

ORIGINAL



0000067259

BEFORE THE ARIZONA CORPORATION C

Arizona Corporation Commission

DOCKETED

2007 FEB 23 P 4: 06

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MIKE GLEASON
KRISTIN K. MAYES
GARY PIERCE

DOCKETED BY *me*

AZ CORP COMMISSION
DOCUMENT CONTROL

BAD

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 OF RETURN ON THE
FAIR VALUE OF THE PROPERTIES OF UNS
GAS, INC. DEVOTED TO ITS OPERATIONS
THROUGHOUT THE STATE OF ARIZONA
CORPORATION COMMISSIONON.

DOCKET NO. G-04204A-06-0463

IN THE MATTER OF THE APPLICATION OF
UNS GAS, INC. TO REVIEW AND REVISE
ITS PURCHASED GAS ADJUSTOR.

DOCKET NO. G-04204A-06-0013

IN THE MATTER OF THE INQUIRY INTO
THE PRUDENCE OF THE GAS
PROCUREMENT PRACTICES OF UNS GAS,
INC.

DOCKET NO. G-04204A-05-0831

**STAFF'S NOTICE OF FILING
DIRECT TESTIMONY OF STEVEN
RUBACK AND MOTION TO FILE
SUPPLEMENTAL DIRECT TESTIMONY
OF RALPH C. SMITH CONCERNING
RATE DESIGN AND BILL IMPACT
ANALYSIS**

Staff of the Arizona Corporation Commission ("Commission") hereby files the Direct
Testimony of Steven Ruback (Consultant - The Columbia Group, Inc.) which addresses the
Company's proposed rate design in accordance with the Commission's February 15, 2007 Procedural
Order.

Staff also moves to file the Supplemental Direct Testimony of Ralph C. Smith (Consultant -
Larkin & Associates) concerning Staff rate design and bill impact analysis. Together these

...
...

1 testimonies filed on behalf of Staff address the rate design issues raised in this case.

2 RESPECTFULLY SUBMITTED this 23rd day of February 2007.

3

4

5

6

7

8

9

10

11

Original and Seventeen (17) copies
of the foregoing filed this 23rd day
of February 2007 with:

12

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

13

14

15

Copies of the foregoing e-mailed/
mailed this 23rd day of February
2007 to:

16

17

Michael W. Patten
Roshka DeWulf & Patten PLC
One Arizona Center
400 East Van Buren Street
Suite 800
Phoenix, Arizona 85004

18

19

20

Scott S. Wakefield
RUCO
1110 West Washington Street
Suite 220
Phoenix, Arizona 85007

21

22

23

Raymond S. Heyman
Michelle Livengood
UniSource Energy Services
One South Church Avenue
Suite 1820
Tucson, Arizona 85701

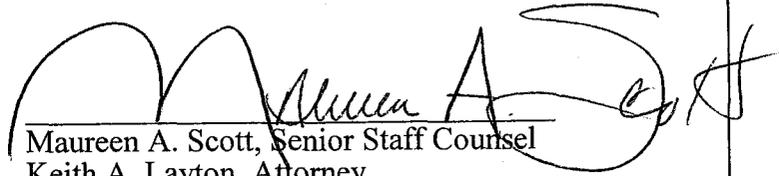
24

25

26

27

28

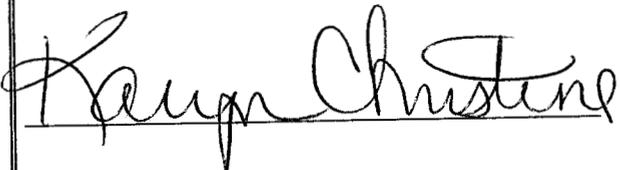


Maureen A. Scott, Senior Staff Counsel
Keith A. Layton, Attorney
Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
(602) 652-3402

1 Copies of the foregoing mailed
2 this 23rd day of February 2007 to:

3 Cynthia Zwick, Executive Director
4 ACAA
5 2700 North 3rd Street, Suite 3040
6 Phoenix, Arizona 85004

7 Marshall Magruder
8 Post Office Box 1267
9 Tubac, Arizona 85646

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28


**DIRECT
TESTIMONY
OF
STEVEN W. RUBACK (CONSULTANT)
AND
SUPPLEMENTAL
DIRECT
TESTIMONY
OF
RALPH C. SMITH (CONSULTANT)**

DOCKET NOS. G-04204A-06-0463

G-04204A-06-0013

&

G-04204A-05-0831

**IN THE MATTER OF THE APPLICATION OF
UNS GAS, INC. FOR ESTABLISHMENT OF
JUST AND REASONABLE RATES AND
CHARGES DESIGNED TO REALIZE A
REASONABLE RATE OF RETURN ON THE
FAIR VALUE OF THE PROPERTIES OF UNS
GAS, INC. DEVOTED TO ITS OPERATIONS
THROUGHOUT THE STATE OF ARIZONA**

FEBRUARY 23, 2007

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. G-04204A-060463
UNS GAS, INC. FOR ESTABLISHMENT OF)
JUST ND REASONABLE RATES AND)
CHARGES DESIGNED TO REALIZE A)
REASONABLE RATE OF RETURN ON THE)
FAIR VALUE OF THE PROPERTIES OF UNS)
GAS, INC. DEVOTED TO ITS OPERATIONS)
THROUGHOUT THE STATE OF ARIZONA)

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. G-04204A-06-0013
UNS GAS, INC. TO REVIEW AND REVISE ITS)
PURCHASED GAS ADJUSTOR)

IN THE MATTER OF THE INQUIRY INTO THE) DOCKET NO. G-04204A-05-0831
PRUDENCE OF THE GAS PROCUREMENT)
PRACTICES OF UNS GAS, INC.)

DIRECT

TESTIMONY

OF

STEVEN W. RUBACK

ON BEHALF OF

ARIZONA CORPORATION COMMISSION

UTILITIES DIVISION STAFF

FEBRUARY 23, 2007

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
RATE DESIGN	3
DECOUPLING	11

SCHEDULES

Front End Load Analysis	STF-SWR-1
Calculation of Customer Charge for each Rate Class.....	STF-SWR-2
Resolution on Gas and Electric Energy Efficiency.....	STF-SWR-3

**EXECUTIVE SUMMARY
UNS GAS INC.
DOCKET NOS. G-04204A-06-0463 ET AL**

My testimony addresses the Company's proposed rate design and Throughput Adjustment Mechanism.

My findings and recommendations for each of these areas are as follows:

- 1) UNS proposed rate design proposes to recover more of its costs from higher fixed charges. I recommend that the rates proposed by UNS' be rejected. Another Staff witness, Ralph C. Smith, is presenting Staff's proposed rate design.
- 2) The Commission should reject the proposed Throughput Adjustment Mechanism ("TAM"), because it is inequitable to ratepayers. The TAM shifts the risk of declining usage attributable to weather, economics and conservation from UNS Gas to ratepayers. There is precedent for rejection of a Rate Decoupling Mechanism such as TAM. I also recommend that the Commission reject the implementation of the TAM because it is piecemeal ratemaking.

1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Steven W. Ruback, and my business address is 785 Washington Street,
4 Canton, Massachusetts 02021.

5
6 **Q. WHAT IS YOUR OCCUPATION?**

7 A. I am the founder and a principal of The Columbia Group, Inc., which is a public interest
8 consulting firm specializing in public utility issues on behalf of state agencies, local
9 governments, municipal utilities, offices of attorneys general and the staff of public utility
10 commissions. My practice consists of providing gas and electric expert testimony,
11 technical support for utility negotiations, municipal utility rate studies and other related
12 rate services.

13
14 **Q. PLEASE STATE YOUR QUALIFICATIONS.**

15 A. I am a lawyer and engineer. For more than 25 years I have worked as a rate consultant on
16 behalf of the public interest. My principal areas of concentration have been the gas and
17 electric utility industries. I have filed expert testimonies in natural gas cases for more than
18 25 years. I have undertaken more than 400 utility assignments, and I have provided expert
19 testimony in over 200 proceedings.

20
21 My principal areas of concentration are: (1) cost allocation studies (2) class revenue
22 requirements (3) rate design (4) unbundling (5) transportation issues (6) competition (7)
23 restructuring (8) design day forecasting (9) gas supply (10) PGA and procurement issues
24 (11) hedging and (12) related policy issues.

25

1 Since our founding in April of 1981, we have worked solely on behalf of the public and
2 ratepayer interests. Representative clients include, but are not limited to, the Consumers'
3 Utility Counsel Division of Georgia, the Connecticut Office of Consumer Counsel, the
4 Vermont Public Service Commission, the Virginia Association of Municipalities and the
5 Virginia Association of Counties.

6
7 I was New Hampshire's first Consumer Advocate for the Legislative Utility Consumers'
8 Counsel in 1976. I graduated from Clarkson College of Technology in 1968 with a degree
9 in Interdisciplinary Engineering & Management. I graduated from the State University of
10 New York at Buffalo, School of Law, in 1973. I have not, however, practiced law since
11 1976, and my current practice consists solely of providing utility consulting services.

12
13 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

14 A. I was asked by the Staff of the Arizona Corporation Commission ("Commission") to
15 review the rate design aspects of UNS Gas, Inc. ("UNS" or the "Company") application
16 for a general change or modification in its rates, charges and tariffs, and to comment upon
17 the Company's proposals, report my findings and, if appropriate, make recommendations
18 for the Commission's consideration.

19
20 **Q. HOW IS TESTIMONY ORGANIZED?**

21 A. The remainder of my testimony is organized as follows: Section I is an Executive
22 Summary which summarizes my findings, recommendations and lists my testimony
23 exhibits. Section II provides my qualifications and experience and the purpose of my
24 testimony. Section III addresses Rate Design. Section IV addresses Decoupling.

1 **Q. PLEASE LIST YOUR EXHIBITS THAT SUPPORT THIS TESTIMONY.**

2 A. STF-SWR-1 Front End Load Analysis

3 STF-SWR-2 Calculation of Customer Charge

4 STF-SWR-3 Resolution on Gas and Electric Energy Efficiency

5

6 **RATE DESIGN**

7 **Q. WOULD YOU PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S**
8 **RATE DESIGN PROPOSALS?**

9 A. The principal rate design proposals are the overwhelming increases in fixed customer
10 charges, the corresponding reduction in volumetric charges and seasonal customer charges
11 for the Residential class.

12

13 The Company is proposing a staggering increase in the fixed customer charges for all
14 classes of service. The most extreme customer charge proposal is the Company's request
15 to increase the Residential customer charge by more than 185 percent, during the summer
16 period and 57 percent in the winter period. The remaining classes would also experience
17 sharp customer charge increases.

18

19 Rate design is a zero sum exercise. Because the allowed revenue requirement is fixed,
20 increases in customer charges must be offset, in this case, by a corresponding reduction in
21 volumetric rates. Based on my experience, utilities are eager to increase fixed charges to
22 reduce the risk of under recovery of the distribution revenue requirement. UNS' proposal
23 is extreme because the proposed customer charges are intended to recover all of the
24 proposed increase plus some of the margin recovered in existing volumetric rates.

25

1 Q. PLEASE COMPARE THE COMPANY'S PRESENT AND PROPOSED
2 CUSTOMER CHARGES?

3 A. The specifics of the Company's proposal are as follows:
4

5 *TABLE 1: CUSTOMER CHARGE AT PRESENT AND PROPOSED RATES*

Class of Service	Present Rates	Proposed Rates	% Increase
RES (R-10) Cust Charge (Sum: Apr - Nov)	7.00	20.00	185.71%
RES (R-10) Cust.Charge (Win: Dec-Mar)	7.00	11.00	57.14%
RES (R-12) Cust Charge (Sum: Apr - Nov)	7.00	20.00	185.71%
RES (R-12) Cust Charge (Win: Dec-Mar)	7.00	11.00	57.14%
SM CS (C-20) Customer Charge	11.00	20.00	81.82%
LG CS (C-22) and CT Customer Charge	85.00	120.00	41.18%
SM IS (I-30) Customer Charge	11.00	20.00	81.82%
LG IS (I-32) and IT Customer Charge	85.00	120.00	41.18%
SM PA (PA-40) Customer Charge	11.00	20.00	81.82%
LG PA (PA-42) and PAT Customer Charge	85.00	120.00	41.18%
Special Gas Light Cust. Charge Lighting Group A	13.57	16.47	21.36%
Special Gas Light Cust. Customer Charge Lighting Group B	16.28	19.70	21.02%
Irrigation (IR-60) Customer Charge	11.00	20.00	81.82%

6
7 Q. IS THE COMPANY'S PROPOSAL TO INCREASE THE RESIDENTIAL
8 CUSTOMER CHARGE FROM \$ 7.00 TO \$20.00 IN THE SUMMER MONTHS
9 AND \$11.00 IN THE WINTER MONTHS JUSTIFIED?

10 A. No. There are several problems with the Company's customer charge proposal. The
11 Company's proposal presents a serious front end loading problem, a decoupling issue and
12 gradualism problem.
13

1 **Q. HAVE YOU CALCULATED THE COMPOSITE RESIDENTIAL CUSTOMER**
2 **CHARGE?**

3 A. Yes. The composite residential charge is \$17.00 a month; this is a 143 percent increase to
4 the existing Residential charge of \$7.00 a month. The Commission should not accept the
5 Company's proposals to increase the customer charges as UNS requested, or to create a
6 seasonal customer charge. An increase to \$17.00 for Residential customers violates the
7 basic rate design criterion of gradualism. The seasonal customer charges are also not
8 appropriate because the customer costs included in a customer charge do not change by
9 season.

10

11 **Q. PLEASE DISCUSS THE FRONT END LOADING PROBLEM PRESENTED BY**
12 **THE COMPANY'S PROPOSED CUSTOMER CHARGES.**

13 A. The Company's proposal to increase the customer charges, specifically in the smaller
14 classes by 81 percent to over 185 percent, is a classic example of front-end loading. These
15 proposed increases would allow the Company to recover a disproportionate amount of
16 revenue through the customer charge.

17

18 **Q. WHAT ARE THE RESULTS OF THE ALLOCATION OF CUSTOMER**
19 **CHARGES TO THE OTHER CLASSES OF SERVICE?**

20 A. As shown in Exhibit STF-SWR-1, the recovery of the Company's proposed revenue
21 increase for each class varies in the amount that is recovered through the increase to the
22 class's customer charge. As stated above, the Residential class recovers more than twice
23 the proposed revenue increase from the increase in its customer charge, the Small
24 Commercial Service (C20) class will recover 66 percent of the Company's proposed
25 increase, Small Public Authority Class (PA-40) will recover almost 36 percent, and the
26 remaining classes range from 17 percent to 2 percent.

1 The Company is proposing to recover more than its requested revenue increase for the
2 Residential class in its newly proposed customer charge. The Company is proposing to
3 collect an increase of \$14.6 million in the Residential (R-10) rate class under its proposed
4 customer charges, but they are only requesting a total increase of \$6.58 million for the
5 Residential Class (See Exhibit STF-SWR-1). Increasing the customer charges to provide
6 more revenue than the proposed revenue increase requires that existing volumetric rates be
7 reduced, which further decreases the Company's risk.

8
9 **Q. WERE YOU SURPRISED BY THE COMPANY'S PROPOSED CUSTOMER**
10 **CHARGE INCREASE?**

11 A. I was not surprised that UNS proposed to increase fixed customer charges. I was,
12 however, surprised by the size of the proposed increase and that more than the proposed
13 revenue increase was to be recovered by fixed charge increases.

14
15 During recent years many utilities, such as UNS, have proposed fixed charge increases to
16 reduce their risk of under-recovery of fixed distribution costs. The reason for this
17 proposal is to increase fixed cost recovery for the utility's overall revenue requirement,
18 regardless of how much or little gas is actually used by customers. This rate design
19 strategy is common among utilities throughout the country. The goal is simply to collect
20 more revenue from fixed charges, independent of usage.

21
22 There is, however, an important distinction between the Company's customer charge and
23 others that I have reviewed. The distinction is that utilities propose increases in fixed
24 charges to recover a disproportionate amount of the proposed revenue increase, but UNS
25 has proposed to recover all of the proposed increase and some of the volumetric margin
26 recovered in existing rates.

1 **Q. HAVE YOU CALCULATED 100 PERCENT FULLY ALLOCATED CUSTOMER**
2 **COSTS?**

3 A. Yes, I have calculated 100 percent fully allocated customer costs. The calculations are
4 provided on my Exhibit STF-SWR-2.

5
6 A customer charge should only include direct customer costs such as meter reading,
7 customer accounting, meter and house regulators, and customer installations. Costs such
8 as general plant and administrative and general costs should not be included.

9
10 In order to calculate the customer-related capital costs, I used a carrying charge approach.
11 A carrying charge approach is used by utilities to estimate the annual revenue requirement
12 required by a dollar of new plant. I used a carrying charge of 18 percent, which represents
13 an estimate of return, depreciation and federal, state and local taxes.

14
15 **Q. IS THERE ANY REGULATORY REQUIREMENT THAT THE CUSTOMER**
16 **CHARGE SHOULD RECOVER 100 PERCENT OF ALLOCATED CUSTOMER**
17 **COSTS?**

18 A. No. Customer charges rarely, if ever, are set to cover their allocated customer costs. This
19 is a long standing regulatory practice. Pricing the customer charge below allocated
20 customer costs is intended to promote public acceptability, which is a valid rate design
21 goal.

22
23 **Q. IS THERE A RATE DESIGN REQUIREMENT THAT CUSTOMER CHARGES**
24 **SHOULD RECOVER 100 PERCENT OF ALLOCATED CUSTOMER COSTS?**

25 A. There is simply no ratemaking requirement that customer charges or other fixed charges
26 recover a specific level of costs. Regulatory commissions throughout the country

1 routinely set customer charges and demand charges below the costs determined in a cost
2 of service study. For small customers, the setting of the customer charge is one of the
3 most controversial aspects of rate design. Based on my experience, commissions have a
4 longstanding practice of pricing customer charges below the customer costs. The primary
5 reason for this is public acceptability, which is a valid rate design criterion, and the impact
6 on small customers.

7
8 **Q. IF CUSTOMER CHARGES ARE REDUCED FROM THE COMPANY'S**
9 **PROPOSAL, WILL RATES BE DESIGNED TO RECOVER THE CLASS**
10 **REVENUE REQUIREMENTS?**

11 A. Lower customer charges than proposed by the Company do not mean that rates will not be
12 designed to recover class revenue requirements. Volumetric charges would be increased
13 from the charges proposed to produce the same class revenue requirements.

14
15 **Q. DO CUSTOMER CHARGES IMPEDE THE ABILITY OF CUSTOMERS TO**
16 **CONTROL THEIR BILL?**

17 A. Customer charges are inelastic. Inelasticity is an inappropriate concept to build into a
18 tariff design. Unlike commodity charges, which provide customers the opportunity to
19 control their bills by changing the amount of gas used or peak demand imposed on the
20 system, a customer charge does not change with reduced consumption or less demand.
21 The only way a customer can avoid customer charges is to discontinue all gas service.

22
23 **Q. IS A CUSTOMER CHARGE A TYPE OF DECOUPLING MECHANISM?**

24 A. Yes. A customer charge is an example of a decoupling mechanism. A customer charge
25 breaks the link between revenue and throughput because the customer charge remains the
26 same regardless of throughput.

1 **Q. ARE THE PROPOSED REDUCTIONS IN VOLUMETRIC RATES A STEP**
2 **TOWARD A STRAIGHT-FIXED-VARIABLE RATE DESIGN?**

3 A. UNS' rate design proposal is a step towards a Straight Fixed Variable ("SFV") rate design.
4 UNS proposes to recover an enormous amount of its overall revenue requirement from
5 *fixed* customer charges, not volumetric charges.

6
7 One of the basic tenets of public utility regulation is that a utility be provided with the
8 opportunity to earn a reasonable rate of return, not a guarantee. A guaranteed recovery of
9 the distribution revenue requirement involves no risk to the Company and if allowed,
10 requires a minimal return on equity. UNS' rate design proposal, which is a healthy step
11 towards a SFV rate design, violates the well-established and long-standing regulatory
12 principle that a utility should have a reasonable opportunity, not a guarantee to earn its
13 allowed rate of return.

14
15 **Q. IS FERC'S IMPLEMENTATION OF THE SFV RATE DESIGN PRECEDENT**
16 **FOR UNS' PROPOSAL TO INCREASE FIXED CHARGES AND DECREASE**
17 **VOLUMETRIC CHARGES?**

18 A. The SFV pipeline rate design is not appropriate for retail distribution rate design because
19 the theoretical underpinning of the SFV pipeline rate design does not apply to distribution
20 service. FERC's SFV was implemented to ration pipeline design day capacity by price.
21 The SFV method should not be applicable to distribution service because there is no need
22 to ration retail distribution capacity. There is no need to ration UNS' distribution capacity
23 since UNS has no distribution constraints and has not had to curtail distribution service
24 over the last 5 years.

25

1 In 1998, the State Corporation Commission of the State of Kansas rejected the LDC's
2 application to implement a Straight Fixed Variable Rate Design. In Docket No. 98-
3 KGSG-822-TAR, the order stated:

4
5 *"13. The Commission rejects the argument that Federal Energy*
6 *Regulatory Commission (FERC) Order 636 is relevant to this proceeding.*
7 *The Commission finds the testimony of Staff witness Joe Williams to be*
8 *persuasive on this issue. [Vol. 1, 176-77, 182; Vol. 2, 491-92, 516-17.1]*
9 *The Commission concludes that the wholesale market addressed by the*
10 *FERC Order is not comparable to the retail markets faced in Kansas by*
11 *local distribution companies. The FERC Order focused on interstate*
12 *pipeline concerns and its reasoning is not applicable to the situation at*
13 *hand."*
14

15 Based on my experience, Atlanta Gas Light Company ("AGLC") is the only LDC that is
16 allowed to employ the SFV rate design method to recover its distribution revenue
17 requirement. The AGLC exception is mandated by legislation which strips the Georgia
18 Public Service Commission of authority to order an alternative rate design. Based on my
19 experience, other jurisdictions allow for reasonable fixed customer charges and reasonable
20 fixed demand charges, but require that the bulk of the distribution revenue requirement be
21 recovered over throughput.

22
23 **Q. HAVE INDUSTRY CONDITIONS CHANGED TO JUSTIFY A MOVE TOWARD**
24 **HIGHER FIXED CHARGES AND LOWER VOLUMETRIC CHARGES?**

25 A. Industry changes should not affect the Commission's rate design policy. The most
26 significant industry changes occurred at the pipeline level, not the retail distribution level.
27 FERC decided to implement the SFV pipeline rate design whereby the pipelines were
28 virtually guaranteed the recovery of their transportation revenue requirement, since nearly all
29 of the revenue recovery was independent of throughput. It is foolish to accept a premise

1 that industry restructuring affected the recovery of distribution costs. From a distribution
2 level vantage point, not much has changed.

3
4 **Q. WHAT DO YOU RECOMMEND?**

5 A. I recommend that UNS' rate design be rejected for the reasons stated in my testimony.

6
7 **Q. ARE YOU PROPOSING A NEW RATE DESIGN?**

8 A. No. The purpose of my rate design testimony is to provide an overview as to why UNS'
9 proposal should be rejected. For specific calculation of rates, refer to Staff witness Ralph
10 C. Smith's testimony.

11
12 **DECOUPLING**

13 **Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

14 A. The purpose of this Section is to address the proposed Throughput Adjustment
15 Mechanism ("TAM") and to discuss Revenue Decoupling Mechanisms ("RDM") and
16 provide my recommendation, which does not support the UNS proposal.

17
18 **Q. WHAT IS A REVENUE DECOUPLING MECHANISM?**

19 A. An RDM is a rate mechanism that separates earnings from throughput. One example of
20 an RDM is the customer charge. It is a fixed rate that is independent of throughput and
21 therefore, for example, is independent of weather variation. A similar mechanism is a
22 purchased gas adjustment ("PGA") mechanism which protects the Company's earnings
23 from price fly-ups regardless of throughput. Demand charges are also independent from
24 throughput as capacity entitlements only consider contribution to a single peak day or are
25 set by contract. Establishing base distribution rates using weather normalized billing units
26 (volumes) also provides some earnings protection from weather sensitive throughput. An

1 SFV rate design is also an RDM because the fixed revenue requirement is recovered via
2 demand charges.

3
4 **Q. PLEASE DESCRIBE THE TAM THAT THE COMPANY IS PROPOSING.**

5 A. The Company is proposing a mechanism, the TAM that would either reduce or increase
6 the collection of volumetric margin revenues to match variations from anticipated usage
7 levels. The TAM will either provide a credit or a surcharge to the existing customer's
8 volumetric rate charge based on usage per customer ("UPC").

9
10 The reason for the TAM proposal is to provide the Company with a rate design that would
11 align customer usage with anticipated revenues. Customer usage varies greatly due to
12 changes in weather conditions. For example, if a winter was much colder than the
13 normalized test year, the Company would over-recover revenues through the customer's
14 volumetric charges. And if the weather was much warmer than normal, the Company
15 would under-recover revenues through the customer's volumetric charge. The TAM
16 would allow the Company to collect its anticipated revenues regardless of why average
17 use per customer is different than anticipated. This mechanism would encourage the
18 Company to promote conservation, but the TAM would discourage conservation by
19 ratepayers because it implements surcharges that erode certain benefits ratepayers
20 received due to conservation.

21
22 **Q. HOW IS THE TAM CALCULATED?**

23 A. The TAM is calculated by first establishing a base UPC. The base UPC is calculated by
24 the test year throughput divided by the test year average number of customers. This is
25 then compared to the actual UPC which is calculated as the actual throughput divided by
26 the actual number of customers in a calendar year. The difference between the base UPC

1 and the actual UPC is then multiplied by the test year's number of customers and the
2 margin rate per therm to arrive at the required throughput adjustment in dollars. This
3 dollar amount is then divided by the projected 12 month throughput ("therms") to arrive at
4 the adjustment per therm.

5
6 The equations are as follows:

- 7 1. Throughput Adjustment (TA) = (Base UPC - Actual UPC) * Test year # of
8 customers * Margin rate per therm; and
9 2. Adjustment per therm = TA divided by Projected 12 month throughput

10
11 **Q. IS THERE AN EXAMPLE IN UNS' FILING?**

12 A. Yes, refer to Company Exhibit TVL-2.

13
14 **Q. ARE BASE RATES SET USING ACTUAL OR NORMALIZED VOLUMES?**

15 A. Distribution rates are designed based on normalized volumes. The rates are intended to
16 recover the distribution revenue requirement over normalized weather volumes.
17 Recovering the distribution revenue requirement over normalized weather means that the
18 Company is responsible for risk or good fortune from deviations from normal weather.

19
20 When weather is warmer than normalized volumes, the Company under-recovers its
21 distribution revenue requirement because warm weather means less heat sensitive sales.
22 Conversely, when the weather is cold, the Company over recovers its distribution revenue
23 requirement.

24
25 The existing policy of designing rates over normalized volumes, without a RDM, has been
26 the regulatory policy of the Commission. The consequences of the risk of deviations from

1 normal weather has not precluded the Company from raising capital during its existence.
2 Moreover, the symmetry of under recoveries attributable to warmer than normal weather
3 and over recoveries from colder than normal weather is a traditional and reasonable
4 allocation of weather risk between the Company and ratepayers.

5
6 Lastly, whether actual weather is more or less than normal weather, the impact on long-
7 term recovery of the distribution revenue requirement will remain unaffected. Long-term
8 recovery will not be affected as actual weather, whatever it may be, folded into the
9 normalized volume calculation in succeeding base rate cases.

10
11 **Q. IS THE COMPANY'S PROPOSAL PIECEMEAL RATEMAKING?**

12 A. Yes. Another reason why the TAM should not be approved is that the TAM would be
13 piecemeal ratemaking. The TAM deals with variations from expected use per customer.
14 No other items in the ratemaking formula are considered in the TAM. There is no
15 opportunity to search for offsetting adjustments such as cost of service reductions, changes
16 in customer allocation factors and changes in the cost of capital, etc. Piecemeal
17 ratemaking is frowned upon because all of the elements of the ratemaking formula are not
18 considered.

19
20 **Q. SHOULD DISTRIBUTION RATES BE FIXED BETWEEN RATE CASES?**

21 A. Distribution-related costs should be fixed between rate cases to provide an incentive to
22 keep costs down between base rate cases. This is the traditional ratemaking incentive to
23 minimize costs between base rate cases. This is a much better regulatory approach than
24 relying on the Company's good intentions to minimize costs.

25

1 The reason distribution rates are fixed between rate cases is that a powerful incentive
2 exists for utilities to control costs between rate cases. Between rate cases a utility enjoys
3 cost reductions attributable to increased efficiencies, but absorbs any cost increases. This
4 is a basic tenet of public utility ratemaking that has been used for a considerable period of
5 time with success which should not be diluted by the proposed TAM.

6
7 **Q. ARE THERE ANY ADDITIONAL DISADVANTAGES TO THE TAM?**

8 A. Yes. The TAM only addresses the recovery of margin, or approximately one-third of a
9 customer's bill. Gas costs represent about two-thirds of a customer bill. Gas costs are
10 also more volatile than distribution costs. Under TAM, customers could be facing high
11 and volatile gas costs plus TAM surcharges.

12
13 **Q. ARE YOU AWARE OF ANY SERIOUS PROBLEMS IN STATES THAT MAY
14 HAVE IMPLEMENTED RDMS?**

15 A. Yes. In the Direct Testimony sponsored by Mr. David E. Dismukes, Ph.D before the
16 Michigan Public Service Commission (Case No. U-14893), Dr. Dismukes refers to the
17 now terminated Electric Revenue Adjustment Mechanism implemented in Maine during
18 the early 1990s (page 17). The adoption of the Mechanism coincided with a recession that
19 resulted in lower sales and substantial revenue deferrals that amounted to \$52 million by
20 the end of 1992. Dr. Dismukes opposed an SFV rate design proposed by SEMCO
21 ENERGY GAS COMPANY. The filing was eventually settled by January 2007, without
22 approval of the decoupling-like proposal.

23
24 Also, I was involved in a January 2007 hearing regarding Public Service of New Mexico
25 for a base rate and TAM (NMRPC Case No. 06-00210-00210-UT). My direct testimony
26 addressed the regulatory acceptance of TAMs and noted that only 4 jurisdictions to date

1 have adopted TAMs. The Company's TAM witness was Mr. Russell Feingold. In his
2 rebuttal testimony, he was only able to cite 8 jurisdictions that have adopted a TAM and
3 that 8 other gas utilities have proposed TAMs. (See the Rebuttal Testimony of Russell
4 Feingold page 42 lines 1 to 8; NMRPC Case No. 06-00210-00210-UT).

5
6 **Q. IS THE TAM SIMILAR TO AN AUTOMATIC ADJUSTMENT CLAUSE?**

7 A. Yes. It is similar to a PGA which adjusts rates to recover for increased gas costs without a
8 base rate case. The type of costs traditionally recovered in an automatic adjustment clause
9 such as the TAM are skyrocketing and volatile costs, which if left unrecovered in a timely
10 manner, could jeopardize a utility's financial health.

11
12 Costs which are generally included in an adjustment rider are costs which are (1) large
13 enough to jeopardize a utility's financial health (2) volatile and (3) substantially beyond a
14 utility's control.

15
16 Based on my comments above, I believe that the TAM does not meet the three tests for
17 inclusion in an automatic adjustment clause. First, traditional rate making has not left the
18 Company in poor financial health. Second, non-gas costs are relatively stable from year to
19 year and certainly not volatile to the same extent as gas costs. Third, non-gas costs are
20 within management's control.

21
22 **Q. DOES THE COMPANY ALREADY HAVE RDMs?**

23 A. Yes. One example of a RDM is the customer charge. It is a fixed rate that is independent
24 of throughput and therefore independent of weather variation. Another example is the
25 PGA, which protects the Company's earnings from price fly-ups regardless of throughput.
26 It should be noted that the TAM would collect revenues that are traditionally authorized

1 but not guaranteed. The PGA collects expenses that have been incurred by the Company.
2 Establishing base distribution rates using weather normalized billing units also provides
3 some earnings protection from weather sensitive throughput.
4

5 **Q. IS THERE ANY ARIZONA PRECEDENT?**

6 A. The precedent may be found in the Opinion and Order of Southwest Gas' ("SW") last rate
7 case. (Southwest Gas Decision No. 68487; Docket No. G-01551A-04-0876).
8

9 In that case, SW proposed a revenue decoupling mechanism called the Conservation
10 Margin Tracker ("CMT"). The purpose of the CMT was the same as the TAM proposed
11 in this case. The CMT tracked shortfall in billing units and imposed an annual surcharge
12 on customers that insulated SW from the risk of declining volumes.
13

14 SW argued that the CMT would provide a more consistent revenue stream. SW argued
15 that the consistent revenue stream produced by a revenue decoupling mechanism would
16 insulate SW from risk. SW argued that borrowing costs would decline.
17

18 The Commission rejected SW's proposal, but indicated that meetings with Staff and other
19 stakeholders should continue. The reasons for the rejection was that the CMT was
20 inconsistent with the public interest and was not sound regulatory policy. (Southwest Gas;
21 Decision No. 68487; Docket No.G-01551A-04-0876).
22

23 **Q. WERE THERE ANY OTHER REASONS WHY THE COMMISSION REJECTED**
24 **THE CMT FILED BY SOUTHWEST GAS?**

25 A. Yes. On page 34 of the above referenced Decision, four additional issues are cited as
26 reasons for rejecting SW's filing:

- 1 1. There is conflicting evidence in the record as to whether declining usage per
2 customer will continue into the future, or for that matter, whether conservation
3 efforts are the direct cause of SW's inability to earn its authorized return.
- 4 2. The likely effect of adopting the proposed CMT would be a disincentive to
5 undertake conservation efforts because ratepayers would be required to pay for gas
6 not used in prior years.
- 7 3. There is also concern that there could be a dramatic impact that could be
8 experienced by customers faced with a surcharge for not using enough gas the
9 prior year.
- 10 4. "The Company is requesting that customers provide a guaranteed method of
11 recovering authorized revenues, thereby virtually eliminating the Company's
12 attendant risk. Neither the law nor sound public policy requires such a result and
13 we decline to adopt the Company's CMT in this case."

14
15 **Q. HAS NARUC ADDRESSED THE DECOUPLING ISSUE?**

16 A. I have reviewed the NARUC resolution, which I have attached as Staff Exhibit STF-
17 SWR-3. The resolution does not endorse a revenue decoupling mechanism. The language
18 of the resolution does not mention earnings variations attributable to variations from
19 normal weather. The resolution mentions conservation, efficiency, and weatherization.
20 There is a reference to demand responses in the gas markets, but the meaning of demand
21 responses is too vague for a confident interpretation of its meaning.

22
23 **Q. WHAT IS STAFF'S RECOMMENDATION REGARDING UNS' PROPOSED**
24 **TAM?**

25 A. Staff recommends that the TAM be rejected because of the following reasons:

- 1 1. The TAM would shift the risk of declining usage attributable to weather and
2 economics from UNS shareholders to ratepayers.
3 2. The TAM would be piecemeal ratemaking.
4 3. The TAM would discourage retail customers from undertaking conservation.

5

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

7 A. Yes.

UNS Gas Inc. rate Case; Docket No. G-04204A-06-0463
FRONT END LOAD ANALYSIS

	Residential R10	Residential Cares R12	Small Comm Serv C20	Large Comm Serv & Comm Trans C22	Sm. Industrial I30	Large Industrial & Industrial Trans I32	Sm. Public Authority PA-40	Lg. Public Authority and Public Authority Trans PA-42	Special Gas Light PA-44	Irrigation IR-60
# of Customers	973,311	33,620	132,098	222	150	238	12,827	117	866	66
Customer Charge (Sum: Apr - Nov) or all year	489,824	16,548								
Customer Charge (Win: Dec-Mar)										
CUSTOMER CHARGE										
CURRENT										
Customer Charge (Sum: Apr - Nov) or all year	\$ 7.00	\$ 7.00	\$ 11.00	\$ 85.00	\$ 11.00	\$ 85.00	\$ 11.00	\$ 85.00	\$ 13.57	\$ 11.00
Customer Charge (Win: Dec-Mar)	\$ 7.00	\$ 7.00								
PROPOSED										
Customer Charge (Sum: Apr - Nov) or all year	\$ 20.00	\$ 20.00	\$ 20.00	\$ 120.00	\$ 20.00	\$ 120.00	\$ 20.00	\$ 120.00	\$ 16.47	\$ 20.00
Customer Charge (Win: Dec-Mar)	\$ 11.00	\$ 11.00								
% of Increase										
Customer Charge (Sum: Apr - Nov) or all year	185.71%	185.71%	81.82%	41.18%	81.82%	41.18%	81.82%	41.18%	21.37%	81.82%
Customer Charge (Win: Dec-Mar)	57.14%	57.14%								
REVENUES GENERATED BY CUSTOMER CHARGE										
Current Revenues	\$ 10,241,949	\$ 351,177	\$ 1,453,077	\$ 18,850	\$ 1,655	\$ 20,256	\$ 141,098	\$ 9,909	\$ 11,758	\$ 725
Proposed Revenues	\$ 24,854,292	\$ 854,430	\$ 2,641,958	\$ 26,612	\$ 3,010	\$ 28,596	\$ 256,541	\$ 13,989	\$ 14,270	\$ 1,317
Customer Charge Revenue Increase	\$ 14,612,343	\$ 503,254	\$ 1,188,881	\$ 7,762	\$ 1,354	\$ 8,341	\$ 115,443	\$ 4,080	\$ 2,513	\$ 593
Total Revenue Increase	\$ 6,582,656	\$ 205,963	\$ 1,801,410	\$ 139,754	\$ 23,054	\$ 416,661	\$ 322,521	\$ 134,687	\$ 15,220	\$ 4,975
% of Total Revenue Increase	221.98%	244.34%	66.00%	5.55%	5.88%	2.00%	35.79%	3.03%	16.51%	11.92%

Source:
Total Number of Customers is provided from Company's exhibit filename: RUCO1.10UNSCAScheduleSupportv2
Current and Proposed Customer charges are provided from Company's Schedule H-3
Total Revenue Increase is provided from Company's Schedule H-2 page 2

UNS Gas Inc. rate case; Docket No. G-04204A-06-0463
Calculation of Customer Charge for each Rate Class

Acct. No.	Description	Comm										Sm. Public Authority PA-40	Lg. Public Authority PA-42	Public Authority Transportation PA-44	Special Gas Light PA-44	Irrigation IR-60
		Residential R10	Residential R12	Residential Care	Small Comm Serv C20	Large Comm Serv C22	Transportation	Sm. Industrial I30	Large Industrial I32	Industrial Transportation	Sm. Public Authority PA-40					
380	Services ACQ ADJ	63,383,998	2,807,193	5,785,431	9,255	8,126	6,755	6,320	9,932	944,140	5,267	2,709	0	0	3,200	
381	Meters	(6,540,414)	(259,523)	(626,916)	(842)	(740)	(615)	(975)	(604)	(85,940)	(479)	(247)	0	0	(281)	
382	Meters ACQ ADJ	10,184,736	451,214	2,422,162	23,221	20,389	1,258	14,000	24,000	105,023	528	9,000	0	0	1,340	
383	Meter Installation	(1,160,960)	(862,010)	(212,140)	(3,034)	(1,785)	(110)	(1,226)	(2,102)	(9,199)	(46)	(701)	0	0	(117)	
384	Meter Installation ACQ ADJ	6,788,588	231,078	1,240,438	11,892	10,442	644	7,170	12,291	53,785	271	4,097	0	0	686	
385	REGULATORS	(744,787)	(25,352)	(136,092)	(1,305)	(1,146)	(71)	(787)	(1,348)	(3,907)	(30)	(449)	0	0	(75)	
386	REGULATORS - ACQ ADJ	(178,700)	(8,978)	(480,319)	(313)	(275)	(249)	(2,176)	(4,759)	(20,828)	(105)	(1,386)	0	0	288	
387	REGULATOR INSTALLATIONS	1,163,596	(6,063)	(32,653)	(17)	(189)	(110)	(324)	(1,088)	(1,416)	(7)	(108)	0	0	(18)	
388	REGULATOR INSTALLATIONS - ACQ ADJ	(82,263)	(3,906)	(212,609)	(203)	(179)	(110)	(1,229)	(2,107)	(9,219)	(46)	(702)	0	0	(118)	
389	INDUSTRIAL MEAS. EQUIP	(82,263)	0	1,004,540	32,810	(1,144)	(8)	(67)	(148)	92,876	16,305	(50)	0	0	739	
390	INDUSTRIAL MEAS. EQUIP - ACQ ADJ	(106,446)	0	(96,916)	(2,822)	(2,116)	(146)	(1,411)	(2,351)	(6,036)	(1,176)	(1,411)	0	0	(64)	
Total		72,951,925	2,807,193	5,785,431	9,255	8,126	6,755	6,320	9,932	944,140	5,267	2,709	0	0	3,200	
Total Customer Related Distr. Plant		89,105,284	74,245,379	3,289,288	76,162	63,059	9,738	43,525	73,085	1,114,727	18,063	30,434	0	0	5,773	
Total Distribution Plant		214,887,170	143,293,346	6,091,274	1,189,484	2,786,553	428,587	1,852,028	10,667,834	7,113,030	1,035,141	3,300,492	75,531	0.00%	57,727	
% of Customer Related Distr. Plant		41.50%	51.81%	54.00%	6.40%	2.26%	2.27%	2.35%	0.86%	15.67%	1.74%	0.92%	0.00%	0.00%	10.00%	
Total Distribution Plant Accumulated Depr.		59,860,270	41,081,169	1,757,864	301,136	686,611	105,258	456,465	2,607,606	1,839,532	255,490	807,356	18,351	0	14,639	
Portion attributable to Customer Related		24,857,282	21,285,615	949,085	19,282	15,938	2,382	10,728	17,832	286,284	4,458	7,445	0	0	1,464	
Net Distribution Plant		64,248,002	52,989,765	2,340,203	56,880	47,621	7,347	32,797	55,254	628,442	13,805	22,990	0	0	4,309	
Carrying Cost (Customer related net plant) (18%)		11,564,640	9,532,759	421,237	10,238	8,554	1,322	5,904	9,946	148,760	2,449	4,138	0	0	776	

Expense Accounts	Comm										Sm. Public Authority PA-40	Lg. Public Authority PA-42	Public Authority Transportation PA-44	Special Gas Light PA-44	Irrigation IR-60
	Residential R10	Residential R12	Residential Care	Small Comm Serv C20	Large Comm Serv C22	Transportation	Sm. Industrial I30	Large Industrial I32	Industrial Transportation	Sm. Public Authority PA-40					
878	METER EXPENSE	1,036,650	45,922	248,515	2,363	2,075	128	1,425	2,443	10,689	54	814	0	0	136
879	CUSTOMER INSTALL EXP	14,187	18,150	98,503	844	823	51	569	976	4,271	21	325	0	0	54
882	MAINT. OF SERVICES	403,941	17,068	36,892	59	52	43	49	63	9,019	34	17	0	0	20
883	MAINT. OF METER	167,036	5,885	30,516	293	257	16	176	302	1,323	7	101	0	0	17
901	SUPERVISION	74,308	5,884	5,926	7	4	9	4	6	314	3	3	0	0	3
902	METER READING EXPENSE	63,456	27,412	56,764	84	47	66	55	84	5,902	31	42	0	0	31
903	CUST RECORDS & COLLECT	710,037	75,713	437,313	430	240	507	280	481	42,364	213	180	120	0	240
905	MISC. CUST ACQ'S EXP	4,958,508	75,713	437,313	430	240	507	280	481	42,364	213	180	120	0	240
906	CUSTOMER SERVICES & INFO	23,546	580	2,392	15	186	0	3	653	238	1	208	1	0	2
907	SUPPLY CUSTOMER SERV.	14,743	0	1,164	1	0	0	1	0	0	0	0	0	0	0
908	CUSTOMER ASSISTANCE	(29,048)	(1,000)	(2,702)	(3)	(1)	(3)	(2)	(3)	113	1	0	0	0	0
909	INFO & INSTRUCTIONAL ADVERT.	65,784	2,882	5,193	5	3	6	3	6	(262)	(1)	(1)	(1)	(1)	(1)
910	MISC. CUST. SERV. & INFO.	19,709	925	1,784	2	1	2	1	2	173	1	1	0	0	1
Total Customer Related Expenses		8,878,038	7,871,864	3,926,792	4,201	3,893	938	2,657	5,056	71,507	377	1,862	0	0	308

Total Carrying Cost & Related Customer Exp.		20,443,728	17,201,542	617,239	17,201,542	12,246	14,439	8,460	15,001	220,267	2,826	5,800	123	1,293
Year End # of Customers	136,340	120,636	5,660	10,919	11	6	13	7	12	1,068	5	4	3	6
Number of Bills per Year	1,860,074	1,447,629	67,925	131,027	129	72	152	84	144	12,693	64	48	36	72
Customer Cost/Bill	\$ 11.88	\$ 9.09	\$ 17.78	\$ 117.98	\$ 170.09	\$ 14.14	\$ 100.72	\$ 104.18	\$ 17.38	\$ 44.26	\$ 120.83	\$ 3.43	\$ 17.83	

Source: Year End # of Customers is provided from the Company's cost of service study; Schedule G-7 Factors (CUST10)

Resolution on Gas and Electric Energy Efficiency

WHEREAS, The National Association of Regulatory Utility Commissioners (NARUC), at its July 2003 Summer Meetings, adopted a *Resolution on State Commission Responses to the Natural Gas Supply Situation* that encouraged State and Federal regulatory commissions to review and reconsider the level of support and incentives for existing gas and electric utility programs designed to promote and aggressively implement cost-effective conservation, energy efficiency, weatherization, and demand response in both gas and electricity markets; *and*

WHEREAS, The National Petroleum Council (NPC), in its September 25, 2003 report on *Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy*, found that greater energy efficiency and conservation are vital near-term and long-term mechanisms for moderating price levels and reducing volatility and recommended all sectors of the economy work toward improving demand flexibility and efficiency; *and*

WHEREAS, The NPC, in its report, identified key elements of the effort to maintain and continue improvements in the efficient use of electricity and natural gas, including (but not limited to):

- (i) enhanced and expanded public education programs for energy conservation, efficiency, and weatherization,
- (ii) DOE identification of best practices utilized by States for low-income weatherization programs and to encourage nation-wide adoption of these practices,
- (iii) a review and upgrade of the energy efficiency standards for buildings and appliances (to reflect current technology and relevant life-cycle cost analyses) to ensure these standards remain valid under potentially higher energy prices
- (iv) promote the use of high-efficiency consumer products including advanced building materials, Energy Star appliances, energy “smart” metering and information control devices
- (v) on-peak electricity conservation to minimize the use of gas-fired electric generating plants,
- (vi) the use of combined-cycle gas-fired electric generating units instead of less-efficient gas-fired boilers, and
- (vii) clear natural gas and power price signals; and
- (viii) remove regulatory and rate structure incentives to inefficient use of natural gas and electricity; and

WHEREAS, The NARUC, at its November 2003 annual convention, adopted a *Resolution Adopting Natural Gas Information “Toolkit”* which encouraged the NARUC Natural Gas Task Force, to review (among other things) the findings and recommendations in the NPC report that have regulatory implications for State commissions for improving and promoting energy efficiency and conservation initiatives, including consumer outreach and education, review of regulatory throughput incentives; *and*

WHEREAS, The American Council for an Energy-Efficient Economy (“ACEEE”), in its December 2003 report on *Responding to the Natural Gas Crisis: America’s Best Natural Gas Energy Efficiency Programs*, (i) identified States and utilities with programs that many would consider best practice or model programs for all types of natural gas customers and all principal natural gas end-use technologies, and (ii) found that these programs are concentrated in relatively few States and regions and could be expanded in other parts of the country to great benefit; *and*

WHEREAS, the Natural Resources Defense Council (NRDC), the American Gas Association (AGA) and the ACEEE have recently adopted a Joint Statement noting that traditional rate structures often act as disincentives for natural gas utilities to aggressively encourage their customers to use less gas. Therefore, the NRDC, AGA, and the ACEEE have urged public utility commissions to align the interests of consumers, utility shareholders, and society as a whole by encouraging conservation. Among the mechanisms supported by these groups are the use of automatic rate true-ups to ensure that a utility’s opportunity to recover authorized fixed costs is not held hostage to fluctuations in retail gas sales; *now therefore be it*

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened in its 2004 Summer Meetings in Salt Lake City, Utah, encourages State commissions and other policy makers to support the expansion of natural gas energy efficiency programs and electric energy efficiency programs, including those designed to promote consumer education, weatherization, and the use of high-efficiency appliances, where economic, and to address regulatory incentives to address inefficient use of gas and electricity; *and be it further*

RESOLVED, That the Board of Directors of the NARUC, encourages State and Federal policy makers to: (i) review and upgrade the energy efficiency standards for buildings and appliances, where economic, to ensure these standards remain valid under potentially higher energy prices, and (ii) promote the use of high-efficiency consumer products, where economic, including advanced building materials, Energy Star appliances, and energy “smart” metering and information control devices; *and be it further*

RESOLVED, That Board of Directors of NARUC encourages State Commissions to review and consider the recommendations contained in the enclosed *Joint Statement of the American Gas Association, the Natural Resources Defense Council, and the American Council for an Energy-Efficient Economy*; *and be it further*

RESOLVED, That the Board of Directors of the NARUC recognizes that the best approach towards promoting gas energy efficiency programs and electric energy efficiency programs for any single utility, State or region may likely depend on local issues, preferences and conditions.

*Sponsored by the NARUC Natural Gas Task Force, Committee on Gas, Committee on Consumer Affairs, Committee on Electricity, and Committee on Energy Resources and the Environment
Adopted by the NARUC Board of Directors July 14, 2004*

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. G-04204A-06-0463
UNS GAS, INC. FOR THE ESTABLISHMENT)
OF JUST AND REASONABLE RATES AND)
CHARGES DESIGNED TO REALIZE A)
REASONABLE RATE OF RETURN ON THE)
FAIR VALUE OF THE PROPERTIES OF UNS)
GAS, INC. DEVOTED TO ITS OPERTATIONS)
THROUGHOUT THE STATE OF ARIZONA)

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. G-04204A-06-01013
UNS GAS, INC. TO REVIEW AND REVISE ITS)
PURCHASED GAS ADJUSTOR)

IN THE MATTER OF THE INQUIRY INTO) DOCKET NO. G-04204A-05-0831
THE PRUDENCE OF THE GAS)
PROCUREMENT PRACTICES OF UNS GAS,)
INC.)

SUPPLEMENTAL
DIRECT TESTIMONY
OF
RALPH C. SMITH
ON BEHALF OF
THE ARIZONA CORPORATION COMMISSION,
UTILITIES DIVISION STAFF
CONCERNING RATE DESIGN AND BILL IMPACT ANALYSIS
FEBRUARY 23, 2007

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. RATE DESIGN	2
R-10, Residential Gas Service	8
R-12, Residential Services CARES	9
C-20, Small Commercial Service	11
C-22, Large Commercial Service	11
I-30, Small Volume Industrial Service	11
I-32, Large Volume Industrial Service	12
PA-40, Small Volume Public Authority	12
PA-42, Large Volume Public Authority	12
PA-44, Special Gas Light Service	13
IR-60, Irrigation Service	13

ATTACHMENTS

Staff Proposed Rate Design and Proof of Revenue	RCS-S1
Staff Bill Impact Analysis.....	RCS-S2

EXECUTIVE SUMMARY
UNS GAS, INC.
DOCKET NOS. G-04204A-06-0463 ET AL

My supplemental testimony addresses the following issues:

- Staff's recommended rate design.
- Staff's bill impact analysis

My findings and recommendations for each of these areas are as follows:

- To achieve the recommended base rate increase of \$4.962 million, Staff recommends the following rates:

Summary of Staff Recommended Rate Design			
Class of Service	Current Rates	Proposed Rates	Change
Residential Service (R10)			
Customer Charge	\$ 7.00	\$ 8.50	\$ 1.50
Distribution Margin Therms	\$ 0.3004	\$ 0.3217	\$ 0.0213
Residential Service Cares (R12)			
Customer Charge	\$ 7.00	\$ 7.00	\$ -
Distribution Margin Therms	\$ 0.3004	\$ 0.3217	\$ 0.0213
Winter Discount (up to 100 Therms)	\$(0.1500)	\$(0.1500)	\$ -
Small Volume Commercial Service (C20)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2420	\$ 0.2651	\$ 0.0231
Large Volume Commercial Service (C22) and Commercial Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.1551	\$ 0.1731	\$ 0.0180
Small Volume Industrial Service (I-30)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2122	\$ 0.2369	\$ 0.0247
Large Volume Industrial Service (I-32) and Industrial Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.0864	\$ 0.0965	\$ 0.0101
Small Volume Public Authority (PA-40)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2354	\$ 0.2606	\$ 0.0252
Large Volume Public Authority (PA-42) and Public Authority Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.1084	\$ 0.1211	\$ 0.0127
Special Gas Light Service (PA-44)			
Customer Charge Lighting Group A	\$ 13.57	\$ 15.17	\$ 1.60
Customer Charge Lighting Group B	\$ 16.28	\$ 18.20	\$ 1.92
Irrigation Service (IR-60)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2876	\$ 0.3205	\$ 0.0329

- Staff's bill impact analysis is shown in Attachment RCS-S2 to this testimony and shows the impact of Staff's proposed rate design for each rate class for a variety of monthly gas sales levels. The bill impact analysis is presented for total rates (including gas costs) and for base rates only.

1 **I. INTRODUCTION**

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

3 A. Ralph C. Smith. I am a Senior Regulatory Consultant at Larkin & Associates, PLLC,
4 15728 Farmington Road, Livonia, Michigan 48154.

5
6 **Q. Are you the same Ralph C. Smith who filed direct testimony in this proceeding?**

7 A. Yes, I am.

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

10 A. The purpose of my supplemental testimony is to present Staff's proposed rate design and
11 bill impact analysis. Another Staff witness, Mr. Steve Ruback, is addressing certain
12 aspects of rate design, including his analysis of the rate design proposed by UNS Gas, Inc.
13 ("UNS Gas").

14
15 **Q. Have you prepared any exhibits to be filed with your testimony?**

16 A. Yes. Attachment RCS-S1 shows Staff's recommended rate design and certain details
17 regarding the development of the recommended rate design. Attachment RCS-S2 presents
18 Staff's bill impact analysis, showing the impact of Staff's recommended rates over a
19 variety of representative usage levels for customers in each customer class, for base rate
20 impacts and total bill impacts¹, respectively.

¹ Staff is also recommending a DSM adjustor rate of \$0.00082 per therm. This DSM adjustor rate has not been factored into the total bill impact analysis shown on Attachment RCS-S2.

1 **II. RATE DESIGN**

2 **Q. Please discuss the factors which Staff considered in regard to rate design for UNS**
3 **Gas.**

4 A. Staff considered a number of factors in creating its rate design. These factors include cost
5 of service, the desire to encourage energy conservation, the need to use gradualism in
6 cases where rates are being charged so that customers are not hit by large rate increases,
7 customer equity issues within and between rate classes, efforts to make rates and bills
8 easier for customers to understand, revenue impacts on the Company, and other policy
9 considerations. Given the number of various considerations which go into designing rates,
10 some of which are not easily quantifiable, it is understandable why it is commonly said
11 that rate design is more of an art than a science.

12
13 **Q. What total margin target have you designed your proposed rates to meet?**

14 A. The rates I am proposing are designed to provide a total margin to UNS Gas of \$50.515
15 million. This represents a base rate revenue increase of \$4.721 million over current
16 revenues of \$45.794 million.

17
18 **Q. Please summarize the rate design that Staff recommends for UNS Gas to achieve this**
19 **total margin.**

20 A. The base rate design for UNS Gas that Staff recommends to produce this total margin is
21 summarized in the following table:

Summary of Staff Recommended Rate Design			
Class of Service	Current Rates	Proposed Rates	Change
Residential Service (R10)			
Customer Charge	\$ 7.00	\$ 8.50	\$ 1.50
Distribution Margin Therms	\$ 0.3004	\$ 0.3217	\$ 0.0213
Residential Service Cares (R12)			
Customer Charge	\$ 7.00	\$ 7.00	\$ -
Distribution Margin Therms	\$ 0.3004	\$ 0.3217	\$ 0.0213
Winter Discount (up to 100 Therms)	\$(0.1500)	\$(0.1500)	\$ -
Small Volume Commercial Service (C20)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2420	\$ 0.2651	\$ 0.0231
Large Volume Commercial Service (C22) and Commercial Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.1551	\$ 0.1731	\$ 0.0180
Small Volume Industrial Service (I-30)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2122	\$ 0.2369	\$ 0.0247
Large Volume Industrial Service (I-32) and Industrial Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.0864	\$ 0.0965	\$ 0.0101
Small Volume Public Authority (PA-40)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2354	\$ 0.2606	\$ 0.0252
Large Volume Public Authority (PA-42) and Public Authority Transportation			
Customer Charge	\$ 85.00	\$ 100.00	\$ 15.00
Distribution Margin Therms	\$ 0.1084	\$ 0.1211	\$ 0.0127
Special Gas Light Service (PA-44)			
Customer Charge Lighting Group A	\$ 13.57	\$ 15.17	\$ 1.60
Customer Charge Lighting Group B	\$ 16.28	\$ 18.20	\$ 1.92
Irrigation Service (IR-60)			
Customer Charge	\$ 11.00	\$ 13.50	\$ 2.50
Distribution Margin Therms	\$ 0.2876	\$ 0.3205	\$ 0.0329

1
2
3
4
5
6

Additional details of Staff's rate design proposals are contained in Attachment RCS-S1, which is appended to my supplemental testimony. Attachment RCS-S1 contains five schedules, labeled as Schedule RD-1 through RD-5, which show various calculations concerning the development of Staff's proposed rate design for UNS Gas in this proceeding.

1 **Q. Please explain what is shown on Schedule RD-1 of Attachment RCS-S1.**

2 A. Schedule RD-1 consists of two pages and shows the proof of revenue at current and Staff-
3 proposed rates. Schedule RD-1, page 1, shows the proof of revenue at current rates using
4 the billing units from UNS Gas' filing at Schedule H-2, page 1. Applying those billing
5 units at current rates would produce base rate revenue of \$45.449 million, as shown in
6 Column C. This is approximately \$240,000 below the adjusted book revenue from gas
7 sales shown on UNS Gas' Schedule H-2, page 2 of 2, of \$45.689 million, which is shown
8 in Column D. The differences by rate class, which sum to \$240,468, are shown in
9 Column E. Columns F and G show the Staff adjustments to UNS Gas' proposed billing
10 units that relate to the Staff customer annualization and weather normalization
11 adjustments, respectively. Column H shows the Staff adjusted billing units, and Column I
12 shows the revenues produced at current rates that result from the application of UNS Gas'
13 current rates to those billing units. As shown on line 33, the difference of approximately
14 \$240,000 noted above occurs in Column I. The Staff adjusted average number of
15 customers in each rate class is shown in Column J. Of particular importance to Staff's
16 proposed rate design is the 5,556 number of Residential CARES (Rate R-12) customers.

17
18 Schedule RD-1, page 2, summarizes how the Staff's recommended rates provide UNS Gas
19 with an opportunity to collect \$50.515 million in base rate revenues, using the billing units
20 from page 1. The Staff recommended customer charge and distribution margin per-therm
21 rates for each rate class are shown in column D.

22
23 **Q. What is shown on Schedule RD-2?**

24 A. Schedule RD-2 shows the development of the CARES discount. As explained in the
25 testimony of Julie McNeely-Kirwan, Staff recommends that the current \$0.15 per therm
26 discount for Residential CARES (Rate R-12) winter gas usage up to 100 therms per month

1 be continued. Using 5,556 Residential CARES customers, the continuation of this
2 discount at average monthly terms, provided by the Company in response to data request
3 STF 15.3, produces the R-12 therm-based revenue discount of \$320,006 shown on
4 Schedule RD-2.

5
6 **Q. Please explain Schedule RD-3.**

7 A. Schedule RD-3 shows the development of Staff's recommended across-the-board base
8 rate revenue increase of 11.80 percent, excluding the Residential CARES (Rate R-12)
9 class. As shown on Schedule RD-3, Staff has calculated an across-the board increase for
10 the rate classes other than Rate R-12, of approximately 11.80 percent.

11
12 **Q. How does this compare with UNS Gas' rate design proposal?**

13 A. As shown on Schedule H-1 of UNS Gas' filing, the Company has proposed net revenue
14 increases for each class of service of approximately 21 percent. Staff's proposed net
15 revenue increase of 11.80 percent for rate classes other than Residential CARES (R-12) is
16 lower than the average 21.11 percent increases proposed by UNS Gas, which are
17 summarized on Schedule H-1 and Schedule H-2, page 2, of the Company's filing. For the
18 Residential CARES (R-12) rate, Staff proposes a revenue increase of approximately 4.54
19 percent. This is substantially lower than the 21.11 percent increase proposed by UNS
20 Gas².

21
22 **Q. What is shown on Schedule RD-4?**

23 A. Schedule RD-4 shows an analysis of revenues generated by fixed charges under the
24 current and Staff recommended rates. The Staff-recommended rate design reflects a
25 gradual approach to increasing customer charges. As shown on Schedule RD-4, Staff's

² See Schedule H-2, page 2 of UNS Gas' filing.

1 recommended rate design reflects an equal or increased percentage of base rate revenue
2 being collected via fixed charges. Of the \$4.962 million³ proposed base rate increase, the
3 Staff recommended rate design collects approximately \$2.560 million, or 52 percent of
4 this increase, through fixed charges.

5
6 As shown on Schedule RD-4, line 7, for example, for residential (R-10) service, UNS Gas
7 is currently collecting approximately 33 percent of the revenue from that rate via the fixed
8 customer charge of \$7.00 per month. As shown on line 11, Staff's proposed rate design,
9 including the recommended customer charge of \$8.50 per month, would result in UNS
10 Gas collecting approximately 36 percent of the revenue via fixed charges. Viewed from a
11 different perspective, as shown on Schedule RD-4, line 13, of the total revenue increase
12 Staff is recommending for residential service (Rate R-10), 60 percent of that would be
13 collected via the increase customer charge revenues.

14
15 Similar information for the other rate classes is also shown on Schedule RD-4.

16
17 **Q. What is shown on Schedule RD-5?**

18 A. Schedule RD-5 shows the derivation of the per-therm distribution rate for each rate class.
19 After accounting for the revenue to be collected via Staff's recommended customer
20 charges for each rate class, the remaining revenue is collected via a per-therm distribution
21 rate. Staff's recommended distribution rates for each rate class are shown on Schedule
22 RD-5, in column G.

³ This consists of the \$4.721 million base revenue requirement increase plus the \$240,000 billing unit adjustment shown on Schedule RD-1.

1 **Q. Please explain the Staff's bill impact comparisons at present and proposed rates.**

2 A. Attachment RCS-S2 shows Staff's bill impact analysis. Each page of Attachment RCS-S2
3 compares present rates and Staff's recommended rates over a range of usage levels for a
4 particular rate class. The average therms per month are similar to those shown on UNS
5 Gas' Schedule H-4, which presented a typical bill comparison of current and Company-
6 proposed rates. The Staff presentation on Attachment RCS-S2 includes both total bill⁴
7 and base rate only information. Because a significant portion of customers' bills can be
8 for gas cost, especially in the winter months, the percentage increases under the total bill
9 comparison are typically smaller than when comparing the base rate changes only.

10

11 To derive the gas costs for the total bill analysis, I added the current base cost of gas of
12 \$0.40 per therm to the current February 2007 PGA cost of \$0.3844 per therm. As
13 explained in the testimony of Staff witness Robert Gray, both UNS Gas and Staff in the
14 current proceeding are recommending that all gas costs be removed from base rates and
15 addressed in the PGA prospectively.

16

17 A review of the information on Attachment RCS-S2 shows that, because of the
18 recommended increases to the customer charge portion of the customer bills, for most
19 usage levels and most rate classes, the recommended rate changes produce a higher
20 percentage increase for lower usage customers within each class and a lower percentage
21 increase for higher usage customers. I discuss bill impacts on individual rate classes in
22 my discussion of Staff's recommended rate design for each rate class, below.

23

⁴ The total bill analysis does not include Staff is recommended DSM adjustor rate of \$0.00082 per therm

1 **R-10, Residential Gas Service**

2 **Q. Please discuss UNS Gas' proposal to significantly increase the customer charge and**
3 **first usage block for residential customers.**

4 A. UNS Gas' rate design proposals would increase the residential customer charge from the
5 current \$7.00 to \$20.00 for summer months and to \$11.00 for winter months. UNS Gas'
6 rate design proposals would reduce the per therm margin from \$0.3004 to \$0.1862. It is
7 understandable that from the Company's financial viewpoint, a heavy frontloading of
8 costs into the customer charge and first usage block is desirable. The testimony of Staff
9 witness Steve Ruback addresses the UNS Gas-proposed frontloading in additional detail.
10 Such a rate design would increase the certainty of the Company's revenue because the
11 customer charge is less impacted by fluctuations in weather and other factors. However,
12 the Company's interest must be balanced by the significant impacts of such a rate design
13 on bills residential customers would face, and other considerations.

14
15 **Q. Please discuss Staff's general concerns with UNS Gas' proposed front-loading of**
16 **costs in the residential customer charge.**

17 A. Any time such large changes in rate structure are proposed by a utility, the potential
18 impacts on customers must be carefully considered. Generally speaking, when large shifts
19 such as this are undertaken, some customers bear much more of the brunt of the rate
20 increase than other customers do. The proposed large increases in the customer charge
21 would hit low usage residential customers particularly hard, while high usage customers
22 would see relatively small bill increases. To the extent there is a need or desire to increase
23 the customer charge, a much more gradual movement would be warranted to protect
24 customers from possible rate shock. Staff's recommendations reflect such a gradual
25 approach to increasing the customer charge component of UNS Gas' rates.

26

1 **Q. What are Staff's recommendations regarding rates for the R-10 tariff?**

2 A. Staff recommends that the basic customer charge be increased from \$7.00 to \$8.50. Staff
3 further recommends that the distribution margin rate be set at \$0.3217 per therm. Staff is
4 not recommending any seasonal rate differential for Rate R-10.

5
6 **Q. What are the estimated customer bill impacts from Staff's proposed R-10 tariff
7 rates?**

8 A. As shown on Attachment RCS-S2, page 1 of 10, an R-10 customer using 100 therms
9 would see their total bill increase from \$115.48 to \$119.11, for an increase of \$3.63 per
10 month, or 3.14 percent. The corresponding increase in base rates only would be from
11 \$37.04 to \$40.67, an increase of 9.80 percent per month. Bill impacts for a range of other
12 monthly usage levels for residential customers (Rate R-10) are also presented on
13 Attachment RCS-S2, page 1 of 10. As shown there, total bill increases at Staff's
14 recommended rates range from 2.21 percent (at 500 therms) to 12.96 percent (at 5 therms).
15 Base rate increases (excluding gas costs), range from 7.72 percent (at 500 therms) to 18.94
16 percent (at 5 therms). At average January usage of 87 therms per month, the proposed
17 increase of \$3.36 equates to a 3.31 percent increase in a residential customer's total
18 monthly bill, or a 10.14 percent increase in the non-gas cost portion of the customer's bill.

19
20 **R-12, Residential Services CARES**

21 **Q. Please discuss the development of Staff's proposed rate design for the R-12 tariff for
22 low income customers.**

23 A. Staff witness Julie McNeely-Kirwan addressed the UNS Gas proposals for Residential
24 Service CARES (Rate R-12) in her direct testimony. As she has explained, Staff proposes
25 to retain the existing \$7.00 customer charge and the \$0.15 per therm winter rate discount
26 (applicable for November through April) up to the first 100 therms. The maximum

1 distribution margin rate discount available for a customer who uses 100 therms in a winter
2 month would thus remain at \$15.00. UNS Gas' current tariff, and Staff's
3 recommendation, provides a \$0.15 per therm discount on the first 100 therms of usage in
4 winter months, setting an effective cap of \$15.00 for a monthly customer discount.

5 For R-12 summer usage and for winter usage in excess of 100 therms per month, Staff
6 recommends the same distribution margin rate as for R-10 of \$0.3217 per therm.

7
8 **Q. What are the customer bill impacts of Staff's recommendations for the R-12 tariff?**

9 A. The estimated impacts over a range of usage are shown on Attachment RCS-S2, page 2 of
10 10. Depending upon the level of usage, for the summer months of May through October,
11 an R-12 customer would see a total bill increase ranging from \$0.11 (at 5 therms) to
12 \$10.64 (at 500 therms) per month, which equates to an increase of 0.89 percent to 1.94
13 percent. Base rate increases (excluding gas costs), range from 6.77 percent (at 500
14 therms) to 1.29 percent (at 5 therms).

15
16 For winter usage, an R-12 customer using less than 100 therms per month would
17 experience increases of no more than \$2.13 per month (at usage of 100 therms). As
18 shown on Attachment RCS-S2, page 2 of 10, an R-12 customer using gas in winter
19 months over 100 therms would experience a bill increase of \$5.32 per month (at 250
20 therms), or a 2.02 percent increase. An average R-12 customer, using 64 therms in the
21 winter months, would experience an increase of \$1.36 per month, which equates to a total
22 bill increase of 2.04 percent and a base rate (excluding gas cost) increase of approximately
23 8.18 percent.

1 **C-20, Small Commercial Service**

2 **Q. What are Staff's recommendations regarding rates for the C-20 tariff?**

3 A. Staff recommends that the customer charge be increased from \$11.00 to \$13.50. Staff
4 further recommends that the distribution margin rate be increased from \$0.2420 per therm
5 to \$0.2651 per therm. As shown on Attachment RCS-S2, page 3 of 10, on a total bill
6 basis, this results in an increase ranging from 2.27 percent (at 10,000 therms) to 5.87
7 percent (at 50 therms). On a base rate increase basis, this results in an increase ranging
8 from 9.61 percent (at 10,000 therms) to 15.84 percent (at 50 therms).

9
10 **C-22, Large Commercial Service**

11 **Q. What are Staff's recommendations regarding rates for the C22 tariff?**

12 A. Staff recommends that the customer charge be increased from \$85.00 to \$100. Staff
13 further recommends that the per therm rate be increased from \$0.1551 per therm to
14 \$0.1731 per therm. As shown on Attachment RCS-S2, page 4 of 10, on a total bill basis,
15 this results in an increase ranging from 1.94 percent (at 75,000 therms) to 2.06 percent (at
16 10,001 therms). On a base rate increase basis, excluding gas costs, this results in an
17 increase ranging from 11.67 percent (at 75,000 therms) to 11.94 percent (at 10,001
18 therms).

19
20 **I-30, Small Volume Industrial Service**

21 **Q. What are Staff's recommendations regarding rates for the I-30 tariff?**

22 A. Staff recommends that the customer charge be increased from \$11.00 to \$13.50. Staff
23 further recommends that the per therm rate be increased from \$0.2122 per therm to
24 \$0.2369 per therm. As shown on Attachment RCS-S2, page 5 of 10, on a total bill basis,
25 this results in an increase ranging from 2.50 percent (at 10,000 therms) to 6.13 percent (at

1 50 therms). On a base rate increase basis, excluding gas costs, this results in an increase
2 ranging from 11.69 percent (at 10,000 therms) to 17.26 percent (at 50 therms).

3

4 **I-32, Large Volume Industrial Service**

5 **Q. What are Staff's recommendations regarding rates for the I-32 tariff?**

6 A. Staff recommends that the customer charge be increased from \$85.00 to \$100. Staff
7 further recommends that the per therm rate be increased from \$0.0864 per therm to
8 \$0.0965 per therm. As shown on Attachment RCS-S2, page 6 of 10, on a total bill basis,
9 this results in an increase ranging from 1.18 percent (at 150,000 therms) to 1.32 percent
10 (at 10,001 therms). On a base rate increase basis, excluding gas costs, this results in an
11 increase ranging from 11.78 percent (at 150,000 therms) to 12.27 percent (at 10,001
12 therms).

13

14 **PA-40, Small Volume Public Authority**

15 **Q. What are Staff's recommendations regarding rates for the PA-40 tariff?**

16 A. Staff recommends that the customer charge be increased from \$11.00 to \$13.50. Staff
17 further recommends that the per therm rate be increased from \$0.2354 per therm to
18 \$0.2606 per therm. As shown on Attachment RCS-S2, page 7 of 10, on a total bill basis,
19 this results in an increase ranging from 2.49 percent (at 10,000 therms) to 6.07 percent (at
20 50 therms). On a base rate increase basis, this results in an increase ranging from 10.75
21 percent (at 10,000 therms) to 16.51 percent (at 50 therms).

22

23 **PA-42, Large Volume Public Authority**

24 **Q. What are Staff's recommendations regarding rates for the PA-42 tariff?**

25 A. Staff recommends that the customer charge be increased from \$85.00 to \$100. Staff
26 further recommends that the per therm rate be increased from \$0.1084 per therm to

1 \$0.1211 per therm. As shown on Attachment RCS-S2, page 8 of 10, on a total bill basis,
2 this results in an increase ranging from 1.43 percent (at 150,000 therms) to 1.58 percent
3 (at 10,001 therms). On a base rate increase basis, excluding gas costs, this results in an
4 increase ranging from 11.75 percent (at 150,000 therms) to 12.15 percent (at 10,001
5 therms).

6
7 **PA-44, Special Gas Light Service**

8 **Q. What are Staff's recommendations regarding rates for the PA-44 tariff?**

9 A. Staff recommends that the customer charge for Lighting Group A be increased from
10 \$13.57 to \$15.17, and for Lighting Group B, from \$16.28 to \$18.20. This is an increase of
11 \$1.60 and \$1.92 per month or approximately 11.80 percent⁵.

12
13 **IR-60, Irrigation Service**

14 **Q. What are Staff's recommendations regarding rates for the IR-60 tariff?**

15 A. Staff recommends that the customer charge be increased from \$11.00 to \$13.50. Staff
16 further recommends that the per therm rate be increased from \$0.2876 per therm to
17 \$0.3205 per therm. As shown on Attachment RCS-S2, page 10 of 10, on a total bill basis,
18 this results in an increase ranging from 3.09 percent (at 10,000 therms) to 6.42 percent (at
19 50 therms). On a base rate increase basis, excluding gas costs, this results in an increase
20 ranging from 11.48 percent (at 10,000 therms) to 16.35 percent (at 50 therms).

21
22 **Q. Does this conclude your supplemental testimony?**

23 A. Yes, it does.

⁵ As shown on Attachment RCS-S1, Schedules RD-3 and RD-4, Staff targeted an increase of 11.80 percent for this rate class, whose rates consist of the customer charge.

**Attachment RCS-S1
To the Supplemental Testimony
Of Staff Witness Ralph C. Smith**

**Staff Proposed Rate Design Summary
And Proof of Revenue**

Attachment RCS-S1
 Staff Rate Design Schedules
Accompanying the Direct Testimony of Ralph C. Smith

Schedule	Description	Pages
RD-1	Staff Proof of Revenue at Present and Proposed Rates	2
RD-2	Calculation of CARES (Rate R12) Total Discount for the Winter Months	1
RD-3	Calculation of An Across the Board Increase	1
RD-4	Analysis of Revenues Generated by Fixed Charges	1
RD-5	Calculation of Distribution Rate	1
	Total Pages	6

**PROOF OF REVENUE USING THE COMPANY'S BILLING UNITS
STATED ON SCHEDULE H-2, PAGE 1 OF 2**

Attachment RCS-S1
Schedule RD-1
Page 1 of 2

Line No.	Class of Service	Adjusted Billed BD (from H-2, page 1)	Existing Rates (B)	Current Revenues (C)	Adjusted Revenue Booked (D)	Difference (E)	Staff Billing Unit Adjustments			Adjusted Billing units (H)	Current Revenues (I)	Staff Adjusted Average No. of Customers (J)
							Staff Adj. for Customer Annualization (F)	Staff Adj. for Weather Normalization (G)	Staff Adj. for Customer Annualization (F)			
1	Residential Service (R10)	1,447,632	\$ 7.00	\$10,133,424			5,883		1,453,515	10,174,608	121,126	
2	Customer Charge	68,951,676	\$0.3004	\$20,713,083			129,854	4,916	69,086,246	20,753,508		
3	Distribution Margin Thems			\$30,646,507						30,928,113		
	TOTAL R10				\$31,176,937	(\$320,430)						
4	Residential Service Cares (R12)	87,920	\$ 7.00	\$475,440			(1,252)	(872)	66,668	466,676	5,556	
5	Customer Charge	2,813,844	\$0.3004	\$845,279			(40,412)		2,772,560	832,877		
6	Distribution Margin Thems			\$1,320,719						1,299,553		
	TOTAL R12				\$975,486	\$345,233						
7	Small Volume Commercial Service (C20)	131,028	\$ 11.00	\$1,441,308			1,178		132,206	1,454,266	11,017	
8	Customer Charge	29,014,067	\$0.2420	\$7,021,404			139,670	3,550	29,157,287	7,056,063		
9	Distribution Margin Thems			\$8,462,712						8,510,329		
	TOTAL R20				\$8,531,880	(\$68,168)						
10	Large Volume Commercial Service (C22) and Commercial Transportation	204	\$ 85.00	\$17,340			4		208	17,680	17	
11	Customer Charge	3,756,735	\$0.1551	\$582,670			32,215		3,788,950	587,666		
12	Distribution Margin Thems			\$600,010						605,346		
	TOTAL R22				\$681,307	(\$61,937)						
13	Small Volume Industrial Service (I-30)	156	\$ 11.00	\$1,716					156	1,716	13	
14	Customer Charge	511,826	\$0.2122	\$108,609					511,826	108,609		
15	Distribution Margin Thems			\$110,325						110,325		
	TOTAL I30				\$109,160	\$1,136						
16	Large Volume Industrial Service (I-32)	228	\$ 85.00	\$19,380					228	19,380	19	
17	Customer Charge	21,610,146	\$0.0864	\$1,867,117					21,610,146	1,867,117		
18	Distribution Margin Thems			\$1,898,497						1,868,497		
	TOTAL I32				\$1,971,743	(\$85,246)						
19	Small Volume Public Authority (PA-40)	12,696	\$ 11.00	\$139,656			(32)		12,664	139,304	1,055	
20	Customer Charge	5,828,186	\$0.2354	\$1,371,955			(19,344)	(476)	5,808,366	1,367,289		
21	Distribution Margin Thems			\$1,511,611						1,506,593		
	TOTAL PA40				\$1,527,532	(\$15,921)						
22	Large Volume Public Authority (PA-42)	108	\$ 85.00	\$9,180			(4)		104	8,840	9	
23	Customer Charge	5,558,725	\$0.1084	\$602,566			(33,636)		5,525,089	598,920		
24	Distribution Margin Thems			\$611,746						607,760		
	TOTAL PA42				\$637,909	(\$26,163)						
25	Special Gas Light Service (PA-44)	864	\$ 13.57	\$11,724					864	11,724		
26	Customer Charge	3,756	\$ 16.28	\$61,148					3,756	61,148		
27	Distribution Margin Thems			\$72,872						72,872		
	TOTAL PA44				\$73,078	(\$206)						
28	Irrigation Service (IR-60)	72	\$ 11.00	\$792					72	792	6	
29	Customer Charge	86,803	\$0.2876	\$24,965					86,803	24,965		
30	Distribution Margin Thems			\$25,757						25,757		
	TOTAL IR60				\$23,562	\$2,194						
31	Total Gas Service Revenue at Present Rates			\$45,689,224						45,553,146		
32	Staff Adjusted Revenue at Present Rates			Note A						45,793,618		
33	Difference								Difference	(240,472)		
										Note A		
34	Total Bills	1,660,047							1,665,824			
35	Total Monthly Customers	136,340							136,822		136,821 [B]	
36	Total Distribution Thems	136,233,863							136,347,273			

Notes and Source
 Col.A: UNS Gas filing, Schedule H-2, page 1 of 2, adjusted average number of customers (x 12) and adjusted therm sales
 Col.B: UNS Gas filing, Schedule H-2, page 1 of 2, adjusted average number of customers lists 3 customers for PA44; billing units for PA44 on lines 25&26 are from a worksheet
 Col.C: Col.A x Col.B
 Col.D: UNS Gas filing, Schedule H-3, Present Rates
 Total agrees with UNS Gas filing, Schedule H-1, Adjusted Present Net Revenue subtotal on line 8 of that schedule.
 Col.E: Col.C - Col.D
 Col.F: Staff worksheets
 Col.G: Staff worksheets
 Col.H: Col.A + Col.F + Col.G
 Col.I: Col.H x Col.B
 [A] The billing units from the Company's Schedule H-2, page 1 of 2 produce a net revenue of \$45,488,756 which is 240,468 less than what the Company states in Schedule H-2, page 2 of 2.
 [B] Includes 3 customers for PA44

Line	Class of Service	Adjusted Billing Units A	Existing Rates (B)	Current Revenues (C)	Staff Proposed New Rates (D)	Proposed Revenues (E)	Residential Cares (R-12) Winter Discount (F)
Residential Service (R10)							
1	Customer Charge	1,453,515	7.00	\$ 10,174,605	8.50	\$ 12,354,878	
2	Distribution Margin Therms	69,086,246	0.3004	\$ 20,753,508	0.3217	\$ 22,223,452	
3	TOTAL R10			\$ 30,928,113		\$ 34,578,330	
Residential Service Cares (R12)							
4	Customer Charge	66,668	7.00	\$ 466,676	7.00	\$ 466,676	
5	Distribution Margin Therms	2,772,560	0.3004	\$ 832,877	0.3217	\$ 891,877	\$ (320,006)
6	TOTAL R12			\$ 1,299,553		\$ 1,358,553	
Small Volume Commercial Service (C20)							
7	Customer Charge	132,206	11.00	\$ 1,454,266	13.50	\$ 1,784,781	
8	Distribution Margin Therms	29,157,287	0.2420	\$ 7,056,063	0.2651	\$ 7,729,960	
9	TOTAL C20			\$ 8,510,329		\$ 9,514,741	
Large Volume Commercial Service (C22) and Commercial Transportation							
10	Customer Charge	208	85.00	\$ 17,680	100.00	\$ 20,800	
11	Distribution Margin Therms	3,788,950	0.1551	\$ 587,666	0.1731	\$ 655,991	
12	TOTAL C22			\$ 605,346		\$ 676,791	
Small Volume Industrial Service (I-30)							
13	Customer Charge	156	11.00	\$ 1,716	13.50	\$ 2,106	
14	Distribution Margin Therms	511,826	0.2122	\$ 108,609	0.2369	\$ 121,240	
15	TOTAL I30			\$ 110,325		\$ 123,346	
Large Volume Industrial Service (I-32) and Industrial Transportation							
16	Customer Charge	228	85.00	\$ 19,380	100.00	\$ 22,800	
17	Distribution Margin Therms	21,610,146	0.0864	\$ 1,867,117	0.0965	\$ 2,086,346	
18	TOTAL I32			\$ 1,886,497		\$ 2,109,146	
Small Volume Public Authority (PA-40)							
19	Customer Charge	12,664	11.00	\$ 139,304	13.50	\$ 170,964	
20	Distribution Margin Therms	5,808,366	0.2354	\$ 1,367,289	0.2606	\$ 1,513,441	
21	TOTAL PA40			\$ 1,506,593		\$ 1,684,405	
Large Volume Public Authority (PA-42) and Public Authority Transportation							
22	Customer Charge	104	85.00	\$ 8,840	100.00	\$ 10,400	
23	Distribution Margin Therms	5,525,089	0.1084	\$ 598,920	0.1211	\$ 669,089	
24	TOTAL PA42			\$ 607,760		\$ 679,489	
Special Gas Light Service (PA-44)							
25	Customer Charge Lighting Group A	864	13.57	\$ 11,724	15.17	\$ 13,108	
26	Customer Charge Lighting Group B	3,756	16.28	\$ 61,148	18.20	\$ 68,364	
27	TOTAL PA44			\$ 72,872		\$ 81,473	
Irrigation Service (IR-60)							
28	Customer Charge	72	11.00	\$ 792	13.50	\$ 972	
29	Distribution Margin Therms	86,803	0.2876	\$ 24,965	0.3205	\$ 27,824	
30	TOTAL IR60			\$ 25,757		\$ 28,796	
30	Total Revenue Requirements			\$ 45,553,146		\$ 4,961,918	\$ 50,515,064
31	Staff revenues			\$ 45,793,618		\$ 4,721,446	\$ 50,515,064
33	Difference			\$ (240,472)		\$ 240,472	

Note A

Notes

[A] The (240,472) billing unit-related difference is incorporated into the development of Staff's Proposed Rates. Staff's proposed rates are designed to recover the adjusted revenue requirement using the adjusted billing determinants in column A.

Attachment RCS-S1
Schedule RD-2

Calculation of CARES (Rate R12) Total Discount for the Winter Months
Discount equals 15 cents off of the per therm rate, up to 100 therms

Provided from STF 15.3		Average monthly therms	Discount	Annualized Customers	R12 Therm- Based Revenue Discount
Line	Month	(A)	(B)	(C)	(D)
1	Nov	29	0.1500	5,556	\$ 24,167
2	Dec	66	0.1500	5,556	\$ 55,001
3	Jan	92	0.1500	5,556	\$ 76,668
4	Feb	76	0.1500	5,556	\$ 63,335
5	March	66	0.1500	5,556	\$ 55,001
6	April	55	0.1500	5,556	\$ 45,834
7					
8	Average Monthly therms	64			\$ 320,006
9	Discount for first 100 therms	0.1500			
10	Average Monthly Savings per customer	9.60			
11	For Six Months	57.60			
12	Annual # of customers	66,668			
13	Monthly customers	5,556			
14	Total Discount				\$ 320,006

Schedule RD-1, pages 1 and 2
Schedule RD-1, page 2

UNS Gas Inc. Rate Case; Docket No. G-04204A-06-0463
 Calculation of An Across the Board Increase

Attachment RCS-S1
 Schedule RD-3

Line	Class	Current Net Revenue (A)	Staff Proposed Increase (B)	Difference in Billing units vs Adj. Revenue (C)	Adjusted Proposed Increase (D)	Proposed Net Revenue (E)	Across-The Board Increase (F)
1	Total	45,553,146	4,721,446	240,472	4,961,918	50,515,064	
2	Residential CARES (R12)	1,299,553			59,000		
3	Total without CARES	44,253,593			4,902,918		11.08%
4	Allocation of CARES (R12) Discount				320,006		0.72%
5	Across the Board %						11.80% (A)
6	Residential (R10)	30,928,113			3,650,217	34,578,330	11.80%
7	Residential CARES (R12)	1,299,553			59,000	1,358,553	4.54% (B)
8	Small Comm Serv (C-20)	8,510,329			1,004,411	9,514,741	11.80%
9	Large Comm Serv (C-22) and Comm Trans	605,346			71,445	676,791	11.80%
10	Sm. Industrial (I-30)	110,325			13,021	123,346	11.80%
11	Large Industrial (I-32) and Industrial Trans	1,886,497			222,649	2,109,146	11.80%
12	Sm. Public Authority (PA-40)	1,506,593			177,812	1,684,405	11.80%
13	Lg. Public Authority (PA-42) and PA Trans	607,760			71,729	679,489	11.80%
14	Special Gas Light (PA-44)	72,872			8,601	81,473	11.80%
15	Irrigation (I-60)	25,757			3,040	28,796	11.80%
16	TOTAL	45,553,146			5,281,924	50,835,070	
17	CARES winter therm discount				\$ 320,006	320,006	
18	Total Revenue Increase				4,961,918	50,515,064	

Notes and Source

Net Revenue is the adjusted Net Revenue proposed by Staff

(A) Across the board for all classes except CARES class; including discount

(B) To ensure therm rate is same as Residential

See Schedule RD-2 for development of the CARES discount

UNS Gas Inc. Rate Case; Docket No. G-04204A-06-0463
 Analysis of Revenues Generated by Fixed Charges

Attachment RCS-S1
 Schedule RD-4

Line	Description	Totals	Residential		Residential Cares		Small Comm		Large Comm		Large Industrial		Sm. Public Authority		Lg. Public Authority and		Special Gas		Irrigation
			R10	R12	Small Comm Serv C20	Small Comm Serv C22	Large Comm Serv & Comm C22	Sm. Industrial I30	Large Industrial & Industrial I32	Sm. Public Authority PA-40	Public Authority Trans PA-42	Special Gas Light PA-44	Special Gas Light Group A	Special Gas Light Group B	Special Gas Light PA-44	Special Gas Light Group B	IR-60		
1	# of Customers	1,453,515	66,668	132,206	208	156	228	12,664	104	864	3,756	72							
CUSTOMER CHARGE																			
CURRENT																			
2	Customer Charge	\$ 7.00	\$ 7.00	\$ 11.00	\$ 85.00	\$ 11.00	\$ 85.00	\$ 11.00	\$ 85.00	\$ 13.57	\$ 16.28	\$ 11.00							
PROPOSED																			
3	Customer Charge	\$ 8.50	\$ 7.00	\$ 13.50	\$ 100.00	\$ 13.50	\$ 100.00	\$ 13.50	\$ 100.00	\$ 15.17	\$ 18.20	\$ 13.50							
% of Increase																			
4	Customer Charge	21.43%	0.00%	22.73%	17.65%	22.73%	17.65%	22.73%	17.65%	11.80%	11.80%	22.73%							
REVENUES GENERATED BY CUSTOMER CHARGE																			
5	Current Revenues from Customer Charge	\$ 12,356,131	\$ 10,174,605	\$ 1,454,266	\$ 17,680	\$ 1,716	\$ 19,380	\$ 139,304	\$ 8,840	\$ 11,724	\$ 61,148	\$ 792							
6	Total Revenues	\$ 45,553,146	\$ 30,928,113	\$ 1,299,553	\$ 8,510,329	\$ 605,346	\$ 1,886,497	\$ 1,506,593	\$ 607,760	\$ 11,724	\$ 61,148	\$ 25,757							
7	% of fixed charges	27%	33%	17%	3%	2%	1%	9%	1%	100%	100%	3%							
PROPOSED CUSTOMER CHARGE																			
8	Proposed Increase	\$ 4,961,918	3,650,217	1,004,411	71,445	13,021	222,649	177,812	71,729	1,384	7,217	3,040							
9	Total Revenues (includes discount)	\$ 50,515,064	\$ 34,578,330	\$ 1,358,553	\$ 8,581,774	\$ 676,791	\$ 2,109,146	\$ 1,684,405	\$ 679,489	\$ 13,108	\$ 68,364	\$ 28,796							
10	Proposed Revenues from Customer Charge	\$ 14,915,849	\$ 12,354,878	\$ 1,784,781	\$ 20,800	\$ 2,106	\$ 22,800	\$ 170,964	\$ 10,400	\$ 13,108	\$ 68,364	\$ 972							
11	% of Fixed Charges	30%	36%	19%	3%	2%	1%	10%	2%	100%	100%	3%							
12	Increase in Revenues from Customer Charge	\$ 2,559,718	\$ 2,180,273	\$ 330,515	\$ 3,120	\$ 390	\$ 3,420	\$ 31,660	\$ 1,560	\$ 1,384	\$ 7,217	\$ 180							
13	Customer Charge Increases as Percent of Total Revenue Increases	52%	60%	33%	4%	3%	2%	18%	2%	100%	100%	6%							

Footnotes:
 PA-44 Group A and B Increase is based on their % of present revenue collected compared to the total

UNS Gas Inc. Rate Case; Docket No. G-04204A-06-0463
Calculation of Distribution Rate

Attachment RCS-S1
 Schedule RD-5

Line	Class	Revenue Increase (A)	Current Revenues (B)	Proposed Revenues (C)	Proposed Cust. Charge Rev. (D)	Difference (E)	Distribution Therms (F)	Distribution Rate (G)
1	Total	\$ 4,961,918	\$ 45,553,146	\$ 50,515,064			138,347,273	
2	Residential (R-10)	3,650,217	30,928,113	34,578,330	12,354,878	22,223,452	69,086,246	0.3217
3	Residential Cares (R-12) (Note A)	59,000	1,299,553	1,358,553	466,676	891,877	2,772,560	0.3217
4	Small Comm Serv (C-20)	1,004,411	8,510,329	9,514,741	1,784,781	7,729,960	29,157,287	0.2651
5	Large Comm Serv (C-22) and Comm Trans	71,445	605,346	676,791	20,800	655,991	3,788,950	0.1731
6	Sm. Industrial (I-30)	13,021	110,325	123,346	2,106	121,240	511,826	0.2369
7	Large Industrial (I-32) and Trans	222,649	1,886,497	2,109,146	22,800	2,086,346	21,610,146	0.0965
8	Sm. Public Authority (PA-40)	177,812	1,506,593	1,684,405	170,964	1,513,441	5,808,366	0.2606
9	Lg. Public Authority (PA-42) and Trans	71,729	607,760	679,489	10,400	669,089	5,525,089	0.1211
10	Special Gas Light (PA-44) (Note B)	8,601	72,872	81,473	81,473			
11	Irrigation (I-60)	3,040	25,757	28,796	972	27,824	86,803	0.3205
12	TOTALS	\$ 5,281,924	\$ 45,553,146	\$ 50,835,070	\$ 14,915,849	\$ 35,919,221	138,347,273	
13	CARES winter discount	\$ (320,006)		\$ (320,006)				
14	TOTALS after reflecting CARES discount	\$ 4,961,918	\$ 45,553,146	\$ 50,515,064				

Notes

Note A: Calculation of Discount for Residential Cares (R12)	
15	Total Annual Customers \$ 57,60
16	Total Monthly Customers 66,668
17	Total Discount for Six months 5,556
	<u>320,006</u>

Note B: Rate PA-44 has Customer Charges Only
 Col.D, Customer Charge Revenue amounts are from Schedule RD-1, page 2, Col.E; amounts on Schedule RD-4, line 10, may differ slightly for some rate classes due to rounding.

**Attachment RCS-S2
To the Supplemental Testimony
Of Staff Witness Ralph C. Smith**

**Bill Impact Analysis
Of Staff Proposed Rate Design**

Note: When discussing rate design and representing impacts of various rate design characteristics, for the total bill impact comparisons, I have included the current base cost of gas and the current (February 2007) PGA rate. Both UNS Gas and Staff in the current proceeding are recommending that all gas costs be removed from base rates and addressed in the PGA prospectively. The total bill impact comparisons presented here are exclusive of the Staff's recommended DSM rate of \$0.00082 per therm.

UNSGas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Residential Service (R10)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge (Sum: Apr-Nov)	\$7.00	\$8.50	A & C
2	Distribution Margin Therms	\$ 0.3004	\$ 0.3217	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$7.00	\$ 1.50	\$8.50	\$ 3.92	\$12.42
7	\$7.00	\$ 3.00	\$10.00	\$ 7.84	\$17.84
8	\$7.00	\$ 6.01	\$13.01	\$ 15.69	\$28.70
9	\$7.00	\$ 10.51	\$17.51	\$ 27.45	\$44.96
10	\$7.00	\$ 15.02	\$22.02	\$ 39.22	\$61.24
11	\$7.00	\$ 22.53	\$29.53	\$ 58.93	\$88.36
12	\$7.00	\$ 30.04	\$37.04	\$ 78.44	\$115.48
13	\$7.00	\$ 75.10	\$82.10	\$ 196.10	\$278.20
14	\$7.00	\$ 150.20	\$157.20	\$ 392.20	\$549.40

Rate Component	Present Rates	Staff Proposed	Notes	
15	Customer Charge (Winter: Dec-Mar)	\$7.00	\$8.50	A & C
16	Distribution Margin Therms	\$ 0.3004	\$ 0.3217	A
17	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
18	Base gas cost	\$ 0.4000	\$ 0.4000	B
19	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
20	\$7.00	\$ 1.50	\$8.50	\$ 3.92	\$12.42
21	\$7.00	\$ 3.00	\$10.00	\$ 7.84	\$17.84
22	\$7.00	\$ 6.01	\$13.01	\$ 15.69	\$28.70
23	\$7.00	\$ 10.51	\$17.51	\$ 27.45	\$44.96
24	\$7.00	\$ 15.02	\$22.02	\$ 39.22	\$61.24
25	\$7.00	\$ 22.53	\$29.53	\$ 58.93	\$88.36
26	\$7.00	\$ 30.04	\$37.04	\$ 78.44	\$115.48
27	\$7.00	\$ 75.10	\$82.10	\$ 196.10	\$278.20
28	\$7.00	\$ 150.20	\$157.20	\$ 392.20	\$549.40

Typical Jan Usage

29	\$7.00	\$ 26.13	\$33.13	\$ 68.24	\$101.37
----	--------	----------	---------	----------	----------

Notes

A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1

B Cost of Gas Inputs worksheet

C UNS Gas is proposing a different customer charge rate of \$20 and \$11 per month for summer and winter, respectively. Staff recommends the same customer charge rate for all months.

R10

Total Bill	Proposed Rates		Total Bill	
	Customer Charge	Distribution Margin		
\$8.50	\$ 1.61	\$10.11	\$ 3.92	\$14.03
\$8.50	\$ 3.22	\$11.72	\$ 7.84	\$19.56
\$8.50	\$ 6.43	\$14.93	\$ 15.69	\$30.62
\$8.50	\$ 11.26	\$24.58	\$ 27.45	\$47.21
\$8.50	\$ 16.08	\$32.63	\$ 39.22	\$63.80
\$8.50	\$ 24.13	\$40.67	\$ 58.93	\$91.46
\$8.50	\$ 32.17	\$48.67	\$ 78.44	\$119.11
\$8.50	\$ 80.42	\$88.92	\$ 196.10	\$285.02
\$8.50	\$ 160.84	\$169.34	\$ 392.20	\$561.54

Total Bill	Proposed Rates		Total Bill	
	Customer Charge	Distribution Margin		
\$8.50	\$ 1.61	\$10.11	\$ 3.92	\$14.03
\$8.50	\$ 3.22	\$11.72	\$ 7.84	\$19.56
\$8.50	\$ 6.43	\$14.93	\$ 15.69	\$30.62
\$8.50	\$ 11.26	\$24.58	\$ 27.45	\$47.21
\$8.50	\$ 16.08	\$32.63	\$ 39.22	\$63.80
\$8.50	\$ 24.13	\$40.67	\$ 58.93	\$91.46
\$8.50	\$ 32.17	\$48.67	\$ 78.44	\$119.11
\$8.50	\$ 80.42	\$88.92	\$ 196.10	\$285.02
\$8.50	\$ 160.84	\$169.34	\$ 392.20	\$561.54

Total Bill	Proposed Rates		Total Bill	
	Customer Charge	Distribution Margin		
\$8.50	\$ 1.61	\$10.11	\$ 3.92	\$14.03
\$8.50	\$ 3.22	\$11.72	\$ 7.84	\$19.56
\$8.50	\$ 6.43	\$14.93	\$ 15.69	\$30.62
\$8.50	\$ 11.26	\$24.58	\$ 27.45	\$47.21
\$8.50	\$ 16.08	\$32.63	\$ 39.22	\$63.80
\$8.50	\$ 24.13	\$40.67	\$ 58.93	\$91.46
\$8.50	\$ 32.17	\$48.67	\$ 78.44	\$119.11
\$8.50	\$ 80.42	\$88.92	\$ 196.10	\$285.02
\$8.50	\$ 160.84	\$169.34	\$ 392.20	\$561.54

Total Bill	Proposed Rates		Total Bill	
	Customer Charge	Distribution Margin		
\$8.50	\$ 1.61	\$10.11	\$ 3.92	\$14.03
\$8.50	\$ 3.22	\$11.72	\$ 7.84	\$19.56
\$8.50	\$ 6.43	\$14.93	\$ 15.69	\$30.62
\$8.50	\$ 11.26	\$24.58	\$ 27.45	\$47.21
\$8.50	\$ 16.08	\$32.63	\$ 39.22	\$63.80
\$8.50	\$ 24.13	\$40.67	\$ 58.93	\$91.46
\$8.50	\$ 32.17	\$48.67	\$ 78.44	\$119.11
\$8.50	\$ 80.42	\$88.92	\$ 196.10	\$285.02
\$8.50	\$ 160.84	\$169.34	\$ 392.20	\$561.54

Typical Jan Usage

29	\$8.50	\$ 27.99	\$36.49	\$ 68.24	\$104.73
----	--------	----------	---------	----------	----------

Notes

A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1

B Cost of Gas Inputs worksheet

C UNS Gas is proposing a different customer charge rate of \$20 and \$11 per month for summer and winter, respectively. Staff recommends the same customer charge rate for all months.

R10

UNIS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Residential Service CARES (R12)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge (Sum: May-Oct)	\$ 7.00	\$ 7.00	A
2	Distribution Margin Therms	\$ 0.3004	\$ 0.3217	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill
5	\$ 7.00	\$ 1.50	\$ 8.50	\$ 3.92	\$ 12.42
10	\$ 7.00	\$ 3.00	\$ 10.00	\$ 7.84	\$ 17.84
20	\$ 7.00	\$ 6.01	\$ 13.01	\$ 15.69	\$ 28.70
35	\$ 7.00	\$ 10.51	\$ 17.51	\$ 27.45	\$ 44.96
50	\$ 7.00	\$ 15.02	\$ 22.02	\$ 39.22	\$ 61.24
75	\$ 7.00	\$ 22.53	\$ 29.53	\$ 56.83	\$ 86.36
100	\$ 7.00	\$ 30.04	\$ 37.04	\$ 74.44	\$ 111.48
250	\$ 7.00	\$ 75.10	\$ 82.10	\$ 166.10	\$ 278.20
500	\$ 7.00	\$ 150.20	\$ 157.20	\$ 392.20	\$ 549.40

Rate Component	Present Rates	Staff Proposed	Notes
15 Customer Charge (Winter)	\$ 7.00	\$ 7.00	A & C
16 Distribution Margin Therms	\$ 0.3004	\$ 0.3217	A
16a Margin Rate Discount (Nov-Apr <100 therms)	\$ 0.1500	\$ 0.1500	C
17 Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
18 Base gas cost	\$ 0.4000	\$ 0.4000	B
19 Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	

Average Therms Per Month	Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill
5	\$ 7.00	\$ 0.75	\$ 7.75	\$ 3.92	\$ 11.67
10	\$ 7.00	\$ 1.50	\$ 8.50	\$ 7.84	\$ 16.34
20	\$ 7.00	\$ 3.01	\$ 10.01	\$ 15.69	\$ 25.70
35	\$ 7.00	\$ 5.26	\$ 12.26	\$ 27.45	\$ 39.71
50	\$ 7.00	\$ 7.52	\$ 14.52	\$ 39.22	\$ 53.74
75	\$ 7.00	\$ 11.28	\$ 18.28	\$ 56.83	\$ 77.11
100	\$ 7.00	\$ 15.04	\$ 22.04	\$ 74.44	\$ 100.48
250	\$ 7.00	\$ 60.10	\$ 67.10	\$ 166.10	\$ 283.20
500	\$ 7.00	\$ 135.20	\$ 142.20	\$ 392.20	\$ 534.40

Average	Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill
64	\$ 7.00	\$ 9.63	\$ 16.63	\$ 50.20	\$ 66.83

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet
- C Direct testimony of Staff witness Julie McNeely-Kirwan

Line 27, Distribution Margin	Present	Staff Proposed
100	\$ 0.1504	\$ 15.04
150	\$ 0.3004	\$ 45.06
	\$	\$ 60.10

Line 28, Distribution Margin	Present	Staff Proposed
100	\$ 0.1504	\$ 15.04
400	\$ 0.3004	\$ 120.16
	\$	\$ 135.20

Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill	Proposed Increase \$	Proposed Increase %	Base Rates Only Proposed Increase \$	Base Rates Only Proposed Increase %
\$ 7.00	\$ 1.61	\$ 8.61	\$ 3.92	\$ 12.53	\$ 0.11	0.89%	\$ 0.11	1.29%
\$ 7.00	\$ 3.22	\$ 10.22	\$ 7.84	\$ 18.06	\$ 0.22	1.23%	\$ 0.22	2.20%
\$ 7.00	\$ 6.43	\$ 13.43	\$ 15.69	\$ 29.12	\$ 0.42	1.46%	\$ 0.42	3.23%
\$ 7.00	\$ 11.26	\$ 18.26	\$ 27.45	\$ 45.71	\$ 0.75	1.67%	\$ 0.75	4.28%
\$ 7.00	\$ 16.08	\$ 23.08	\$ 39.22	\$ 62.30	\$ 1.06	1.73%	\$ 1.06	4.81%
\$ 7.00	\$ 24.13	\$ 31.13	\$ 56.83	\$ 87.96	\$ 1.60	1.84%	\$ 1.60	5.42%
\$ 7.00	\$ 32.17	\$ 39.17	\$ 74.44	\$ 117.61	\$ 2.13	1.84%	\$ 2.13	5.75%
\$ 7.00	\$ 80.42	\$ 87.42	\$ 196.10	\$ 283.52	\$ 5.32	1.91%	\$ 5.32	6.48%
\$ 7.00	\$ 160.84	\$ 167.84	\$ 392.20	\$ 560.04	\$ 10.64	1.94%	\$ 10.64	6.77%

Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill	Proposed Increase \$	Proposed Increase %	Base Rates Only Proposed Increase \$	Base Rates Only Proposed Increase %
\$ 7.00	\$ 0.86	\$ 7.86	\$ 3.92	\$ 11.78	\$ 0.11	0.94%	\$ 0.11	1.42%
\$ 7.00	\$ 1.72	\$ 9.72	\$ 7.84	\$ 17.56	\$ 0.22	1.35%	\$ 0.22	2.59%
\$ 7.00	\$ 3.43	\$ 10.43	\$ 15.69	\$ 26.12	\$ 0.42	1.53%	\$ 0.42	4.20%
\$ 7.00	\$ 6.01	\$ 13.01	\$ 27.45	\$ 40.46	\$ 0.75	1.89%	\$ 0.75	6.12%
\$ 7.00	\$ 8.58	\$ 15.58	\$ 39.22	\$ 54.80	\$ 1.06	1.97%	\$ 1.06	7.30%
\$ 7.00	\$ 12.88	\$ 19.88	\$ 56.83	\$ 76.71	\$ 1.60	2.07%	\$ 1.60	8.75%
\$ 7.00	\$ 17.17	\$ 24.17	\$ 74.44	\$ 102.61	\$ 2.13	2.12%	\$ 2.13	9.65%
\$ 7.00	\$ 65.42	\$ 72.42	\$ 196.10	\$ 288.52	\$ 5.32	2.02%	\$ 5.32	7.93%
\$ 7.00	\$ 145.84	\$ 152.84	\$ 392.20	\$ 545.04	\$ 10.64	1.99%	\$ 10.64	7.48%

Average	Customer Charge	Distribution Margin	Base Rates	Gas Cost	Total Bill	Proposed Increase \$	Proposed Increase %	Base Rates Only Proposed Increase \$	Base Rates Only Proposed Increase %
64	\$ 7.00	\$ 10.99	\$ 17.99	\$ 50.20	\$ 66.19	\$ 1.36	2.04%	\$ 1.36	6.18%

Line 27, Distribution Margin	Present	Staff Proposed
100	\$ 0.1717	\$ 17.17
150	\$ 0.3217	\$ 48.25
	\$	\$ 65.42

Line 28, Distribution Margin	Present	Staff Proposed
100	\$ 0.1717	\$ 17.17
400	\$ 0.3217	\$ 128.67
	\$	\$ 145.84

UNSGas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Small Commercial Service (C20)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$11.00	\$13.50	A
2	Distribution Margin Therms	\$ 0.2420	\$ 0.2651	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$11.00	\$ 12.10	\$23.10	\$ 39.22	\$62.32
7	\$11.00	\$ 24.20	\$35.20	\$ 78.44	\$113.64
8	\$11.00	\$ 121.00	\$132.00	\$ 392.20	\$524.20
9	\$11.00	\$ 242.00	\$253.00	\$ 784.40	\$1,037.40
10	\$11.00	\$ 363.00	\$374.00	\$1,176.60	\$1,550.60
11	\$11.00	\$ 605.00	\$616.00	\$1,961.00	\$2,577.00
12	\$11.00	\$1,210.00	\$1,221.00	\$3,922.00	\$5,143.00
13	\$11.00	\$1,815.00	\$1,826.00	\$5,883.00	\$7,709.00
14	\$11.00	\$2,420.00	\$2,431.00	\$7,844.00	\$10,275.00

Customer Charge	Distribution Margin	Proposed Rates		Total Bill
		Base Rates	Gas Cost	
\$13.50	\$ 13.26	\$26.76	\$ 39.22	\$65.98
\$13.50	\$ 26.51	\$40.01	\$ 78.44	\$118.45
\$13.50	\$ 132.56	\$146.06	\$ 392.20	\$538.26
\$13.50	\$ 265.11	\$278.61	\$ 784.40	\$1,063.01
\$13.50	\$ 397.67	\$411.17	\$1,176.60	\$1,587.77
\$13.50	\$ 662.78	\$676.28	\$1,961.00	\$2,637.28
\$13.50	\$ 1,325.56	\$1,339.06	\$3,922.00	\$5,261.06
\$13.50	\$ 1,988.34	\$2,001.84	\$5,883.00	\$7,884.84
\$13.50	\$ 2,651.12	\$2,664.62	\$7,844.00	\$10,508.62

Total Bill		Proposed Increase	
\$	%	\$	%
\$3.66	5.87%	\$3.66	15.84%
\$4.81	4.23%	\$4.81	13.66%
\$14.06	2.68%	\$14.06	10.65%
\$25.61	2.47%	\$25.61	10.12%
\$37.17	2.40%	\$37.17	9.94%
\$60.28	2.34%	\$60.28	9.79%
\$118.06	2.30%	\$118.06	9.67%
\$175.84	2.28%	\$175.84	9.63%
\$233.62	2.27%	\$233.62	9.61%

Base Rates Only		Proposed Increase	
\$	%	\$	%
\$3.66	15.84%	\$3.66	15.84%
\$4.81	13.66%	\$4.81	13.66%
\$14.06	10.65%	\$14.06	10.65%
\$25.61	10.12%	\$25.61	10.12%
\$37.17	9.94%	\$37.17	9.94%
\$60.28	9.79%	\$60.28	9.79%
\$118.06	9.67%	\$118.06	9.67%
\$175.84	9.63%	\$175.84	9.63%
\$233.62	9.61%	\$233.62	9.61%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNSGas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Large Commercial Service (C22)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$85.00	\$100.00	A
2	Distribution Margin Therms	\$ 0.1551	\$ 0.1731	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$85.00	\$ 1,551.16	\$1,836.16	\$ 7,844.78	\$9,460.94
7	\$85.00	\$ 1,938.75	\$2,023.75	\$ 9,805.00	\$11,828.75
8	\$85.00	\$ 2,326.50	\$2,411.50	\$11,766.00	\$14,177.50
9	\$85.00	\$ 2,714.25	\$2,799.25	\$13,727.00	\$16,526.25
10	\$85.00	\$ 3,102.00	\$3,187.00	\$15,688.00	\$18,875.00
11	\$85.00	\$ 3,877.50	\$3,962.50	\$19,610.00	\$23,572.50
12	\$85.00	\$ 4,653.00	\$4,738.00	\$23,532.00	\$28,270.00
13	\$85.00	\$ 6,979.50	\$7,064.50	\$35,298.00	\$42,362.50
14	\$85.00	\$11,632.50	\$11,717.50	\$58,830.00	\$70,547.50

Customer Charge	Distribution Margin	Proposed Rates			Total Bill
		Base Rates	Gas Cost	Total Bill	
\$100.00	\$ 1,731.50	\$1,831.50	\$ 7,844.78	\$9,676.28	
\$100.00	\$ 2,164.16	\$2,264.16	\$ 9,805.00	\$12,069.16	
\$100.00	\$ 2,596.99	\$2,696.99	\$11,766.00	\$14,462.99	
\$100.00	\$ 3,029.82	\$3,129.82	\$13,727.00	\$16,856.82	
\$100.00	\$ 3,462.65	\$3,562.65	\$15,688.00	\$19,250.65	
\$100.00	\$ 4,328.31	\$4,428.31	\$19,610.00	\$24,038.31	
\$100.00	\$ 5,193.98	\$5,293.98	\$23,532.00	\$28,825.98	
\$100.00	\$ 7,790.97	\$7,890.97	\$35,298.00	\$43,186.97	
\$100.00	\$ 12,984.94	\$13,084.94	\$58,830.00	\$71,914.94	

Total Bill		Base Rates Only	
Proposed Increase \$	Proposed Increase %	Proposed Increase \$	Proposed Increase %
\$195.34	2.06%	\$195.34	11.94%
\$240.41	2.03%	\$240.41	11.88%
\$285.49	2.01%	\$285.49	11.84%
\$330.57	2.00%	\$330.57	11.81%
\$375.65	1.99%	\$375.65	11.79%
\$465.81	1.98%	\$465.81	11.76%
\$555.98	1.97%	\$555.98	11.73%
\$826.47	1.95%	\$826.47	11.70%
\$1,367.44	1.94%	\$1,367.44	11.67%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNGS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005
Small Volume Industrial Service (I-30)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$11.00	\$13.50	A
2	Distribution Margin Therms	\$ 0.2122	\$ 0.2369	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$11.00	\$ 10.61	\$21.61	\$ 39.22	\$60.83
7	\$11.00	\$ 21.22	\$32.22	\$ 78.44	\$110.66
8	\$11.00	\$ 106.10	\$117.10	\$ 392.20	\$509.30
9	\$11.00	\$ 212.20	\$223.20	\$ 784.40	\$1,007.60
10	\$11.00	\$ 318.30	\$329.30	\$1,176.60	\$1,505.90
11	\$11.00	\$ 530.50	\$541.50	\$1,961.00	\$2,502.50
12	\$11.00	\$1,081.00	\$1,072.00	\$3,922.00	\$4,994.00
13	\$11.00	\$1,591.50	\$1,602.50	\$5,883.00	\$7,485.50
14	\$11.00	\$2,122.00	\$2,133.00	\$7,844.00	\$9,977.00

Customer Charge	Proposed Rates				Total Bill
	Distribution Margin	Base Rates	Gas Cost	Total Bill	
\$13.50	\$ 11.84	\$25.34	\$ 39.22	\$64.56	
\$13.50	\$ 23.69	\$37.19	\$ 78.44	\$115.63	
\$13.50	\$ 118.44	\$131.94	\$ 392.20	\$524.14	
\$13.50	\$ 236.88	\$250.38	\$ 784.40	\$1,034.78	
\$13.50	\$ 355.32	\$368.82	\$1,176.60	\$1,545.42	
\$13.50	\$ 592.20	\$605.70	\$1,961.00	\$2,566.70	
\$13.50	\$ 1,184.39	\$1,197.89	\$3,922.00	\$5,119.89	
\$13.50	\$ 1,776.59	\$1,790.09	\$5,883.00	\$7,673.09	
\$13.50	\$ 2,368.78	\$2,382.28	\$7,844.00	\$10,226.28	

Total Bill	Proposed Increase		Base Rates Only
	Proposed Increase \$	Proposed Increase %	
\$3.73	\$3.73	6.13%	Proposed Increase \$3.73 17.26%
\$4.97	\$4.97	4.49%	Proposed Increase \$4.97 15.43%
\$14.84	\$14.84	2.91%	Proposed Increase \$14.84 12.67%
\$27.18	\$27.18	2.70%	Proposed Increase \$27.18 12.18%
\$39.52	\$39.52	2.62%	Proposed Increase \$39.52 12.00%
\$64.20	\$64.20	2.57%	Proposed Increase \$64.20 11.86%
\$125.89	\$125.89	2.52%	Proposed Increase \$125.89 11.74%
\$187.59	\$187.59	2.51%	Proposed Increase \$187.59 11.71%
\$249.28	\$249.28	2.50%	Proposed Increase \$249.28 11.69%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNSGas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Larve Volume Industrial Service (I-32)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$85.00	\$100.00	A
2	Distribution Margin Therms	\$ 0.0864	\$ 0.0965	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$85.00	\$ 864.09	\$949.09	\$ 7,844.78	\$8,793.87
7	\$85.00	\$ 1,296.00	\$1,381.00	\$ 11,766.00	\$13,147.00
8	\$85.00	\$ 1,728.00	\$1,813.00	\$ 15,688.00	\$17,501.00
9	\$85.00	\$ 2,592.00	\$2,677.00	\$ 23,532.00	\$26,209.00
10	\$85.00	\$ 4,320.00	\$4,405.00	\$ 39,220.00	\$43,625.00
11	\$85.00	\$ 6,480.00	\$6,565.00	\$ 58,830.00	\$65,395.00
12	\$85.00	\$ 8,640.00	\$8,725.00	\$ 78,440.00	\$87,165.00
13	\$85.00	\$10,800.00	\$10,885.00	\$ 98,050.00	\$108,935.00
14	\$85.00	\$12,960.00	\$13,045.00	\$117,660.00	\$130,705.00

Customer Charge	Distribution Margin	Proposed Rates		Total Bill
		Base Rates	Gas Cost	
\$100.00	\$ 965.54	\$1,065.54	\$ 7,844.78	\$8,910.32
\$100.00	\$ 1,448.17	\$1,548.17	\$ 11,766.00	\$13,314.17
\$100.00	\$ 1,930.89	\$2,030.89	\$ 15,688.00	\$17,718.89
\$100.00	\$ 2,896.34	\$2,996.34	\$ 23,532.00	\$26,528.34
\$100.00	\$ 4,827.24	\$4,927.24	\$ 39,220.00	\$44,147.24
\$100.00	\$ 7,240.86	\$7,340.86	\$ 58,830.00	\$66,170.86
\$100.00	\$ 9,654.47	\$9,754.47	\$ 78,440.00	\$88,194.47
\$100.00	\$12,068.09	\$12,168.09	\$ 98,050.00	\$110,218.09
\$100.00	\$14,481.71	\$14,581.71	\$117,660.00	\$132,241.71

Total Bill		Base Rates Only	
Proposed Increase	%	Proposed Increase	%
\$116.45	1.32%	\$116.45	12.27%
\$167.17	1.27%	\$167.17	12.10%
\$217.89	1.25%	\$217.89	12.02%
\$319.34	1.22%	\$319.34	11.93%
\$522.24	1.20%	\$522.24	11.86%
\$775.66	1.19%	\$775.66	11.82%
\$1,029.47	1.18%	\$1,029.47	11.80%
\$1,283.09	1.18%	\$1,283.09	11.79%
\$1,536.71	1.18%	\$1,536.71	11.78%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Small Volume Public Authority (PA-40)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$11.00	\$13.50	A
2	Distribution Margin	\$ 0.2354	\$ 0.2606	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$11.00	\$ 11.77	\$22.77	\$ 39.22	\$61.99
7	\$11.00	\$ 23.54	\$34.54	\$ 78.44	\$112.98
8	\$11.00	\$ 117.70	\$128.70	\$ 392.20	\$520.90
9	\$11.00	\$ 235.40	\$246.40	\$ 784.40	\$1,030.80
10	\$11.00	\$ 353.10	\$364.10	\$1,176.60	\$1,540.70
11	\$11.00	\$ 588.50	\$599.50	\$1,961.00	\$2,560.50
12	\$11.00	\$1,177.00	\$1,188.00	\$3,922.00	\$5,110.00
13	\$11.00	\$1,765.50	\$1,776.50	\$5,883.00	\$7,659.50
14	\$11.00	\$2,354.00	\$2,365.00	\$7,844.00	\$10,209.00

Customer Charge	Distribution Margin	Proposed Rates			Total Bill
		Base Rates	Gas Cost	Total	
\$13.50	\$ 13.03	\$26.53	\$ 39.22	\$65.75	
\$13.50	\$ 26.06	\$39.56	\$ 78.44	\$118.00	
\$13.50	\$ 130.28	\$143.78	\$ 392.20	\$535.98	
\$13.50	\$ 260.56	\$274.06	\$ 784.40	\$1,058.46	
\$13.50	\$ 390.84	\$404.34	\$1,176.60	\$1,580.94	
\$13.50	\$ 651.41	\$684.91	\$1,961.00	\$2,625.91	
\$13.50	\$ 1,302.81	\$1,316.31	\$3,922.00	\$5,238.31	
\$13.50	\$ 1,954.22	\$1,967.72	\$5,883.00	\$7,850.72	
\$13.50	\$ 2,605.62	\$2,619.12	\$7,844.00	\$10,463.12	

Total Bill		Base Rates Only	
Proposed Increase \$	Proposed Increase %	Proposed Increase \$	Proposed Increase %
\$3.76	6.07%	\$3.76	16.51%
\$5.02	4.44%	\$5.02	14.53%
\$15.08	2.89%	\$15.08	11.72%
\$27.66	2.88%	\$27.66	11.23%
\$40.24	2.61%	\$40.24	11.05%
\$65.41	2.55%	\$65.41	10.91%
\$128.31	2.51%	\$128.31	10.80%
\$191.22	2.50%	\$191.22	10.76%
\$254.12	2.49%	\$254.12	10.75%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNIS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Large Volume Public Authority (PA-42)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge	\$85.00	\$100.00	A
2	Distribution Margin Therms	\$ 0.1084	\$ 0.1211	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$85.00	\$ 1,084.11	\$1,169.11	\$ 7,844.78	\$9,013.89
7	\$85.00	\$ 1,626.00	\$1,711.00	\$ 11,766.00	\$13,477.00
8	\$85.00	\$ 2,168.00	\$2,253.00	\$ 15,688.00	\$17,941.00
9	\$85.00	\$ 3,252.00	\$3,337.00	\$ 23,532.00	\$26,869.00
10	\$85.00	\$ 5,420.00	\$5,505.00	\$ 39,220.00	\$44,725.00
11	\$85.00	\$ 8,130.00	\$8,215.00	\$ 58,830.00	\$67,045.00
12	\$85.00	\$10,840.00	\$10,925.00	\$ 78,440.00	\$89,365.00
13	\$85.00	\$13,550.00	\$13,635.00	\$ 98,050.00	\$111,685.00
14	\$85.00	\$16,260.00	\$16,345.00	\$ 117,660.00	\$134,005.00

Customer Charge	Distribution Margin	Proposed Rates		Gas Cost	Total Bill
		Base Rates	Proposed Increase		
\$100.00	\$ 1,211.12	\$1,311.12	\$ 7,844.78	\$9,155.90	
\$100.00	\$ 1,816.50	\$1,916.50	\$ 11,766.00	\$13,682.50	
\$100.00	\$ 2,422.00	\$2,522.00	\$ 15,688.00	\$18,210.00	
\$100.00	\$ 3,633.00	\$3,733.00	\$ 23,532.00	\$27,265.00	
\$100.00	\$ 6,055.01	\$6,155.01	\$ 39,220.00	\$45,375.01	
\$100.00	\$ 9,082.51	\$9,182.51	\$ 58,830.00	\$68,012.51	
\$100.00	\$ 12,110.01	\$12,210.01	\$ 78,440.00	\$90,650.01	
\$100.00	\$ 15,137.52	\$15,237.52	\$ 98,050.00	\$113,287.52	
\$100.00	\$ 18,165.02	\$18,265.02	\$ 117,660.00	\$135,925.02	

Total Bill		Proposed Increase		Base Rates Only	
Proposed Increase \$	Proposed Increase %	Proposed Increase \$	Proposed Increase %	Proposed Increase \$	Proposed Increase %
\$142.01	1.58%	\$142.01	12.15%	\$205.50	12.01%
\$269.00	1.50%	\$269.00	11.87%	\$396.00	11.87%
\$650.01	1.45%	\$650.01	11.81%	\$967.51	11.78%
\$1,285.01	1.44%	\$1,285.01	11.76%	\$1,602.52	11.75%
\$1,920.02	1.43%	\$1,920.02	11.75%	\$1,920.02	11.75%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet

UNS Gas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Special Gas Light Service (PA-44)

Line	Rate Component	Present Rates	Staff Proposed	Increase \$	Note
1	Customer Charge Lighting Group A	\$13.57	\$15.17	\$1.60	A
2	Customer Charge Lighting Group B	\$16.28	\$18.20	\$1.92	A

Annual Bill Impact		Present	Proposed	Increase \$	Increase %
3	Customer Charge Lighting Group A	\$162.84	\$182.06	\$19.22	11.80%
4	Customer Charge Lighting Group B	\$195.36	\$218.42	\$23.06	11.80%

Notes

A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1

UNSGas, Inc.
Typical Bill Comparison - Present And Proposed Rates
Test Year Ended December 31, 2005

Irrigation Service (IR-60)

Line	Rate Component	Present Rates	Staff Proposed	Notes
1	Customer Charge (Sum: Apr-Nov)	\$11.00	\$13.50	A
2	Distribution Margin Therms	\$ 0.2876	\$0.3205	A
3	Feb 2007 PGA Cost	\$ 0.3844	\$ 0.3844	B
4	Base gas cost	\$ 0.4000	\$ 0.4000	B
5	Gas Cost Subtotal	\$ 0.7844	\$ 0.7844	L3+L4

Average Therms Per Month	Present Rates				Total Bill
	Customer Charge	Distribution Margin	Base Rates	Gas Cost	
6	\$11.00	\$ 14.38	\$25.38	\$ 39.22	\$64.60
7	\$11.00	\$ 28.76	\$39.76	\$ 78.44	\$118.20
8	\$11.00	\$ 143.80	\$154.80	\$ 392.20	\$547.00
9	\$11.00	\$ 287.60	\$298.60	\$ 784.40	\$1,083.00
10	\$11.00	\$ 431.40	\$442.40	\$ 1,176.60	\$1,619.00
11	\$11.00	\$ 719.00	\$730.00	\$ 1,961.00	\$2,691.00
12	\$11.00	\$1,438.00	\$1,449.00	\$ 3,922.00	\$5,371.00
13	\$11.00	\$2,157.00	\$2,168.00	\$5,883.00	\$8,051.00
14	\$11.00	\$2,876.00	\$2,887.00	\$7,844.00	\$10,731.00

Customer Charge	Distribution Margin	Proposed Rates			Total Bill
		Base Rates	Gas Cost	Total	
\$13.50	\$ 16.03	\$29.53	\$ 39.22	\$68.75	
\$13.50	\$ 32.05	\$45.55	\$ 78.44	\$123.99	
\$13.50	\$ 160.25	\$173.75	\$ 392.20	\$565.95	
\$13.50	\$ 320.50	\$334.00	\$ 784.40	\$1,118.40	
\$13.50	\$ 480.75	\$494.25	\$ 1,176.60	\$1,670.85	
\$13.50	\$ 801.25	\$814.75	\$ 1,961.00	\$2,775.75	
\$13.50	\$ 1,602.50	\$1,616.00	\$ 3,922.00	\$5,538.00	
\$13.50	\$ 2,403.75	\$2,417.25	\$5,883.00	\$8,300.25	
\$13.50	\$ 3,205.00	\$3,218.50	\$7,844.00	\$11,062.50	

Total Bill		Proposed Increase	
Increase \$	%	Increase \$	%
\$4.15	6.42%	\$4.15	16.35%
\$5.79	4.90%	\$5.79	14.56%
\$18.95	3.46%	\$18.95	12.24%
\$35.40	3.27%	\$35.40	11.86%
\$51.85	3.20%	\$51.85	11.72%
\$84.75	3.15%	\$84.75	11.61%
\$167.00	3.11%	\$167.00	11.53%
\$249.25	3.10%	\$249.25	11.50%
\$331.50	3.09%	\$331.50	11.48%

Base Rates Only		Proposed Increase	
Increase \$	%	Increase \$	%
\$4.15	16.35%	\$4.15	16.35%
\$5.79	14.56%	\$5.79	14.56%
\$18.95	12.24%	\$18.95	12.24%
\$35.40	11.86%	\$35.40	11.86%
\$51.85	11.72%	\$51.85	11.72%
\$84.75	11.61%	\$84.75	11.61%
\$167.00	11.53%	\$167.00	11.53%
\$249.25	11.50%	\$249.25	11.50%
\$331.50	11.48%	\$331.50	11.48%

Notes

- A Staff Proof of Revenue. See Attachment RCS-S1, Schedule RD-1
- B Cost of Gas Inputs worksheet