,562,033	\$7,798,464			\$0.2600	\$7,685,647	
10	TOTAL R20			\$9,649,058	\$161,345	\$9,810,403		\$9,810,403	1.67%
\$0									
Large Volume Commercial Service (C22)									
11	Customer Charge	\$100.00	182	\$18,200			\$105.00	\$19,110	5.00%
12	Distribution Margin Therms	\$0.1718	1,416,892	\$243,422			\$0.1742	\$246,887	
13	TOTAL R22			\$261,622	\$4,375	\$265,997		\$265,997	1.67%
Large Volume Commercial Transportation Service (C22)									
14	Customer Charge	\$100.00	125	\$12,500			\$105.00	\$13,125	5.00%
15	Distribution Margin Therms	\$0.1718	3,344,634	\$574,608			\$0.1742	\$582,787	
16	TOTAL R22			\$587,108	\$9,817	\$596,925		\$595,912	1.50%
-\$1,014									
Small Volume Industrial Service (I-30)									
16	Customer Charge	\$13.50	212	\$2,862			\$15.50	\$3,286	14.81%
17	Distribution Margin Therms	\$0.2356	502,579	\$118,408			\$0.2388	\$120,011	
18	TOTAL I30			\$121,270	\$2,028	\$123,297		\$123,297	1.67%
\$0									
Large Volume Industrial Service (I-32)									
19	Customer Charge	\$100.00	68	\$6,800			\$105.00	\$7,140	5.00%
20	Distribution Margin Therms	\$0.0952	1,246,247	\$118,643			\$0.0966	\$120,400	
21	TOTAL I32			\$125,443	\$2,098	\$127,540		\$127,540	1.67%
Large Volume Industrial Transportation Service (I-32)									
22	Customer Charge	\$100.00	141	\$14,100			\$105.00	\$14,805	5.00%
23	Distribution Margin Therms	\$0.0952	11,443,573	\$1,089,428			\$0.0968	\$1,107,176	
24	TOTAL I32			\$1,103,528	\$18,452	\$1,121,981		\$1,121,981	1.67%
\$0									
Small Volume Public Authority (PA-40)									
25	Customer Charge	\$13.50	12,747	\$172,085			\$15.50	\$197,579	14.81%
26	Customer Charge - CNG	\$30.00	82	\$2,460			\$15.50	\$1,271	-48.33%
27	Distribution Margin Therms	\$0.2593	5,610,320	\$1,454,756			\$0.2598	\$1,457,695	0.20%
28	TOTAL PA40			\$1,629,301	\$27,244	\$1,656,545		\$1,656,545	
\$0									
Large Volume Public Authority (PA-42)									
29	Customer Charge	\$100.00	60	\$6,000			\$105.00	\$6,300	
30	Distribution Margin Therms	\$0.1198	1,192,130	\$142,817			\$0.1216	\$145,006	

Line No.	Class of Service	Existing Rates as of Dec 1, 2007	Adjusted Billing units	TY Adjusted Revenues	Proposed Increase	Total Revenue Requirement	New Rates	Total Revenue Requirement	Percentage Increase
31	TOTAL PA42			<u>\$148,817</u>	<u>\$2,488</u>	<u>\$151,306</u>		<u>\$151,306</u>	1.67%
								\$0	
	Large Volume Public Authority Transportation Service (PA-42)								
32	Customer Charge	\$100.00	86	\$8,600			\$105.00	\$9,030	5.00%
33	Distribution Margin Therms	\$0.1198	5,127,210	<u>\$614,240</u>			\$0.1217	<u>\$624,224</u>	
34	TOTAL PA42			<u>\$622,840</u>	<u>\$10,415</u>	<u>\$633,254</u>		<u>\$633,254</u>	1.67%
								\$0	
	Special Gas Light Service (PA-44)								
35	Customer Charge Lighting Group A	\$15.17	108	\$1,638			\$18.41	\$1,989	21.39%
36	Customer Charge Lighting Group B	\$18.20	3,588	<u>\$65,302</u>			\$18.41	<u>\$66,071</u>	1.18%
37	TOTAL PA44		145,406	<u>\$66,940</u>	<u>\$1,119</u>	<u>\$68,059</u>		<u>\$68,059</u>	1.67%
								\$0	
	Irrigation Service (IR-60)								
38	Customer Charge	\$13.50	60	\$810			\$15.50	\$930	14.81%
39	Distribution Margin Therms	\$0.3192	103,554	<u>\$33,055</u>			\$0.3235	<u>\$33,501</u>	
40	TOTAL IR60		0	<u>\$33,865</u>	<u>\$566</u>	<u>\$34,431</u>		<u>\$34,431</u>	1.67%
								\$0	
	T1 Contract Customers								
41	Customer Charge	\$100.00	36	\$3,600			\$105.00	\$3,780	5.00%
42	Distribution Margin Therms	\$0.0867	7,564,291	<u>\$655,582</u>			\$0.0881	<u>\$666,424</u>	
43	TOTAL IR60			<u>\$659,182</u>	<u>\$11,022</u>	<u>\$670,204</u>		<u>\$670,204</u>	1.67%
								\$0	
	T2 - Contract Customer								
44	Customer Charge	\$100.00	12	\$1,200			\$105.00	\$1,260	5.00%
45	Distribution Margin Therms	\$0.0544	1,151,133	<u>\$62,652</u>			\$0.0553	<u>\$63,659</u>	
46	TOTAL IR60			<u>\$63,852</u>	<u>\$1,068</u>	<u>\$64,919</u>		<u>\$64,919</u>	1.67%
								\$0	
								0	
47	Customers		1,739,041						
48	Therms		140,518,475						
49	Revenue			<u><u>\$51,673,767</u></u>	<u><u>\$841,000</u></u>	<u><u>\$52,515,835</u></u>		<u><u>\$52,514,821</u></u>	1.63%

Exhibit 3
Schedule H – Bill Impacts

UNS Gas, Inc.
Summary of Revenues by Customer Classifications
Adjusted Present Rates And Proposed Rates
Test Year Ended June 30, 2008
(Thousands of Dollars)

Line No.	Class of Service	Adjusted Present Net Revenue	Proposed Net Revenue	Proposed Net Increase	Proposed Percent Increase (a)	Line No.
1	Residential Service	\$36,600,943	\$37,190,974	\$590,030	1.61%	1
2	Commercial Gas Service	9,910,680	10,076,399	165,720	1.67%	2
3	Industrial Gas Service	246,712	250,838	4,125	1.67%	3
4	Public Authority Gas Service	1,778,118	1,807,850	29,732	1.67%	4
5	Special Gas Light Service	66,940	68,059	1,119	1.67%	5
6	Irrigation Service	33,865	34,431	566	1.67%	6
7	Transportation Customers	3,036,509	3,086,270	49,761	1.64%	7
8	Subtotal	<u>51,673,767</u>	<u>52,514,821</u>	<u>841,054</u>	<u>1.63%</u>	8
9	Other Operating Revenue	1,744,743	1,744,743	0	0.00%	9
10	Total	<u>\$53,418,510</u>	<u>\$54,259,564</u>	<u>\$841,054</u>	<u>1.57%</u>	10

Supporting Schedules
(a) H-2 (P2)

Recap Schedules
A-1

UNS Gas, Inc.
Comparisons of Revenues by Rate Schedules
Present And Proposed Rates
Test Year Ended June 30, 2008

Line No.	Class of Service	Rate Schedule Present	Proposed	Actual			Test Year End Adjustments	Adjusted			Line No.
				Therm Sales	Average Number of Customers	Average Therm per Customer		Therm Sales	Average Number of Customers	Average Therm per Customer	
1	Residential Service	R-10	R-10	70,723,037	125,602	563	(2,656,075)	68,066,962	125,602	542	1
2	Residential Service Cares	R-12	R-12	3,478,376	6,745	516	55,060	3,533,436	6,745	524	2
3	Small Volume Commercial Service	C-20	C-20	30,119,256	11,423	2,637	(827,599)	29,291,657	11,423	2,564	3
4	Large Volume Commercial Service	C-22	C-22	1,442,578	15	95,115	(104,334)	1,338,244	15	88,236	4
5	Commercial Transportation	C-22T1	C-22T1	3,344,634	10	321,085	(303,749)	3,040,885	10	291,925	5
6	Small Volume Industrial Service	I-30	I-30	502,579	18	28,448	51,187	553,766	18	31,345	6
7	Large Volume Industrial Service	I-32	I-32	1,246,247	6	219,926	(33,594)	1,212,653	6	213,998	7
8	Industrial Transportation	I-32 T1	I-32 T1	11,443,573	12	973,921	138,953	11,582,526	12	985,747	8
9	Industrial Transportation - Contracts	I-32 T1C	I-32 T1C	7,564,291	3	2,521,430	(2,396,706)	5,167,584	3	1,722,528	9
10	T2 Transportation	I-32 T2	I-32 T2	1,151,133	1	1,151,133	0	1,151,133	1	1,151,133	10
11	Small Volume Public Authority	P-40	P-40	5,797,679	1,069	5,423	(185,370)	5,612,308	1,069	5,250	11
12	Large Volume Public Authority	P-42	P-42	1,225,072	5	245,014	(32,942)	1,192,130	5	238,426	12
13	Public Authority Transportation	P-42T1	P-42T1	5,127,210	7	715,425	270,621	5,397,831	7	753,186	13
14	Special Gas Light Service	P-44	P-44	145,406	2	72,703	0	145,406	2	72,703	14
15	Irrigation Service	I-60	I-60	104,267	5	20,853	(712)	103,554	5	20,711	15
16	Total Gas Service			<u>143,415,337</u>	<u>144,923</u>	<u>990</u>	<u>(6,025,261)</u>	<u>137,390,076</u>	<u>144,923</u>	<u>948</u>	16

Note: Some transportation customers have more than one meter which is accounted for in this schedule.

UNS Gas, Inc.
Comparisons of Revenues by Rate Schedules
Present And Proposed Rates
Test Year Ended June 30, 2008

Line No.	Class of Service	Actual Net Revenue	Test Year End Adjustments	Adjusted Net Revenue	Proposed Increase		Proposed Net Revenue	Line No.
					\$	%		
1	Residential Service	\$35,937,829	(\$651,725)	\$35,286,104	\$590,030	1.67%	\$35,876,134	1
2	Residential Service Cares	1,341,403	(\$26,564)	1,314,839	0	0.00%	\$1,314,839	2
3	Small Volume Commercial Service	9,796,053	(\$146,996)	9,649,058	161,345	1.67%	\$9,810,403	3
4	Large Volume Commercial Service	266,035	(\$4,413)	261,622	4,375	1.67%	\$265,997	4
5	Commercial Transportation	587,108	\$0	587,108	8,803	1.50%	\$595,912	5
6	Small Volume Industrial Service	121,270	\$0	121,270	2,028	1.67%	\$123,297	6
7	Large Volume Industrial Service	125,443	\$0	125,443	2,098	1.67%	\$127,540	7
8	Industrial Transportation	1,103,528	\$0	1,103,528	18,452	1.67%	\$1,121,981	8
9	Industrial Transportation - Contracts	659,182	\$0	659,182	11,022	1.67%	\$670,204	9
10	T2 Transportation	63,852	\$0	63,852	1,068	1.67%	\$64,919	10
11	Small Volume Public Authority	1,677,883	(\$48,582)	1,629,301	27,244	1.67%	\$1,656,545	11
12	Large Volume Public Authority	152,764	(\$3,947)	148,817	2,488	1.67%	\$151,306	12
13	Public Authority Transportation	622,840	\$0	622,840	10,415	1.67%	\$633,254	13
14	Special Gas Light Service	66,940	\$0	66,940	1,119	1.67%	\$68,059	14
15	Irrigation Service	34,092	(\$227)	33,865	566	1.67%	\$34,431	15
16	Total Gas Service	<u>\$52,556,220</u>	<u>(\$882,453)</u>	<u>\$51,673,767</u>	<u>\$841,054</u>	<u>1.63%</u>	<u>\$52,514,821</u>	16

UNS Gas, Inc.
Comparison of Present And Proposed Rates
Test Year Ended June 30, 2008

	Present Rate	Proposed Rate	Increase	
			\$	%
Residential Service				
Customer Charge	\$8.50	\$10.00	\$1.50	17.65%
Distribution Margin Therms	\$0.3270	\$0.3027	-\$0.0243	-7.43%
Residential Service Cares (R12)				
Customer Charge	\$7.00	\$7.00	\$0.00	0.00%
Distribution Margin Therms Summer	\$0.3270	\$0.3270	\$0.00	0.00%
Distribution Margin Therms Winter (First 100 Therms)	\$0.1770	\$0.3270	\$0.15	84.75%
Distribution Margin Therms Winter all additional therms	\$0.3270	\$0.1770	-\$0.15	-45.87%
Small Commercial Service (C20)				
Customer Charge	\$13.50	\$15.50	\$2.00	14.81%
Distribution Margin Therms	\$0.2638	\$0.2600	-\$0.0038	-1.45%
Large Commercial Service (C22)				
Customer Charge	\$100.00	\$105.00	\$5.00	5.00%
Distribution Margin Therms	\$0.1718	\$0.1742	\$0.0024	1.42%
Small Volume Industrial Service (I-30):				
Customer Charge	\$13.50	\$15.50	\$2.00	14.81%
Distribution Margin Therms	\$0.2356	\$0.2388	\$0.0032	1.35%
Large Volume Industrial Service (I-32):				
Customer Charge	\$100.00	\$105.00	\$5.00	5.00%
Distribution Margin Therms	\$0.0952	\$0.0966	\$0.0014	1.48%
Small Volume PA (PA-40)				
Customer Charge	\$13.50	\$15.50	\$2.00	14.81%
Distribution Margin Therms	\$0.2593	\$0.2598	\$0.0005	0.20%
Large Volume PA (PA-42)				
Customer Charge	\$100.00	\$105.00	\$5.00	5.00%
Distribution Margin Therms	\$0.1198	\$0.1216	\$0.0018	1.53%
Special Gas Light Service (PA-44):				
Single Orifice	\$23.72	\$18.41	-\$5.31	-22.37%
Double Orifice	\$39.53	\$36.83	-\$2.70	-6.83%
Triple Orifice	\$54.86	\$55.24	\$0.38	0.70%
Quadruple Orifice	\$71.16	\$73.66	\$2.50	3.51%
Irrigation Service (IR-60)				
Customer Charge	\$13.50	\$15.50	\$2.00	14.81%
Distribution Margin Therms	\$0.3192	\$0.3235	\$0.0043	1.35%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Residential Service (R10)
Customer Charge (Sum: Apr - Nov)
Distribution Margin Therms

\$8.50 \$10.00
0.3270 0.3027

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
5	\$10.14	\$11.51	\$1.38	13.6%
10	\$11.77	\$13.03	\$1.26	10.7%
20	\$15.04	\$16.05	\$1.01	6.7%
35	\$19.95	\$20.59	\$0.65	3.3%
50	\$24.85	\$25.13	\$0.28	1.1%
75	\$33.03	\$32.70	(\$0.32)	-1.0%
100	\$41.20	\$40.27	(\$0.93)	-2.3%
250	\$90.25	\$85.67	(\$4.58)	-5.1%
500	\$172.00	\$161.35	(\$10.65)	-6.2%

Residential Service (R10)
Customer Charge (Win: Dec-Mar)
Distribution Margin Therms

\$8.50 \$10.00
0.3270 \$0.3027

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
5	\$10.14	\$11.51	\$1.38	13.6%
10	\$11.77	\$13.03	\$1.26	10.7%
20	\$15.04	\$16.05	\$1.01	6.7%
35	\$19.95	\$20.59	\$0.65	3.3%
50	\$24.85	\$25.13	\$0.28	1.1%
75	\$33.03	\$32.70	(\$0.32)	-1.0%
100	\$41.20	\$40.27	(\$0.93)	-2.3%
250	\$90.25	\$85.67	(\$4.58)	-5.1%
500	\$172.00	\$161.35	(\$10.65)	-6.2%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Residential Service Cares (R12)		
Customer Charge (Summer)	\$7.00	\$7.00
Distribution Margin Therms	0.3270	0.3270

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
5	\$8.64	\$8.64	\$0.00	0.0%
10	\$10.27	\$10.27	\$0.00	0.0%
20	\$13.54	\$13.54	\$0.00	0.0%
35	\$18.45	\$18.45	\$0.00	0.0%
50	\$23.35	\$23.35	\$0.00	0.0%
75	\$31.53	\$31.53	\$0.00	0.0%
100	\$39.70	\$39.70	\$0.00	0.0%
250	\$88.75	\$88.75	\$0.00	0.0%
500	\$170.50	\$170.50	\$0.00	0.0%

Residential Service Cares (R12)		
Customer Charge (Winter)	\$7.00	\$7.00
Distribution Margin Therms (1st 100 Therms)	0.1770	0.1770
Distribution Margin all additional Therms	0.3270	0.3270

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
5	\$7.89	\$7.89	\$0.00	0.0%
10	\$8.77	\$8.77	\$0.00	0.0%
20	\$10.54	\$10.54	\$0.00	0.0%
35	\$13.20	\$13.20	\$0.00	0.0%
50	\$15.85	\$15.85	\$0.00	0.0%
75	\$20.28	\$20.28	\$0.00	0.0%
100	\$24.70	\$24.70	\$0.00	0.0%
250	\$73.75	\$73.75	\$0.00	0.0%
500	\$155.50	\$155.50	\$0.00	0.0%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Small Commercial Service (C20)
Customer Charge
Distribution Margin Therms

\$13.50	\$15.50
\$0.2638	\$0.2600

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
50	\$26.69	\$28.50	\$1.81	6.8%
100	\$39.88	\$41.50	\$1.62	4.1%
500	\$145.40	\$145.49	\$0.09	0.1%
1,000	\$277.30	\$275.48	(\$1.82)	-0.7%
1,500	\$409.20	\$405.48	(\$3.72)	-0.9%
2,500	\$673.00	\$665.46	(\$7.54)	-1.1%
5,000	\$1,332.50	\$1,315.42	(\$17.08)	-1.3%
7,500	\$1,992.00	\$1,965.38	(\$26.62)	-1.3%
10,000	\$2,651.50	\$2,615.34	(\$36.16)	-1.4%

Large Commercial Service (C22)
Customer Charge
Distribution Margin Therms

\$100.00	\$105.00
\$0.1718	\$0.1742

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
10,001	\$1,818	\$1,848	\$29	1.6%
12,500	\$2,248	\$2,283	\$36	1.6%
15,000	\$2,677	\$2,719	\$42	1.6%
17,500	\$3,107	\$3,154	\$48	1.5%
20,000	\$3,536	\$3,590	\$54	1.5%
25,000	\$4,395	\$4,461	\$66	1.5%
30,000	\$5,254	\$5,332	\$78	1.5%
45,000	\$7,831	\$7,946	\$115	1.5%
75,000	\$12,985	\$13,173	\$188	1.5%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Small Volume Industrial Service (I-30):

Customer Charge	\$13.50	\$15.50
Distribution Margin Therms	\$0.2356	\$0.2388

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
50	\$25.28	\$27.44	\$2.16	8.5%
100	\$37.06	\$39.38	\$2.32	6.3%
500	\$131.30	\$134.90	\$3.60	2.7%
1,000	\$249.10	\$254.29	\$5.19	2.1%
1,500	\$366.90	\$373.69	\$6.79	1.8%
2,500	\$602.50	\$612.48	\$9.98	1.7%
5,000	\$1,191.50	\$1,209.46	\$17.96	1.5%
7,500	\$1,780.50	\$1,806.43	\$25.93	1.5%
10,000	\$2,369.50	\$2,403.41	\$33.91	1.4%

Large Volume Industrial Service (I-32):

Customer Charge	\$100.00	\$105.00
Distribution Margin Therms	\$0.0952	\$0.0966

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
10,001	\$1,052.10	\$1,071.20	\$19.10	1.8%
15,000	\$1,528.00	\$1,554.15	\$26.15	1.7%
20,000	\$2,004.00	\$2,037.21	\$33.21	1.7%
30,000	\$2,956.00	\$3,003.31	\$47.31	1.6%
50,000	\$4,860.00	\$4,935.51	\$75.51	1.6%
75,000	\$7,240.00	\$7,350.77	\$110.77	1.5%
100,000	\$9,620.00	\$9,766.03	\$146.03	1.5%
125,000	\$12,000.00	\$12,181.29	\$181.29	1.5%
150,000	\$14,380.00	\$14,596.54	\$216.54	1.5%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Small Volume Public Authority (PA-40)
Customer Charge
Distribution Margin Therms

\$13.50	\$15.50
\$0.2593	\$0.2598

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
50	\$26.47	\$28.49	\$2.03	7.7%
100	\$39.43	\$41.48	\$2.05	5.2%
500	\$143.15	\$145.41	\$2.26	1.6%
1,000	\$272.80	\$275.32	\$2.52	0.9%
1,500	\$402.45	\$405.24	\$2.79	0.7%
2,500	\$661.75	\$665.06	\$3.31	0.5%
5,000	\$1,310.00	\$1,314.62	\$4.62	0.4%
7,500	\$1,958.25	\$1,964.18	\$5.93	0.3%
10,000	\$2,606.50	\$2,613.74	\$7.24	0.3%

Large Volume Public Authority (PA-42)
Customer Charge
Distribution Margin Therms

\$100.00	\$105.00
\$0.1198	\$0.1216

Average Therms per Month	Total Bill Present Rate	Total Bill Proposed Rate	Proposed Increase \$	Proposed Increase %
10,001	\$1,298.12	\$1,321.48	\$23.36	1.8%
15,000	\$1,897.00	\$1,929.54	\$32.54	1.7%
20,000	\$2,496.00	\$2,537.71	\$41.71	1.7%
30,000	\$3,694.00	\$3,754.07	\$60.07	1.6%
50,000	\$6,090.00	\$6,186.79	\$96.79	1.6%
75,000	\$9,085.00	\$9,227.68	\$142.68	1.6%
100,000	\$12,080.00	\$12,268.57	\$188.57	1.6%
125,000	\$15,075.00	\$15,309.47	\$234.47	1.6%
150,000	\$18,070.00	\$18,350.36	\$280.36	1.6%

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended June 30, 2008

Special Gas Light Service (PA-44):		
Customer Charge Lighting Group A	\$15.17	\$18.41
Customer Charge Lighting Group B	\$18.20	\$18.41

Average Montly Customers	Annual Bill		Proposed Increase \$	Proposed Increase %
	Present	Proposed		

The following is an annual delivery bill per lamp

Customer Charge Lighting Group A	\$182.04	\$220.97	\$38.93	21.4%
Customer Charge Lighting Group B	\$218.40	\$220.97	\$2.57	1.2%

Note: There is no longer a Group A and Group B rate. All current customers are applicable to the Single Orifice Rate.

Irrigation Service (IR-60)		
Customer Charge	\$13.50	\$15.50
Distribution Margin Therms	\$0.3192	\$0.3235

Average Therms per Month	Total Bill	Total Bill	Proposed Increase \$	Proposed Increase %
	Present Rate	Proposed Rate		
50	\$29.46	\$31.68	\$2.22	7.5%
100	\$45.42	\$47.85	\$2.43	5.4%
500	\$173.10	\$177.25	\$4.15	2.4%
1,000	\$332.70	\$339.01	\$6.31	1.9%
1,500	\$492.30	\$500.76	\$8.46	1.7%
2,500	\$811.50	\$824.27	\$12.77	1.6%
5,000	\$1,609.50	\$1,633.05	\$23.55	1.5%
7,500	\$2,407.50	\$2,441.82	\$34.32	1.4%
10,000	\$3,205.50	\$3,250.59	\$45.09	1.4%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms		
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total	
RESIDENTIAL SERVICE RATE R-10								
0	4	147,084	262,849	147,084	9.8%	262,849	0.4%	
5	9	171,684	1,192,055	318,768	21.3%	1,454,904	2.1%	
10	14	166,473	1,951,866	485,241	32.4%	3,406,770	5.0%	
15	19	142,975	2,376,119	628,216	41.9%	5,782,889	8.5%	
20	24	104,527	2,253,814	732,742	48.9%	8,036,703	11.8%	
25	29	84,218	2,234,609	816,961	54.5%	10,271,312	15.1%	
30	34	66,359	2,088,008	883,320	58.9%	12,359,320	18.2%	
35	39	56,108	2,043,097	939,427	62.6%	14,402,416	21.2%	
40	44	48,058	1,984,852	987,485	65.9%	16,387,268	24.1%	
45	49	42,192	1,950,246	1,029,677	68.7%	18,337,514	26.9%	
50	54	39,086	2,000,309	1,068,764	71.3%	20,337,823	29.9%	
55	59	34,616	1,941,915	1,103,379	73.6%	22,279,738	32.7%	
60	64	32,491	1,983,631	1,135,871	75.7%	24,263,369	35.6%	
65	69	29,440	1,942,862	1,165,311	77.7%	26,206,230	38.5%	
70	74	26,766	1,898,738	1,192,077	79.5%	28,104,968	41.3%	
75	79	25,101	1,903,764	1,217,178	81.2%	30,008,732	44.1%	
80	84	23,195	1,872,920	1,240,373	82.7%	31,881,652	46.8%	
85	89	22,160	1,898,794	1,262,533	84.2%	33,780,446	49.6%	
90	94	19,996	1,812,496	1,282,529	85.5%	35,592,943	52.3%	
95	99	18,769	1,793,949	1,301,298	86.8%	37,386,892	54.9%	
100	104	17,015	1,709,036	1,318,313	87.9%	39,095,928	57.4%	
105	109	15,634	1,647,042	1,333,947	89.0%	40,742,969	59.9%	
110	114	14,801	1,632,328	1,348,748	89.9%	42,375,297	62.3%	
115	119	13,521	1,558,532	1,362,269	90.8%	43,933,829	64.5%	
120	124	11,779	1,415,846	1,374,049	91.6%	45,349,675	66.6%	
125	129	11,170	1,397,071	1,385,219	92.4%	46,746,747	68.7%	
130	134	9,920	1,289,603	1,395,140	93.0%	48,036,349	70.6%	
135	139	9,413	1,270,375	1,404,552	93.7%	49,306,724	72.4%	
140	144	8,428	1,179,089	1,412,980	94.2%	50,485,813	74.2%	
145	149	7,611	1,101,882	1,420,591	94.7%	51,587,695	75.8%	
150	154	6,978	1,044,501	1,427,569	95.2%	52,632,196	77.3%	
155	159	6,445	996,611	1,434,014	95.6%	53,628,806	78.8%	
160	164	5,794	924,943	1,439,808	96.0%	54,553,749	80.1%	
165	169	5,115	841,987	1,444,923	96.4%	55,395,736	81.4%	
170	174	4,724	800,358	1,449,647	96.7%	56,196,095	82.6%	
175	179	4,310	751,397	1,453,957	97.0%	56,947,492	83.7%	
180	184	3,945	707,364	1,457,903	97.2%	57,654,856	84.7%	
185	189	3,488	642,571	1,461,391	97.5%	58,297,427	85.6%	
190	194	3,211	607,402	1,464,602	97.7%	58,904,829	86.5%	
195	199	2,802	543,938	1,467,404	97.9%	59,448,767	87.3%	
200	299	25,263	5,859,005	1,492,668	99.5%	65,307,772	95.9%	
300	399	4,674	1,553,213	1,497,342	99.9%	66,860,985	98.2%	
400	499	1,194	518,440	1,498,536	99.9%	67,379,425	99.0%	
500	999	884	545,180	1,499,419	100.0%	67,924,605	99.8%	
1,000	1,999	76	97,646	1,499,495	100.0%	68,022,251	99.9%	
	≥ 2,000	17	44,711	1,499,512	100.0%	68,066,962	100.0%	

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms		
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total	
RESIDENTIAL SERVICE RATE R-12								
0	4	5,459	12,331	5,459	6.4%	12,331	0.3%	
5	9	10,624	76,405	16,082	18.9%	88,737	2.5%	
10	14	10,301	125,639	26,384	31.1%	214,375	6.1%	
15	19	9,085	156,305	35,469	41.8%	370,680	10.5%	
20	24	6,551	146,395	42,019	49.5%	517,076	14.6%	
25	29	5,236	144,026	47,255	55.6%	661,102	18.7%	
30	34	4,038	131,678	51,293	60.4%	792,780	22.4%	
35	39	3,373	127,317	54,667	64.4%	920,096	26.0%	
40	44	3,032	129,564	57,699	67.9%	1,049,660	29.7%	
45	49	2,653	127,105	60,352	71.1%	1,176,765	33.3%	
50	54	2,453	130,177	62,805	74.0%	1,306,942	37.0%	
55	59	2,074	120,537	64,879	76.4%	1,427,479	40.4%	
60	64	2,031	128,330	66,910	78.8%	1,555,808	44.0%	
65	69	1,801	123,134	68,711	80.9%	1,678,943	47.5%	
70	74	1,663	122,206	70,374	82.9%	1,801,149	51.0%	
75	79	1,530	120,151	71,904	84.7%	1,921,300	54.4%	
80	84	1,361	113,847	73,265	86.3%	2,035,147	57.6%	
85	89	1,300	115,400	74,565	87.8%	2,150,548	60.9%	
90	94	1,140	107,205	75,706	89.1%	2,257,753	63.9%	
95	99	1,045	103,439	76,750	90.4%	2,361,192	66.8%	
100	104	903	94,006	77,653	91.4%	2,455,198	69.5%	
105	109	823	89,783	78,476	92.4%	2,544,982	72.0%	
110	114	787	89,920	79,263	93.3%	2,634,901	74.6%	
115	119	661	78,915	79,923	94.1%	2,713,816	76.8%	
120	124	557	69,294	80,480	94.8%	2,783,111	78.8%	
125	129	504	65,386	80,985	95.4%	2,848,497	80.6%	
130	134	458	61,736	81,443	95.9%	2,910,232	82.4%	
135	139	445	62,184	81,887	96.4%	2,972,417	84.1%	
140	144	362	52,346	82,249	96.9%	3,024,762	85.6%	
145	149	349	52,376	82,598	97.3%	3,077,138	87.1%	
150	154	258	39,939	82,856	97.6%	3,117,077	88.2%	
155	159	230	36,871	83,086	97.8%	3,153,949	89.3%	
160	164	209	34,441	83,295	98.1%	3,188,389	90.2%	
165	169	167	28,511	83,462	98.3%	3,216,901	91.0%	
170	174	194	34,100	83,656	98.5%	3,251,000	92.0%	
175	179	137	24,682	83,793	98.7%	3,275,682	92.7%	
180	184	128	23,850	83,921	98.8%	3,299,532	93.4%	
185	189	126	24,112	84,048	99.0%	3,323,644	94.1%	
190	194	98	19,125	84,145	99.1%	3,342,769	94.6%	
195	199	108	21,712	84,253	99.2%	3,364,481	95.2%	
200	299	591	139,942	84,844	99.9%	3,504,422	99.2%	
300	399	70	23,854	84,914	100.0%	3,528,276	99.9%	
400	499	7	3,151	84,921	100.0%	3,531,428	99.9%	
500	999	3	2,008	84,924	100.0%	3,533,436	100.0%	

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
SMALL VOLUME COMMERCIAL RATE C-20							
0	9	45,637	93,478	45,637	33.4%	93,478	0.3%
10	19	11,797	162,319	57,434	42.0%	255,798	0.9%
20	29	7,608	180,216	65,042	47.6%	436,014	1.5%
30	39	5,567	187,261	70,609	51.7%	623,275	2.1%
40	49	4,652	202,215	75,261	55.1%	825,490	2.8%
50	59	3,958	210,633	79,219	58.0%	1,036,123	3.5%
60	69	3,356	211,655	82,575	60.4%	1,247,778	4.3%
70	79	2,886	210,179	85,461	62.6%	1,457,958	5.0%
80	89	2,573	212,899	88,034	64.4%	1,670,857	5.7%
90	99	2,264	209,493	90,298	66.1%	1,880,350	6.4%
100	109	2,137	218,373	92,436	67.7%	2,098,724	7.2%
110	119	1,947	217,863	94,382	69.1%	2,316,587	7.9%
120	129	1,757	214,256	96,139	70.4%	2,530,842	8.6%
130	139	1,558	205,156	97,698	71.5%	2,735,998	9.3%
140	149	1,480	209,601	99,178	72.6%	2,945,599	10.1%
150	159	1,434	216,925	100,612	73.6%	3,162,524	10.8%
160	169	1,310	211,315	101,922	74.6%	3,373,839	11.5%
170	179	1,173	200,443	103,095	75.5%	3,574,282	12.2%
180	189	1,124	202,795	104,219	76.3%	3,777,076	12.9%
190	199	1,085	206,800	105,304	77.1%	3,983,877	13.6%
200	249	4,395	960,820	109,699	80.3%	4,944,697	16.9%
250	299	3,384	906,615	113,083	82.8%	5,851,312	20.0%
300	349	2,746	871,124	115,829	84.8%	6,722,436	23.0%
350	399	2,247	823,754	118,076	86.4%	7,546,190	25.8%
400	449	1,958	813,951	120,033	87.9%	8,360,141	28.5%
450	499	1,713	796,260	121,747	89.1%	9,156,401	31.3%
500	599	2,650	1,419,229	124,397	91.1%	10,575,631	36.1%
600	699	2,002	1,267,932	126,399	92.5%	11,843,563	40.4%
700	799	1,545	1,129,873	127,944	93.6%	12,973,436	44.3%
800	899	1,212	1,005,484	129,155	94.5%	13,978,920	47.7%
900	999	916	849,267	130,071	95.2%	14,828,187	50.6%
1,000	1,499	2,912	3,475,058	132,984	97.3%	18,303,245	62.5%
1,500	1,999	1,443	2,438,885	134,426	98.4%	20,742,130	70.8%
2,000	2,999	1,145	2,706,208	135,572	99.2%	23,448,338	80.1%
3,000	3,999	416	1,391,628	135,988	99.5%	24,839,965	84.8%
4,000	4,999	183	793,480	136,170	99.7%	25,633,445	87.5%
5,000	5,999	132	712,597	136,303	99.8%	26,346,042	89.9%
6,000	6,999	84	533,014	136,387	99.8%	26,879,056	91.8%
7,000	7,999	62	455,483	136,449	99.9%	27,334,539	93.3%
8,000	8,999	37	303,016	136,486	99.9%	27,637,555	94.4%
9,000	9,999	39	358,260	136,524	99.9%	27,995,815	95.6%
10,000	10,999	32	323,236	136,556	100.0%	28,319,051	96.7%
11,000	11,999	22	244,189	136,578	100.0%	28,563,240	97.5%
12,000	12,999	13	156,847	136,590	100.0%	28,720,087	98.0%
13,000	13,999	1	13,058	136,591	100.0%	28,733,145	98.1%
14,000	14,999	9	127,467	136,600	100.0%	28,860,612	98.5%
≥ 15,000		20	431,045	136,620	100.0%	29,291,657	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
LARGE VOLUME COMMERCIAL RATE C-22							
0	249	51	2,411	51	30.4%	2,411	0.2%
250	499	15	5,249	66	39.1%	7,660	0.6%
500	749	15	9,297	80	47.8%	16,957	1.3%
750	999	1	914	81	48.4%	17,872	1.3%
1,000	1,999	2	2,561	83	49.5%	20,432	1.5%
2,000	2,999	2	5,483	85	50.5%	25,915	1.9%
3,000	3,999	5	19,333	90	53.8%	45,248	3.4%
4,000	4,999	3	13,056	93	55.4%	58,304	4.4%
5,000	5,999	7	41,464	100	59.8%	99,768	7.5%
6,000	6,999	6	42,774	107	63.6%	142,542	10.7%
7,000	7,999	3	21,534	110	65.2%	164,076	12.3%
8,000	8,999	4	32,672	113	67.4%	196,748	14.7%
9,000	9,999	3	26,598	116	69.0%	223,346	16.7%
10,000	19,999	34	564,529	150	89.1%	787,875	58.9%
20,000	29,999	12	295,317	162	96.2%	1,083,192	80.9%
30,000	39,999	5	161,749	166	98.9%	1,244,941	93.0%
40,000	49,999	1	46,128	167	99.5%	1,291,069	96.5%
50,000	59,999	1	47,176	168	100.0%	1,338,244	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
SMALL VOLUME INDUSTRIAL RATE I-30							
0	249	82	3,300	82	34.3%	3,300	0.6%
250	499	13	4,204	95	39.5%	7,503	1.4%
500	749	17	9,111	112	46.7%	16,614	3.0%
750	999	11	8,272	123	51.4%	24,886	4.5%
1,000	1,499	13	13,631	136	56.7%	38,517	7.0%
1,500	1,999	8	12,616	144	60.0%	51,133	9.2%
2,000	2,499	3	6,545	147	61.4%	57,678	10.4%
2,500	2,999	8	19,539	155	64.8%	77,217	13.9%
3,000	3,499	13	35,039	168	70.0%	112,255	20.3%
3,500	3,999	9	28,921	177	73.8%	141,176	25.5%
4,000	4,499	5	16,855	182	75.7%	158,031	28.5%
4,500	4,999	7	28,308	189	78.6%	186,339	33.6%
5,000	5,499	10	47,089	199	82.9%	233,428	42.2%
5,500	5,999	8	40,151	207	86.2%	273,579	49.4%
6,000	6,499	1	6,130	208	86.7%	279,709	50.5%
6,500	6,999	8	46,506	216	90.0%	326,215	58.9%
7,000	7,499	6	35,617	222	92.4%	361,832	65.3%
7,500	7,999	3	22,790	225	93.8%	384,622	69.5%
8,500	8,999	2	16,928	227	94.8%	401,550	72.5%
9,000	9,499	1	8,968	229	95.2%	410,518	74.1%
9,500	9,999	1	9,325	230	95.7%	419,843	75.8%
10,000	10,999	1	9,939	231	96.2%	429,782	77.6%
11,000	11,999	2	23,175	233	97.1%	452,957	81.8%
12,000	12,999	2	24,844	235	98.1%	477,800	86.3%
14,000	14,999	2	28,452	238	99.0%	506,252	91.4%
19,000	19,999	1	19,143	239	99.5%	525,395	94.9%
28,000	28,999	1	28,371	240	100.0%	553,766	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
LARGE VOLUME INDUSTRIAL RATE I-32							
0	499	9	517	9	15.7%	517	0.0%
500	999	3	2,178	12	20.0%	2,695	0.2%
1,000	1,999	1	1,570	13	21.4%	4,265	0.4%
3,000	3,999	1	3,182	14	22.9%	7,447	0.6%
4,000	4,999	2	8,248	15	25.7%	15,695	1.3%
5,000	9,999	9	91,679	25	41.4%	107,374	8.9%
10,000	14,999	11	160,059	36	60.0%	267,433	22.1%
15,000	19,999	10	205,704	46	77.1%	473,137	39.0%
20,000	29,999	6	162,332	52	87.1%	635,469	52.4%
30,000	39,999	2	66,882	54	90.0%	702,351	57.9%
40,000	49,999	1	40,506	55	91.4%	742,857	61.3%
50,000	59,999	1	52,592	56	92.9%	795,449	65.6%
60,000	69,999	2	128,029	57	95.7%	923,478	76.2%
75,000	125,000	3	289,176	60	100.0%	1,212,653	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
SMALL VOLUME PUBLIC AUTHORITY RATE P-40							
0	49	5,942	72,013	5,942	46.5%	72,013	1.3%
50	99	1,332	93,099	1,332	10.4%	165,112	2.9%
100	199	1,367	190,289	1,367	10.7%	355,400	6.3%
200	299	745	177,867	745	5.8%	533,268	9.5%
300	399	545	181,987	545	4.3%	715,255	12.7%
400	499	418	181,359	418	3.3%	896,614	16.0%
500	599	293	155,157	293	2.3%	1,051,772	18.7%
600	699	220	137,566	220	1.7%	1,189,337	21.2%
700	799	203	146,683	203	1.6%	1,336,021	23.8%
800	899	161	131,699	161	1.3%	1,467,720	26.2%
900	999	133	122,012	133	1.0%	1,589,732	28.3%
1,000	1,999	698	956,175	698	5.5%	2,545,906	45.4%
2,000	2,999	301	711,158	301	2.4%	3,257,065	58.1%
3,000	3,999	134	443,779	134	1.0%	3,700,844	66.0%
4,000	4,999	105	453,501	105	0.8%	4,154,345	74.0%
5,000	6,999	97	545,552	97	0.8%	4,699,896	83.8%
7,000	9,999	47	381,443	47	0.4%	5,081,339	90.6%
10,000	19,999	34	438,273	34	0.3%	5,519,612	98.4%
20,000	29,999	4	91,041	4	0.0%	5,610,653	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
LARGE VOLUME PUBLIC AUTHORITY RATE P-42							
600	799	1	605	1	1.7%	605	0.1%
800	999	2	1,742	3	5.0%	2,346	0.2%
1,000	5,999	4	5,281	7	11.7%	7,627	0.6%
6,000	7,999	4	26,637	11	18.3%	34,264	2.9%
8,000	9,999	5	41,881	16	26.7%	76,146	6.4%
10,000	12,999	8	89,684	24	40.0%	165,830	13.9%
13,000	15,999	3	44,641	27	45.0%	210,471	17.7%
16,000	18,999	5	82,950	32	53.3%	293,421	24.6%
19,000	23,999	6	115,842	38	63.3%	409,264	34.3%
24,000	26,999	8	199,194	46	76.7%	608,458	51.0%
27,000	29,999	3	82,833	49	81.7%	691,290	58.0%
30,000	39,999	4	135,070	53	88.3%	826,361	69.3%
40,000	59,999	5	235,294	58	96.7%	1,061,655	89.1%
60,000	70,000	2	130,475	60	100.0%	1,192,130	100.0%

Usage Range - Therms		Number of Bills	Therms	Cumulative Bills		Cumulative Therms	
Lower	Upper			Bills	Percent of Total	Therms	Percent of Total
IRRIGATION SERVICE RATE I-60							
0	99	40	215	40	66.7%	215	0.2%
100	199	3	406	43	71.7%	620	0.6%
1,700	1,799	1	1,821	44	73.3%	2,441	2.4%
1,800	1,899	1	1,901	45	75.0%	4,343	4.2%
1,900	1,999	1	1,982	46	76.7%	6,325	6.1%
2,100	2,199	1	2,276	47	78.3%	8,600	8.3%
2,200	2,299	1	2,340	48	80.0%	10,941	10.6%
2,400	2,499	1	2,546	49	81.7%	13,486	13.0%
2,900	2,999	1	3,107	50	83.3%	16,593	16.0%
3,000	3,099	1	3,153	51	85.0%	19,746	19.1%
3,200	3,299	1	3,411	52	86.7%	23,157	22.4%
3,400	3,499	1	3,644	53	88.3%	26,802	25.9%
3,600	3,699	1	3,846	54	90.0%	30,647	29.6%
4,200	4,299	1	4,450	55	91.7%	35,098	33.9%
4,400	4,499	1	4,654	56	93.3%	39,751	38.4%
10,500	10,599	1	10,996	57	95.0%	50,747	49.0%
11,900	11,999	1	12,416	58	96.7%	63,163	61.0%
16,900	16,999	1	17,693	59	98.3%	80,856	78.1%
21,700	21,799	1	22,699	60	100.0%	103,554	100.0%