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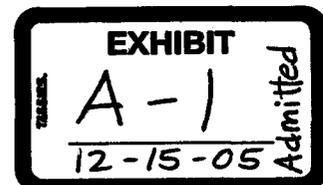
Transcript Exhibit(s)

Docket #(s): G-02528A-05-0314

G-02528A-03-0205

Exhibit #: A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8,

S-1, S-2, S-3, S-4, S-5, S-6, S-7



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

DIRECT

TESTIMONY

OF

JOHN V. WALLACE

DUNCAN RURAL SERVICES CORPORATION

June 9, 2005

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1 **I. INTRODUCTION**

2 Q. Please state your name address and occupation.

3 A. My name is John V. Wallace. I am the Director of Regulatory and Strategic
4 Services of Grand Canyon State Electric Cooperative Association (GCSECA). I
5 represent Duncan Rural Services, Inc. (DRSC or the Company).

6
7 Q. Please describe your professional qualifications and experience.

8 A. I have been the Director of Regulatory and Strategic Services since August 1, 2000. In
9 this position, I am responsible for preparing rate, financial and other utility related
10 analysis and testimony for all of the GCSECA member Arizona Electric Cooperatives.
11 Before I accepted a position with GCSECA, I worked for the Arizona Corporation
12 Commission (ACC) for approximately 10 years. While working for the ACC, I held a
13 number of positions within the Accounting and Rates Section of the Utilities Division of
14 the ACC; the last of these positions was Manager, Revenue Requirements Analysis. In
15 this capacity, I was responsible for managing six analysts and preparing staff reports and
16 testimony on Certificate of Convenience and Necessity (CC&N), financing, rate and
17 other utility matters. In addition to my work experience, I have a Masters Degree in
18 Business Administration from the University of North Dakota.

19
20 Q. On whose behalf are you appearing in this proceeding?

21 A. I am appearing on behalf of the applicant, DRSC. As discussed by Mr. Shilling in his
22 direct testimony, DRSC provides gas service to approximately 760 customers in Greenlee
23 County, Arizona.

24
25 Q. Was this testimony prepared by you or under your direction?

26 A. Yes, it was.
27

1 Q. What exhibits are you sponsoring in this case?

2 A. In addition to the schedules attached to this testimony, I am responsible for the
3 preparation of all the test year materials contained in DRSC's filing, except for the
4 historical financial statements prepared by DRSC and the report of its Certified Public
5 Accountants. I will be referring to these materials from time to time throughout my
6 direct testimony.

7

8 Q. What areas does your testimony address?

9 A. My testimony addresses four primary areas: revenue requirements, cost of service and
10 class revenue allocations, rate design, additional long-term debt, and reorganization.

11

12 Q. Please summarize your recommendations.

13 A. Mr. Shilling has discussed in his testimony the reasons underlying the Company's request
14 for an overall 22.70% increase in revenues. An increase of this magnitude is needed to
15 eliminate the large negative margins produced by the current rates, to provide adequate
16 interest and debt service coverage's and to provide the internally generated cash flows
17 required to support the utility's on-going plant improvement program.

18

19 Q. Please explain Schedule A-2 of the filing.

20 A. Schedule A-2, page 1 of 2, summarizes operating results at present and proposed rates for
21 the 12 months ended December 31, 2004, the test year in this case. The present rates
22 produced a net/total margin deficit, or loss, of \$77,970 on an adjusted test year basis. The
23 proposed \$147,406 increase in revenues produces a positive net/total margin of \$30,845
24 and a corresponding times interest earned ratio (TIER) of 2.00 in contrast to the current
25 negative net TIER of 1.51.

26

27

1 Q. Do you view the indicated net TIER of 2.00 at proposed rates as a reasonable ratio in this
2 case?

3 A. Yes. The 2.00 TIER requested in this case is, in my view, at the lower end of a
4 reasonable TIER range for this utility in view of its negative equity, the need to reverse
5 the losses it is experiencing most every month, and as discussed later in my testimony,
6 the need to produce positive cash flows.

7
8 Q. Why is an increase in revenues of this magnitude needed?

9 A. This revenue increase is needed primarily to pay for the higher cost of purchased gas. In
10 its previous rate case, the Commission approved a base cost of gas of \$0.36 per therm.
11 As of the December 31, 2004, DRSC's base cost of gas per therm was \$0.56. This results
12 in an \$118,666 increase in the Test Year Purchased Gas Expense and accounts for the
13 majority of the \$147,406 proposed increase in revenues. DRSC has experienced major
14 price increases in the spot price of natural gas during and after the Test Year.

15
16 According to DRSC's audited financial statements, DRSC also had a deficiency in total
17 margins of \$18,859 at December 31, 2003 and a deficiency in total margins of \$49,639 at
18 December 31, 2004. At current revenue levels, this deficiency will likely increase to
19 approximately \$70,000 before new rates can be approved by the Commission. Moreover,
20 DRSC filed with this rate application a request for approval to borrow an additional
21 \$268,988 thereby increasing its long-term indebtedness to \$772,408. The proposed
22 \$147,406 increase in revenues is needed to provide adequate TIER and debt service
23 coverage ratios on the increased debts and expenses and to eliminate the deficiency in
24 margins and equities.

25
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1 Q. Why is DRSC seeking to incur more indebtedness at this time?

2 A. In general, this additional debt is needed to reimburse Duncan Valley Electric
3 Cooperative, Inc. ("DVEC") for funds supplied to DRSC over the past 4 years for
4 improvements to the gas distribution system. A more detailed discussion of this
5 requested borrowing is contained in the financing portion of my testimony. This long-
6 term debt would have a variable interest rate (assumed 6 percent) with repayment over 25
7 years.

8
9 Q. Would DRSC be able to borrow long-term debt directly from National Rural Utilities
10 Cooperative Finance Corporation ("CFC") or another third party lender on its own credit?

11 A. No. CFC or any other lender will require all lending to DRSC to be guaranteed by
12 DVEC since DRSC is not a full member of CFC and, in any event, the Company's poor
13 financial condition does not enable it to incur additional debt on its own credit. The
14 increase in revenues sought in this case will be an important step towards restoring the
15 credit worthiness of the utility.

16
17 Q. Please summarize your rate design recommendations.

18 A. As approved in DRSC's last rate case, I am recommending customer classes be based on
19 three-meter size ranges rather than by residential, irrigation and commercial. I believe
20 that a rate design based on meter size is more equitable for all customers. I am also
21 recommending that winter and summer per therm rates be continued for each of the three-
22 meter classes. I am recommending monthly service charges that were based on the cost
23 and demand associated with the different meter sizes. Finally, I am recommending that
24 all three-meter classes pay same per therm winter and summer rates.

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I am recommending no change to the three customer classes based on meter size:

250 cubic feet per hour (cfh) & below

Above 250 cfh to 425 cfh

425 cfh to 1,000 cfh

I set the monthly service charges at \$20 for the 250 cfh & below meter size, \$30 for above 250 cfh and up to 425 cfh meter size and \$40 for above 425 cfh to 1,000 cfh the largest meter size. Meter sizes above 1,000 cfh would be provided service on a contractual basis. (Refer to Schedule H-3)

After determining the amount of additional revenue that resulted from the increase in the monthly service charges listed above, I increased the per therm rates for summer and winter by an equal percentage to collect the remainder of the revenue requirement. I am recommending that the per therm rates for summer and winter be the same for all three classes. The DRSC recommended summer rate is \$0.80580 per therm, and the winter rate is \$1.25405.

I am recommending that the Commission approve the same interest rate on customer deposits (Three Month Non-Financial Commercial Paper Rate as published by the Federal Reserve) and late/deferred payment percentage of 1.5 percent per month that was approved in DVEC's recent rate case (Decision No. 67433, dated December 3, 2004). I am not recommending any other changes to the current service charges. The present and proposed service charges are detailed on the bottom of Schedule H-3.

1 **II. REVENUE REQUIREMENTS**

2 Q. Please explain the Original Cost Rate Base (OCRB) calculation shown on Schedule B-1.

3 A. I have made one pro forma adjustment to rate base increasing the amount of customer
4 deposits by \$3,139 from \$16,925 to \$20,064 to reflect the interest accrued on customer
5 deposits. I have subtracted the \$20,064 of customer deposits and \$19,554 of net deferred
6 taxes from DRSC's rate base. DRSC is recommending an OCRB of \$772,408.

7
8 Q. Why hasn't DRSC included its Reconstruction Cost New less Depreciation (RCND)
9 information (Schedules B-3 and B-4) in its application?

10 A. DRSC stipulates that the Commission may use its original cost data for the calculation of
11 a rate of return on fair value for this proceeding. Therefore, the RCND information
12 contained on Schedules B-3 and B-4 is unnecessary for a determination of this matter.

13
14 Q. Why hasn't a provision for working capital (Schedule B-5) been included in the
15 development of rate base?

16
17 A. The Company decided not to incur the additional expense required to conduct a lead/lag
18 study since its revenue request is based on Times Interest Earned Ratio (TIER),
19 consistent with the method used by the Commission in deciding revenue requirements in
20 the last case, and not a return on rate base approach to ratemaking. Accordingly, no
21 working capital allowance is sought in this case.

22
23 Q. Please explain Schedule C-1 of the filing.

24 A. Schedule C-1 shows the actual and adjusted operating income statement for the test year.
25 As described on Schedule C-2, actual test year results were adjusted as follows:
26
27

1 Adjustment A. increased revenues to reflect \$118,453 of purchased gas fuel cost that was
2 collected through DRSC's fuel adjustor mechanism during the Test Year. As a result of
3 DRSC's recommendation to raise its base gas cost to \$0.56 per therm in this case, base
4 rate revenues will be increasing by approximately \$118,000.

5
6 Adjustment B. increased several expenses were increased by a total of \$13,068 to
7 annualize the 4 percent increase in salary and related benefits that occurred in July 2004.

8
9 Adjustment C. increased Regulatory Commission Expense by \$5,281 for actual and
10 estimated rate case expenses that will be incurred in the preparation and completion of
11 this case. I have estimated the total amount of rate case expense and ongoing regulatory
12 expenses to be approximately \$16,000 per year.

13
14 Adjustment D. decreases Income Tax Expense by \$30,302 from a negative \$158 to a
15 negative \$30,460. Included in this adjustment is the removal of a negative \$158 that was
16 loss carry-forward that has expired as well as an adjustment of \$50 for an income tax
17 filing fee and an adjustment of a negative \$30,194 to reflect the Adjusted Test Year
18 Income Tax Expense.

19
20 Adjustment E. increases Interest Expense on Long-term Debt (LTD) by \$16,139 to
21 account for the additional interest of 6% on the \$268,988 of additional LTD to be used to
22 pay down the accounts payable to DVEC that DRSC has used to fund its construction
23 expenditures and plant additions.

24
25 These adjustments in total increase net margin for the test year by \$114,267 resulting in
26 an adjusted deficit in total/net margins of \$77,970.

27

1 Q. Please explain the DRSC's Income Tax Expense for its proposed level of revenues and
2 expenses as contained on Schedule A-2, page 2 of 2.

3 A. DRSC is a "C" Corporation and subject to federal and state income taxes. Based on the
4 operating income level that results from DRSC's proposed rates, DRSC will have an
5 Income Tax Expense of approximately \$8,132 as shown on Schedule A-2, page 2 of 2.
6
7

8 **III COST OF SERVICE AND RATE DESIGN**

9 Q. Why should gas rates be based upon cost of service?

10 A. Cost of service is an important criterion in the development of revenues by class of
11 consumer and the development of rates that will produce those revenues. If rates are not
12 cost based, the inevitable results are subsidies among the classes of consumers and
13 consumers within a class. This is not only perceived as inequitable, but may result in
14 distorted consumer decisions concerning the use of utility services. Other factors, such as
15 spot gas prices in winter vs. summer, continuity, simplicity and stability are valid
16 considerations in the rate design process and had to be considered given DRSC's
17 circumstances.
18

19 Q. Did you prepare the class cost of service analysis contained in the filing?

20 A. Yes. The study was prepared to provide guidance in setting class revenue targets and
21 designing the rates required to meet these targets. The costing methodology used is
22 essentially the same as that used in the last rate proceeding. As recommended by Staff in
23 DRSC's last rate case and to limit the differences between DRSC and Staff in this case, I
24 am using Staff's 100 percent demand allocation for mains. Additionally, the rate design I
25 am recommending relies less on the cost of service analysis and more on other rate
26 design factors as explained later in my testimony.
27

1 Q. Would you briefly describe the approach used to develop the study?

2 A. The basic method used in the study is commonly known as the embedded or average cost
3 method as contrasted with the marginal cost method. This method, properly applied,
4 produces a guide for ratemaking purposes.

5
6 The initial step was to establish, for costing purposes, consumer classes with similar
7 usage characteristics. For the purposes of present rates these classes are: 250 cubic feet
8 per hour (cfh) & below (residential and small commercial), above 250 cfh to 425 cfh
9 (commercial and irrigation) and 425 cfh to 1,000 cfh (schools and large commercial).
10 The next step in the study was to classify all elements of rate base and classifications of
11 operating expenses as demand-related, commodity-related or customer-related. The
12 results of this process are shown on Schedules G-6 and G-7. The final step in the
13 analysis was to allocate rate base and operating expenses to each class of consumer. The
14 results of these allocations are shown on Schedules G-4 and G-5. Functionalization and
15 class allocation factors used in the study are provided on Schedule G-8.

16
17 Q. How were the class allocation factors developed?

18 A. DRSC is a winter-peaking system, primarily due to the increased space heating
19 requirements during the winter months. Due to historically low class usage in 2004,
20 Class demand allocation factors were developed based on total therm sales for the five-
21 month period of January through March and November through December 2004 as well
22 as previous years. Average commodity usage was used as a proxy for class peak
23 demands since peak-day measurements were not available. Class commodity allocation
24 factors were based on total therm sales for the test year. Two customer allocation factors
25 were developed: one based on total bills by class (unweighted) and the other (weighted)
26 based on meter size.

27

1 Q. Please summarize the results of your study.

2 A. The results of my study, at present and proposed rates, are summarized on Schedules G-1
3 and G-2. At present rates, the 250 cubic feet per hour (cfh) & below, Above 250 cfh to
4 425 cfh and 425 cfh to 1,000 cfh classes are producing sizable negative returns. The
5 return indices show the 250 cubic feet per hour (cfh) & below with a negative return of
6 4.82% and a return index of 0.79, or 79% of the system average return (a return index of
7 1.00) which is a negative 6.08%. The Above 250 cfh to 425 cfh class has a negative
8 return of 15.38% and a return index of 2.53; the 425 cfh to 1,000 cfh class shows a
9 negative return of 17.35% and a return index of 2.85.

10

11 Q. Please explain the rate of return index concept.

12 A. The rate of return index is a relative measure of class contribution to the system average
13 rate of return. When the system rate of return is positive, an index below 1.00 indicates
14 that a class's revenues are not sufficient to recover its cost of service, while an index
15 exceeding 1.00 indicates that a class is over-recovering its cost of service. When the
16 system rate of return is negative, an index below 1.00 indicates that a class is over-
17 recovering its cost of service, while an index exceeding 1.00 indicates that a class's
18 revenues are not sufficient to recover its cost of service.

19

20 Q. Typically the cost of service study is used as the basis to allocate revenues among
21 customer classes. Did you use the cost of service study to allocate revenues to customer
22 classes?

23 A. No. DRSC's circumstances merit a deviation from strictly using the cost of service study
24 to set rates for the reasons discussed below.

25

26

27

1 Q. How did you allocate revenues to the customer classes?

2 A. The rate design that I am recommending resulted in an allocation of revenues to customer
3 classes as explained further below. The 250 cubic feet per hour (cfh) & below class
4 revenues were increased by approximately 25 percent. The Above 250 cfh to 425 cfh
5 class revenues were increased by approximately 15 percent. Finally, the 425 cfh to 1,000
6 cfh class revenues were increased by approximately 24 percent (See Schedule H-1). The
7 Above 250 cfh to 425 cfh class revenue increase of 15 percent is less than the other two
8 classes because the majority of customers in this class use very little gas in the peak
9 winter months.

10

11 Q. What changes in the existing rate design are you recommending?

12 A. A rate design based on meter sizes is more equitable for all customers and should be
13 continued. I am also recommending that winter and summer per therm rates be continued
14 for each of the three-meter classes. I am recommending monthly service charges that
15 were based on the cost and demand associated with the different meter sizes. Finally, I
16 am recommending that all three-meter classes pay the same per therm winter and summer
17 rates. All of these rate recommendations affected the revenue allocation to each customer
18 class.

19

20 Q. Why are you recommending that the customer classes be based on meter size be
21 continued?

22 A. The cost and demand that a customer places on the gas system is more closely related to
23 meter size than whether a customer is a residential, irrigation or commercial customer.
24 The demand that any customer can place on the gas system is directly related to how
25 much gas can flow through the gas system to the customer during peak winter months.
26 The larger the meter, service line and mains, the larger the peak flow demand that a
27 customer places on the system. Residential, irrigation and commercial customers with

1 the same main, service line and meter size have the potential to place the same peak
2 demand on the system, assuming that each of these customers use gas during peak
3 periods.

4
5 Q. Do each of the customer's classes place a similar demand on the system during the five
6 peak winter months?

7 A. No. The irrigation customers in the Above 250 cfh to 425 cfh class primarily uses gas
8 during the off peak summer months. The Above 250 cfh to 425 cfh customers used
9 20,980 therms in the five peak winter months compared to 148,600 therms used by these
10 customers in the other months. During the Test Year, DRSC's peak month for therm
11 usage was February. In that month, irrigation customers used only 3,751 therms of the
12 83,019 therms sold to all DRSC customers.

13
14 Q. Please explain the new customer classes by meter sizes and how existing residential,
15 commercial and irrigation customers will fit into these classes.

16 A. I am recommending the following three customer classes based on meter sizes:

17 250 cubic feet per hour (cfh) & below

18 Above 250 cfh to 425 cfh

19 425 cfh to 1,000 cfh.

20
21 Residential, commercial and irrigation customers will take service under one of these
22 three classes on the basis of the size of their existing meter. Based on existing meter
23 sizes, all residential customers (692) and most (47) commercial customers take service
24 under the 250 cfh & below customer class. The 18 irrigation customers and one
25 commercial customer will take service under the Above 250 cfh to 425 cfh customer
26 class. Currently, only two meters of the school fit into the 425 cfh to 1,000 cfh customer
27 class.

1 Q. What monthly service charges are you recommending by meter size and why?

2 A. I set the monthly service charges at \$20 for the 250 cfh & below meter size, \$30 for
3 Above 250 cfh and up to 425 cfh meter size and \$40 for Above 425 cfh to 1,000 cfh the
4 largest meter size. Meter sizes above 1,000 cfh would be provided service on a
5 contractual basis. (Refer to Schedule H-3)

6
7 I am recommending the monthly service charges be different by meter size because the
8 fixed costs (meter cost, main size, etc.) to provide gas service generally are more as the
9 size of the meter increases and larger meter sizes also place a larger demand on the
10 system during the peak winter months (i.e. the 425 cfh meter costs approximately three
11 times more than the 250 cfh meter, the 1,000 cfh meter is approximately 10 times the cost
12 of the 425 cfh meter).

13
14 Q. What is the increase in revenues that will result from your proposed increase in monthly
15 service charges?

16 A. The increases in the monthly service charges that I am recommending result in an
17 additional \$46,308 of revenues. The remainder of the \$147,406 revenue requirement
18 increase, \$101,098, was collected from the increase in per therm usage charges that are
19 discussed below.

20
21 Q. What winter and summer per therm rates are you recommending for all three customer
22 classes?

23 A. I am recommending the winter per therm rate be set at \$1.25405, and the summer per
24 therm rate be set at \$0.8058 for all three customer classes.

25
26
27

1 Q. Why is the winter per therm rate that you are recommending significantly higher than the
2 summer per therm rate?

3 A. During the Test Year, DRSC's customers' peak monthly usage was 83,019 therms in
4 February versus 25,644 therms in lowest month, October. DRSC gas system is built to
5 meet its peak demand (capacity) in the winter months like December, January and
6 February. Customers who use the gas system during peak winter months should pay a
7 higher share of the demand (capacity) related costs than customers who predominantly
8 use gas during summer months.

9
10 In addition, historically the spot price of natural gas has been considerably lower in the
11 summer months versus the winter months, because the demand for natural gas nationally
12 is the highest during the winter months. DRSC's purchased gas costs in October 2004
13 were approximately \$0.51 per therm versus an average of approximately \$0.70 per therm
14 in the peak winter months of November and December. For the reasons stated above, it
15 would be unfair to customers who primarily use gas during the off-peak summer months
16 to use a rate structure that only has one therm rate per customer class.

17
18 Q. Why are you recommending the same winter and summer per therm rates apply to all
19 customers?

20 A. I am recommending that the per therm rates for summer and winter be the same for all
21 three classes because each customer class regardless of the type of customer that uses gas
22 during summer months should experience a lower cost of gas during the off-peak summer
23 months. There is very little difference in per unit variable costs of service 250 cfh &
24 below versus Above 250 cfh and up to 425 cfh versus Above 425 cfh to 1,000 cfh
25 customers. The only difference in the rates and charges to the three customer classes will
26 be the monthly service charge.

27

1 Q. How were the summer per therm and winter per therm rates calculated?

2 A. The summer and winter per therm rates were increased by an equal percentage until the
3 remaining revenue requirement increase of \$101,098 (the remainder of the \$147,406
4 revenue requirement increase after the proposed increases in the monthly service charges)
5 was collected from the proposed summer and winter per therm rates.

6
7 Q. What is the effect of the proposed rates on the average monthly bill of a 250 cfh & below
8 customer?

9 A. As shown on Schedule H-4, page 1 of 3, the monthly bill for a 250 cfh & below customer
10 who uses 76 therms in the winter will increase by \$23.58 (25.55%), from \$92.28 to
11 \$115.86. These bill calculations include the PGA rate of \$0.211 per therm in present
12 rates, and the PGA rate has been eliminated in DRSC's proposed rates.

13
14 Q. What is the effect of the proposed rates on the average monthly bill of an Above 250 cfh
15 and up to 425 cfh customer as well as other customers?

16 A. As shown on Schedule H-4, page 2 of 3, the monthly bill for an Above 250 cfh and up to
17 425 cfh customer who uses 262 therms in the winter will increase by \$71.24 (24.77%),
18 from \$287.63 to \$358.87. These bill calculations include the PGA rate of \$0.211 per
19 therm in present rates, and the PGA rate has been eliminated in DRSC's proposed rates.

20
21 Q. What is the effect of the proposed rates on the average monthly bill of an Above 425 cfh
22 to 1,000 cfh customer as well as other customers?

23 A. As shown on Schedule H-4, page 3 of 3, the monthly bill for an Above 425 cfh to 1,000
24 cfh customer who uses 1,430 therms in the winter will increase by \$357.56 (24.23%),
25 from \$1,475.73 to \$1,833.29. These bill calculations include the PGA rate of \$0.211 per
26 therm in present rates, and the PGA rate has been eliminated in DRSC's proposed rates.

27

1 Q. What changes are you recommending to service charges?

2 A. I am recommending that the Commission approve the same interest rate on customer
3 deposits (Three Month Non-Financial Commercial Paper Rate as published by the
4 Federal Reserve) and late/deferred payment percentage of 1.5 percent per month that was
5 approved in DVEC's recent rate case (Decision No. , dated November 2004). I am not
6 recommending any other changes to the current service charges

7

8 **IV. BASE COST OF GAS, PGA AND BANK BALANCE**

9 Q. What are your recommendations regarding the base cost of gas?

10 A. I am recommending that DRSC's base cost of gas be set at \$0.56678 per therm
11 (purchased gas costs on Schedule C-1 of \$325,260 divided by the total number of therms
12 sold of 573,869 as found on Schedule H-1. The current base cost of gas approved by the
13 Commission is \$0.36 per therm. As mentioned previously, DRSC has experienced a
14 significant increase in its purchased gas costs. The proposed level of base cost of gas is
15 closer to the level that DRSC will pay for future purchased gas costs.

16

17 Q. Are you recommending that the PGA charge which is \$0.211 per therm as of March 31,
18 2005 be set to zero?

19 A. Yes. DRSC's current bank balance as of March 31, 2005 is only approximately \$20,000.
20 Therefore, I am recommending that DRSC's fuel adjustor rate that is \$0.211 as of March
21 31, 2005 be set at zero. If approved, the proposed base cost of gas of \$0.56678 should
22 continue to gradually reduce the current under-collected bank balance of approximately
23 \$20,000 in the months that the purchased gas cost is below the proposed base cost of gas.

24

25

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1 **V. FINANCING**

2 Q. Why is DRSC seeking to incur more indebtedness at this time?

3 A. In general, this additional debt is needed to reimburse Duncan Valley Electric
4 Cooperative, Inc. ("DVEC") for funds supplied to DRSC over the past four years for
5 improvements to the gas distribution system. Over this four year period, DVEC has
6 advanced funds to DRSC as needed for cash flow needs related to construction and
7 paying expenses. Since its last rate case in 2000, DRSC has made the following plant
8 additions by year:

9 2001 - \$108,087

10 2002 - \$106,194

11 2003 - \$62,393

12 2004 - \$54,620

13
14
15 This long-term debt would have an interest rate equivalent to the Arizona Electric Power
16 Cooperative, Inc. (AEPCO) variable interest rate earned on funds with repayment over 25
17 years. AEPCO pays this interest rate to DVEC on funds that DVEC has deposited with
18 AEPCO. DVEC has chosen this rate to charge DRSC because this is the rate of interest
19 that DVEC would have earned on funds that were advanced to DRSC. This interest rate
20 is variable and will depend on market conditions. DRSC's revenue requirement
21 calculation in this case assumes a 6% interest rate because the loan is over a 25 year
22 period. DRSC chose a 25 year term because that is the term of one of its other loans from
23 DVEC and because of the revenue increase necessary to enable DRSC to pay the
24 additional debt service that resulted from the 25 year term was affordable.
25
26
27

1 Q. DRSC's total accounts payable to DVEC equaled \$455,352 on February 28, 2005. Why
2 hasn't DRSC requested a higher loan be approved in this case to repay this amount?

3 A. The maximum loan that DRSC has requested is equal to its current recommended rate
4 base of \$772,408 minus its existing approved debt of \$503,420 which equals
5 approximately \$268,988. DRSC did not want to request a loan that would result in its
6 total debt exceeding its proposed rate base of \$268,988.

7
8 Q. How will DRSC repay the remaining accounts payable of \$186,364 to DVEC?

9 A. DRSC will have to make payments on the \$186,364 (\$455,352-\$268,988) remaining
10 balance of accounts payable as funds are available. If a balance remains or continues to
11 grow, DRSC will need to seek ACC approval of additional long-term debt and/or file a
12 rate case.

13
14 Q. Will DRSC be able to pay the additional debt service on the additional \$268,988 with the
15 rate increase that DRSC is requesting?

16 A. Yes. The rates requested by DRSC in this rate application are predicated on the
17 repayment of DRSC's existing debts as well as the \$268,988 of additional debt.
18 According to Schedule A-2, page 1 of 2, DRSC will maintain a TIER of 2.00 and a Debt
19 Service Coverage Ratio of 1.38 even with the additional debt service from the \$268,988
20 loan assuming a 6% interest rate.

21
22 Q. Would DRSC be able to borrow long-term debt directly from CFC or Rural Utilities
23 Service (RUS) on its own credit?

24 A. No. As mentioned previously, CFC will require all lending to DRSC to be guaranteed by
25 DVEC since DRSC is not a full member of CFC and, in any event, the Company's poor
26 financial condition does not enable it to incur additional debt on its own credit. DRSC is
27 not an eligible borrower of RUS. The increase revenues sought in this case will provide

1 an important first step towards restoring the credit worthiness of the utility.

2

3 Q. What are the cash flow ramifications of this rate and financing application?

4 A. I urge the Commission to be mindful of this precarious cash flow condition when
5 considering any modifications to the average increase in revenues requested in this case.

6 While the increase requested by DRSC in this case is substantial, DRSC must collect this
7 recommended level of revenues to pay its expenses, debts and fund future construction
8 projects. As mentioned in Jack Shilling's testimony, DRSC can no longer rely on DVEC
9 to advance DRSC funds for these purposes.

10

11 Q. Does that conclude your direct testimony?

12 A. Yes, it does.

13

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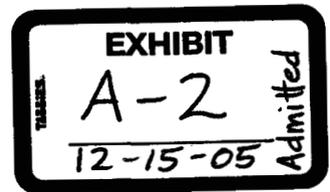
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BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

REBUTTAL
TESTIMONY
OF
JOHN V. WALLACE
DUNCAN RURAL SERVICES CORPORATION

November 21, 2005

1 **I. INTRODUCTION**

2 Q. Please state your name address and occupation.

3 A. My name is John V. Wallace. I am the Director of Regulatory and Strategic
4 Services of Grand Canyon State Electric Cooperative Association (GCSECA). I
5 represent Duncan Rural Services, Inc. (DRSC or the Company).

6
7 Q. Are you the same John V. Wallace who filed direct testimony in this matter?

8 A. Yes.

9
10 Q. Was this testimony prepared by you or under your direction?

11 A. Yes, it was.

12
13 Q. What areas does your rebuttal testimony address?

14 A. My testimony addresses four primary areas: revenue requirement, cost of service, base
15 cost of gas and rate design.

16
17 Q. Please summarize your recommendations.

18 A. Rebuttal Schedule A-2, page 1 of 2, summarizes operating results at present and proposed
19 rates for the 12 months ended December 31, 2004, the test year in this case. The present
20 rates produced a net/total margin deficit, or loss, of \$86,106 on an adjusted test year basis.
21 The proposed \$167,705 increase in revenues produces a positive net/total margin of
22 \$39,031 and a corresponding times interest earned ratio (TIER) of 2.00 in contrast to the
23 current negative net TIER of 1.20.

24
25 DRSC accepts the Staff adjustments to its proposed rate base calculation as found on
26 DTZ-3. DRSC is recommending the Staff proposed OCRB of \$758,057 on DTZ-3 be
27 adopted by the Commission in this case.

1 DRSC's Rebuttal Schedule C-1 shows the adjustments made to DRSC's test year
2 revenues and expenses as a result of Staff's direct testimony.

3
4 Per Mr. Jack Shilling's rebuttal testimony, DRSC is recommending \$600,000 of
5 additional Long Term Debt ("LTD") be approved by the Commission. \$502,000 of the
6 \$600,000 of additional LTD would be recovered through DRSC's recommended rebuttal
7 rates. The \$502,000 is the amount of current advances owed to Duncan Valley Electric
8 Cooperative, Inc. ("DVEC"). This LTD would have a variable interest rate (assumed 5
9 percent) with repayment over 25 years.

10
11 DRSC stipulates to the testimony, recommendations and schedules as found in Mr. Prem
12 Bahl's direct testimony.

13
14 DRSC agrees with the Staff testimony that recommends setting the base cost of gas to
15 zero and in the future having the entire cost of gas be recovered from the fuel adjustor
16 for the reasons stated in Staff's testimony.

17
18 With the exception of the per therm rates for each customer class and the interest rate on
19 customer deposits as discussed in the Rate Design section of my rebuttal testimony,
20 DRSC recommends that the rates and charges as shown on SPI-1, page 1 of 1.

21
22 DRSC is recommending the winter per therm rate be set at \$0.73 and the summer per
23 therm rate be set at \$0.26 for all three customer classes. These per therm rates reflect
24 DRSC's higher revenue requirement that has been recommended in its rebuttal testimony.
25 Refer to Rebuttal Schedule H-3 for a comparison of present versus proposed rates. Refer
26 to Rebuttal Schedules H-4 pages 1-3 for a typical bill analysis for the three customer
27 classes.

1 DRSC is recommending that the Commission approve the same interest rate on customer
2 deposits (Three Month Non-Financial Commercial Paper Rate as published by the
3 Federal Reserve) that was approved in DVEC's recent rate case (Decision No. 67433,
4 dated December 3, 2004).

5
6 Q. Do you view the indicated net TIER of 2.00 at proposed rates as a reasonable ratio in this
7 case?

8 A. Yes. The 2.00 TIER requested in this case is, in my view, at the lower end of a
9 reasonable TIER range for this utility in view of its negative equity, the need to reverse
10 the losses it is experiencing most every month and the need to produce positive cash
11 flows.

12
13 **II. REVENUE REQUIREMENT**

14
15 **Rate Base**

16 Q. Please comment on Staff's proposed rate base as illustrated on Schedule DTZ-3.

17 A. DRSC accepts the Staff adjustments to its proposed rate base calculation as found on
18 DTZ-3. DRSC is recommending the Staff proposed OCRB of \$758,057 on DTZ-3 be
19 adopted by the Commission in this case.

20
21 **Operating Income**

22 Q. What are DRSC's recommended revenue, net/total margin and TIER amounts in its
23 rebuttal testimony?

24 A. Rebuttal Schedule A-2, page 1 of 2, summarizes operating results at present and proposed
25 rates for the 12 months ended December 31, 2004, the test year in this case. The present
26 rates produced a net/total margin deficit, or loss, of \$86,106 on an adjusted test year basis.
27 The proposed \$167,705 increase in revenues produces a positive net/total margin of

1 \$39,031 and a corresponding times interest earned ratio (TIER) of 2.00 in contrast to the
2 current negative net TIER of 1.20.

3
4 Q. Is DRSC recommending a higher revenue requirement and revenue increase in its rebuttal
5 testimony versus its direct testimony?

6 A. Yes, it is. For the reasons stated in Mr. Jack Shilling's rebuttal testimony, DRSC is
7 recommending a higher amount of additional LTD than it recommended in its direct
8 testimony. As a result, the interest expense and margin amounts have increased from the
9 levels recommended in DRSC's direct testimony.

10
11 Q. Does DRSC agree with Staff's revenue annualization adjustment of \$2,574 (ADJ #1)
12 shown on Schedule DTZ-7?

13 A. No, it does not. In order for this adjustment to be required, DRSC must experience a
14 known and measurable growth in the number of customers in its customer classes. In
15 order for this adjustment to be valid, DRSC must experience customer growth that is
16 predictable, sustainable and significant. As a basis for making this adjustment, Staff has
17 assumed that the number of customers in the 250 cfh and below class has increased from
18 740 in January 2004 to 747 in December 2004.

19
20 Q. Has DRSC experienced a predictable, sustainable and significant growth in its number of
21 customers in 250 cfh and below class?

22 A. No, it has not. While it may appear from looking at Schedule DTZ-8, line 2 that the
23 number of customers has increased from 740 in January 2004 to 747 in December 2004,
24 the growth in the number of customers is not predictable, sustainable and significant. In
25 fact the number of customers increases from 740 in January 2004 to approximately 747 in
26 February and March but decreases back to 740 in April through June and further
27 decreases to 729 in July and is approximately 735 in August and September and

1 decreases to 730 in October and increases to 740 in November and 747 in December.

2

3 Q. Is this the type and pattern of monthly customer counts that is expected from a customer
4 class that is experiencing predictable, sustainable and significant growth?

5 A. No it is not. In fact there appears to be little that is predictable about the number of
6 customers in this class of customers or any of the other DRSC customer classes.

7

8 Q. Has Staff annualized the other two customer classes' revenues?

9 A. No, it has not. Staff did not annualize revenues for the Above 250 cfh to 425 cfh because
10 of a large number of seasonal customers and did not annualize revenues for the Above
11 425 to 1,000 cfh class because this class experienced a customer decrease that was due to
12 that customer moving to another class.

13

14 Q. Has DRSC experienced an increase in its total number of customers over the last five
15 years?

16 A. As illustrated in Part R. of the annual RUS Form 7 reports that DRSC submitted with its
17 direct testimony, DRSC has experienced a decline in its total number of customers.

18

19 Q. Does DRSC expect this trend to continue in the years 2005 and beyond?

20 A. Yes. As a result of a depressed local economy in Duncan's service territory and high
21 natural gas prices, DRSC expects that its total number of customers will either continue
22 to decline or remain stable in the future. I have attached the RUS Form 7 Report, Part R.
23 that contains the number of customers by class for the months January through October
24 of 2005. The number of customers in the 250 cfh and Above class decreases from 745 in
25 January 2005 to 725 in October 2005.

26

27

1 Q. Should Staff's revenue annualization adjustment of \$2,574 (ADJ #1) shown on Schedule
2 DTZ-7 be adopted by the Commission?

3 A. No, it should not be adopted for the reasons stated above.
4

5 Q. Staff has recommended that DRSC remove the revenues and expenses associated with the
6 ACC assessment charge and that these amounts should be recovered through a bill add-
7 on. Does DRSC agree?

8 A. DRSC does not object to removing the revenues and expenses associated with the ACC
9 assessment charge. As a result of the additional billing programming costs and a limited
10 number of lines on its bill, DRSC does not agree that these amounts should be recovered
11 through a bill add-on. DRSC proposes that this item be combined with another line item
12 for recovery from customers.
13

14 Q. Please discuss Staff's adjustment to Interest Expense on Long Term Debt (LTD) of
15 \$8,019 (ADJ #6) shown on Schedule DTZ-7?

16 A. Staff has recommended that DRSC's additional LTD should be increased from \$268,988
17 to \$330,484. Staff has also decreased DRSC's proposed interest expense on the
18 additional LTD from a variable annual rate of 6 percent to a variable rate of 2.725
19 percent, which is equal to Arizona Electric Power Cooperative's (AEPCO) current
20 variable interest rate earned on funds that cooperatives have deposited with AEPCO.
21

22 Q. Given the Staff recommendations that DRSC discontinue the use of unauthorized cash
23 advances from Duncan Valley Electric Cooperative and meet a 30 percent equity ratio,
24 what amount of additional LTD should be approved by in this case?

25 A. For the reasons stated in Jack Shilling's rebuttal testimony, DRSC is recommending
26 additional LTD of \$600,000 be approved for DRSC.
27

1 Q. What amount of interest expense is DRSC recommending by recovered in this case?

2 A. DRSC is recommending that \$39,187 of interest expense be approved in this case. This
3 interest expense amount is equal to the interest expense of \$14,087 on existing LTD plus
4 \$25,100 (5.00 percent interest times \$502,000 of advances from DVEC as of September
5 30, 2005). The interest expense on the outstanding amount of LTD of \$98,000 (\$600,000
6 of proposed LTD minus \$502,000 of current DVEC advances) will be recovered from
7 customers through the two phased-in rate increases of up to 5 percent that are discussed
8 in Jack Shilling's rebuttal testimony.

9

10 Q. Does DRSC have concerns about Staff's recommendation to lower the interest rate from
11 6 to 2.725 percent?

12 A. Yes, it does. Recently, interest rates have been gradually increasing. DRSC is concerned
13 that interest rates will rise in the future above the current 2.725 rate. By setting this rate
14 at the current rate of 2.725 percent, Staff has not allowed any margin for interest rate
15 increases. If the Commission adopts the 2.725 percent interest rate and interest rates
16 increase significantly, DRSC will need to spend more of its margins on interest expense
17 and will have less to spend on capital improvements. In the past, expense increases have
18 necessitated cash advances from Duncan Valley Electric Cooperative (DVEC).

19

20 Q. Is DRSC still recommending that the interest expense on LTD by set at 6 percent?

21 A. No, it is not. The 6 percent interest rate is a reasonable rate when compared with market
22 interest rates for LTD, which would allow DRSC some cushion to be used for rising
23 interest expense. However, as a compromise, DRSC recommends an interest rate of 5.00
24 percent be adopted.

25

26 Q. In its rebuttal testimony, has DRSC accepted Staff's adjustment to rate case expense of
27 \$4,851 (ADJ #4) shown on Schedule DTZ-7?

1 A. Yes. In its rebuttal testimony, DRSC has accepted Staff's adjustment to Rate Case
2 Expense of \$4,851 (ADJ #4) shown on Schedule DTZ-7. Staff's adjustment amortized
3 DRSC's rate case expense over a three-year period rather than the two-year amortization
4 recommended by DRSC. However, DRSC reserves the right to argue its position on this
5 adjustment in rejoinder testimony if its rebuttal recommendations are not adopted by
6 Staff. For the reasons set forth in Mr. Shilling's rebuttal testimony, DRSC may have to
7 apply for rate increases annually to comply with the Staff recommendations on equity
8 and advances from DVEC. Consequently amortizing the rate case over a three-year
9 period as proposed by Staff, may not be appropriate in this case.

10

11 Q. Please explain the DRSC's Income Tax Expense for its proposed level of revenues and
12 expenses as contained on Schedule A-2, page 2 of 2.

13 A. DRSC is a "C" Corporation and subject to federal and state income taxes. Based on the
14 operating income level that results from DRSC's proposed rates in rebuttal testimony,
15 DRSC will have an Income Tax Expense of approximately \$17,722 as shown on Rebuttal
16 Schedule A-2, page 2 of 2.

17

18 Q. Does DRSC have any other comments on the remaining adjustments on Schedule DTZ-
19 7?

20 A. In its Rebuttal C-1 Schedule, DRSC has adopted the remaining adjustments found on
21 Schedule DTZ-7. However, the test year and proposed income tax expense that DRSC is
22 recommending is different from Staff's amounts due to the differences between
23 DRSC's and Staff's revenue and expense levels.

24

25

26

27

1 **III COST OF SERVICE, BASE COST OF GAS AND RATE DESIGN**

2
3 **Cost of Service Study**

4 Q. Please comment on Mr. Prem Bahl's direct testimony regarding DRSC's cost of service
5 study.

6 A. DRSC stipulates to the testimony, recommendations and schedules as found in Mr. Prem
7 Bahl's direct testimony.

8
9 **Base Cost of Gas**

10 Q. Does DRSC agree with the Staff testimony that recommends setting the base cost of gas
11 to zero and in the future having the entire cost of gas be recovered from the fuel adjustor?

12 A. Yes, it does for the reasons stated in Staff's testimony.

13
14 **Rate Design**

15 Q. Does DRSC agree with the Staff proposed rate design as shown on SPI-1, page 1 of 1?

16 A. Yes it does with the exception of the per therm rates for each customer class and the
17 interest rate on customer deposits as discussed below.

18
19 Q. Does DRSC agree with the Staff proposed per therm rate design as shown on SPI-1, page
20 1 of 1?

21 A. No, it does not. The per therm rates shown on SPI-1 page 1 of 1 do not reflect a winter
22 and summer cost differential and are different for each customer class.

23
24 Q. What is DRSC's proposal?

25 A. Mr. Prem Bahl has stated in his direct testimony that the largest plant account is
26 distribution mains which is 67 percent of total distribution and that these mains have been
27 allocated 100 percent on basis of demand. This has a direct impact on rate design.

1 DRSC's distribution system has been sized to meet its peak demands during the winter
2 months. Consequently, the costs of providing service not only vary from summer to
3 winter due to gas costs, there is a variance in DRSC's capacity/demand costs due to its
4 peak winter season. For these reasons, DRSC is still proposing a higher winter per therm
5 rate than the summer per therm rate.

6
7 Q. Do each of the customer's classes place a similar demand on the system during the five
8 peak winter months?

9 A. No. The irrigation customers in the Above 250 cfh to 425 cfh class primarily uses gas
10 during the off peak summer months. The Above 250 cfh to 425 cfh customers used
11 20,980 therms in the five peak winter months compared to 148,600 therms used by these
12 customers in the other months. During the Test Year, DRSC's peak month for therm
13 usage was February. In that month, irrigation customers used only 3,751 therms of the
14 83,019 therms sold to all DRSC customers.

15
16 Q. Does DRSC have any further recommendations regarding the per therm rates for each
17 customer class?

18 A. Yes, it does. DRSC is also recommending that the summer and winter per therm rates be
19 equal for all three classes. Besides the differences in the service line and meter that are
20 recovered in the fixed monthly charge, the other distribution costs to serve the three
21 customer classes are similar. Therefore, DRSC is recommending that the summer and
22 winter per therm rates be equal for all three classes.

23
24 Q. What winter and summer per therm rates are you recommending for all three-customer
25 classes?

26 A. DRSC is recommending the winter per therm rate be set at \$0.73 and the summer per
27 therm rate be set at \$0.26 for all three customer classes. These per therm rates reflect

1 DRSC's higher revenue requirement that has been recommended in its rebuttal testimony.
2 Refer to Rebuttal Schedule H-3 for a comparison of present versus proposed rates. Refer
3 to Rebuttal Schedules H-4 pages 1-3 for a typical bill analysis for the three customer
4 classes.

5
6 Q. Why is the winter per therm rate that DRSC is recommending significantly higher than
7 the summer per therm rate?

8 A. During the Test Year, DRSC's customers' peak monthly usage was 83,019 therms in
9 February versus 25,644 therms in lowest month, October. DRSC gas system is built to
10 meet its peak demand (capacity) in the winter months like December, January and
11 February. Customers who use the gas system during peak winter months should pay a
12 higher share of the demand (capacity) related costs than customers who predominantly
13 use gas during summer months.

14
15 Q. Please comment on Staff's proposal to raise the interest rate on customer deposits from 3
16 percent to 6 percent.

17 A. Staff is recommending that the interest rate on customer deposits be increased from 3
18 percent to 6 percent because all other gas utilities have a flat 6 percent interest rate on
19 customer deposits.

20
21 Q. Is the current interest rate that DRSC earns on customer deposits equal to 6 percent?

22 A. No. It is equal to 2.78 percent.

23
24 Q. Should DRSC pay more interest on customer deposits than it is able to earn on its bank
25 deposits?

26 A. No. It should not. Under Staff's recommendation DRSC will be paying customers with
27 deposits 6 percent while currently only earning 2.78% on its deposits. The amount of

1 interest paid on customer deposits that exceeds what is earned by DRSC on its bank
2 deposits or 3.22 percent (6.00% - 2.78%) is a subsidy paid to customers with deposits.
3 This subsidy is paid by all of DRSC's customers without deposits.
4

5 Q. Does the variable interest rate proposed by DRSC better track the interest rate being
6 earned by DRSC on its deposits?

7 A. Yes, it does. The variable interest rate proposed by DRSC will move up and down with
8 market interest rates and will better reflect what DRSC is earning on its bank deposits.
9

10 Q. Should a flat 6 percent interest rate on customer deposits be adopted by the Commission
11 for DRSC?

12 A. No, for the reasons stated above. DRSC's customers who do not have deposits should
13 not be penalized because other gas utilities in the state have a 6 percent interest rate on
14 customer deposits. DRSC is recommending that the Commission approve the same
15 interest rate on customer deposits (Three Month Non-Financial Commercial Paper Rate
16 as published by the Federal Reserve) that was approved in DVEC's recent rate case
17 (Decision No. 67433, dated December 3, 2004).
18

19 Q. Does that conclude your rebuttal testimony?

20 A. Yes, it does.
21
22
23
24
25
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27

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY ORIGINAL COST
1	Adjusted Operating Income (Loss)	\$ (47,029)
2	Required Operating Income	\$ 78,374
3	Operating Income Deficiency (L2 - L1)	\$ 125,403
4	Gross Revenue Conversion Factor	1.32936
5	Increase In Gross Revenue (L3 * L4)	\$ 166,705
6	Adjusted Test Year Revenue	\$ 324,346
7	Proposed Annual Revenue (L5 + L6)	\$ 491,051
8	Required Increase in Revenue (%) (L6/L7)*	51.40%

* This Required Increase in Revenue % does not include fuel adjustor revenues. The actual increase customers will experience is lower and is reflected on Typical Bill Analysis Schedules. Schedules H-4, pages 1-3.

PROPOSED REVENUE INCREASE
SUMMARY

Line

No.	Description	Per Books	Test Year As Adjusted	Proposed Rates
1a.	Total Base Rate Revenue	\$ 644,167	\$ 319,136	\$ 485,841
1b.	Total Other Revenue*	\$ 5,210	\$ 5,210	\$ 5,210
1c.	Total Base Rate Revenue and Other Revenue	\$ 649,377	\$ 324,346	\$ 491,051
1d.	Plus: Fuel Adjustor Revenue	\$ -	\$ -	\$ -
1e.	Total Revenue Before Other Contract Margin Revenue	\$ 649,377	\$ 324,346	\$ 491,051
1f.	Other Contract Margin Revenue	\$ -	\$ -	\$ -
1g.	Total Revenue	\$ 649,377	\$ 324,346	\$ 491,051
2.	Operating Expense Before Interest Exp. On L.T. Debt	\$ 708,298	\$ 371,375	\$ 412,943
3.	Operating Margin Before Interest Exp. On L.T. Debt	\$ (58,921)	\$ (47,029)	\$ 78,108
4.	Interest Expense on Long-Term Debt	\$ 14,973	\$ 39,187	\$ 39,187
5.	Non-Operating Margins	\$ 110	\$ 110	\$ 110
6.	Total/Net Margin	\$ (73,784)	\$ (86,106)	\$ 39,031
7.	Total Long-Term Debt Principal Payment	\$ 45,305	\$ 55,421	\$ 55,421
8.	Net TIER (Intr Exp on L.T. Debt + Net Margin)/Total Intr Exp on L.T. Debt	(3.93)	(1.20)	2.00
9.	DSC (Net Margin + Depr Exp + Intr Exp on L.T. Debt)/ Prin&Int on L.T. Debt	(0.15)	(0.50)	1.35
10.	Rate Base	\$ 758,057	\$ 758,057	\$ 758,057
11.	% Return on Rate Base (Operating Margin / Rate Base)	-7.77%	-6.20%	10.30%
12.	Total Proposed Revenue Increase Over Total Present Rates (Does not include Fuel Adjustor Revenue)	-		\$ 166,705
14.	% Increase In Total Adusted Test Year Revenues			25.66%

SUMMARY OF FILING			
		PRESENT RATES	PROPOSED RATES
	Per Books	TY as Adjusted	Proposed
Revenues			
Sales Revenue of Gas - Base Rates & PGA	\$ 644,167	\$ 319,136	\$ 485,841
Other Operating Revenue	\$ 5,210	\$ 5,210	5,210
Total Revenue	\$ 649,377	324,346	\$ 491,051
Expenses			
Purchased Gas	\$ 325,260	\$ (0)	\$ (0)
Distribution Expense - Operation	\$ 147,723	\$ 154,097	\$ 154,097
Distribution Expense - Maintenance	\$ 52,766	\$ 54,824	\$ 54,824
Consumer Accounts Expense	\$ 58,103	\$ 60,129	\$ 60,129
Administrative and General Expense	\$ 54,952	\$ 56,520	\$ 56,520
Depreciation and Amortization Expense	\$ 49,645	\$ 49,645	\$ 49,645
Tax Expense - Property	\$ 19,639	\$ 19,639	\$ 19,639
Tax Expense - Other	\$ -	\$ -	\$ -
Tax Expense - Income taxes*	\$ (158)	\$ (23,846)	\$ 17,722
Interest Expense - Other	\$ 367	\$ 367	\$ 367
Total Operating Expenses	\$ 708,298	\$ 371,375	\$ 412,943
Interest Expense - Long-term Debt	\$ 14,973	\$ 39,187	\$ 39,187
Total Operating Expenses and Int on L.T. Debt	\$ 723,271	\$ 410,562	\$ 452,130
OPERATING MARGIN after Intr Exp on L.T. Debt	\$ (73,894)	\$ (86,216)	\$ 38,921
Non-Operating Margin			
Interest and Dividend Income	\$ 110	\$ 110	\$ 110
Capital Credits	\$ -	\$ -	\$ -
	\$ 110	\$ 110	\$ 110
TOTAL/NET MARGINS	\$ (73,784)	\$ (86,106)	\$ 39,031

* For a calculation of Proposed Tax Expense-Income taxes, refer to
WORKPAPER FILENAME: DRSC Rebuttal ACC Schedules 11-19-05.xls, Worksheet: Schedule C-3

		INCOME STATEMENT		
Acct. No.	Revenues	Per Books	Adjustments	Adjusted TY
480-481	Sales Revenue of Gas - Base Rates	\$ 319,136	\$ -	A \$ 319,136
451	Other Operating Revenue	\$ 5,210	-	\$ 5,210
	Total Revenue	\$ 324,346	-	\$ 324,346
Acct. No.	Expenses			
804.10	Gas Purchases	\$ 325,260	(325,260.00)	F \$ (0)
	Distribution Expense - Operations			
870.00	Supervision	\$ -	950	B \$ 950
874.00	Mains & Services	\$ 105,889	4,137	B \$ 110,026
877.00	Measuring & Regulation Stations	\$ 13,213	540	B \$ 13,753
878.00	Meters & House Regulators	\$ 19,467	747	B \$ 20,214
880.00	Other Expenses	\$ 3,116	-	\$ 3,116
881.00	Rents	\$ 6,039	-	\$ 6,039
	Distribution Expense - Operations	\$ 147,723	6,374	\$ 154,097
	Distribution Expense - Maintenance			
885.00	Supervision	\$ -	-	\$ -
887.00	Mains & Services	\$ 44,287	1,811	B \$ 46,098
891.00	Measuring & Regulation Stations	\$ -	-	\$ -
892.00	Services	\$ -	-	\$ -
893.00	Meters & House Regulators	\$ 8,479	247	B \$ 8,726
894.00	Other Equipment	\$ -	-	\$ -
	Distribution Expense - Maintenance	\$ 52,766	2,058	\$ 54,824
	Consumer Accounts Expense			
902.00	Meter Reading Expense	\$ 24,148	900	B \$ 25,048
903.00	Consumer Expense	\$ 29,397	1,126	B \$ 30,523
904.00	Reserve for Uncollectible Accounts	\$ 1,500	-	\$ 1,500
909.00	Information & Instruction ads	\$ 3,058	-	\$ 3,058
	Consumer Accounts Expense	\$ 58,103	2,026	\$ 60,129
	Administrative and General Expense			
920.00	Salaries	\$ 5,881	2,610	B \$ 8,491
921.00	Office Supplies and Expenses	\$ 3,606	-	\$ 3,606
923.00	Outside Services Employed	\$ 11,826	-	\$ 11,826
923.00	Rate Case	\$ -	-	\$ -
924.00	Property Insurance	\$ -	-	\$ -
925.00	Injuries and Damages Ins.	\$ 17,568	-	\$ 17,568
928.00	Regulatory Commission Expense	\$ 10,521	(1,042)	C \$ 9,479
930.00	Miscellaneous General	\$ 5,550	-	\$ 5,550
		\$ -	-	\$ -
		\$ -	-	\$ -
		\$ -	-	\$ -
	Administrative and General Expense	\$ 54,952	1,568	\$ 56,520
	Interest Expense - Other			
		\$ -	-	\$ -
427.21	Interest Expense - Due to/Due from	\$ -	-	\$ -
431.00	Interest Expense - Customer Deposits	\$ 367	-	\$ 367
	Interest Expense - Other	\$ 367	-	\$ 367
403.00	Depreciation and Amortization Expense	\$ 49,645	-	\$ 49,645
408.00	Tax Expense - Property	\$ 19,639	-	\$ 19,639
408.50	Tax Expense - Other	\$ -	-	\$ -
409.00	Tax Expense - Income Taxes	\$ (158)	(23,688)	D \$ (23,846)
	Total Expenses	\$ 708,298	(336,922)	\$ 371,375
	OPERATING MARGIN	\$ (383,951)	336,922	\$ (47,029)
427.10	Interest on Long Term Debt	\$ 14,973	24,214	E \$ 39,187
428.00	Amortization of Debt Discount and Expense	\$ -	-	\$ -
	Total Interest Expense on LT Debt	\$ 14,973	24,214	\$ 39,187
	Non-Operating Margin			
419.00	Interest and Dividend Income	\$ 110	-	\$ 110
424.00	Capital Credits	\$ -	-	\$ -
		\$ 110	-	\$ 110
	TOTAL/NET MARGINS	\$ (398,814)	\$ 312,708	\$ (86,106)

EXPLANATION OF INCOME ADJUSTMENTS

A -	Sales Revenue of Gas	- Per Books	\$	319,136	
		- Per Adjusted	\$	319,136	\$ -
	Reflects total revenues less base cost of gas and fuel adjustor revenue				
B -	Salaries & Related Expenses	- Per Books	\$	135,525	
		- Per Adjusted	\$	148,593	\$ 13,068
	To annualize salaries, salary increases and related benefits that occurred in the Test Year				
	(WORKPAPER FILENAME: DRSC ACC Schedules 6-6-05.xls, Worksheet: SalaryAdj)				
C -	Regulatory Commission Expense	- Per Books	\$	10,521	
		- Per Adjusted	\$	9,479	\$ (1,042)
	To reflect Staff's recommended rate case expense				
D -	Tax Expense - Income Taxes	- Per Books	\$	(158)	
		- Per Adjusted	\$	(23,846)	\$ (23,688)
	To reflect the removal of a negative \$158 loss carry-forward, a \$50 income tax filing fee and Adjusted Test Year Income Tax Expense of a negative \$23,580				
E -	Interest On Long-Term Debt	- Per Books	\$	14,973	
		- Per Adjusted	\$	39,187	\$ 24,214
	To reflect interest on additional Long-Term Debt of \$ 502,000				
F -		- Per Books	\$	325,260	
		- Per Adjusted	\$	(0)	\$ (325,260)
	To reflect the removal of purchased gas expense				

RATE DESIGN

METER SIZES

250 cfh & Below

	<u>Present Rates</u>	<u>Proposed Rates</u>
Monthly Service Charge	\$15.00	\$20.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000

Above 250 cfh to 425 cfh

Monthly Service Charge	\$22.50	\$30.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000

Above 425 cfh to 1,000 cfh

Monthly Service Charge	\$30.00	\$40.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000

Service Charges:

	<u>Present Rates</u>	<u>Proposed Rates</u>
Establishment of Service (Regular Hours)	\$ 35.00	\$ 35.00
Establishment of Service (After Hours)	\$ 50.00	\$ 50.00
Re-establishment/Reconnection of Service (Regular Hours)	\$ 50.00	\$ 50.00
Re-establishment/Reconnection of Service (After Hours)	\$ 75.00	\$ 75.00
After Hours Service Calls - Consumer Caused (Per Hour)*	\$ 50.00	\$ 50.00
Meter Re-read Charge (No Charge for Read Error)	\$ 30.00	\$ 30.00
Meter Test Fee	\$ 50.00	\$ 50.00
Insufficient Funds Check	\$ 20.00	\$ 20.00
Interest Rate on Customer Deposits**	3.0%	Variable
Late/Deferred Payment (Per Month)	0.0%	1.5%

* One hour minimum

** Variable Rate based on the Three Month Non-Financial Commercial Paper Rate as published by the Federal Reserve

TYPICAL BILL ANALYSIS
250 cfh & Below

	Avg Therms Used Per Bill	Present Rates*	Proposed Rates	Dollar Increase	Percent Increase
Winter	76	\$92.28	\$119.45	\$ 27.17	29.44%
Summer	20	\$29.42	\$36.53	\$ 7.11	24.16%

Therm Consumption	Winter		Winter		Summer		Summer	
	Present Rates*	Proposed Rates	% Change	Present Rates*	Proposed Rates	% Change		
0	\$ 15.00	\$ 20.00	33.33%	\$ 15.00	\$ 20.00	33.33%		
25	\$ 40.28	\$ 52.53	30.42%	\$ 33.13	\$ 40.78	23.09%		
50	\$ 65.55	\$ 85.05	29.75%	\$ 51.25	\$ 61.55	20.09%		
60	\$ 75.66	\$ 98.06	29.61%	\$ 58.50	\$ 69.86	19.41%		
70	\$ 85.77	\$ 111.07	29.50%	\$ 65.75	\$ 78.17	18.88%		
75	\$ 90.83	\$ 117.58	29.45%	\$ 69.38	\$ 82.33	18.66%		
80	\$ 95.88	\$ 124.08	29.41%	\$ 73.00	\$ 86.48	18.46%		
90	\$ 105.99	\$ 137.09	29.34%	\$ 80.25	\$ 94.79	18.11%		
100	\$ 116.10	\$ 150.10	29.29%	\$ 87.51	\$ 103.10	17.82%		
125	\$ 141.38	\$ 182.63	29.18%	\$ 105.63	\$ 123.88	17.27%		
150	\$ 166.65	\$ 215.15	29.10%	\$ 123.76	\$ 144.65	16.88%		
175	\$ 191.93	\$ 247.68	29.05%	\$ 141.88	\$ 165.43	16.59%		
200	\$ 217.20	\$ 280.20	29.01%	\$ 160.01	\$ 186.20	16.37%		
250	\$ 267.75	\$ 345.25	28.94%	\$ 196.26	\$ 227.75	16.04%		
300	\$ 318.30	\$ 410.30	28.90%	\$ 232.52	\$ 269.30	15.82%		
350	\$ 368.85	\$ 475.35	28.87%	\$ 268.77	\$ 310.85	15.66%		
400	\$ 419.40	\$ 540.40	28.85%	\$ 305.02	\$ 352.40	15.53%		
450	\$ 469.95	\$ 605.45	28.83%	\$ 341.27	\$ 393.95	15.44%		
500	\$ 520.50	\$ 670.50	28.82%	\$ 377.53	\$ 435.50	15.36%		
750	\$ 773.25	\$ 995.75	28.77%	\$ 558.79	\$ 643.25	15.12%		
1000	\$ 1,026.00	\$ 1,321.00	28.75%	\$ 740.05	\$ 851.00	14.99%		

NOTE:

Fuel Adjustor Included in Present Rates
Fuel Adjustor Included in Proposed Rates

\$ 0.5710
\$ 0.5710

TYPICAL BILL ANALYSIS
Above 250 cfh to 425 cfh

	Avg Therms Used Per Bill	Present Rates*	Proposed Rates	Dollar Increase	Percent Increase
Winter	262	\$287.63	\$371.19	\$ 83.55	29.05%
Summer	997	\$745.60	\$858.77	\$ 113.17	15.18%

Irrigation

Therm Consumption	Winter			Summer		
	Present Rates*	Proposed Rates	% Change	Present Rates*	Proposed Rates	% Change
0	\$ 22.50	\$ 30.00	33.33%	\$ 22.50	\$ 30.00	33.33%
25	\$ 47.78	\$ 62.53	30.87%	\$ 40.63	\$ 50.78	24.98%
50	\$ 73.05	\$ 95.05	30.12%	\$ 58.75	\$ 71.55	21.78%
60	\$ 83.16	\$ 108.06	29.94%	\$ 66.00	\$ 79.86	20.99%
70	\$ 93.27	\$ 121.07	29.81%	\$ 73.25	\$ 88.17	20.36%
75	\$ 98.33	\$ 127.58	29.75%	\$ 76.88	\$ 92.33	20.09%
80	\$ 103.38	\$ 134.08	29.70%	\$ 80.50	\$ 96.48	19.84%
90	\$ 113.49	\$ 147.09	29.61%	\$ 87.75	\$ 104.79	19.41%
100	\$ 123.60	\$ 160.10	29.53%	\$ 95.01	\$ 113.10	19.05%
125	\$ 148.88	\$ 192.63	29.39%	\$ 113.13	\$ 133.88	18.34%
150	\$ 174.15	\$ 225.15	29.29%	\$ 131.26	\$ 154.65	17.82%
175	\$ 199.43	\$ 257.68	29.21%	\$ 149.38	\$ 175.43	17.43%
200	\$ 224.70	\$ 290.20	29.15%	\$ 167.51	\$ 196.20	17.13%
250	\$ 275.25	\$ 355.25	29.06%	\$ 203.76	\$ 237.75	16.68%
300	\$ 325.80	\$ 420.30	29.01%	\$ 240.02	\$ 279.30	16.37%
350	\$ 376.35	\$ 485.35	28.96%	\$ 276.27	\$ 320.85	16.14%
400	\$ 426.90	\$ 550.40	28.93%	\$ 312.52	\$ 362.40	15.96%
450	\$ 477.45	\$ 615.45	28.90%	\$ 348.77	\$ 403.95	15.82%
500	\$ 528.00	\$ 680.50	28.88%	\$ 385.03	\$ 445.50	15.71%
750	\$ 780.75	\$ 1,005.75	28.82%	\$ 566.29	\$ 653.25	15.36%
1000	\$ 1,033.50	\$ 1,331.00	28.79%	\$ 747.55	\$ 861.00	15.18%
1250	\$ 1,286.25	\$ 1,656.25	28.77%	\$ 928.81	\$ 1,068.75	15.07%
1500	\$ 1,539.00	\$ 1,981.50	28.75%	\$ 1,110.08	\$ 1,276.50	14.99%
1750	\$ 1,791.75	\$ 2,306.75	28.74%	\$ 1,291.34	\$ 1,484.25	14.94%
2000	\$ 2,044.50	\$ 2,632.00	28.74%	\$ 1,472.60	\$ 1,692.00	14.90%
2500	\$ 2,550.00	\$ 3,282.50	28.73%	\$ 1,835.13	\$ 2,107.50	14.84%
3000	\$ 3,055.50	\$ 3,933.00	28.72%	\$ 2,197.65	\$ 2,523.00	14.80%
4000	\$ 4,066.50	\$ 5,234.00	28.71%	\$ 2,922.70	\$ 3,354.00	14.76%
5000	\$ 5,077.50	\$ 6,535.00	28.71%	\$ 3,647.75	\$ 4,185.00	14.73%

NOTE:

Fuel Adjustor Included in Present Rates \$ 0.5710
Fuel Adjustor Included in Proposed Rates \$ 0.5710

TYPICAL BILL ANALYSIS
Above 425 cfh to 1,000 cfh

	Avg Therms Used Per Bill	Present Rates*	Proposed Rates	Dollar Increase	Percent Increase
Winter	1,430	\$1,475.73	\$1,900.43	\$ 424.70	28.78%
Summer	128	\$122.81	\$146.37	\$ 23.56	19.19%

Therm Consumption	Winter			Summer		
	Present Rates*	Proposed Rates	% Change	Present Rates*	Proposed Rates	% Change
0	\$ 30.00	\$ 40.00	33.33%	\$ 30.00	\$ 40.00	33.33%
10	\$ 40.11	\$ 53.01	32.16%	\$ 37.25	\$ 48.31	29.69%
20	\$ 50.22	\$ 66.02	31.46%	\$ 44.50	\$ 56.62	27.23%
50	\$ 80.55	\$ 105.05	30.42%	\$ 66.25	\$ 81.55	23.09%
100	\$ 131.10	\$ 170.10	29.75%	\$ 102.51	\$ 123.10	20.09%
150	\$ 181.65	\$ 235.15	29.45%	\$ 138.76	\$ 164.65	18.66%
200	\$ 232.20	\$ 300.20	29.29%	\$ 175.01	\$ 206.20	17.82%
250	\$ 282.75	\$ 365.25	29.18%	\$ 211.26	\$ 247.75	17.27%
300	\$ 333.30	\$ 430.30	29.10%	\$ 247.52	\$ 289.30	16.88%
350	\$ 383.85	\$ 495.35	29.05%	\$ 283.77	\$ 330.85	16.59%
400	\$ 434.40	\$ 560.40	29.01%	\$ 320.02	\$ 372.40	16.37%
450	\$ 484.95	\$ 625.45	28.97%	\$ 356.27	\$ 413.95	16.19%
500	\$ 535.50	\$ 690.50	28.94%	\$ 392.53	\$ 455.50	16.04%
750	\$ 788.25	\$ 1,015.75	28.86%	\$ 573.79	\$ 663.25	15.59%
1000	\$ 1,041.00	\$ 1,341.00	28.82%	\$ 755.05	\$ 871.00	15.36%
1250	\$ 1,293.75	\$ 1,666.25	28.79%	\$ 936.31	\$ 1,078.75	15.21%
1500	\$ 1,546.50	\$ 1,991.50	28.77%	\$ 1,117.58	\$ 1,286.50	15.12%
1750	\$ 1,799.25	\$ 2,316.75	28.76%	\$ 1,298.84	\$ 1,494.25	15.05%
2000	\$ 2,052.00	\$ 2,642.00	28.75%	\$ 1,480.10	\$ 1,702.00	14.99%
2500	\$ 2,557.50	\$ 3,292.50	28.74%	\$ 1,842.63	\$ 2,117.50	14.92%
3000	\$ 3,063.00	\$ 3,943.00	28.73%	\$ 2,205.15	\$ 2,533.00	14.87%
3500	\$ 3,568.50	\$ 4,593.50	28.72%	\$ 2,567.68	\$ 2,948.50	14.83%
4000	\$ 4,074.00	\$ 5,244.00	28.72%	\$ 2,930.20	\$ 3,364.00	14.80%
4500	\$ 4,579.50	\$ 5,894.50	28.71%	\$ 3,292.73	\$ 3,779.50	14.78%
5000	\$ 5,085.00	\$ 6,545.00	28.71%	\$ 3,655.25	\$ 4,195.00	14.77%
5500	\$ 5,590.50	\$ 7,195.50	28.71%	\$ 4,017.78	\$ 4,610.50	14.75%
6000	\$ 6,096.00	\$ 7,846.00	28.71%	\$ 4,380.30	\$ 5,026.00	14.74%

NOTE:

Fuel Adjustor Included in Present Rates \$ 0.5710
Fuel Adjustor Included in Proposed Rates \$ 0.5710

DUNCAN RURAL SERVICES CORPORATION

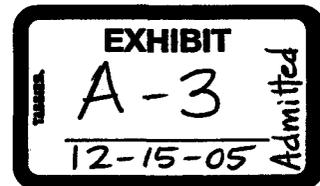
FINANCIAL AND STATISTICAL REPORT

YEAR ENDING
December 31, 2005

PART R. POWER REQUIREMENTS DATA BASE

(Continued)

LINE ITEM NUMBER		JULY (g)	AUGUST (h)	SEPTEMBER (i)	OCTOBER (j)	NOVEMBER (k)	DECEMBER (l)	TOTAL (Columns a - l)
1	a.	726	727	724	725			
	b.	14,143	15,397	13,718	12,643			282,519
	c.	21,357	22,504	21,282	20,581			364,556
2	a.	19	18	19	18			
	b.	27,957	12,255	7,909	8,775			108,894
	c.	21,267	9,746	6,468	7,172			86,617
3	a.	2	2	2	2			20
	b.	70	94	119	194			10,146
	c.	112	131	151	209			10,321
10.		747	747	745	745	0	0	
11.		42,170	27,746	21,746	21,612	0	0	401,559
12.		42,736	32,380	27,901	27,962	0	0	461,494
13.		(619)	(682)	2,023	0	0	0	4,725
14.								0
15.		42,060	23,370	16,860				349,870
16.		28,410	15,579	14,835	0	0	0	222,445



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

REJOINDER

TESTIMONY

OF

JOHN V. WALLACE

DUNCAN RURAL SERVICES CORPORATION

December 12, 2005

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1 **I. INTRODUCTION**

2 Q. Please state your name address and occupation.

3 A. My name is John V. Wallace. I am the Director of Regulatory and Strategic
4 Services of Grand Canyon State Electric Cooperative Association (GCSECA). I
5 represent Duncan Rural Services, Inc. (DRSC or the Company).

6
7 Q. Did you file direct and rebuttal testimony in this matter?

8 A. Yes.

9
10 Q. Was this testimony prepared by you or under your direction?

11 A. Yes, it was.

12
13 Q. What areas does your rebuttal testimony address?

14 A. My testimony addresses two primary areas: revenue requirement and rate design.

15
16 Q. Please summarize your recommendations.

17 A. Rebuttal Schedule A-2, page 1 of 2, summarizes operating results at present and proposed
18 rates for the 12 months ended December 31, 2004, the test year in this case. The present
19 rates produced a net/total margin deficit, or loss, of \$86,106 on an adjusted test year basis.
20 The proposed \$167,705 increase in revenues produces a positive net/total margin of
21 \$39,031 and a corresponding times interest earned ratio (TIER) of 2.00 in contrast to the
22 current negative net TIER of 1.20.

23
24 DRSC accepts the Staff adjustments to its proposed rate base calculation as found on
25 DTZ-3. DRSC is recommending the Staff proposed OCRB of \$758,057 on DTZ-3 be
26 adopted by the Commission in this case.

27

1 DRSC's Rebuttal Schedule C-1 shows the adjustments made to DRSC's test year
2 revenues and expenses as a result of Staff's direct testimony.

3
4 Per Mr. Jack Shilling's rebuttal testimony, DRSC is recommending \$600,000 of
5 additional Long Term Debt ("LTD") be approved by the Commission. \$502,000 of the
6 \$600,000 of additional LTD would be recovered through DRSC's recommended rebuttal
7 rates. The \$502,000 is the amount of current advances owed to Duncan Valley Electric
8 Cooperative, Inc. ("DVEC"). This LTD would have a variable interest rate (assumed 5
9 percent) with repayment over 25 years.

10
11 If the Commission does not adopt DRSC's recommended revenue requirement, DRSC
12 recommends that the rate case expense be amortized over a 2 year period and Staff's
13 adjustment to rate case expense of \$4,851 (ADJ #4) shown on Schedule DTZ-7 be
14 rejected.

15
16 DRSC stipulates to the testimony, recommendations and schedules as found in Mr. Prem
17 Bahl's direct testimony.

18
19 DRSC agrees with the Staff testimony that recommends setting the base cost of gas to
20 zero and in the future having the entire cost of gas be recovered from the fuel adjustor
21 for the reasons stated in Staff's testimony.

22
23 However, DRSC recommends that the rates and charges as shown under the column
24 entitled Company Proposed Rates on SPI-4, page 1 of 1, be approved.

25
26 DRSC is recommending the winter per therm rate be set at \$0.73 and the summer per
27 therm rate be set at \$0.26 for all three customer classes. These per therm rates reflect

1 DRSC's higher revenue requirement that has been recommended in its rebuttal testimony.
2 Refer to Rebuttal Schedules H-4 pages 1-3 for a typical bill analysis for the three
3 customer classes.

4
5 DRSC is further recommending that the Commission reject Staff's recommendation for
6 the Above 425 cfh to 1,000 cfh class to pay a significantly higher per therm rate than the
7 other customer classes.

8
9 DRSC is recommending that the Commission approve the same interest rate on customer
10 deposits (Three Month Non-Financial Commercial Paper Rate as published by the
11 Federal Reserve) that was approved in DVEC's recent rate case (Decision No. 67433,
12 dated December 3, 2004).

13
14 **II. REVENUE REQUIREMENT**

15
16 **Operating Income**

17 Q. Has DRSC's recommended revenue, net/total margin and TIER amounts as found in its
18 rebuttal testimony changed as a result of Staff's surrebuttal testimony?

19 A. No. Rebuttal Schedule A-2, page 1 of 2, summarizes operating results at present and
20 proposed rates for the 12 months ended December 31, 2004, the test year in this case. The
21 present rates produced a net/total margin deficit, or loss, of \$86,106 on an adjusted test
22 year basis. The proposed \$167,705 increase in revenues produces a positive net/total
23 margin of \$39,031 and a corresponding times interest earned ratio (TIER) of 2.00 in
24 contrast to the current negative net TIER of 1.20.

25
26 Q. Please discuss Staff's adjustment to Interest Expense on Long Term Debt (LTD) of
27 \$8,019 (ADJ #6) shown on Schedule DTZ-7.

1 A. Staff has recommended that DRSC's additional LTD should be increased from \$268,988
2 to \$330,484. Staff has also decreased DRSC's proposed interest expense on the
3 additional LTD from a variable annual rate of 6 percent to a variable rate of 2.725 percent
4 which is equal to Arizona Electric Power Cooperative's (AEPCO) current variable
5 interest rate earned on funds that cooperatives have deposited with AEPCO.

6
7 Q. Is the interest rate that DVEC is currently charging DRSC for advances equivalent to an
8 interest rate that DVEC should charge on a LTD with a repayment period of 25 years?

9 A. No, it is not. DVEC is charging DRSC an interest rate on advances which is equal to
10 AEPCO's current variable interest rate earned on funds that cooperatives have deposited
11 with AEPCO. This interest rate is a deposit interest rate not a LTD interest rate.

12
13 Q. Is a deposit interest rate typically significantly lower than an interest rate on LTD with a
14 term of 25 years?

15 A. Yes, it is. A lender has significantly more risk associated with a LTD that has a 25 year
16 repayment period than with a short term deposit interest rate.

17
18 Q. Does the Staff recommendation to allow a variable rate of 2.725 percent which is equal to
19 Arizona Electric Power Cooperative's (AEPCO) current variable interest rate earned on
20 funds that cooperatives have deposited with AEPCO recognize this difference in risk?

21 A. No, it does not. Staff recommends the same interest rate for a 25 year LTD as DVEC
22 earns on its deposits.

23
24 Q. In your rejoinder testimony, have you provided some evidence of this difference between
25 interest rate for LTD versus deposits?

26
27

1 A. Yes, I have. I have attached to this testimony the current interest rates offered by
2 National Rural Utilities Cooperative Finance Corporation (CFC). CFC's current variable
3 interest rate for a loan with a 25 year term is 6.25 percent. I have also attached the
4 Federal Reserve Statistical Release which demonstrates that the corporate bond interest
5 rate for a corporation with a rating of Aaa is approximately 5.4 percent. A bond from a
6 corporation with a rating of Baa is paying an interest rate approximately 6.36 percent.

7
8 Q. Given DRSC's financial condition, would it be eligible to borrow from a third party at
9 any of these interest rates?

10 A. No. Even if it were able to borrow money from a third party, it would be borrowing at a
11 significantly higher interest rate than the rates listed above.

12
13 Q. What amount of interest expense is DRSC recommending be recovered in this case?

14 A. DRSC is recommending that \$39,187 of interest expense be approved in this case. This
15 interest expense amount is equal to the interest expense of \$14,087 on existing LTD plus
16 \$25,100 (5.00 percent interest times \$502,000 of advances from DVEC as of September
17 30, 2005). The interest expense on the outstanding amount of LTD of \$98,000 (\$600,000
18 of proposed LTD minus \$502,000 of current DVEC advances) will be recovered from
19 customers through the two phased-in rate increases of 5 percent that are discussed in Jack
20 Shilling's rebuttal testimony.

21
22 Q. In its rebuttal testimony, has DRSC accepted Staff's adjustment to rate case expense of
23 \$4,851 (ADJ #4) shown on Schedule DTZ-7?

24 A. Yes. In its rebuttal testimony, DRSC accepted Staff's adjustment to Rate Case Expense
25 of \$4,851 (ADJ #4) shown on Schedule DTZ-7. Staff's adjustment amortized DRSC's
26 rate case expense over a three year period rather than the two year amortization
27 recommended by DRSC. However, DRSC reserved the right to argue its position on this

1 adjustment in rejoinder testimony if its rebuttal recommendations were not adopted.

2
3 Q. Has Staff adopted DRSC's rebuttal testimony recommendations?

4 A. No, it has not.

5
6 Q. In its rejoinder testimony, Is DRSC recommending that Staff's adjustment to rate case
7 expense of \$4,851 (ADJ #4) shown on Schedule DTZ-7 be adopted by the Commission?

8 A. No, it is not. For the reasons set forth in Mr. Shilling's rebuttal testimony, DRSC may
9 have to apply for rate increases annually to comply with the Staff recommendations on
10 equity and advances from DVEC. Consequently amortizing the rate case over a three
11 year period as proposed by Staff is not appropriate in this case. If the Commission does
12 not adopt DRSC's recommended revenue requirement, DRSC recommends that the rate
13 case expense be amortized over a 2 year period and Staff's adjustment to rate case
14 expense of \$4,851 (ADJ #4) shown on Schedule DTZ-7 be rejected.

15
16 **III RATE DESIGN**

17
18 Q. Does DRSC agree with the Staff proposed rate design as shown on its surrebuttal SPI-4,
19 page 1 of 1?

20 A. No it does not. DRSC recommends that the rates and charges as shown under the column
21 entitled Company Proposed Rates on SPI-4, page 1 of 1, be approved.

22
23 Q. Does DRSC agree with the Staff proposed per term rate design as shown on SPI-4, page
24 1 of 1?

25 A. No, it does not. The per term rates shown on SPI-4 page 1 of 1 do not reflect a winter
26 and summer cost differential and are different for each customer class.

27

1 Q. Does DRSC's per therm rate design reflect a winter and summer cost differential?

2 A. Yes, it does. DRSC's distribution system has been sized to meet its peak demands during
3 the winter months. Consequently, the costs of providing service not only vary from
4 summer to winter due to gas costs, there is a variance in DRSC's capacity/demand costs
5 due to its peak winter season. For these reasons, DRSC is still proposing a higher winter
6 per therm rate than the summer per therm rate as found on rebuttal Schedule H-3.

7
8 Q. Do each of the customer's classes place a similar demand on the system during the five
9 peak winter months?

10 A. No. As stated previously, the irrigation customers in the Above 250 cfh to 425 cfh class
11 primarily use gas during the off peak summer months. The Above 250 cfh to 425 cfh
12 customers used 20,980 therms in the five peak winter months compared to 148,600
13 therms used by these customers in the other months. During the Test Year, DRSC's peak
14 month for therm usage was February. In that month, irrigation customers used only
15 3,751 therms of the 83,019 therms sold to all DRSC customers.

16
17 Q. What are the potential impacts to DRSC if Staff's per therm rate design is adopted by the
18 Commission?

19 A. The irrigation customers in the Above 250 cfh to 425 cfh class are price sensitive and will
20 convert their pumps to electric power or decide not to pump any water. If this occurs,
21 then DRSC will lose all of the revenue from these irrigation customers which will result
22 in higher rates for DRSC's remaining customers. The Staff recommended per therm rate
23 design may also encourage irrigation customers to use gas in winter months which would
24 result in DRSC having to increase its capacity to meet this new demand. This would
25 make DRSC's capital budget even higher than the \$80,000 that is projected.

26
27

1 Q. Staff has stated concerns in its testimony about cost shifting among customers. Will
2 Staff's per therm rate design result in cost shifting?

3 A. Yes, it will. It shifts costs from winter peak customers to irrigation customers who may
4 leave DRSC's system. It also shifts significantly higher costs to the Above 425 cfh to
5 1,000 cfh class.

6
7 Q. What customers are currently taking service under the Above 425 cfh to 1,000 cfh tariff?

8 A. The school district is currently the only customer taking service under the Above 425 cfh
9 to 1,000 cfh tariff.

10

11 Q. Does DRSC have concerns about Staff's rate design which significantly increases the per
12 therm rates that the school will pay?

13 A. Yes, it does. The distribution costs that are not related to capacity/demand for the three
14 customer classes are similar. Consequently, it is unfair to the school district to pay a
15 significantly higher per therm rate than DRSC's other customer classes. In addition, rates
16 paid by schools are ultimately paid by DRSC's customers through taxes. Finally, equal
17 per therm rates for all customer classes are easier to explain to customers and to
18 administer. For these reasons, DRSC is recommending that the summer and winter per
19 therm rates be equal for all three classes. DRSC is further recommending that the
20 Commission reject Staff's recommendation for the Above 425 cfh to 1,000 cfh class to
21 pay a significantly higher per therm rate than the other customer classes.

22

23 Q. Does DRSC have a recommendation on how Staff's per therm rate could be modified to
24 achieve Staff's surrebuttal revenue requirement without significantly increasing the per
25 therm rates that the school will pay?

26

27

1 A. Yes, it does. Under the Staff proposed rate design methodology, the winter and summer
2 per therm rates could be set at \$0.5808 for the Above 425 cfh to 1,000 cfh class and the
3 Below 250 cfh class. The Above 250 cfh to 425 cfh summer and winter per therm rates
4 would remain at \$0.2848 as stated in Staff's Schedule SPI-4.

5

6 Q. What winter and summer per therm rates are you recommending for all three customer
7 classes?

8 A. DRSC is recommending the winter per therm rate be set at \$0.73 and the summer per
9 therm rate be set at \$0.26 for all three customer classes. Refer to rebuttal Schedule H-3
10 for a comparison of present versus proposed rates. Refer to rebuttal Schedules H-4 pages
11 1-3 for a typical bill analysis for the three customer classes.

12

13 Q. Why is the winter per therm rate that DRSC is recommending significantly higher than
14 the summer per therm rate?

15 A. During the Test Year, DRSC's customers' peak monthly usage was 83,019 therms in
16 February versus 25,644 therms in lowest month, October. DRSC gas system is built to
17 meet its peak demand (capacity) in the winter months like December, January and
18 February. Customers who use the gas system during peak winter months should pay a
19 higher share of the demand (capacity) related costs than customers who predominantly
20 use gas during summer months.

21

22 Q. In its surrebuttal testimony, is Staff still recommending that the interest rate on customer
23 deposits be increased from 3 percent to 6 percent?

24 A. Yes, it is. Staff is recommending that the interest rate on customer deposits be increased
25 from 3 percent to 6 percent because all other gas utilities have a flat 6 percent interest rate
26 on customer deposits.

27

1 Q. In its rejoinder testimony, is DRSC still recommending the same interest rate on customer
2 deposits be adopted as it recommended in its rebuttal testimony?

3 A. Yes, it is for the reasons stated in my rebuttal testimony. In addition, DRSC does not
4 believe it is fair for its gas customers to pay a higher interest rate on deposits than
5 DVEC's customers must pay. DRSC is recommending that the Commission approve the
6 same interest rate on customer deposits (Three Month Non-Financial Commercial Paper
7 Rate as published by the Federal Reserve) that was approved in DVEC's recent rate case
8 (Decision No. 67433, dated December 3, 2004).

9

10 Q. Does that conclude your rejoinder testimony?

11 A. Yes, it does.

12

13

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POWERFUL FINANCIAL SOLUTIONS

December 1, 2005

Interest Rates

LONG-TERM FIXED RATES FOR 12/1/05

1 year	6.300%
20 year	6.750%
30 year	6.850%

SHORT-TERM RATES EFFECTIVE 12/1/05

Long-Term Variable Rate	6.250%
Line of Credit/Intermediate	6.100%
Associate Member (5% Loan CTCs)	6.550%
Associate Member (10% Loan CTCs)	6.250%

BANK PRIME RATE ON 12/1/05

7.000%

RUS MUNICIPAL LOAN RATES

Rates for October 1, 2005 – December 31, 2005

YEAR INTEREST TERM ENDS	INTEREST RATE	YEAR INTEREST TERM ENDS	INTEREST RATE
2006	2.875%	2016	3.750%
2007	3.000%	2017	3.875%
2008	3.125%	2018	3.875%
2009	3.125%	2019	3.875%
2010	3.250%	2020	4.000%
2011	3.375%	2021	4.000%
2012	3.500%	2022	4.000%
2013	3.500%	2023	4.125%
2014	3.625%	2024	4.125%
2015	3.750%	2025	4.125%
		2026 or later	4.250%

CFC COMMERCIAL PAPER RATES FOR 12/1/05

DAYS	RATE	DAYS	RATE
1-5	4.075%	37-119	4.425%
6-14	4.100%	120-149	4.475%
15-18	4.150%	150-179	4.525%
19-28	4.300%	180-209	4.600%
29-36	4.125%	210-270	4.625%

To invest in CFC CP call: 800-424-2955

CFC MEDIUM-TERM NOTES FOR 12/1/05

MONTHS	RATE	MONTHS	RATE
10	4.870%	18	4.900%
11	4.880%	19	4.900%
12	4.890%	20	4.900%
13	4.890%	21	4.910%
14	4.890%	22	4.910%
15	4.900%	23	4.910%
16	4.900%	24	4.910%
17	4.900%		

To invest in CFC MTNs call: 800-424-2954, ext. 6731

NOTICE

Fixed Rates for Class A members are quoted each business day. These rates are for selected maturities and are available for loans advanced or repriced today. These rates do not include discounts. Call the CFC Rate Line at 800-599-6782 or visit CFC's website <http://www.nrucfc.org> for rate quotes, for other maturity periods, and for rate information any time during the month. Variable rates are subject to change monthly or semi-monthly in accordance with the terms of the loan agreement.

Quoted Associate Member rates reflect the value of the different CTC investments related to the two loan types.



Investment Rates

The Fed:

As expected on November 1, the Federal Open Market Committee (FOMC) unanimously voted to increase the federal funds rate for the twelfth consecutive time by another 25 basis points to reach a new target rate of 4 percent. The minutes from the FOMC November meeting indicate that Fed members continue to view the U.S. economy growing at a strong pace, albeit a temporary, regional negative impact from the hurricanes. Despite recent favorable inflation data, the FOMC remains concerned about the upside risk to the inflation outlook. The Committee also acknowledged the need to alter its policy statement "before long," and discussed the statement's potential evolution to place a greater dependence of future policy changes on both economic and inflationary developments. Keeping the Fed statement appropriate to current market conditions is a necessary element of the Fed's credibility. In addition, the minutes revealed that the current target rate of 4 percent is within the lower area of some members' neutral range, and the FOMC must be wary of tightening monetary policy too soon or too quickly. The fed funds futures market is still fully pricing in another 25 basis point rate hike at the next FOMC meeting on December 13. Looking further out, the futures market is currently pricing in a 85 percent chance of another rate increase at the FOMC meeting on January 31.

THE ECONOMY :

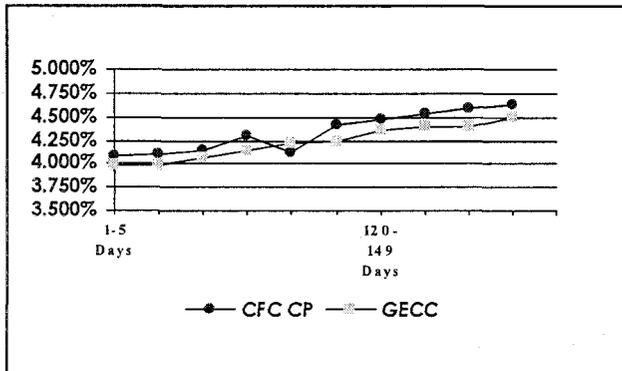
According to the Bureau of Economic Analysis (BEA) preliminary estimate, GDP rose at a 4.3 percent annual rate during the third quarter, stronger growth than the consensus estimate of 4.0 percent and higher than the previous advance estimate of 3.8 percent. The increase was driven by many components including consumer spending on nondurable goods, housing investment, and business investment. These upward revisions more than offset the upward revision to imports. The U.S. economy continued to push ahead, brushing off the impact of Hurricanes Katrina and Rita. Overall, inflation gauges for the third quarter experienced sharp increases, however core inflation remains low. The government's price index for personal consumption (PCE) rose 3.6%. The PCE core deflator, excluding food and energy rose 1.2% in the third quarter, down from 0.1% from the prior advance estimate.

CFC COMMERCIAL PAPER RATES				
# OF DAYS	CURRENT RATES	90-DAY HISTORY		
		AVERAGE	HIGH	LOW
1-5	4.075%	3.730%	4.075%	3.250%
6-14	4.100%	3.759%	4.100%	3.325%
15-20	4.150%	3.795%	4.150%	3.325%
21-58	4.300%	3.855%	4.300%	3.450%
59-66	4.125%	3.890%	4.125%	3.575%
67-119	4.425%	4.034%	4.425%	3.675%
120-149	4.475%	4.102%	4.475%	3.750%
150-179	4.525%	4.168%	4.525%	3.825%
180-209	4.600%	4.232%	4.600%	3.875%
210-270	4.625%	4.277%	4.650%	3.900%

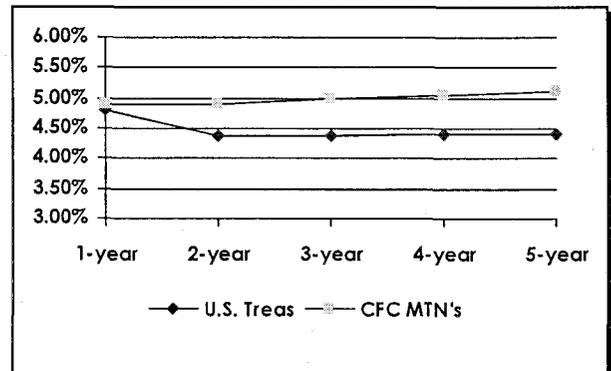
CFC MEDIUM-TERM NOTE RATES				
# OF MONTHS	CURRENT RATES	90-DAY HISTORY		
		AVERAGE	HIGH	LOW
10	4.87%	4.52%	4.89%	4.06%
11	4.88%	4.53%	4.90%	4.07%
12	4.89%	4.54%	4.91%	4.08%
13	4.89%	4.55%	4.92%	4.09%
14	4.89%	4.56%	4.92%	4.10%
15	4.90%	4.57%	4.93%	4.11%
16	4.90%	4.58%	4.94%	4.12%
17	4.90%	4.59%	4.95%	4.12%
18	4.90%	4.60%	4.95%	4.13%
19	4.90%	4.60%	4.96%	4.14%
20	4.90%	4.61%	4.97%	4.15%
21	4.91%	4.62%	4.97%	4.16%
22	4.91%	4.63%	4.98%	4.17%
23	4.91%	4.64%	4.99%	4.18%
24	4.91%	4.65%	5.00%	4.19%

Spread between CFC 9-month CP & 10-month MTN:0.25%
 Spread between CFC 2-year MTN & 1-year MTN:0.02%

INVESTMENT RATE COMPARISON—CP

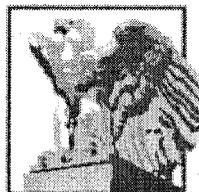


INVESTMENT RATE COMPARISON—MTN



Note: Stated rates are indicative only. Call (800) 424-2955 for current CFC Commercial Paper Rates and (800) 424-2954 ext. 731 for current CFC Medium-Term Note Rates

Federal Reserve Statistical Release



H.15

Selected Interest Rates

Release Date: December 5, 2005

[Release dates](#) | [Daily update](#) | [Historical data](#) | [About](#)

 Current release *Other formats:* [Screen reader](#) | [ASCII](#) | [PDF \(17 KB\)](#)

FEDERAL RESERVE STATISTICAL RELEASE

 H.15 (519) SELECTED INTEREST RATES
 For use at 2:30 p.m. Eastern Time

Yields in percent per annum	December 5, 2005					
	2005 Nov 28	2005 Nov 29	2005 Nov 30	2005 Dec 1	2005 Dec 2	Wee Dec 2
Instruments						
Federal funds (effective) 1 2 3	4.01	3.99	4.03	4.03	4.00	4.0
Commercial Paper 3 4 5						
Nonfinancial						
1-month	4.11	4.07	4.11	4.13	4.18	4.1
2-month	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
3-month	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
Financial						
1-month	4.10	4.13	4.15	4.12	4.17	4.1
2-month	4.23	4.25	4.25	4.26	4.28	4.2
3-month	4.28	4.30	4.29	4.29	4.32	4.3
CDs (secondary market) 3 6						
1-month	4.18	4.25	4.25	4.27	4.28	4.2
3-month	4.37	4.37	4.38	4.40	4.42	4.3
6-month	4.54	4.54	4.55	4.59	4.61	4.5
Eurodollar deposits (London) 3 7						
1-month	4.22	4.27	4.28	4.29	4.29	4.2
3-month	4.39	4.40	4.41	4.41	4.44	4.4
6-month	4.57	4.57	4.59	4.61	4.63	4.5
Bank prime loan 2 3 8	7.00	7.00	7.00	7.00	7.00	7.0
Discount window primary credit 2 9	5.00	5.00	5.00	5.00	5.00	5.0
U.S. government securities						
Treasury bills (secondary market) 3 4						
4-week	3.88	3.92	3.93	3.93	3.94	3.9
3-month	3.89	3.89	3.86	3.88	3.90	3.8
6-month	4.16	4.17	4.16	4.17	4.16	4.1
Treasury constant maturities						
Nominal 10						
1-month	3.94	3.99	4.00	3.99	4.00	3.9
3-month	3.98	3.98	3.95	3.97	3.99	3.9
6-month	4.31	4.32	4.31	4.32	4.31	4.3
1-year	4.32	4.35	4.34	4.36	4.35	4.3
2-year	4.33	4.40	4.42	4.45	4.43	4.4
3-year	4.32	4.40	4.41	4.44	4.43	4.4
5-year	4.32	4.40	4.42	4.45	4.45	4.4
7-year	4.35	4.42	4.45	4.47	4.48	4.4
10-year	4.41	4.48	4.49	4.52	4.52	4.4

20-year 11	4.71	4.78	4.81	4.83	4.81	4.7
Inflation indexed 12						
5-year	1.94	2.03	2.07	2.08	2.09	2.0
7-year	2.00	2.08	2.10	2.12	2.13	2.0
10-year	2.04	2.11	2.12	2.15	2.16	2.1
20-year	2.13	2.18	2.17	2.21	2.21	2.1
Inflation-indexed long-term average 13	2.08	2.14	2.13	2.16	2.17	2.1
Interest rate swaps 14						
1-year	4.75	4.79	4.80	4.83	4.85	4.8
2-year	4.75	4.80	4.82	4.87	4.89	4.8
3-year	4.77	4.82	4.85	4.89	4.91	4.8
4-year	4.79	4.85	4.88	4.92	4.95	4.8
5-year	4.82	4.88	4.91	4.95	4.98	4.9
7-year	4.87	4.92	4.96	4.99	5.03	4.9
10-year	4.94	5.00	5.03	5.06	5.10	5.0
30-year	5.14	5.20	5.23	5.25	5.28	5.2
Corporate bonds						
Moody's seasoned						
Aaa 15	5.30	5.37	5.42	5.45	5.44	5.4
Baa	6.30	6.36	6.38	6.39	6.39	6.3
State & local bonds 16				4.53		4.5
Conventional mortgages 17				6.26		6.2

n.a. Not available.

Footnotes

1. The daily effective federal funds rate is a weighted average of rates on broke
2. Weekly figures are averages of 7 calendar days ending on Wednesday of the curr figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. On a discount basis.
5. Interest rates interpolated from data on certain commercial paper trades settl Depository Trust Company. The trades represent sales of commercial paper by deale issuers to investors (that is, the offer side). The 1-, 2-, and 3-month rates are 30-, 60-, and 90-day dates reported on the Board's Commercial Paper Web page (www.federalreserve.gov/releases/cp/).
6. An average of dealer bid rates on nationally traded certificates of deposit.
7. Bid rates for Eurodollar deposits collected around 9:30 a.m. Eastern time.
8. Rate posted by a majority of top 25 (by assets in domestic offices) insured U. commercial banks. Prime is one of several base rates used by banks to price short loans.
9. The rate charged for discounts made and advances extended under the Federal Re credit discount window program, which became effective January 9, 2003. This rate adjustment credit, which was discontinued after January 8, 2003. For further info www.federalreserve.gov/boarddocs/press/bcreg/2002/200210312/default.htm. The rate for the Federal Reserve Bank of New York. Historical series for the rate on adjus well as the rate on primary credit are available at www.federalreserve.gov/releas
10. Yields on actively traded non-inflation-indexed issues adjusted to constant m

PROPOSED REVENUE INCREASE
 SUMMARY

Line No.	Description	Per Books	Test Year As Adjusted	Proposed Rates	Proposed Rates With 5% Inc.	Proposed Rates With 10% Inc.
1a.	Total Base Rate Revenue	\$ 644,167	\$ 319,136	\$ 485,841	\$ 502,060	\$ 518,278
1b.	Total Other Revenue*	\$ 5,210	\$ 5,210	\$ 5,210	\$ 5,210	\$ 5,210
1c.	Total Base Rate Revenue and Other Revenue	\$ 649,377	\$ 324,346	\$ 491,051	\$ 507,270	\$ 523,488
1d.	Plus: Fuel Adjustor Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
1e.	Total Revenue Before Other Contract Margin Revenue	\$ 649,377	\$ 324,346	\$ 491,051	\$ 507,270	\$ 523,488
1f.	Other Contract Margin Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
1g.	Total Revenue	\$ 649,377	\$ 324,346	\$ 491,051	\$ 507,270	\$ 523,488
2.	Operating Expense Before Interest Exp. On L.T. Debt	\$ 708,298	\$ 371,375	\$ 412,943	\$ 412,943	\$ 420,713
3.	Operating Margin Before Interest Exp. On L.T. Debt	\$ (58,921)	\$ (47,029)	\$ 78,108	\$ 94,326	\$ 102,774
4.	Interest Expense on Long-Term Debt	\$ 14,973	\$ 39,187	\$ 39,187	\$ 39,187	\$ 39,187
5.	Non-Operating Margins	\$ 110	\$ 110	\$ 110	\$ 110	\$ 110
6.	Total/Net Margin	\$ (73,784)	\$ (86,106)	\$ 39,031	\$ 55,249	\$ 63,697
7.	Total Long-Term Debt Principal Payment	\$ 45,305	\$ 55,421	\$ 55,421	\$ 55,421	\$ 55,421
8.	Net TIER (Int Exp on L.T. Debt + Net Margin)/Total Int Exp on L.T. Debt	(3.93)	(1.20)	2.00	2.41	2.63
9.	DSC (Net Margin + Depr Exp + Int Exp on L.T. Debt)/PrinInt on L.T. Debt	(0.15)	(0.50)	1.35	1.52	1.61
10.	Rate Base	\$ 758,057	\$ 758,057	\$ 758,057	\$ 758,057	\$ 758,057
11.	% Return on Rate Base (Operating Margin / Rate Base)	-7.77%	-6.20%	10.30%	12.44%	13.56%
12.	Total Proposed Revenue Increase Over Total Present Rates (Does not include Fuel Adjustor Revenue)	-	\$	\$ 166,705	\$ 182,923	\$ 199,142
14.	% Increase In Total Adjusted Test Year Revenues			25.66%	28.16%	30.66%
15.	Increase In Revenues			\$	\$ 16,218	\$ 32,436

EXHIBIT
 A-4
 12-15-05
 Admitted

**SUMMARY OF FILING
 PRESENT RATES PROPOSED RATES**

Revenues	Per Books	TY as Adjusted	Proposed	Proposed	
				With 5 %	With 10 %
Sales Revenue of Gas - Base Rates & PGA	\$ 644,167	\$ 319,136	\$ 485,841	\$ 502,060	\$ 518,278
Other Operating Revenue	\$ 5,210	\$ 5,210	\$ 5,210	\$ 5,210	\$ 5,210
Total Revenue	\$ 649,377	\$ 324,346	\$ 491,051	\$ 507,270	\$ 523,488

Expenses	Per Books	TY as Adjusted	Proposed	Proposed	
				With 5 %	With 10 %
Purchased Gas	\$ 325,260	\$ (0)	\$ (0)	\$ (0)	\$ (0)
Distribution Expense - Operation	\$ 147,723	\$ 154,097	\$ 154,097	\$ 154,097	\$ 154,097
Distribution Expense - Maintenance	\$ 52,766	\$ 54,824	\$ 54,824	\$ 54,824	\$ 54,824
Consumer Accounts Expense	\$ 58,103	\$ 60,129	\$ 60,129	\$ 60,129	\$ 60,129
Administrative and General Expense	\$ 54,952	\$ 56,520	\$ 56,520	\$ 56,520	\$ 56,520
Depreciation and Amortization Expense	\$ 49,645	\$ 49,645	\$ 49,645	\$ 49,645	\$ 49,645
Tax Expense - Property	\$ 19,639	\$ 19,639	\$ 19,639	\$ 19,639	\$ 19,639
Tax Expense - Other	\$ -	\$ -	\$ -	\$ -	\$ -
Tax Expense - Income taxes*	\$ (158)	\$ (23,846)	\$ 17,722	\$ 21,474	\$ 25,492
Interest Expense - Other	\$ 367	\$ 367	\$ 367	\$ 367	\$ 367
Total Operating Expenses	\$ 708,298	\$ 371,375	\$ 412,943	\$ 416,695	\$ 420,713
Interest Expense - Long-term Debt	\$ 14,973	\$ 39,187	\$ 39,187	\$ 39,187	\$ 39,187
Total Operating Expenses and Int on L.T. Debt	\$ 723,271	\$ 410,562	\$ 452,130	\$ 455,882	\$ 459,900

OPERATING MARGIN after Intr Exp on L.T. Debt	\$ (73,894)	\$ (86,216)	\$ 38,921	\$ 51,387	\$ 63,587
Non-Operating Margin	\$ 110	\$ 110	\$ 110	\$ 110	\$ 110
Interest and Dividend Income	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Credits	\$ 110	\$ 110	\$ 110	\$ 110	\$ 110
TOTAL/NET MARGINS	\$ (73,784)	\$ (86,106)	\$ 39,031	\$ 51,497	\$ 63,697

Duncan Rural Services Corporation
 Docket No. G-02528A-05-0314
 Test Year Ended December 31, 2004

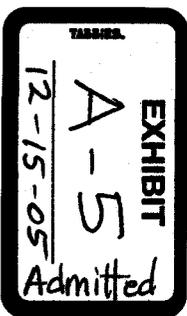
Rejoinder Schedule H-3

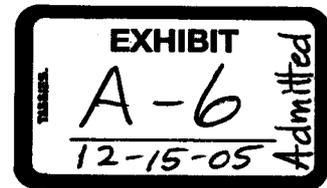
RATE DESIGN

	Present	Proposed	Proposed	Proposed
	Rates	Rates	Rates With 5% Incr.	Rates With 10% Incr.
METER SIZES				
250 cft & Below				
Monthly Service Charge	\$15.00	\$20.00	\$20.00	\$20.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000	\$0.77000	\$0.81000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000	\$0.27600	\$0.28800
Above 250 cft to 425 cft				
Monthly Service Charge	\$22.50	\$30.00	\$30.00	\$30.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000	\$0.77000	\$0.81000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000	\$0.27600	\$0.28800
Above 425 cft to 1,000 cft				
Monthly Service Charge	\$30.00	\$40.00	\$40.00	\$40.00
Winter Commodity Rate per Therm	\$0.44000	\$0.73000	\$0.77000	\$0.81000
Summer Commodity Rate per Therm	\$0.15405	\$0.26000	\$0.27600	\$0.28800

Service Charges:	Present	Proposed	Proposed	Proposed
	Rates	Rates	Rates	Rates
Establishment of Service (Regular Hours)	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00
Establishment of Service (After Hours)	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Re-establishment/Reconnection of Service (Regular Hours)	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Re-establishment/Reconnection of Service (After Hours)	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00
After Hours Service Calls - Consumer Caused (Per Hour)*	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Meter Re-read Charge (No Charge for Read Error)	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Meter Test Fee	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Insufficient Funds Check	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00
Interest Rate on Customer Deposits**	3.0%	Variable	Variable	Variable
Later/Deferred Payment (Per Month)	0.0%	1.5%	1.5%	1.5%

* One hour minimum
 ** Variable Rate based on the Three Month Non-Financial Commercial Paper Rate as published by the Federal Reserve
 Base Cost of Gas & Fuel Adjustor Included in Present Rates \$ -
 Base Cost of Gas & Fuel Adjustor Included in Proposed Rates \$ -





BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

DIRECT
TESTIMONY
OF
JACK SHILLING
CHIEF EXECUTIVE OFFICER
DUNCAN VALLEY ELECTRIC COOPERATIVE, INC.

June 9, 2005

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1 **I. INTRODUCTION**

2 Q. Please state your name, address and occupation.

3 A. My name is Jack Shilling. My business address is 222 Highway 75, P.O. Box 440,
4 Duncan, Arizona. I am Chief Executive Officer of Duncan Valley Electric Cooperative,
5 Inc. ("DVEC"). Through an Operations and Management Agreement, Duncan Valley
6 manages the day-to-day operations of Duncan Rural Services Corporation ("DRSC").
7

8 Q. Please describe the nature of DRSC's Operations.

9 A. DRSC is a non-profit corporation that provides service to about 760 consumers in
10 Greenlee County. The gas system was acquired in 1989 from General Utilities, Inc.
11 ("General"). The vast majority of DRSC's consumers are rural, residential users that heat
12 their homes with natural gas. Approximately 56% of the utility's annual sales occur
13 during the five winter months of November through March.
14

15 **II. REVENUE REQUIREMENTS**

16 Q. Please summarize DRSC's rate request in this proceeding.

17 A. We are requesting Commission approval to increase our overall revenues by 22.70%.
18 The proposed rates contained in the filing schedules are designed to provide additional
19 annual revenues of \$147,406. In the test year ending December 31, 2004, DRSC
20 sustained an adjusted net/total margin loss of slightly less than \$78,000.
21

22 A detailed discussion of all aspects of the request is provided in the testimony of Mr.
23 John Wallace, Director of Regulatory and Strategic Services for Grand Canyon State
24 Electric Cooperative Association.
25
26
27
28

1 Q. When did DRSC last increase its rates?

2 A. In Decision No. 64869 (June 5, 2002), the Commission authorized a 24 percent increase
3 in gross annual revenues based on a test year ending December 31, 2000. In this case, the
4 Commission found that DRSC had suffered a net loss in the test year of approximately
5 \$19,000.

6
7 In Decision No. 59539, dated February 21, 1996, the Commission authorized a 31%
8 increase in gross annual revenues based on a test year ending December 31, 1994. In the
9 1995 case, the Commission found that DRSC had suffered an adjusted \$52,508 operating
10 margin loss in the test year.

11
12 Q. Has DRSC's financial position improved in years after its most recent rate case?

13 A. Not significantly. Given the fact that DRSC has a lower number of customers now
14 approximately 760 versus 820 customers in the last rate case, DRSC's capital
15 requirements of approximately \$55,000 to \$108,000 per year and the increases in
16 purchased gas and other expenses, DRSC's revenues have not kept pace with its costs.
17 As DRSC's audited financial statements indicate, DRSC's total margins have declined
18 from a negative \$18,859 on December 31, 2003 to a negative \$49,639 on December 31,
19 2004.

20
21 Q. What are the reasons why DRSC's financial performance has not improved?

22 A. There are two primary reasons. First, DRSC's customer base is decreasing not growing,
23 which allows expenses to outpace revenues. Second, as mentioned above, purchased gas
24 costs have significantly increased during the Test Year and other costs have increased
25 since DRSC's last rate case.

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1 **III. CAPITAL IMPROVEMENTS & FINANCING**

2 Q. Please describe the major capital improvements DRSC has made to the system since its
3 acquisition in late 1989.

4 A. As the Commission found in Decision No. 58356, General's system at time of purchase
5 was in serious disrepair and had been cited numerous times by the Staff's pipeline safety
6 section. DRSC's efforts have been primarily directed to bringing the system into
7 substantial safety compliance and also reducing large system gas losses. In consultation
8 with the pipeline safety section, a meter replacement program was begun in 1993. Of
9 course, normal repairs, replacements and additions to the system have also been
10 necessary over the past fifteen years. The major construction project remaining is the
11 PVC pipe replacement project, which also was discussed at pages 18-19 of Decision No.
12 58356. In compliance with that Decision, a finance application was filed with the
13 Commission to fund that project on April 19, 1995 that was approved in Decision No.
14 59271, (September 20, 1995). Since that time, DRSC has been replacing pipe and
15 making repairs in its gas distribution system that have resulted in a significant reduction
16 in the number of gas leaks.

17
18 Since its last rate case with a Test Year ended of December 31, 2000, DRSC has made
19 the following plant additions by year:

20 2001 - \$108,087

21 2002 - \$106,194

22 2003 - \$62,393

23 2004 - \$54,620

24 According to DRSC's financial forecast, capital additions will continue to average
25 approximately \$80,000 for the next five years.

26
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1 Q. How have the costs of these projects been met?

2 A. DRSC was completely debt funded at its inception. As of December 31, 2004, DRSC had
3 negative equity of approximately \$150,000. Therefore, other than cash available from
4 depreciation (a non-cash expense), there have been no funds available from DRSC to
5 meet these construction needs. Duncan Valley manages the operations of DRSC
6 including its operational and capital expenditures and then keeps track of these
7 expenditures on a company-by-company basis. As of March 2004, the account payable
8 from DRSC to DVEC had grown to approximately \$455,000. This obviously is not a
9 satisfactory long-term situation for the members of either DRSC or DVEC.

10

11 Q. Please explain how DRSC proposes to address and remedy this situation.

12 A. As discussed further in the financing section of Mr. Wallace's direct testimony, DRSC
13 plans to borrow \$268,988 from Duncan Valley for completed construction and
14 correspondingly will reduce DRSC's account payable to DVEC. An adjustment to reflect
15 interest and principal charges associated with the debt has been made in the schedules
16 Mr. Wallace has prepared. The rates requested in this proceeding would then allow
17 DRSC to meet these obligations and provide some positive margins on a going forward
18 basis.

19

20 Q. Has DRSC previously requested approval of this \$268,988 of additional debt?

21 A. Yes. On April 4, 2003, DRSC filed an application that requested that a loan in the
22 amount of \$400,000 be approved by the Commission (Docket No. G-02528A-03-0205).
23 Shortly after making this filing, DRSC requested that Commission Staff not process this
24 case until it filed a rate case. DRSC made this request because it would not be able to
25 repay this additional debt without a rate increase. DRSC had originally intended to file
26 its rate case in 2004 with a Test Year ending December 31, 2003. However, due to the
27 amount of man hours needed to complete a rate case for DVEC in Arizona and New
28 Mexico, the DRSC rate case application was not able to be completed until April of 2005.

1 DRSC is requesting that the financing application (Docket No. G-02528A-03-0205) be
2 consolidated with this rate case docket for the reasons stated above.

3
4 Q. Can DVEC continue to advance funds to DRSC at the levels it has in previous years.

5 A. No. DVEC can not continue to advance funds to DRSC in the amounts that it has in
6 previous years. DVEC's cash account has been significantly reduced due to DRSC's
7 advances and the amounts borrowed. DVEC can no longer sustain this level of advances.
8 DRSC must be financially self-sufficient and must stop relying on the funds of DVEC.

9
10 Q. Have DVEC and DRSC considered other measures to address these financial concerns?

11 A. Yes. The DVEC and DRSC Board of Directors have considered reorganizing DRSC
12 such that DRSC would become a department/division of DVEC as well as other
13 alternatives to address DRSC's financial situation. If DRSC would become a
14 department/division of DVEC, this would allow DRSC access to CFC's low cost
15 financing and restore DRSC's non-taxable status. However, there are many other factors
16 (i.e. income tax issues, debt issues, regulatory approvals, etc.) that must be considered
17 and resolved before any reorganization is approved and can occur.

18
19 Q. Does such reorganization completely address the financial concerns of DRSC?

20 A. No. DRSC will still need to be financially responsible for all expenses, debt service and
21 construction expenditures that it incurs. Consequently, the first step is to improve
22 DRSC's financial condition by increasing rates to a level that interest and debt coverage
23 ratios will be acceptable to outside lenders and where enough cash-flow is being provided
24 through rates to fund expenses, debt payments and construction without the continued
25 need for advances from outside sources.

26
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1 Q. If DRSC's proposed revenue increase is granted, will DRSC be on the road to financial
2 recovery?

3 A. Yes. According to DRSC's financial forecast, if DRSC's proposed increase is granted,
4 DRSC will be in the financial position to pay its expenses, debt service and fund the
5 majority of its construction without having to rely on major advances from DVEC
6 (Please refer to the schedule entitled Financial Forecast that is attached to this testimony).
7 Also according to this financial forecast, DRSC should remain in this financial position
8 for the next several years.

9
10 Q. Does that conclude your direct testimony?

11 A. Yes, it does.
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ITEM	FINANCIAL FORECAST FORM 325A - FINANCIAL RATIOS													
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1. EQUITY RATIO (WITH ADD REVENUE) (%)	-10.27%	-11.28%	-16.31%	-22.96%	-32.11%	-22.54%	-16.83%	-12.54%	-9.54%	-7.91%	-7.76%	-5.91%	-4.13%	
2. DSC (WITH ADD REVENUE)	1.36	0.88	0.34	0.14	-0.16	2.93	2.60	2.41	2.20	1.94	1.64	1.95	1.94	
3. TIER (WITH ADD REVENUE)	0.04	-0.52	-2.24	-2.69	-3.23	4.15	3.51	3.04	2.51	1.84	1.04	2.00	2.00	
4. AVERAGE REV PER THERM SOLD (DOLLARS)	0.82	0.98	1.13	1.15	1.15	1.42	1.42	1.42	1.42	1.42	1.42	1.47	1.49	
5. INCREASE IN AVER REV PER THERM SOLD (%)	XXX	19.19%	15.02%	1.90%	0.03%	23.31%	0.00%	0.01%	-0.01%	-0.01%	-0.01%	3.87%	1.41%	
6. TOT UTIL PLANT PER THERM SOLD (DOLLARS)	2.01	1.99	2.30	2.42	2.55	2.69	2.83	2.97	3.11	3.24	3.38	3.52	3.66	
7. NET GENER FUNDS TO TOT UTIL PLANT (%)	0.80%	0.40%	0.41%	-1.89%	-5.05%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
8. ACCUM DEPR & AMORT TO TOT UTIL PLANT (%)	42.53%	43.42%	45.17%	46.09%	47.10%	48.19%	49.34%	50.54%	51.80%	53.09%	54.43%	55.79%	57.19%	
9. OPER & MAIN COST PER CONSUMER (\$)	189.79	234.22	263.80	250.28	258.74	266.57	273.77	282.60	291.01	299.00	309.14	319.07	326.01	
10. ADMIN & GENER EXP PER CONSUMER (\$)	48.68	59.23	72.31	71.77	73.93	75.87	77.76	81.39	82.81	86.49	90.17	91.16	94.74	
11. PLANT REVENUE RATIO	4.21	3.96	4.07	4.34	4.58	3.26	3.43	3.60	3.76	3.93	4.10	4.00	4.06	
TE OF RETURN ON RATE BASE (%)	0.65%	-2.30%	-7.78%	-5.63%	-6.98%	10.29%	8.49%	6.88%	5.39%	3.81%	2.12%	4.11%	4.02%	
TEBASE = 104% OF NET UTIL PLANT	710,517	743,539	752,960	785,183	814,494	840,893	864,380	884,954	902,617	917,368	929,207	938,134	944,149	
14. % INCR OVER PRESENT RATES REQ	XXX	XXX	XXX	XXX	0.03%	0.02%	0.02%	0.03%	0.02%	0.01%	0.00%	3.88%	5.34%	
15. MODIFIED DSC	1.52	0.65	-0.19	0.14	-0.16	2.93	2.60	2.41	2.20	1.94	1.64	1.95	1.94	
16. MOD. TIER	0.20	-1.37	-3.81	-2.69	-3.23	4.15	3.51	3.04	2.51	1.84	1.04	2.00	2.00	

	FINANCIAL FORECAST FORM 325B - BALANCE SHEET													
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1. ASSETS AND OTHER DEBITS														
A. TOTAL UTILITY PLANT	1,188,833	1,263,675	1,320,470	1,400,470	1,480,470	1,560,470	1,640,470	1,720,470	1,800,470	1,880,470	1,960,470	2,040,470	2,120,470	
B. ACCUM DEPR AND AMORT	505,644	548,734	596,470	645,486	697,303	751,919	809,336	869,552	932,569	998,385	1,067,002	1,138,418	1,212,635	
C. NET UTILITY PLANT	683,189	714,941	724,000	754,984	783,167	808,551	831,134	850,918	867,901	882,085	893,468	902,052	907,835	
D. NET GENERAL FUNDS	9,564	5,094	5,458	(26,456)	(74,800)	0	656	0	0	0	0	0	0	
E. GENERAL FUNDS EXCLUDABLE ITEMS	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
F. OTHER ASSETS AND DEBITS	80,731	151,813	177,511	177,511	177,511	177,511	177,511	177,511	177,511	177,511	177,511	177,511	177,511	
J. TOTAL ASSETS AND OTHER DEBITS	774,484	872,848	907,969	907,039	886,878	987,062	1,010,301	1,029,429	1,046,412	1,060,596	1,071,979	1,080,563	1,086,347	
2. LIABILITIES AND OTHER CREDITS														
A. TOTAL MARGINS AND EQUITIES	(79,574)	(98,435)	(148,072)	(208,298)	(284,808)	(222,507)	(170,012)	(129,136)	(99,866)	(83,893)	(63,134)	(63,853)	(44,893)	
B. LONG TERM DEBT	608,229	562,263	516,958	576,253	632,604	670,486	641,230	619,482	607,195	605,405	616,030	605,333	592,157	
C. LONG TERM DEBT- OTHER	245,829	409,020	539,083	539,083	539,083	539,083	539,083	539,083	539,083	539,083	539,083	539,083	539,083	
D. OTHER LIABILITIES AND CREDITS														
E. TOTAL LIABILITIES AND CREDITS	774,484	872,848	907,969	907,039	886,878	987,062	1,010,301	1,029,429	1,046,412	1,060,596	1,071,979	1,080,563	1,086,347	

ITEM	FINANCIAL FORECAST FORM 325C - STATEMENT OF OPERATIONS													
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
1. ACCRUAL BASIS														
A1.ADD REV REQD TO MEET TIER GOALS	0	0	0	0	168	169	132	234	176	70	2	31,843	43,882	
A2.OPER REV & PAT CAP (PRESENT RATES)	486,060	622,515	649,378	667,119	667,119	822,640	822,640	822,640	822,640	822,640	822,640	822,640	822,640	
B. COST OF GAS	203,481	303,644	325,260	344,388	344,388	344,388	344,388	344,388	344,388	344,388	344,388	344,388	344,388	
C. OPER REV LESS COST OF GAS	282,579	318,871	324,118	322,731	322,899	478,421	478,383	478,466	478,427	478,322	478,254	510,095	522,133	
EXPENSES LESS COST OF GAS	301,395	348,332	398,011	383,284	397,822	411,632	425,888	437,650	449,157	462,348	477,495	490,814	503,173	
D. OPER & MAIN EXPENSE	150,310	180,119	200,490	190,464	196,903	202,861	208,340	215,059	221,458	227,537	235,256	242,816	248,095	
E. CONSUMER ACC & SALES EXPENSE	47,702	45,826	58,103	53,270	54,031	54,792	55,553	56,314	57,075	57,836	58,597	59,358	60,119	
F. ADM & GEN & OTHER DEDUCTIONS EXPENSE	38,557	45,546	54,952	54,618	56,258	57,737	60,697	61,997	63,016	65,816	68,616	69,376	72,096	
G. DEPRECIATION & AMORT EXPENSE	29,340	46,807	49,645	49,016	51,816	54,616	57,416	60,216	63,016	65,816	68,616	71,416	74,216	
H. TAX EXPENSE	12,048	17,642	19,481	19,607	20,727	21,847	22,967	24,087	25,207	26,327	27,447	28,567	29,687	
I. INTEREST EXPENSE	23,438	12,392	15,340	16,309	18,088	19,778	20,915	20,037	19,384	19,016	18,982	19,281	18,960	
J. TOTAL COST OF GAS SERVICE	504,876	651,976	723,271	727,672	742,210	756,020	770,276	782,038	793,545	806,736	821,883	835,202	847,561	
K. PATRONAGE CAPITAL & OPER MARGINS	(18,816)	(29,461)	(73,893)	(60,553)	(74,923)	(74,923)	(74,923)	(74,923)	(74,923)	(74,923)	(74,923)	(74,923)	(74,923)	
L. OPERATING MARGINS	51	110	110	327	(1,587)	(4,489)	0	39	0	0	0	0	0	
M. OTHER EXTRAORDINARY ITEMS	(3,658)	10,490	24,146	24,146	24,146	24,146	24,146	24,146	24,146	24,146	24,146	24,146	24,146	
N. TOTAL ACCRUAL MARGINS	(22,423)	(18,861)	(49,637)	(60,226)	(76,511)	(62,301)	52,496	40,875	29,271	15,973	758	19,281	18,960	
GOAL: TIER	XXX	XXX	XXX	XXX	-3.23	4.15	3.51	3.04	2.51	1.84	1.04	2.00	2.00	
2. CASH BASIS														
A. CASH BEFORE DEBT SERVICE	34,013	29,848	(8,798)	5,099	(6,606)	136,696	130,827	121,129	111,671	100,806	88,337	109,978	112,136	
B. TOTAL DEBT SERVICE	22,362	45,966	45,305	37,013	41,737	46,602	50,318	50,327	50,818	51,917	53,704	56,310	57,822	
C. CASH MARGINS AFTER DEBT SERVICE	11,651	(16,118)	(54,103)	(31,914)	(48,344)	90,093	80,508	70,801	60,854	48,888	34,633	53,669	54,315	
1. SOURCES OF GENERAL FUNDS														
A. NET GENERAL FUNDS (FIRST OF YEAR)	XXX	XXX	XXX	5,458	(26,456)	(74,800)	0	656	0	0	0	0	0	
B. CASH MARGINS AFTER DEBT SERVICE	XXX	XXX	XXX	(31,914)	(48,344)	90,093	80,508	70,801	60,854	48,888	34,633	53,669	54,315	
C. OTHER PROCEEDS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
D. EIMBURSEMENTS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
EIMBURSEMENTS FROM SPECIAL LOANS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
IEMBURSEMENTS FROM SPECIAL LOANS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
2. TOTAL GENERAL FUNDS AVAILABLE	XXX	XXX	XXX	(26,456)	(74,800)	15,293	80,508	71,457	60,854	48,888	34,633	53,669	54,315	
3. PROPOSED USES OF GENERAL FUNDS														
A. CAPITAL CREDIT RETIREMENTS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
B. GEN FUNDS INVESTED IN PLANT	XXX	XXX	XXX	0	0	15,293	79,852	71,457	60,854	48,888	34,633	53,669	54,315	
C. GEN FUNDS INVESTED IN PLANT	XXX	XXX	XXX	0	0	15,293	79,852	71,457	60,854	48,888	34,633	53,669	54,315	
D. OTHER USES OF GENERAL FUNDS	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	
4. TOTAL PROPOSED USES OF GENERAL FUNDS	XXX	XXX	XXX	0	0	15,293	79,852	71,457	60,854	48,888	34,633	53,669	54,315	
5. NET GENERAL FUNDS/END OF YEAR	9,564	5,094	5,458	(26,456)	(74,800)	0	656	0	0	0	0	0	0	
GENERAL FUNDS GOAL - PERCENTAGE	XXX	XXX	XXX	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
GEN FUNDS REQUIRED FOR PLANT INVEST	XXX	XXX	XXX	0	0	15,293	79,852	71,457	60,854	48,888	34,633	53,669	54,315	
ADDL GEN FUNDS AVAIL FOR PLANT INVEST	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0	

FINANCIAL FORECAST FORM 325D - GENERAL FUNDS SUMMARY

FINANCIAL FORECAST FORM 325E - DETERMINATION OF LOAD

ITEM	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1. NUMBER OF CONSUMERS													
A. 250 ckt and below	766	746	739	740	740	740	740	740	740	740	740	740	740
B.	0	0	0	0	0	0	0	0	0	0	0	0	0
C. 251 ckt and 425 ckt	24	20	19	19	19	19	19	19	19	19	19	19	19
D. 426 ckt and 1000 ckt	2	3	2	2	2	2	2	2	2	2	2	2	2
K. TOTAL CONSUMERS	792	769	760	761	761	761	761	761	761	761	761	761	761
2. AVERAGE MONTHLY USE PER CONSUMER													
A. 250 ckt and below	41	44	44	44	44	44	44	44	44	44	44	44	44
B.	#DIV/0!												
C. 251 ckt and 425 ckt	576	863	746	750	750	750	750	750	750	750	750	750	750
D. 426 ckt and 1000 ckt	2,000	1,028	750	750	750	750	750	750	750	750	750	750	750
VUAL SALES (THERMS)													
50 ckt and below	376	390	387	391	391	391	391	391	391	391	391	391	391
C. 251 ckt and 425 ckt	166	207	170	171	171	171	171	171	171	171	171	171	171
D. 426 ckt and 1000 ckt	48	37	18	18	18	18	18	18	18	18	18	18	18
4. ANNUAL GAS REQUIREMENTS													
A. TOTAL THERMS SOLD	590	634	575	580	580	580	580	580	580	580	580	580	580
A1. THERMS SOLD NOT SUBJECT TO LINE LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
B. SYSTEMS OWN USE	0	0	0	0	0	0	0	0	0	0	0	0	0
C. SYSTEM LOSS PERCENTAGE	-0.042403	-0.070946	-0.043557	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000	-0.010000
D. THERMS REQUIREMENTS	566	592	551	574	574	574	574	574	574	574	574	574	574

FINANCIAL FORECAST FORM 325F - DETERMINATION OF OPERATING PAGE 1 OF 2

ITEM	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
3. BY "REV PER THERM SOLD METHOD"													
CONSUMER CLASS -----> 250 chf and below													
A. TOTAL ANNUAL THERMS SOLD	376	390	387	391	391	391	391	391	391	391	391	391	391
B. AVERAGE REVENUE PER THERM SOLD	0.68336	0.76546	0.86602	0.95765	0.95765	1.18000	1.18000	1.18000	1.18000	1.18000	1.18000	1.18000	1.18000
C. FIXED MONTHLY CHARGE PER CONS	14.00	15.00	15.00	15.00	15.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
D. AVG NUMBER OF CONSUMERS	766	746	739	740	740	740	740	740	740	740	740	740	740
E. ANNUAL REV LESS FLOWTHRU ADJ	385,631	432,810	468,170	507,373	507,373	638,650	638,650	638,650	638,650	638,650	638,650	638,650	638,650
CONSUMER CLASS ----->													
A. TOTAL ANNUAL THERMS SOLD	0	0	0	0	0	0	0	0	0	0	0	0	0
B. AVERAGE REVENUE PER THERM SOLD	#DIV/0!	#DIV/0!	#DIV/0!	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
C. FIXED MONTHLY CHARGE PER CONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. AVG NUMBER OF CONSUMERS	0	0	0	0	0	0	0	0	0	0	0	0	0
F. ANNUAL REV LESS FLOWTHRU ADJ	0	0	0	0	0	0	0	0	0	0	0	0	0
"REV PER THERM SOLD METHOD"													
CONSUMER CLASS -----> 251 chf and 425 chf													
A. TOTAL ANNUAL THERMS SOLD	166	207	170	171	171	171	171	171	171	171	171	171	171
B. AVERAGE REVENUE PER THERM SOLD	0.50646	0.62451	0.68653	0.78564	0.78564	0.89000	0.89000	0.89000	0.89000	0.89000	0.89000	0.89000	0.89000
C. FIXED MONTHLY CHARGE PER CONS	20.00	22.50	22.50	22.50	22.50	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
D. AVG NUMBER OF CONSUMERS	24	20	19	19	19	19	19	19	19	19	19	19	19
E. ANNUAL REV LESS FLOWTHRU ADJ	89,833	134,674	121,840	139,474	139,474	159,030	159,030	159,030	159,030	159,030	159,030	159,030	159,030
CONSUMER CLASS ----->													
A. TOTAL ANNUAL THERMS SOLD	48	37	18	18	18	18	18	18	18	18	18	18	18
B. AVERAGE REVENUE PER THERM SOLD	0.76096	0.68946	0.89089	1.00286	1.00286	1.25000	1.25000	1.25000	1.25000	1.25000	1.25000	1.25000	1.25000
C. FIXED MONTHLY CHARGE PER CONS	25.00	30.00	30.00	30.00	30.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
D. AVG NUMBER OF CONSUMERS	2	3	2	2	2	2	2	2	2	2	2	2	2
E. ANNUAL REV LESS FLOWTHRU ADJ	37,126	26,590	16,756	18,771	18,771	23,460	23,460	23,460	23,460	23,460	23,460	23,460	23,460
4. FLOWTHRU ADJUSTMENTS													
A. THERMS SOLD SUBJECT TO ADJ- 1													
B. FLOWTHRU ADJ- 1 PER THERM	590	634	575	580	580	580	580	580	580	580	580	580	580
C. REV FROM ADJUSTMENT- 1	0	0	0	0	0	0	0	0	0	0	0	0	0
D. THERMS SOLD SUBJECT TO ADJ- 2	0	0	0	0	0	0	0	0	0	0	0	0	0
E. FLOWTHRU ADJ- 2 PER THERM	0	0	0	0	0	0	0	0	0	0	0	0	0
F. REV FROM ADJUSTMENT- 2	0	0	0	0	0	0	0	0	0	0	0	0	0
G. TOTAL REV FROM ADJUSTMENTS	0	0	0	0	0	0	0	0	0	0	0	0	0
5. TOTAL REV FROM SALE OF GAS ENERGY													
6. OTHER OPERATING REVENUE	512,590	594,074	606,766	665,619	665,619	821,140	821,140	821,140	821,140	821,140	821,140	821,140	821,140
	(26,530)	28,441	42,612	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
7. TOTAL OPERATING REVENUE	486,060	622,515	649,378	667,119	667,119	822,640	822,640	822,640	822,640	822,640	822,640	822,640	822,640

FINANCIAL FORECAST FORM 3256 - DETERMINATION OF PLANT INVESTMENT & LOAN REQUIREMENTS

ITEM	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1. A. TOTAL UTILITY PLANT (BEGIN YEAR)	748,893	1,188,833	1,263,675	1,320,470	1,400,470	1,480,470	1,560,470	1,640,470	1,720,470	1,800,470	1,880,470	1,960,470	2,040,470
B. PLANT ADDITIONS AND REPLACEMENTS	439,940	74,842	56,795	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
C. CONTRIBUTIONS IN AID OF CONST.	0	0	0	0	0	0	0	0	0	0	0	0	0
D. RETIREMENTS	0	0	0	0	0	0	0	0	0	0	0	0	0
E. TOTAL UTILITY PLANT (END OF YEAR)	1,188,833	1,263,675	1,320,470	1,400,470	1,480,470	1,560,470	1,640,470	1,720,470	1,800,470	1,880,470	1,960,470	2,040,470	2,120,470
2. ANALYSIS OF PRIORITY FUNDS.													
A. DISTR.- NEW CONSTRUCTION	439,940	74,842	56,795	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
B. DISTR.- SYSTEM IMPROVEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0
C. DISTR.- ORDINARY REPLACEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0
D. DISTR.- SUBTRANSMISSION	0	0	0	0	0	0	0	0	0	0	0	0	0
F. DISTR.- WAREHOUSE, ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0
REIMBURSEMENT OF GENERAL FUNDS	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL OF PRIORITY ITEMS.	439,940	74,842	56,795	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
LESS: H. CONTR. IN AID OF CONST.	0	0	0	0	0	0	0	0	0	0	0	0	0
I. GEN. FUNDS INVESTED IN PLANT	0	0	0	0	0	15,293	79,852	71,457	60,854	48,888	34,633	53,669	54,315
J. LOAN FUNDS REQD FOR PRIORITY ITEMS	XXX	XXX	XXX	80,000	80,000	64,707	148	8,543	19,146	31,112	45,367	26,331	25,685
K. PRIOR LOAN FUNDS REQUIRED	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0
N. NEW LOANS FROM OTHER SOURCES	XXX	XXX	XXX	80,000	80,000	64,707	148	8,543	19,146	31,112	45,367	26,331	25,685
3. ANALYSIS OF NON-PRIORITY FUNDS													
A. OFFICE HEADQUARTERS	0	0	0	0	0	0	0	0	0	0	0	0	0
B. GENERAL PLANT ADDITIONS	0	0	0	0	0	0	0	0	0	0	0	0	0
C. GENERATION AND TRANSMISSION	0	0	0	0	0	0	0	0	0	0	0	0	0
D. OTHER NEEDS (E. G. SCADA)	0	0	0	0	0	0	0	0	0	0	0	0	0
E. TOTAL NON-PRIORITY FUNDS REQ.	0	0	0	0	0	0	0	0	0	0	0	0	0
LESS: F. SPECIAL LOAN FUNDS USED	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0
G. GEN. FUNDS INVESTED IN PLANT	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0
H. LOAN FUNDS REQ.-OTHER	XXX	XXX	XXX	0	0	0	0	0	0	0	0	0	0
4. TOTAL NEW LOANS REQ. FROM OTHERS	XXX	XXX	XXX	80,000	80,000	64,707	148	8,543	19,146	31,112	45,367	26,331	25,685
INTEREST RATE ON LOANS	3.00%												
EXISTING LOAN FUNDS AVAILABLE:	-----												
AMOUNT	0	0	0	0	0	0	0	0	0	0	0	0	0

FINANCIAL FORECAST FORM 325I - SUPPLEMENTAL DEBT SERVICE

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
SUPPLEMENTAL LOANS														
1. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
2. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
DATE OF LOAN														
AMOUNT OF LOAN														
AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
4. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
5. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
6. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
7. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														
8. A. DATE OF LOAN														
B. AMOUNT OF LOAN														
C. AMORTIZATION PERIOD														
D. INTEREST RATE														
TYPE:														

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

9. A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

10.A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

11. A. DATE OF LOAN
 MOUNT OF LOAN
 AMORTIZATION PERIOD
 INTEREST RATE
 TYPE:

12.A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

13.A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

14.A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

15.A. DATE OF LOAN
 B. AMOUNT OF LOAN
 C. AMORTIZATION PERIOD
 D. INTEREST RATE
 TYPE:

99. TOTAL DEBT & DEBT SERVICE OTHER
 A. DEBT FIRST OF YEAR
 B. FUNDS ADVANCED
 C. INTEREST
 D. DEBT PAYMENTS
 E. DEBT END OF YEAR

1. A. TOTAL TERMS REQUIREMENTS
 B. COST PER TERM PURCHASED (\$)
 B1.FLOWDOWN RISK ADJUSTED FINANCIAL FORECAST RISK

FINANCIAL FORECAST FORM 325K - DETERMINATION OF OPERATING EXPENSE

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
9. A. DATE OF LOAN	2012												
B. AMOUNT OF LOAN	45,367			0	0	0	0	0	0	0	0	0	0
C. AMORTIZATION PERIOD	25			0	0	0	0	0	0	0	0	0	0
D. INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
10.A. DATE OF LOAN	2013												
B. AMOUNT OF LOAN	26,331			0	0	0	0	0	0	0	0	0	0
C. AMORTIZATION PERIOD	25			0	0	0	0	0	0	0	0	0	0
D. INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
11. A. DATE OF LOAN	2014												
MOUNT OF LOAN	25,685			0	0	0	0	0	0	0	0	0	0
AMORTIZATION PERIOD	25			0	0	0	0	0	0	0	0	0	0
INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
12.A. DATE OF LOAN													
B. AMOUNT OF LOAN	0			0	0	0	0	0	0	0	0	0	0
C. AMORTIZATION PERIOD	35			0	0	0	0	0	0	0	0	0	0
D. INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
13.A. DATE OF LOAN													
B. AMOUNT OF LOAN	0			0	0	0	0	0	0	0	0	0	0
C. AMORTIZATION PERIOD	35			0	0	0	0	0	0	0	0	0	0
D. INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
14.A. DATE OF LOAN													
B. AMOUNT OF LOAN	0			0	0	0	0	0	0	0	0	0	0
C. AMORTIZATION PERIOD	35			0	0	0	0	0	0	0	0	0	0
D. INTEREST RATE	3.00%			0	0	0	0	0	0	0	0	0	0
E. BAL 1ST OF YEAR				0	0	0	0	0	0	0	0	0	0
F. PLUS: INTEREST				0	0	0	0	0	0	0	0	0	0
G. LESS: PAYMENTS				0	0	0	0	0	0	0	0	0	0
H. BAL END OF YEAR				0	0	0	0	0	0	0	0	0	0
ADVANCE				0	0	0	0	0	0	0	0	0	0
99. TOTAL DEBT & DEBT SERVICE OTHER													
A. DEBT FIRST OF YEAR	XXX	XXX	XXX	516,968	576,253	632,604	670,486	641,230	619,482	607,195	605,405	616,030	605,333
B. FUNDS ADVANCED	XXX	XXX	XXX	80,000	80,000	64,707	148	8,543	19,146	31,112	45,367	26,331	25,685
C. INTEREST	XXX	XXX	XXX	15,509	17,288	18,978	20,115	19,237	18,584	18,216	18,162	18,481	18,160
D. DEBT PAYMENTS	XXX	XXX	XXX	36,213	40,937	45,802	49,518	49,527	50,018	51,117	52,904	55,510	57,022
E. DEBT END OF YEAR	XXX	XXX	XXX	576,253	632,604	670,486	641,230	619,482	607,195	605,405	616,030	605,333	592,157
1. A. TOTAL TERMS REQUIREMENTS	566	592	551	574	574	574	574	574	574	574	574	574	574
B. COST PER TERM PURCHASED (\$)	0.3595071	0.5129122	0.59030853	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
B1.FLOWDOWN RISK ADJUSTED FINANCIAL FORECAST RISK	0	0	0	0	0	0	0	0	0	0	0	0	0



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

REBUTTAL
TESTIMONY
OF
JACK SHILLING
CHIEF EXECUTIVE OFFICER
DUNCAN VALLEY ELECTRIC COOPERATIVE, INC.

November 21, 2005

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1 **I. INTRODUCTION**

2 Q. Please state your name, address and occupation.

3 A. My name is Jack Shilling. My business address is 222 Highway 75, P.O. Box 440,
4 Duncan, Arizona. I am Chief Executive Officer of Duncan Valley Electric Cooperative,
5 Inc. ("DVEC"). Through an Operations and Management Agreement, Duncan Valley
6 manages the day-to-day operations of Duncan Rural Services Corporation ("DRSC").
7

8 Q. Are you the same Jack Shilling who filed direct testimony in this matter?

9 A. Yes.

10
11 Q. What issues will your rebuttal testimony address?

12 A. My rebuttal testimony will address Long Term Debt ("LTD"), capital structure and the
13 purchased gas adjustor.
14

15 Q. Please summarize your rebuttal recommendations.

16 A. Given the Staff recommendations for a 30 percent equity percentage goal for DRSC and a
17 recommendation for DRSC to discontinue the use of unauthorized cash advances from
18 Duncan Valley Electric Cooperative ("DVEC") will require that a higher amount of
19 revenues and LTD be approved, DRSC recommends that an additional LTD of \$600,000
20 be approved to allow DRSC to be brought into compliance with ARS 40-302.D through
21 2006.
22

23 On the basis of the Commission approving \$600,000 of additional LTD for DRSC and
24 Staff's recommendation to increase its equity ratio by 5.00% per year, DRSC would
25 further recommend that two additional rate increases be phased-in; one rate increase
26 effective January 1, 2006 for up to 5 percent across the board for all its customers and
27 second rate increase effective January 1, 2007 for up to 5 percent across the board for all
28 its customers.

1 Finally, DRSC recommends that it be allowed to manage its bank balance as close to \$0.0
2 as possible. DRSC recommends it be allowed to do this by using a 12 month rolling
3 average cost of gas and increase or decrease the average cost of gas by up to \$0.10 per
4 month to move the bank balance closer to zero.

5
6 **II. Long Term Debt and Capital Structure**

7
8 Q. Does DRSC agree with Staff's recommendation to authorize \$330,484 of additional Long
9 Term Debt (LTD)?

10 A. No, it does not. The Staff recommendations for a 30 percent equity percentage goal for
11 DRSC and a recommendation for DRSC to discontinue the use of unauthorized cash
12 advances from Duncan Valley Electric Cooperative ("DVEC") will require that a higher
13 amount of revenues and LTD be approved. By making these recommendations together,
14 DRSC will not be able to operate without filing for rate cases every year.

15
16 Q. Please explain why the cash advances from DVEC are so important to DRSC and should
17 be allowed to continue.

18 A. Given the fact that DRSC has a lower number of customers now approximately 760
19 versus 820 customers in the last rate case, DRSC's capital requirements of approximately
20 \$55,000 to \$108,000 per year and the increases in purchased gas and other expenses,
21 DRSC's revenues have not kept pace with its costs. According to DRSC's financial
22 forecast, capital additions will continue to average approximately \$80,000 for the next
23 five years.

24
25 The Company's poor financial condition does not enable it to incur additional debt on its
26 own credit, so CFC or any other lender will require all lending to DRSC to be guaranteed
27 by DVEC since DRSC is not a full member of CFC. The increase in revenues
28 recommended by Staff in this case will be an important step towards restoring the credit

1 worthiness of the utility but is not enough to fund capital improvements or meet the 30
2 percent equity goal. Consequently, DRSC will be applying for rate increases every year
3 if it is not able to rely on advances from DVEC. Each rate case costs DRSC's members
4 approximately \$33,000.

5
6 Q. Is it possible for DRSC to operate and remain solvent even if it could file for and receive
7 a rate increase every year?

8 A. Probably not because DRSC's cash flow would continue to lag given the nature of
9 ratemaking (funds must be invested before rate recovery is allowed) and the amount of
10 time it takes the ACC to process a rate filing.

11
12 Q. What is the current amount of Advances from DVEC that DRSC owes?

13 A. As of September 30, 2005, DRSC owes DVEC approximately \$502,000 for cash
14 advances.

15
16 Q. Has Staff recommended that all of DRSC's cash advances be converted to LTD?

17 A. No Staff has not recommended that all of DRSC's cash advances be converted to LTD
18 but has only recommended that \$330,484 be converted and the remaining amount of
19 advances of \$171,516 be repaid when there are funds available.

20
21 Q. Will these unconverted advances ever be repaid?

22 A. It is unlikely these advances will be repaid for many years given DRSC's financial
23 condition and its capital requirements.

24
25 Q. Do Staff's recommendations on DRSC's cash advances bring DRSC into compliance
26 with Arizona Revised Statute ("ARS") 40-302.D?

27
28

1 A. No, Staff's recommendations do not. In fact, Staff's recommendation that DRSC
2 discontinue the use of unauthorized cash advances from Duncan Valley Electric
3 Cooperative will make DRSC insolvent.

4
5 Q. Staff has recommended that DRSC improve its equity ratio by 5 percent each year until it
6 reaches a 30 percent equity ratio. Is it realistic for DRSC to meet a 30 percent equity
7 requirement within a 10 year period as recommended by Staff?

8 A. No it is not realistic given the revenue requirement recommended by Staff and the future
9 capital requirements of DRSC. DRSC will be applying for rate increases every year if it
10 is not able to rely on advances from DVEC and must meet a 5 percent increase in its
11 equity ratio. This 30 percent equity goal may be more realistic over a 20 year period.

12
13 Q. What is the current revenue and rate impact associated with DRSC improving its equity
14 position by 5 percent per year?

15 A. As of October 2005, DRSC had negative equity of approximately \$222,245 and LTD of
16 approximately \$1,019,000 including the requested LTD of \$502,000. To improve its
17 current equity position, DRSC would need to have positive margins of \$32,400 on
18 December 31, 2006. As DRSC's audited financial statements indicate, DRSC's total
19 margins have declined from a negative \$18,859 on December 31, 2003 to a negative
20 \$49,639 on December 31, 2004 to a negative \$69,171 on September 30, 2005. DRSC has
21 not experienced positive margins since its inception. Assuming DRSC can maintain a
22 customer count of 725, improving DRSC's equity position by 5 percent (\$32,400) will
23 cost customers \$3.72 per month or \$44.64 per year.

24
25 Q. Given the Staff recommendations that DRSC discontinue the use of unauthorized cash
26 advances from Duncan Valley Electric Cooperative and meet a 30 percent equity ratio,
27 what does DRSC recommend be done in this case?

28

1 A. DRSC recommends that an additional LTD of \$600,000 be approved to allow DRSC to
2 be brought into compliance with ARS 40-302.D through 2006. This \$600,000 would
3 cover the \$502,000 of current advances from DVEC as well as allow DRSC an additional
4 \$98,000 for future advances from DVEC.

5
6 Q. Staff has expressed a concern that any cash advances used for operating expenses should
7 not be allowed to be converted to LTD because of a cost shift to customers in a later
8 period. Does this apply to DRSC?

9 A. No it does not. DRSC has experienced a decline in its customer base. DRSC's customer
10 base has been the same customers who have taken service from DRSC for years.
11 Consequently, its existing customers were present when these advances were incurred
12 and are still present today.

13
14 Q. Does DRSC have further recommendations on improving its equity ratio and repaying
15 advances from DVEC?

16 A. Yes, it does. On the basis of the Commission approving \$600,000 of additional LTD for
17 DRSC and Staff's recommendation to increase its equity ratio by 5.00% per year, DRSC
18 would further recommend that two additional rate increases be phased-in; one rate
19 increase effective January 1, 2006 for up to 5 percent across the board for all its
20 customers and second rate increase effective January 1, 2007 for up to 5 percent across
21 the board for all its customers. Future rate increases for DRSC are inevitable under the
22 Staff recommendations. This will allow DRSC to repay the \$600,000 of additional debt
23 as well as its other debts and operating expenses and will enable DRSC to meet the Staff
24 equity ratio requirements without incurring significant rate increases.

25
26 Q. Have DVEC and DRSC considered other measures to address these financial concerns?

27 A. Yes. As stated in my direct testimony, the DVEC and DRSC Board of Directors have
28 considered reorganizing DRSC such that DRSC would become a department/division of

1 DVEC as well as other alternatives to address DRSC's financial situation. If DRSC
2 would become a department/division of DVEC, this would allow DRSC access to CFC's
3 low cost financing and restore DRSC's non-taxable status. However, there are many
4 other factors (i.e. income tax issues, debt issues, regulatory approvals, etc.) that must be
5 considered and resolved before any reorganization is approved and can occur.

6
7 Q. Does such reorganization completely address the financial concerns of DRSC?

8 A. No. DRSC will still need to be financially responsible for all expenses, debt service and
9 construction expenditures that it incurs. Consequently, the first step is to improve
10 DRSC's financial condition by increasing rates to a level that interest and debt coverage
11 ratios will be acceptable to outside lenders and where enough cash-flow is being provided
12 through rates to fund expenses, debt payments and construction without the continued
13 need for advances from outside sources.

14
15 **III. Purchased Gas Adjustor**

16 Q. Are Staff's recommendations for DRSC's Purchased Gas Adjustor (PGA) adequate?

17 A. No. Staff's recommendations are not adequate given the nationwide increase and
18 fluctuations in natural gas prices. Staff's recommendation that DRSC discontinue the use
19 of unauthorized cash advances from Duncan Valley Electric Cooperative and Staff's
20 recommended revenue requirement. As mentioned in Staff's direct testimony, DRSC has
21 applied for and received a surcharge. Decision No. 68297 approved a \$0.45 per therm
22 surcharge for DRSC's customers for all usage on and after December 1, 2005.

23
24 Q. What is DRSC's current PGA bank balance?

25 A. DRSC currently has an under-collected PGA bank balance of approximately \$35,000.
26
27
28

1 Q. Where did the funds come from to pay for the higher cost of gas (under-collected bank
2 balance)?

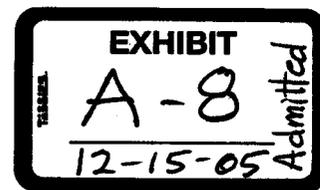
3 A. Shortfalls in cash flow due to higher operating expenses are funded from internal funds if
4 available but are most likely funded by advances from DVEC. The current PGA
5 mechanism approved by the Commission is not adequate to address the nation wide
6 increases and fluctuations in the costs of gas. The current mechanism only allows \$0.10
7 increase or decrease over a 12 month period. This \$0.10 increase or decrease has not
8 been adequate as demonstrated by the \$0.4165 PGA Surcharge approved for DRSC in
9 Decision No. 63369 (February 16, 2001) and the \$0.45 per therm surcharge approved
10 Decision No. 68297 (November 8, 2005). The surcharge applications approved are
11 costly and time consuming to prepare and have caused rate shock to DRSC's customers
12 and will not reflect the proper price signals of the market place as these increases are
13 delayed by application approvals and continue past the winter heating season.

14
15 Q. Under the Staff recommendations, DRSC will no longer be able to obtain cash advances
16 from DVEC. What are DRSC's recommendations regarding the PGA in the future?

17 A. DRSC recommends that it be allowed to manage its bank balance as close to \$0.0 as
18 possible. DRSC recommends it be allowed to do this by using a 12 month rolling
19 average cost of gas and increase or decrease the average cost of gas by up to \$0.10 per
20 month to move the bank balance closer to zero. This will allow DRSC to phase in gas
21 cost increases or decreases to its customers and should mitigate the need for surcharge
22 applications and cash advances from DVEC for gas cost increases.

23
24 Q. Does that conclude your rebuttal testimony?

25 A. Yes, it does.
26
27
28



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR APPROVAL OF A LOAN IN THE)
AMOUNT OF \$400,000)
_____)

DOCKET NO. G-02528A-03-0205

REJOINDER

TESTIMONY

OF

JACK SHILLING

CHIEF EXECUTIVE OFFICER
DUNCAN VALLEY ELECTRIC COOPERATIVE, INC.

December 12, 2005

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III.	Purchased Gas Adjustor	6

1 **I. INTRODUCTION**

2 Q. Please state your name, address and occupation.

3 A. My name is Jack Shilling. My business address is 222 Highway 75, P.O. Box 440,
4 Duncan, Arizona. I am Chief Executive Officer of Duncan Valley Electric Cooperative,
5 Inc. ("DVEC"). Through an Operations and Management Agreement, Duncan Valley
6 manages the day-to-day operations of Duncan Rural Services Corporation ("DRSC").

7
8 Q. Did you file direct and rebuttal testimony in this matter?

9 A. Yes.

10
11 Q. Was this testimony prepared by you or under your direction?

12 A. Yes, it was.

13
14 Q. What issues will your rebuttal testimony address?

15 A. My rebuttal testimony will address Long Term Debt ("LTD"), capital structure and the
16 purchased gas adjustor.

17
18 Q. Please summarize your rebuttal recommendations.

19 A. The Staff recommendation for a 30 percent equity percentage goal for DRSC and a
20 recommendation for DRSC to discontinue the use of cash advances from Duncan Valley
21 Electric Cooperative ("DVEC") will require that a higher amount of revenues and LTD
22 be approved. DRSC recommends that additional LTD of \$600,000 be approved to allow
23 DRSC to meet its borrowing needs through 2006.

24
25 On the basis of the Commission approving \$600,000 of additional LTD for DRSC and
26 Staff's recommendation to increase its equity ratio by 5.00% per year, DRSC would
27 further recommend that two additional rate increases be phased-in; one rate increase
28 effective January 1, 2007 for 5 percent across the board for all its customers and a second

1 rate increase effective January 1, 2008 for 5 percent across the board for all its customers.

2
3 Finally, DRSC recommends that it be allowed to manage its bank balance as close to \$0.0
4 as possible. DRSC recommends it be allowed to do this by using a 12 month rolling
5 average cost of gas and increase or decrease the average cost of gas by up to \$0.10 per
6 month to move the bank balance closer to zero.

7
8 **II. Long Term Debt and Capital Structure**

9
10 Q. Does DRSC agree with Staff's recommendation to authorize \$330,484 of additional Long
11 Term Debt (LTD) and classify the remaining advances of \$171,616 as an equity infusion
12 from DVEC?

13 A. No, it does not. The \$171,616 of remaining advances represent funds that DVEC
14 advanced to DRSC to meet its operating and capital expenditures. DVEC's intent with
15 providing the advances is that they would be repaid at some point in the future. If the
16 \$171,616 of advances is classified as an equity infusion, this amount will likely become a
17 permanent contribution from DVEC.

18
19 Q. Does classifying the remaining advances of \$171,616 as an equity infusion result in cost
20 shifting to DVEC's members?

21 A. Yes, it would. DVEC currently has approximately 1,500 customers who are not
22 customers of DRSC. Classifying the remaining advances of \$171,616 as an equity
23 infusion will result in cost shifting to these 1,500 members of DVEC because they will
24 probably not be repaid. If these funds are treated as advances or LTD, they will
25 eventually be repaid and no cost shifting will occur.

26
27
28

1 Q. Please comment on Staff's concerns about cost shifting from DRSC's past to its current
2 members if the advances that paid for DRSC's past operating expenses are converted to
3 LTD?

4 A. DRSC and DVEC would by far prefer to have a small portion of the past operating
5 expenses of DRSC shifted from a few customers who have left DRSC's system to
6 DRSC's remaining customers than to the approximately 1,500 customers of DVEC who
7 are not customers of DRSC. Classifying the remaining advances of \$171,616 as an
8 equity infusion will result in cost shifting to these 1,500 members of DVEC. If these
9 funds are treated as advances or LTD, they will eventually be repaid and no cost shifting
10 will occur.

11

12 Q. Staff has described the historical cash advance relationship that has developed between
13 DVEC and DRSC as being inappropriate. Please comment.

14 A. The fact remains that without these cash advances from DVEC, DRSC would be
15 insolvent, DRSC would have not been able to make the necessary capital improvements
16 to its systems and DRSC's rates would have needed to be significantly higher. DRSC's
17 board and management have attempted to balance the need for significantly higher rates
18 and capital improvements through the use of advances from DVEC.

19

20 Q. Has Staff addressed how the \$80,000 of projected capital improvements for 2005 and
21 2006 will be funded by DRSC?

22 A. No, it has not. Staff has recognized the potential for a cash short-fall with respect to
23 purchased gas costs by recommending approval of a LOC but it has not recognized the
24 cash flow needs associated with additional capital expenditures. DRSC continues to
25 recommend that additional LTD of \$600,000 be approved. This \$600,000 would cover
26 the \$502,000 of current advances from DVEC as well as allow DRSC an additional
27 \$98,000 for future advances from DVEC.

28

1 Q. Do Staff's surrebuttal recommendations on DRSC's cash advances bring DRSC into
2 compliance with Arizona Revised Statute ("ARS") 40-302.D?

3 A. No, Staff's surrebuttal recommendations do not. In fact, Staff's recommendation that
4 DRSC discontinue the use of unauthorized cash advances from DVEC will make DRSC
5 insolvent and unable to pay bills when they come due. If the Staff recommended LTD
6 amount of \$330,484 is adopted, approval for an additional LTD (or LOC) with DVEC
7 should be approved to address DRSC's capital and operating expenditures in 2005 and
8 2006.

9
10 Q. Staff has stated that its recommendation that DRSC improve its equity ratio by 5 percent
11 will only require a positive margin of \$18,194 or the total amount of capital of \$363,884
12 multiplied by 5 percent. Does DRSC agree?

13 A. No. DRSC does not agree with Staff's calculation. Staff has used a total capital amount
14 that does not include its recommended additional LTD of \$330,484. When this amount is
15 included, the Staff calculation of the amount of positive margin required increases to
16 approximately \$35,000 ($363,884 + 330,484 = \$694,368 * 5.00\%$). Consequently, Staff's
17 calculation of the excess margin that DRSC has to pay for interest, depreciation and the 5
18 percent equity requirement decreases from the \$24,488 to \$7,963. The \$7,963 amount of
19 excess margins is not enough to meet the \$9,280 of expenses associated with the \$80,000
20 of additional capital requirements of DRSC in year one as listed in the table in Dan
21 Zivan's surrebuttal testimony on page 9, lines 13-14. This table also does not take into
22 account that DRSC's salaries and benefits expenses have been increasing by
23 approximately \$11,000 per year or any other expenses that may increase in the future.

24
25 Q. Given Staff's recommendations in its surrebuttal testimony, will DRSC be able to
26 continue to limit its rate increase requests to once every three years?

27 A. No, it will not. DRSC will need to apply annually for rate increases to fund its \$80,000
28 annual capital expenditure budget and to increase its equity ratio by 5 percent per year.

1 Increases in variable interest expense and PGA under-collection could also necessitate
2 annual rate increase filings.

3
4 Q. Given Staff's recommendations in its surrebuttal testimony, has DRSC eliminated its
5 recommendation for two additional rate increases of 5 percent in 2007 and 2008?

6 A. No, it has not. However, DRSC is correcting and modifying proposal that appeared in
7 my rebuttal testimony. On the basis of Staff's surrebuttal testimony recommendations,
8 DRSC would further recommend that two additional rate increases be phased-in; one rate
9 increase effective January 1, 2007 for 5 percent across the board for all its customers and
10 a second rate increase effective January 1, 2008 for 5 percent across the board for all its
11 customers. I had mistakenly stated 2006 and 2007 in my rebuttal testimony. Also,
12 DRSC believes that it will be simpler for the Commission to authorize in this order a
13 precise amount of 5 percent rather than my original "up to" proposal.

14
15 **III. Purchased Gas Adjustor**

16
17 Q. Does Staff's recommendation to allow a DRSC to borrow funds from DVEC under a
18 Line of Credit ("LOC") agreement address DRSC's concerns regarding gas price
19 fluctuations and DRSC's Purchased Gas Adjustor (PGA) being able to recover gas costs
20 in a timely fashion?

21 A. No, it does not completely address these concerns. DRSC appreciates Staff's attempt to
22 address the cash flow issues associated with the PGA due to higher gas costs. However,
23 Staff's recommendation is contrary to its other recommendations for DRSC to seek rate
24 relief in a more timely fashion, to avoid the use of advances from DVEC and to avoid
25 financing operating expenses. As stated previously in my testimony in this case, DRSC
26 will continue to experience price fluctuations in its cost of gas that can not be adequately
27 addressed by its current PGA. If DRSC's PGA rate can not be adequately increased or
28 decreased to recover higher or lower gas costs, then DRSC will need an advance or LOC

1 from DVEC to finance an operating expense, DRSC's customers will have to pay interest
2 on the amount of the advance or LOC and the higher cost of winter gas is shifted to
3 summer irrigation users who only use a small amount of gas in the winter.

4
5 Q. Is DRSC's existing PGA mechanism adequate to recover or refund significant gas price
6 increases or decreases?

7 A. No, it is not. DRSC's current PGA mechanism is inadequate to address significant price
8 fluctuations as demonstrated by the need for DRSC to file two surcharge applications in
9 the last four years. Decision No. 63369 (February 15, 2001) approved a surcharge for
10 DRSC of \$0.4165 per therm. Decision No. 68297 (November 14, 2005) approved a
11 surcharge for DRSC of \$0.45 per therm. The current PGA mechanism has caused the
12 DRSC to request a higher and longer surcharge increase than what would have been
13 necessary had DRSC been allowed to manage its bank balance as close to \$0.00 as
14 possible. Under DRSC's PGA proposal, DRSC would be able to gradually increase or
15 decrease the PGA rate when price fluctuations start to occur which will result in lower
16 price fluctuations and better price signals for its customers.

17
18 Q. Have DRSC's recommendations regarding the PGA changed from what you stated in
19 your rebuttal testimony?

20 A. No, for the reasons stated above. DRSC recommends that it be allowed to manage its
21 bank balance as close to \$0.00 as possible. DRSC recommends it be allowed to do this
22 by using a 12 month rolling average cost of gas and increase or decrease the average cost
23 of gas by up to \$0.10 per month to move the bank balance closer to zero. This will allow
24 DRSC to phase in gas cost increases or decreases to its customers, should mitigate rate
25 shock, should avoid cost shifting among customer classes and should mitigate the need
26 for surcharge applications and cash advances or LOC from DVEC for gas cost increases.

27
28

1 Q. Does that conclude your rejoinder testimony?

2 A. Yes, it does.

3

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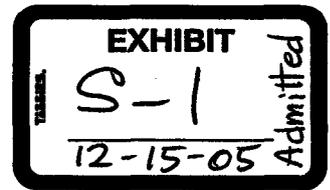
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BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
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 DUNCAN RURAL)
SERVICES CORPORATION DEVOTED ITS)
OPERATIONS THROUGHOUT THE STATE OF)
ARIZONA.)
_____)

DOCKET NO. G-02528A-05-0314

DIRECT
TESTIMONY
OF
PREM K. BAHL
ELECTRIC UTILITIES ENGINEER
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION
NOVEMBER, 8 2005

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EXHIBIT 1

ACC Staff Prem Bahl's Bio

EXHIBIT 2

Cost of Service Summary – Present Rates.....	Schedule G-1
Cost of Service Summary – Proposed Rates.....	Schedule G-2
Allocation of Rate Base	Schedule G-3
Expense Allocation to Classes of Service	Schedule G-4
Distribution of Rate Base by Function.....	Schedule G-5
Distribution of Expense by Function	Schedule G-6
Allocation Factors	Schedule G-7

EXECUTIVE SUMMARY
DUNCAN RURAL SERVICES CORPORATION
DOCKET NO. G-02528A-05-0314

Staff's testimony discusses Utilities Division Staff's ("Staff") review of Duncan Rural Services Corporation ("Duncan" or "Company") Cost of Service Study ("COSS") for the rate case filed with the Arizona Corporation Commission ("Commission"), and presents the results of its analysis.

Based on its review of Duncan's COSS, Staff's conclusions and recommendations are as follows:

1. It is Staff's conclusion that Duncan performed the COSS consistent with the methodology generally accepted in the industry, and utilized the COSS model in developing the allocation factors appropriately.
2. Staff further concludes that, based on the evaluation of Duncan's COSS model and some minor changes Staff made in Schedules G-5 through G-7, the results of COSS are satisfactory. These changes are described in detail in the main body of the testimony under Conclusions and Recommendations.
3. Staff eliminated a duplicate G Schedule and renamed several Schedules contained in the Company's filing. Staff recommends that Duncan continue to utilize the current COSS model including the modifications Staff made in the G Schedules in any future rate proceeding. These modifications include the appropriate titles according to the A.A.C. Rule R14-2-103.
4. Staff further recommends that Duncan's COSS cost allocations and factors be accepted with Staff's aforementioned modifications, which are reflected in the attached COSS G-Schedules under Exhibit 2:

1 **I. INTRODUCTION**

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

3 A. My name is Prem K. Bahl. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. By whom and in what capacity are you employed?**

7 A. I am employed by the Arizona Corporation Commission ("Commission") as an Electric
8 Utilities Engineer.

9
10 **Q. Please describe your educational background.**

11 A. I graduated from South Dakota State University with a Masters degree in Electrical
12 Engineering in May 1972. I received my Professional Engineering ("P.E.") License in the
13 state of Arizona in 1978. My Bachelor of Science degree in Electrical Engineering is
14 from the Agra University, India in 1957.

15
16 **Q. Please describe your pertinent work experience.**

17 A. Please see my bio, which is attached as Exhibit 1.

18
19 **Q. As part of your assigned duties at the Commission, did you perform an analysis of
20 the application that is the subject of this proceeding?**

21 A. Yes, I did.

22
23 **Q. Is your testimony herein based on that analysis?**

24 A. Yes, it is.

25

1 **Q. What is the purpose of your prefiled testimony?**

2 A. The purpose of my testimony is to discuss Staff's review of Duncan Rural Services
3 Corporation ("Duncan" or "Company") Cost of Service Study ("COSS") for the rate case,
4 and present the results of this review.

5

6 **II. COST OF SERVICE STUDY – REVIEW PROCESS**

7 **Q. What is the purpose of a COSS?**

8 A. There are three steps to take in performing a COSS. They are: 1) functionalization; 2)
9 classification; and 3) allocation. First, the COSS enables us to determine the system's cost
10 of service by classifying the utility's costs (investments and expenses) by function, such as
11 demand-related, commodity-related, and customer-related functions. Second, the study
12 breaks down these costs by customer classes to reflect as closely as possible the cost
13 causation by respective customer classes. Third, the results of the COSS provide a
14 benchmark for the revenues needed from each customer category by appropriately
15 allocating the revenue requirement for each customer class.

16

17 **Q. Is there a standard COSS model?**

18 A. There is no standard methodology for designing a COSS, but it is generally advisable to
19 follow a range of alternatives to identify which allocations are more reasonable than
20 others. For that reason, the COSS should be used as a general guide only and as one of
21 many considerations in designing rates.

22

23 **Q. What was the process Staff used in reviewing Duncan's COSS?**

24 A. First, I reviewed the model used by Duncan in developing various allocation factors in the
25 COSS. Second, I reviewed the Test Year ("TY 2004") rate base, revenues and expenses
26 in the filed rate case, adjusted by Duncan's Pro Forma adjustments, and matched them

1 with the appropriate schedules contained in the application. Third, I incorporated the
2 revenue allocations and operating expense adjustments of Staff witnesses, Steve Irvine
3 and Dan Zivan, in the COSS.

4
5 **Q. Did Staff conduct a separate independent COSS?**

6 A. After studying Duncan's model, Staff decided that the best method for review would be to
7 replicate Duncan's COSS and make the appropriate Staff revisions and adjustments. The
8 accuracy of the COSS model was established by the fact that all the revisions and
9 adjustments flowed through the relevant G-Schedules. Furthermore, Duncan used the
10 same COSS model that was used and approved by the Commission in the last rate case
11 (Docket No. G-02527A-00-0392).

12
13 **Q. Did Staff make any changes in Duncan's COSS Schedules?**

14 A. Yes. Staff made the following changes in the G Schedules.

- 15 1. Incorporated Staff's revenue and operating expense adjustments.
- 16 2. Corrected some typographical errors in the designation of allocation factors
17 in Schedules G-5 through G-7.
- 18 3. Eliminated the duplicate Schedule G-4 ("Allocation of Rate Base") and
19 replaced it with the "Expense Allocation to Classes" Schedule G-4, and
20 renumbered the remaining Schedules as G-5 through G-7.
- 21 4. Relabeled the titles of Schedules G-5 through G-7 in accordance with the
22 A.A.C. Rule R14-2-103.
- 23 5. Introduced a new allocation factor, F10, in Schedules G-6 and G-7 that was
24 erroneously labeled as F-3.
- 25 6. Included in Schedule G-7 the missing Allocation Factor F-4 for the
26 Weighted Customer Accounts.

1 Q. What was the effect of the above-noted changes in the Allocation Factors?

2 A. The above-noted changes in the Allocation Factors did not affect the COSS results.

3

4 **III. ALLOCATION OF DISTRIBUTION MAINS**

5 Q. What comments does Staff have regarding Duncan's allocation of Distribution
6 Mains?

7 A. This account is the largest single plant account. It constitutes approximately 67 percent of
8 Gross Distribution Plant in Service, according to Duncan's figures used in its COSS.
9 Duncan rightly allocated one hundred percent (100%) of the cost of Distribution Mains to
10 peak demand, as was done in the last rate case.

11

12 **IV. CONCLUSIONS AND RECOMMENDATIONS**

13 Q. Based upon your testimony, what are Staff's conclusions and recommendations
14 regarding the COSS?

15 A. Based on its review of Duncan's COSS, Staff's conclusions and recommendations are as
16 follows:

17 1. It is Staff's conclusion that Duncan performed the COSS consistent with the
18 methodology generally accepted in the industry, and developed the allocation
19 factors appropriately, except for the modifications made by Staff in terms of
20 correcting some typographical errors in the allocation factors in schedules G-5
21 through G-7, and relabeling another factor in Schedules G-6 and G-7, which was
22 erroneously designated by the Company.

23

24 2. Staff further concludes that, based on the evaluation of the COSS model utilized
25 by Duncan, and the changes Staff made in the allocation factors mentioned under
26 Item 4 below, the results of Duncan's COSS are reasonable.

- 1 3. Staff recommends that in any future rate proceeding, Duncan continue to utilize
2 the current COSS model, including any appropriate revisions to the allocation
3 factors for allocating expenditures.
4
- 5 4. Staff further recommends that the Commission accept Duncan's COSS cost
6 allocations and factors with the following adjustments and modifications, which
7 are reflected in the attached COSS G-Schedules under Exhibit 2.
- 8 a. Include Staff's revenue allocation adjustment by class.
9 b. Include Staff's operating expense adjustments to Duncan's filing.
10 c. Replace Schedule G-4, which is duplicate of the "Allocation of Rate Base"
11 Schedule G-3, with the "Expense Allocation to Classes" Schedule G-4, and
12 renumber the remaining Schedules as G-5 through G-7.
13 d. Schedules G-5 and G-6: change the Allocation Factor for Meters and
14 House Regulators from F-5 to F-4.
15 e. Schedules G-6 and G-7: relabel the Allocation Factor for Operating
16 Expenses, under Function of Salaries and Wages, F-3, as F-10.
17 f. Schedule G-7: include the missing Allocation Factor F-4 for the Weighted
18 Customer Accounts.
19

20 **Q. Does this conclude your pre-filed testimony?**

21 **A. Yes it does.**

EXHIBIT 1

**Duncan Rural Services Corporation
(Docket No. G-02528A-05-0314)**

ACC Staff Prem Bahl's Bio

Prem Bahl's Bio

Mr. Bahl worked at the Arizona Corporation Commission from 1988 to 1998 as a Utilities Consultant, and has been re-employed at the Commission as an Electric Utilities Engineer since June 2002. During this period of over thirteen years, he has conducted engineering evaluations of utility rate cases and financing cases, including analyses of cost of service studies performed by Southwest Gas and rural electric cooperatives. His responsibilities have included review of electric utilities' generation and transmission plans, inspection of power stations, and transmission and distribution facilities. Mr. Bahl was involved with the development of retail competition in Arizona and of DesertStar, an Independent System Operator ("ISO"), later renamed as WestConnect, a Regional Transmission Operator ("RTO"). He was Chairman of the System Reliability Working Group, which evaluated the impact of competition on system reliability and recommended the establishment of the Arizona Independent System Administrator ("AZISA") as an interim organization until commercial operation of DesertStar was implemented. Since rejoining the Commission, Mr. Bahl has reviewed utilities' load curtailment plans, and coordinated with the Commission consultants to hold two workshops to report on the second Biennial Transmission Assessment ("BTA") 2002-2011, and the third BTA 2004-2013, in the state of Arizona. He is responsible for the compliance of power plant and line siting cases.

From July 1998 to August 2000, Mr. Bahl was Chief Engineer at the Residential Utility Consumer Office. During this time period, he performed many of the duties he performed at the Commission. He was involved with the Distributed Generation Work Group that looked at the impact of development of distributed generation in Arizona on system reliability, and modifications of interconnection standards currently specified by the jurisdictional utilities. Mr. Bahl was a member of the AZISA Board of Directors

from September 1999 to June 2000. He was involved in the deliberations of the Market Interface Committee of the North American Electric Reliability Council.

From July 2001 to June 2002, Mr. Bahl had his own consulting engineering firm, and was involved with deregulation of electric power industry, and formation of RTO West and the MidWest ISO.

Mr. Bahl has a Masters in Electrical Engineering from the South Dakota State University, and is a registered Professional Engineer in the state of Arizona. He has published and presented a number of technical papers at the national and international conferences regarding formation of ISOs and RTOs; transmission issues and distributed generation. In April 2005, he chaired a national conference on "Western Power Supply" in Los Angeles, California.

Prior to his employment with the Commission, Mr. Bahl was an electrical engineer with electric utilities and consulting firms in the transmission and generation planning areas for approximately twenty eight years, including ten years with the Punjab State Electricity Board ("PSEB") in India from 1960 to 1970. He was Executive Engineer at the PSEB from 1968 to 1970 prior to coming to the USA in 1970.

EXHIBIT 2

**Duncan Rural Services Corporation
(Docket No. G-02527A-04-0301)**

Cost of Service Study Schedules G-1 thru G-7

DUNCAN RURAL SERVICES CORPORATION
COST OF SERVICE SUMMARY - PRESENT RATES
TEST YEAR ENDED DECEMBER 31, 2004

<u>DESCRIPTION</u>	<u>TOTAL</u>	<u>250cfh & Below</u>	<u>>250 & < 425 cfh</u>	<u>>425 & < 1k cfh</u>
Operating Revenues	325,812	300,393	17,421	7,998
Operating Expenses:				
Purchased Gas	-	-	-	-
Distribution Expense - Operations	154,097	134,924	12,508	6,665
Distribution Expense - Maintenance	54,824	48,107	4,413	2,304
Customer Account Expense	60,129	58,455	1,509	165
Administrative & General Expense	56,520	50,520	4,490	1,510
Depreciation	49,646	44,090	3,809	1,747
Property Taxes	19,639	17,021	1,656	962
Tax Expense - Other (Income, etc.)	(23,047)	(20,601)	(1,831)	(615)
Interest Expense -Other	367	357	9	1
Total Operation Expenses	372,175	332,873	26,563	12,739
Operating Income (Loss)	(46,363)	(32,480)	(9,142)	(4,741)
Rate Base	758,058	672,374	58,472	27,212
% Return - Present Rates	-6.12%	-4.83%	-15.63%	-17.42%
Return Index	1.00	0.79	2.56	2.85

DUNCAN RURAL SERVICES CORPORATION
COST OF SERVICE SUMMARY - PROPOSED RATES
TEST YEAR ENDED DECEMBER 31, 2004

<u>DESCRIPTION</u>	<u>TOTAL</u>	<u>250cfh & Below</u>	<u>>250 & < 425 cfh</u>	<u>>425 & < 1k cfh</u>
Operating Revenues (1)	477,825	385,400	78,360	14,065
<u>Operating Expenses:</u>				
Purchased Gas	-	-	-	-
Distribution Expense - Operations	154,097	134,924	12,508	6,665
Distribution Expense - Maintenance	54,824	48,107	4,413	2,304
Customer Account Expense	60,129	58,455	1,509	165
Administrative & General Expense	56,520	50,520	4,490	1,510
Depreciation	49,646	44,090	3,809	1,747
Property Taxes	19,639	17,021	1,656	962
Tax Expense - Other (Income, etc.)	12,305	10,999	978	328
Interest Expense -Other	367	357	9	1
Total Operation Expenses	407,524	364,473	29,372	13,682
Operating Income (Loss)	70,301	20,927	48,988	383
Rate Base	758,058	672,374	58,472	27,212
% Return - Proposed Rates	9.27%	3.11%	83.78%	1.41%
Return Index	1.00	0.34	9.03	0.15

Note:

(1) Operating Revenues exclude recovery of Purchased Gas cost.

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
ALLOCATION OF RATE BASE

<u>DESCRIPTION</u>	<u>FACTOR</u>	<u>CONSUMER CLASS</u>	
		<u>TOTAL</u>	<u>250cfh & Below 50 & < 425 cfh · 425 & < 1k cfh</u>
<u>GROSS PLANT IN SERVICE:</u>			
Demand	D-1	926,778	78,147
Commodity	CM-1	-	45,406
Customer - Weighted	C-1	415,620	2,190
Customer - Unweighted	C-2	-	-
Total		1,342,398	103,219
<u>ACCUMULATED DEPRECIATION:</u>			
Demand	D-1	395,086	33,314
Commodity	CM-1	-	19,356
Customer - Weighted	C-1	177,178	10,688
Customer - Unweighted	C-2	-	933
Total		572,264	44,002
<u>NET PLANT IN SERVICE</u>			
<u>Customer Deposits & Def. Tax:</u>			
Demand	D-1	19,554	1,649
Commodity	CM-1	-	958
Customer - Weighted	C-1	20,064	1,210
Customer - Unweighted	C-2	-	106
Total		39,618	2,859
<u>WORKING CAPITAL:</u>			
Demand	D-1	18,839	1,589
Commodity	CM-1	-	-
Customer - Weighted	C-1	8,703	525
Customer - Unweighted	C-2	-	46
Total		27,542	2,114
TOTAL RATE BASE		758,058	58,472
		24,459	969
		672,374	27,212

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
EXPENSE ALLOCATION TO CLASSES OF SERVICE

DESCRIPTION	FACTOR	CONSUMER CLASS		
		250cfh & Below	>250 & < 425 cfh	>425 & < 1k cfh
REVENUES:				
Gas Sales - Adjusted		320,602	295,328	17,291
Service Charges & Other Revenues	C-2	5,210	5,065	131
Total (1)		325,812	300,393	17,421
OPERATING EXPENSE:				
Purchased Gas	CM-1	-	-	-
Distribution Expense - Operations:				
Demand	D-1	133,884	116,036	11,289
Commodity	CM-1	-	-	-
Customer - Weighted	C-1	20,213	18,888	1,219
Customer - Unweighted	C-2	-	-	-
Total		154,097	134,924	12,508
Distribution Expense - Maintenance:				
Demand	D-1	46,098	39,953	3,887
Commodity	CM-1	-	-	-
Customer - Weighted	C-1	8,726	8,154	526
Customer - Unweighted	C-2	-	-	-
Total		54,824	48,107	4,413
Customer Accounts Expense:				
Demand	D-1	-	-	-
Commodity	CM-1	-	-	-
Customer - Weighted	C-1	-	-	-
Customer - Unweighted	C-2	60,129	58,455	1,509
Total		60,129	58,455	1,509
Admin. & General Expense:				
Demand	D-1	26,743	23,178	2,255
Commodity	CM-1	2,930	1,801	1,040
Customer - Weighted	C-1	14,794	13,824	892
Customer - Unweighted	C-2	12,053	11,717	303
Total		56,520	50,520	4,490

Note: (1) Total Revenues exclude recovery of Purchased Gas cost.

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
EXPENSE ALLOCATION TO CLASSES OF SERVICE

DESCRIPTION	FACTOR	TOTAL	CONSUMER CLASS		
			250cfh & Below	>250 & < 425 cfh	>425 & < 1k cfh
Depreciation:					
Demand	D-1	33,958	29,431	2,863	1,664
Commodity	CM-1	-			
Customer - Weighted	C-1	15,688	14,659	946	83
Customer - Unweighted	C-2	-			
Total		49,646	44,090	3,809	1,747
Property Taxes:					
Demand	D-1	13,433	11,642	1,133	658
Commodity	CM-1	-			
Customer - Weighted	C-1	6,206	5,379	523	304
Customer - Unweighted	C-2	-			
Total		19,639	17,021	1,656	962
ADJUSTED TY Tax Expense - Other:					
Demand	D-1	(10,905)	(9,451)	(920)	(534)
Commodity	CM-1	(1,195)	(735)	(424)	(36)
Customer - Weighted	C-1	(6,033)	(5,637)	(364)	(32)
Customer - Unweighted	C-2	(4,914)	(4,778)	(123)	(13)
Total		(23,047)	(20,601)	(1,831)	(615)
PROPOSED Tax Expense - Other:					
Demand	D-1	5,822	5,046	491	285
Commodity	CM-1	638	392	227	19
Customer - Weighted	C-1	3,221	3,010	194	17
Customer - Unweighted	C-2	2,624	2,551	66	7
Total		12,305	10,999	978	328
Interest Expense - Other:					
Demand	D-1	-			
Commodity	CM-1	-			
Customer - Weighted	C-1	-			
Customer - Unweighted	C-2	367	357	9	1
Total		367	357	9	1
TOTAL OPERATING EXPENSES		372,175	332,873	26,563	12,739
OPERATING INCOME (LOSS)		(46,363)	(32,480)	(9,142)	(4,741)
OPERATING INCOME PERCENT		-14.23%	-10.81%	-52.47%	-59.28%

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
DISTRIBUTION OF RATE BASE BY FUNCTION

DESCRIPTION	FACTOR	TOTAL	FUNCTION	SPECIFIC	DEMAND	COMMODITY	CUST. - WT	CUST.
GROSS UTILITY PLANT IN SERVICE								
<u>Distribution Plant:</u>								
F-3		869,079	869,079	-	869,079	-	-	-
F-3		27,130	27,130	-	27,130	-	-	-
F-4		191,962	191,962	-	-	-	191,962	-
F-4		209,535	209,535	-	-	-	209,535	-
F-7		1,297,706	1,297,706	-	896,209	-	401,497	-
		100.00%	100.00%	0.00%	69.06%	0.00%	30.94%	0.00%
<u>General Plant:</u>								
		2,000	2,000	-	1,368	-	632	-
		22,553	22,553	-	15,426	-	7,127	-
		13,369	13,369	-	9,144	-	4,225	-
		6,769	6,769	-	4,630	-	2,139	-
F-7		44,691	44,691	-	30,569	-	14,122	-
		100.00%	100.00%	0.00%	68.40%	0.00%	31.60%	0.00%
		1,342,397	1,342,397	-	926,778	-	415,619	-
		100.00%	100.00%	0.00%	69.04%	0.00%	30.96%	0.00%
<u>ACCUMULATED DEPRECIATION:</u>								
F-7		549,867	549,867	-	379,623	-	170,244	-
F-7		22,397	22,397	-	15,463	-	6,934	-
		572,264	572,264	-	395,086	-	177,178	-
		39,618	39,618	-	19,554	-	20,064	-
<u>WORKING CAPITAL:</u>								
F-7		27,542	27,542	-	18,839	-	8,703	-
F-9		-	-	-	-	-	-	-
		27,542	27,542	-	18,839	-	8,703	-
		758,057	758,057	-	550,531	-	267,208	-

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
DISTRIBUTION OF EXPENSE BY FUNCTION

DESCRIPTION	FACTOR	TOTAL	FUNCTION	SPECIFIC	DEMAND	COMMODITY	CUST. - WT	CUST.
Purchased Gas	F-2	-	-	-	-	-	-	-
Distribution Operating Expenses:								
Supervision & Engineering	F-3	950	950	-	950	-	-	-
Mains & Services	F-3	110,026	110,026	-	110,026	-	-	-
Measuring & Reg Stations	F-1	13,753	13,753	-	13,753	-	-	-
Meters and House Regulators	F-4	20,214	20,214	-	-	-	20,214	-
Other Operating Expenses	F-3	9,155	9,155	-	9,155	-	-	-
Total Operating Expenses		154,097	154,097	-	133,884	-	20,214	-
Distribution Maint. Expenses:								
Supervision & Engineering	F-3	-	-	-	-	-	-	-
Mains & Services	F-3	46,098	46,098	-	46,098	-	-	-
Measuring & Reg Stations	F-1	-	-	-	-	-	-	-
Meters and House Regulators	F-4	8,726	-	-	-	-	8,726	-
Other Equipment	F-3	-	-	-	-	-	-	-
Total Maint. Expenses		54,824	46,098	-	46,098	-	8,726	-
Meter Reading Expenses	F-6	25,048	25,048	-	-	-	-	25,048
Consumer Expense	F-6	30,523	30,523	-	-	-	-	30,523
Info. and Instructional Ads & Uncollectibles	F-6	4,558	4,558	-	-	-	-	4,558
Total Customer Accounts Expenses:		60,129	60,129	-	-	-	-	60,129
Administrative & General Exp.	F-8	56,520	53,589	2,931	26,742	2,931	14,795	12,052
Depreciation	F-7	49,645	49,645	-	33,957	-	15,688	-
Property Taxes	F-7	19,639	19,639	-	13,433	-	6,206	-
Taxes - Other	F-8	(23,048)	(23,048)	-	(10,905)	(1,195)	(6,033)	(4,915)
Interest Expense - Other	F-6	367	367	-	-	-	-	367
TOTAL OPERATING EXPENSES		372,174	360,517	2,931	243,209	1,736	59,595	67,634
FUNCT. OF SALARIES & WAGES								
Operating Expenses	F-10	129,955	118,242	11,713	59,121	11,713	59,121	-
Maintenance Expenses	F-3	47,741	47,741	-	47,741	-	-	-
Meter Reading & Installation	F-6	21,681	21,681	-	-	-	-	21,681
Customer Accounting	F-6	26,480	26,480	-	-	-	-	26,480
Total		225,857	214,144	11,713	106,862	11,713	59,121	48,161
Percent		100.00%	94.81%	5.19%	47.31%	5.19%	26.18%	21.32%
FUNCTION OF O&M LESS PG		372,174	360,517	2,931	243,209	1,736	59,595	67,634
Percent		100.00%	96.87%	0.79%	65.35%	0.47%	16.01%	18.17%

DUNCAN RURAL SERVICES CORPORATION
TEST YEAR ENDED DECEMBER 31, 2004
ALLOCATION FACTORS

<u>FUNCTION FACTOR</u>	<u>DESCRIPTION</u>	<u>TOTAL</u>	<u>DEMAND</u>	<u>COMMODITY</u>	<u>WEIGHTED CUSTOMER</u>	<u>CUSTOMER</u>
F-1	Demand	100.00%	100.00%			
F-2	Commodity	100.00%		100.00%		
F-3	Distribution Mains	100.00%	100.00%			
F-4	Customer Accts - Weighted	100.00%			100.00%	
F-6	Customer Accounts	100.00%				100.00%
DERIVED FUNCTION FACTOR						
F-7	Gross Plant in Service	100.00%	68.40%			31.60%
F-8	Salaries & Wages	100.00%	47.31%		5.19%	26.18%
F-9	O & M Less Purchased gas	100.00%	65.35%		0.47%	16.01%
F-10	Salaries & Wages - Oper Exp	100.00%	45.49%		9.01%	45.49%
CLASS ALLOCATION FACTORS						
		TOTAL	250cfh & Below	>250 & < 425 cfh	>425 & < 1k cfh	
D-1	Winter Peak Demand	100.000%	86.669%	8.432%	4.899%	
CM-1	Commodity	100.000%	61.454%	35.493%	3.053%	
C-1	Customer - Weighted	100.000%	93.441%	6.032%	0.527%	
C-2	Customer - Unweighted	100.000%	97.216%	2.510%	0.274%	

DUNCAN RURAL SERVICES CORPORATION
COST OF SERVICE SUMMARY - PROPOSED RATES
TEST YEAR ENDED DECEMBER 31, 2004

DESCRIPTION	TOTAL			
	250cfh & Below	>250 & < 425 cfh	>425 & < 1k cfh	
Operating Revenues	473,397	403,965	55,297	14,135
Operating Expenses:				
Purchased Gas				
Distribution Expense - Operations	154,097	134,924	12,508	6,665
Distribution Expense - Maintenance	54,824	48,107	4,413	2,304
Customer Account Expense	60,129	58,455	1,509	165
Administrative & General Expense	56,520	50,520	4,490	1,510
Depreciation	49,646	44,090	3,809	1,747
Property Taxes	19,639	17,021	1,656	962
Tax Expense - Other (Income, etc.)	12,305	10,999	978	328
Interest Expense - Other	367	357	9	1
Total Operation Expenses	407,524	364,473	29,372	13,682
Operating Income (Loss)	65,873	39,492	25,925	453
Rate Base	758,058	672,374	58,472	27,212
% Return - Proposed Rates	8.69%	5.87%	44.34%	1.66%
Return Index	1.00	0.68	5.10	0.19
Allocated Interest - Long-Term	23,007	20,407	1,775	826

EXHIBIT
S-2
12-15-05
Admitted



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THER APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

DIRECT
TESTIMONY
OF
DANIEL ZIVAN
PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

NOVEMBER 8, 2005

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**EXECUTIVE SUMMARY
DUNCAN RURAL SERVICES CORPORATION
DOCKET NO. G-02528A-05-0314**

Duncan Rural Services Corporation ("Duncan Rural") is a non-profit corporation that supplies gas service to approximately 750 customers in Greenlee County, Arizona. Duncan Rural is operated by Duncan Valley Electric Cooperative ("DVEC") through a management contract. DVEC controls Duncan Rural's board of directors. Duncan Rural's current rates were approved by the Commission in Decision No. 64869 (June 5, 2002).

Rate Application:

Duncan Rural proposed a \$147,406, or 22.70 percent, revenue increase from \$649,377 to \$796,783. The proposed revenue increase, as filed, would produce an operating margin of \$61,846 for an 8.01 percent rate of return on an original cost rate base of \$772,408. The \$147,406 proposed revenue increase includes \$33,179¹ of margin revenue and \$114,227² of base cost of gas revenue. Only the \$33,179 margin increase is comparable to Staff's recommended revenue increase. Duncan Rural requests a 2.0 times interest earned ratio ("TIER") and a 1.38 debt service coverage ratio ("DSC").

Staff recommends removing purchased gas cost and its recovery from revenue and expenses to recognize them in a fuel adjustor mechanism. Staff further recommends a revenue requirement of \$473,218. Staff's proposed revenue would provide a \$147,406, or 45.24 percent, increase over adjusted test year margin revenues of \$325,812 and an operating margin of \$65,665 for an 8.66 percent rate of return on a Staff adjusted original cost rate base of \$758,057. Operating revenue of \$473,218 would produce a 3.38 TIER and a 1.64 DSC.

Finance Application:

Duncan Rural proposes to convert \$268,988 of its \$443,584 unauthorized cash advances from DVEC to a 25-year note at a variable interest rate equal to Arizona Electric Power Cooperative Inc.'s ("AEPSCO") variable interest rate earned on funds. Staff determined that Duncan Rural used \$330,484 of the advances for capital improvements and recommends authorization to convert that amount to a 25-year note on the terms proposed. Staff further recommends discontinuation of unauthorized cash advances from DVEC to Duncan Rural.

Duncan Rural's capital structure consists of 142.07 percent debt and negative 42.07 percent patronage equity. The negative equity exists due to continued net losses experienced by Duncan Rural. Duncan Rural's highly leveraged capital structure has negative consequences in the future.

Staff recommends that Duncan Rural adhere to an equity plan designed to improve its capital structure. The recommended capital plan requires Duncan Rural to make a filing with the Commission for 2005 and each year thereafter detailing its calendar year end equity position. The recommended equity plan requires Duncan Rural to improve its equity position by 5 percent

¹ \$147,046 revenue increase - \$114,827 base cost of gas revenue = \$33,178 margin revenue

² 574,136 Test Year therm sales x [(\$0.56 proposed base cost of gas) - (\$0.36 current base cost of gas)]= \$114,827

each year. Staff recommends that in the event Duncan Rural does not improve its cumulative equity position by an average of 5 percent (using its December 31, 2005 position as a base) at the end of any calendar year until patronage equity is a minimum of 30 percent of total capital that the Cooperative be required to file a rate application within 180 days of the end calendar year that the 5 percent cumulative average increase in patronage equity is not achieved. However, Duncan Rural may be granted a waiver from filing a rate application if it provides a written explanation as to why it did not achieve its equity goal and it can demonstrate to Staff's satisfaction that it is likely that it will achieve the cumulative equity goal in Staff's recommendation within a reasonable timeframe without any rate adjustment. Such demonstration should be provided within 90 days of the end of the calendar year. In no instance shall Duncan Rural fail to achieve its cumulative equity improvement goal for three consecutive years without filing a rate application. Staff also recommends that the Commission prohibit distribution of patronage dividends until Duncan Rural has achieved a capital structure composed of at least 20 percent patronage equity.

1 **I. INTRODUCTION**

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

3 A. My name is Daniel Zivan. I am a Public Utilities Analyst III employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. I am responsible for the examination and verification of financial and statistical
9 information included in utility rate applications. In addition, I develop revenue
10 requirements, analyze financial information related to financings, sales of assets and other
11 matters. I am also responsible for preparing written reports, testimonies, and schedules
12 that include Staff recommendations to the Commission and testifying at formal hearings
13 on these matters.
14

15 **Q. Please describe your educational background and professional experience.**

16 A. In 2001, I graduated from Arizona State University, receiving a Bachelor of Science
17 degree in Global Business with a specialization in finance. My course of studies included
18 classes in corporate and international finance, investments, accounting, and economics. In
19 2005, after three years of working in financial analysis, financial operations and
20 accounting, I accepted employment with the Commission as a Public Utilities Analyst in
21 the Financial and Regulatory Analysis Section. I have attended seminars on rate design,
22 rate making and financial modeling during my employment with the Commission.
23

24 **Q. What is the scope of your testimony in this case?**

25 A. I present Staff's analysis and recommendations in the areas of rate base, operating income,
26 revenue requirement and capital structure regarding Duncan Rural Services Corporation's

1 (“Duncan Rural” or “Cooperative”) application for a permanent rate increase. I also
2 present Staff’s recommendations on the Cooperative’s application requesting
3 authorization for debt financing and recommend an equity improvement plan. Staff
4 witness Steve Irvine is presenting Staff’s recommendations regarding the base cost of gas,
5 fuel adjustor, and rate design. Staff witness Prem Bahl is presenting Staff’s analysis and
6 recommendations with regard to the Cost of Service Study.
7

8 **Q. What is the basis of Staff’s recommendations?**

9 A. Staff performed a regulatory audit of Duncan Rural’s application and records to determine
10 the Cooperative’s rate base, adjusted test year operating results and revenue requirement.
11 The regulatory audit consisted of examining and testing the financial information,
12 accounting records, and other supporting documentation and verifying that the accounting
13 principles applied were in accordance with the Commission adopted Federal Energy
14 Regulatory Commission (“FERC”) Uniform System of Accounts (“USOA”).
15

16 **Q. Briefly summarize how your testimony is organized.**

17 A. My testimony is organized in five sections. Section I is this introduction. Section II
18 summarizes a brief history of customer complaints. Section III discusses the rate
19 application including Staff’s recommendations for rate base, operating income and
20 revenue requirement. Section IV discusses the Cooperative’s unauthorized incurrence of
21 debt. Section V discusses the Cooperative’s request to convert accounts payable to
22 Duncan Valley Electric Cooperative (“DVEC”) to long-term debt. Section VI discusses
23 the Cooperative’s capital structure. Section VII presents Staff’s recommendation for an
24 equity improvement plan.
25

1 **Q. Please review the background of the Cooperative's rate application.**

2 A. Duncan Rural initially filed a rate application on April 19, 2005. Staff filed a letter of
3 deficiency pertaining to that application on May 27, 2005. On June 9, 2005, Duncan
4 Rural filed a new application that corrected the deficiencies in its initial application and
5 requested that the initial application be disregarded. Staff filed a letter finding the second
6 application sufficient on June 22, 2005.

7

8 Duncan Rural supplies gas service to approximately 750 customers in Greenlee County,
9 Arizona. DVEC has a contract to manage and operate Duncan Rural. DVEC controls
10 Duncan Rural's board of directors³ and serves approximately 2,500 electric customers. A
11 majority of Duncan Rural's gas customers are also electric customers of DVEC. Duncan
12 Rural's current rates were approved by the Commission in Decision No. 64869 (June 5,
13 2002).

14

15 **Q. What primary reasons did Duncan Rural state for requesting a permanent rate
16 increase?**

17 A. Duncan Rural's application discusses two primary reasons: increased purchased gas costs
18 and a decreasing customer base. Additionally, the application states that Duncan Rural
19 incurred a Test Year operating loss of \$46,967 and a total margin loss of \$77,970.

20

21 **Q. What Test Year did Duncan Rural use in this filing?**

22 A. Duncan Rural's rate filing is based on the twelve months ended December 31, 2004 ("Test
23 Year").

24

³ According to Note 3 of the Cooperative's 2004 audited financial statements, the Cooperative has three membership classes with voting entitlements as follows: 1 Class A member (DVEC) entitled to 1,000 votes; 685 Class B members entitled to one vote each and 19 Class C members entitled to one vote each.

1 **II. CONSUMER SERVICE**

2 **Q. Please provide a brief history of customer complaints received by the Commission**
3 **regarding Duncan Rural.**

4 A. The Commission's Consumer Service Section received one complaint pertaining to
5 Duncan Rural for the period of September 7, 2002 through September 10, 2005. This
6 complaint has been resolved and closed.

7
8 **III. RATE APPLICATION**

9 **Summary of Proposed Revenues**

10 **Q. Please summarize the Cooperative's filing.**

11 A. Duncan Rural proposes total annual operating revenue of \$796,783. The Cooperative's
12 proposed revenue, as filed, represents an increase of \$147,406, or 22.70 percent, over Test
13 Year revenue of \$649,377.

14
15 **Q. Please summarize Staff's recommended revenue.**

16 A. Staff recommends a margin revenue requirement (excludes recovery of purchased gas) of
17 \$473,218. As discussed in the testimony of Steve Irvine, Staff recommends recovering
18 purchase gas cost entirely through an adjustor mechanism. Staff's revenue requirement
19 represents a \$147,406, or 45.24 percent, increase over adjusted test year revenue of
20 \$325,812.

21
22 **Q. How does Staff's recommended revenue requirement compare to Duncan Rural's**
23 **proposed revenue requirement?**

24 A. Staff and Duncan Rural agree that a \$147,406 revenue increase is appropriate. The
25 apparent disparity between Staff and the Cooperative regarding the revenue requirement
26 and test year revenues is in form only. The apparent disparity is due to a difference in the

1 base cost of gas used to calculate revenue. Staff's revenues exclude all revenues collected
2 to recover purchased gas cost, i.e., the base cost of gas is zero, while the Cooperative's
3 revenues reflect recovery of purchased gas cost. This difference is a matter of
4 classification and has no impact on the revenues the Cooperative can ultimately recover.
5 The \$147,406 recommended revenue increase represents a 45.24 percent increase over
6 Staff's adjusted test year margin revenue and a 22.70 percent increase over Duncan
7 Rural's test year revenue of \$649,377, which includes recovery of gas costs. The 22.70
8 percent calculation is more representative of the increase to customer bills since customers
9 would continue to pay the cost of purchased gas under either Staff's recommendation or
10 the Cooperative's proposal.

11
12 **Q. What times interest earned ratio ("TIER") and debt service coverage ("DSC") would**
13 **result from Staff's recommended revenue?**

14 A. Staff's recommended revenue would provide Duncan Rural with a 3.38 TIER and a 1.64
15 DSC.

16
17 **Q. What TIER and DSC would result from Duncan Rural's proposed revenues as filed?**

18 A. Duncan Rural's application shows that its proposed revenue would provide a 2.00 TIER
19 and a 1.38 DSC.

20
21 **Q. Why do Staff's TIER and DSC differ from Duncan Rural's TIER and DSC?**

22 A. The reasons for the differing TIER and DSC results are: (1) differing amounts of debt
23 recognized; (2) differing recommended operating margins; and (3) differing TIER and
24 DSC calculation methods.

25

1 **Q. How do Staff and Duncan Rural calculate TIER?**

2 A. Staff calculates TIER by dividing the sum of operating income and income tax expense by
3 interest expense on long term debt. Duncan Rural calculates TIER by dividing the sum of
4 interest expense and net income/loss by interest expense on long term debt.

5
6 **Q. How do Staff and Duncan Rural calculate DSC?**

7 A. Staff calculates DSC by taking the sum of operating income, depreciation and
8 amortization and income tax expense divided by the sum of interest expense on long term
9 debt and repayment of principle. Duncan Rural calculates DSC by taking the sum of net
10 income/loss, depreciation and interest expense on long term debt divided by the sum of
11 interest expense on long term debt and repayment of principle.

12
13 **Q. What do the times interest earned and the debt service coverage ratios represent?**

14 A. TIER represents the number of times operating income covers interest expense on long-
15 term debt. A TIER greater than 1.0 means that operating income is greater than interest
16 expense. DSC represents the number of times internally generated cash covers required
17 principal and interest payments on long-term debt. A DSC greater than 1.0 indicates that
18 operating cash flow is sufficient to cover debt obligations.

19
20 **Q. Does Duncan Rural's lender have debt covenants for TIER and DSC?**

21 A. No. Duncan Rural's lender, who is DVEC, does not have TIER and DSC ratio
22 requirements.

23

1 **Summary of Staff's Adjustments and Recommendations**

2 **Operating**

3 **Q. Please summarize the rate base and operating income adjustments addressed in your**
4 **testimony.**

5 A. My testimony addresses the following issues:

6 Prepayments – This adjustment decreases rate base by \$14,351 to eliminate the
7 Cooperative's selective recognition of prepayments and the exclusion of other cash
8 working capital components.

9
10 Revenue Annualization – This adjustment increases revenues by \$2,574 to reflect
11 revenues at the Test-Year end customer level.

12
13 Base Cost of Gas and Fuel Adjustor – This adjustment decreases operating revenue by a
14 total of \$325,142 to remove all revenue that represents recovery of gas costs.
15 Additionally, this adjustment removes \$325,260 for purchased gas costs from expenses.
16 The removal of gas costs from expenses and removal of recovery of gas costs from
17 revenue reflects Staff's recommendation to flow all purchased gas expense through the
18 fuel adjustor mechanism.

19
20 ACC Assessment – This adjustment removes \$997 from revenue and \$1,472 from expense
21 included in the Cooperative's application related to the ACC assessment to reflect Staff's
22 recommendation that the ACC Assessment be treated as a pass-through item.

23
24 Rate Case Expense – This adjustment decreases operating expenses by \$4,851 to
25 recognize a normalized level of rate case expense by distributing the Cooperative's
26 estimated cost over three years.

1 Income Tax Expense – This adjustment increases test year operating expenses by \$7,445
2 to reflect application of statutory state and federal income tax rates to Staff's calculated
3 taxable income.

4
5 **Non-Operating**

6 Interest Expense on Long-term Debt – This non-operating income adjustment decreases
7 interest expense on long-term debt by \$8,019 to reflect application of Staff's interest rates
8 to Staff recommended level of long-term debt.

9
10 **Other Recommendations**

11 DVEC Debt – Staff recommends that the Commission order Duncan Rural to refrain from
12 obtaining any new debt from DVEC without obtaining prior authorization from the
13 Commission.

14
15 Capital Structure – Staff recommends that the Commission order the Cooperative to
16 follow Staff's recommended schedule to improve its equity position by 5 percent each
17 year until patronage equity equals 30 percent of total capital.

18
19 **Schedules**

20 **Q. Have you prepared any schedules to support Staff's testimony?**

21 **A. Yes. I prepared fourteen schedules (DTZ-1 to DTZ-14) to support Staff's revenue**
22 **requirement analysis.**

23

1 **Rate Base**

2 **Fair Value Rate Base**

3 **Q. Did the Cooperative prepare a schedule showing the elements of Reconstruction Cost**
4 **New Rate Base ("RCND")?**

5 A. No. The Cooperative stipulated that the Commission may use its "original cost less
6 depreciation rate base for purposes of determining a return on fair value in this
7 Application."

8

9 **Rate Base Summary**

10 **Q. Please summarize Staff's adjustments to Duncan Rural's rate base shown on**
11 **Schedules DTZ-3 and DTZ-4.**

12 A. Staff made one adjustment to Duncan Rural's proposed rate base resulting in a net
13 decrease of \$14,351 from \$772,408 to \$758,057. Staff's adjustment is discussed below.

14

15 **Rate Base Adjustment No. 1 – Working Capital, Prepayments**

16 **Q. What is the purpose of recognizing a cash working capital component in the rate**
17 **base calculation?**

18 A. In general, cash working capital reflects the amount of cash that the utility principals
19 either provide or receive from customers for daily operations. If the principals provide
20 cash the cash working capital allowance is an addition to rate base, and if the cash is
21 received from customers, then cash working capital is treated as a deduction from rate
22 base.

23

24 **Q. What is the best method to determine a cash working capital allowance?**

25 A. Performing a lead-lag study is the most reliable method for calculating cash working
26 capital. A lead-lag study measures the revenue dollar lag days between the provision of

1 service and the collection of revenue and the expense dollar lag days between the
2 provision of service and the payment of bills. If the revenue dollar lag days exceed the
3 expense dollar lag days the cash working capital allowance is an increase to rate base, and
4 if the expense dollar lag days exceed the revenue dollar lag days the cash working capital
5 allowance is a deduction from rate base.

6
7 **Q. Did Duncan Rural perform a lead-lag study?**

8 A. No, it did not.

9
10 **Q. If the Cooperative had performed a lead-lag study could it have shown that the cash
11 working capital allowance is negative?**

12 A. Yes, it could have. Some of the Cooperative's largest expenses such as interest, property
13 and income taxes are collected from customers prior to the payment due dates. This
14 provides significant support to the possibility that if a lead-lag study had been conducted
15 that the resulting cash working capital allowance would have been a deduction from rate
16 base.

17
18 **Q. Does Duncan Rural's proposal to include the cost of a prepaid insurance premium in
19 the Working Capital calculation represent an inequitable, selective adjustment to
20 increase rate base?**

21 A. Yes. The Cooperative chose not to conduct a lead-lag study and, accordingly, omitted a
22 major component of cash working capital analysis. A lead-lag study is recognized as the
23 most accurate method to calculate cash working capital. It is inequitable to ignore a major
24 component of the cash working capital analysis and selectively recognize other
25 components.

26

1 **Q. Is there any significance to the allowance or disallowance of prepayments or any**
2 **other component to cash working capital to Duncan Rural's revenue requirement?**

3 A. No. The members of the cooperative are also the owners. The members' goal is to obtain
4 the best service at the lowest rate possible. Consequently, the primary revenue
5 requirement considerations are the provision of adequate cash flow to meet payment
6 obligations and maintenance of an appropriate capital structure. Therefore, the
7 Cooperative appropriately chose not to incur the expense of a lead-lag study. However,
8 the inclusion of selective cash working capital components in rate base is inappropriate.

9
10 **Q. What is the amount and nature of the Prepayment that the Cooperative is proposing**
11 **to include in rate base?**

12 A. The prepayment is the annual renewal cost of an insurance premium in the amount of
13 \$14,351.

14
15 **Q. What is Staff recommending for Prepayments?**

16 A. Staff recommends removal of \$14,351 in Prepayments from Working Capital as shown on
17 Schedules DTZ-4 and DTZ-5.

18
19 **Operating Income**

20 **Operating Income Summary**

21 **Q. What are the results of Staff's analysis of Test Year revenues, expenses and**
22 **operating income?**

23 A. As shown on Schedules DTZ-6 and DTZ-7 Staff's analysis resulted in Test Year revenues
24 of \$325,812, expenses of \$372,174 and an operating loss of \$46,394.

25

1 **Operating Income Adjustment No. 1 – Revenue Annualization**

2 **Q. Did the Cooperative annualize both revenues and expenses?**

3 A. No. The Cooperative annualized salary and wage expense but made no adjustment to
4 annualize revenues.

5
6 **Q. What is the purpose of a revenue and expense annualization?**

7 A. A revenue and expense annualization is made to achieve matching with the test-year end
8 rate base measurement date.

9
10 **Q. What customer classes did Staff annualize?**

11 A. Staff annualized only the “250 cfh and Below” customer class. The “Above 250 cfh to
12 425 cfh” was not annualized due to the relatively large number of seasonal customers
13 within the class. The “Above 425cfh to 1,000 cfh” was not annualized because the lone
14 customer decrease was due to that customer moving to another customer class.

15
16 **Q. What method did Staff use to annualize revenues for the “250 cfh and Below”
17 customer class?**

18 A. First, Staff calculated the average customer bill for each respective month of the test year.
19 Second, Staff multiplied the average customer bill for each month to the difference
20 between the test-year end customer count and the customer count for each respective
21 month to determine the additional revenue that would have resulted each month had the
22 test-year end customer level existed throughout the year. Finally, Staff totaled the
23 monthly calculations to determine the total annualization adjustment. Staff’s
24 annualization adjustment adds \$2,574 to Test Year revenue as shown on Schedule DTZ-8.

25

1 **Q. Is it necessary to annualize purchased gas expense to match the annualization of**
2 **revenues?**

3 A. Annualization of purchase gas expense is not necessary as long as the base cost of gas is
4 set at \$0.00 and purchased gas cost is recovered through the fuel adjustor mechanism as
5 recommended by Staff and discussed in the testimony of Staff witness Steve Irvine.
6

7 **Q. Is it necessary to annualize any other expenses to match the annualization of**
8 **revenues?**

9 A. No. In response to a data request, the Cooperative indicated there were no other expenses
10 that varied significantly with usage. Additionally, Staff performed an analysis that
11 calculated the increase and decrease in the number of customers for the past three years
12 and compared those numbers to the increase or decrease in expenses for the same years.
13 That analysis showed that no expense varied significantly with the change in the number
14 of customers.
15

16 **Q. What is Staff recommending?**

17 A. Staff recommends increasing revenues by \$2,574 as shown on Schedules DTZ-7 and
18 DTZ-8.
19

20 **Operating Income Adjustment No. 2 – Base Cost of Gas and Fuel Adjustor**

21 **Q. Explain the purpose of classifying Total Revenue into two components as shown in**
22 **Schedules DTZ-9.**

23 A. The purpose is to show separately the portion of revenue that represents costs that flow
24 through the fuel adjustor mechanism.
25

1 Q. What revenue did Duncan Rural recover through its base cost of gas rate and its fuel
2 adjustor mechanism?

3 A. The Cooperative collected \$206,689 (574,136 therms x \$0.36) from its base cost of gas
4 rate and \$118,453 from its fuel adjustor rate for a total of \$325,142.

5
6 Q. What purchased gas expense did the Cooperative incur during the Test Year?

7 A. Duncan Rural incurred \$325,260 in purchased gas expense during the Test Year.

8
9 Q. What ratemaking treatment does Staff recommend for the purchased gas expense?

10 A. Staff recommends removing all purchased gas expense from the margin revenue
11 requirement and providing for the recovery of all purchased gas cost through a fuel
12 adjustor mechanism, as discussed in the testimony of Staff witness Steve Irvine.

13
14 Q. What is Staff recommending?

15 A. Staff recommends removing the entire \$325,260 purchased gas cost from operating
16 expenses and the entire \$325,142 operating revenue as shown on Schedules DTZ-7 and
17 DTZ-9.

18
19 **Operating Income Adjustment No. 3 – ACC Gross Revenue Assessment**

20 Q. What is the Cooperative proposing for the ACC assessment?

21 A. The Cooperative included \$997 in operating revenue and \$1,472 in operating expense for
22 the ACC assessment.

23
24 Q. Does Staff agree that the ACC Assessment be included in operating expenses?

25 A. No, the assessment should not be included in the cost of service and should be recovered
26 through a bill add-on similar to that recommended for Arizona Electric Power

1 Cooperative, Inc. ("AEPCO") in Decision No. 58405⁴ which states that "*The gross*
2 *revenue tax will in the future be recovered through a bill add-on.*"

3
4 **Q. What is Staff recommending?**

5 A. Staff recommends decreasing operating revenue by \$997 and operating expense by \$1,472
6 to remove the effects of the ACC assessment as shown on Schedules DTZ-7 and DTZ-10.
7

8 **Operating Income Adjustment No. 4 – Rate Case Expense**

9 **Q. What is the Cooperative proposing for Rate Case Expense?**

10 A. Duncan Rural proposed \$16,426 for rate case expense. The Company's proposed amount
11 represents distribution of its estimated total rate case expense of \$32,852 over two years.
12

13 **Q. Does Staff agree with the Cooperative proposed rate case expense?**

14 A. No. The history of Duncan Rural suggests that the Cooperative will not file another rate
15 case within two years. Staff's revenue recommendation in this case is based on the
16 assumption of a three-year interval between this and the Cooperative's next rate filing.
17 Accordingly, Staff recommends a normalized rate case expense of \$10,951 that would
18 provide recovery of the Cooperative's estimated amount over three years.
19

20 **Q. What is Staff recommending?**

21 A. Staff recommends decreasing rate case expense by \$4,851 to reflect Staff's normalized
22 amount as shown on Schedules DTZ-7 and DTZ-11.
23

⁴ At page 17, footnote no. 9.

1 **Operating Income Adjustment No. 5 – Test Year Income Tax Expense**

2 **Q. What is the Cooperative proposing for test year income tax expense?**

3 A. The Company is proposing test year income tax expense of negative \$30,460.

4
5 **Q. Does Staff agree with the Cooperative's income tax amount?**

6 A. No. Differences between the Staff's and the Cooperative's test year operating revenues
7 and expenses result in different taxable incomes and income taxes. Staff calculated
8 income tax expense by applying the statutory State and Federal income tax rates to its
9 taxable income as shown in Schedule DTZ-2.

10

11 **Q. What is Staff recommending?**

12 A. Staff recommends increasing test year income tax expense by \$7,445 to negative \$23,015
13 as shown on Schedule DTZ-7 and DTZ-12.

14

15 **Income Adjustment No. 6 (Non-Operating) – Interest Expense on Long-term Debt**

16 **Q. What is the Cooperative proposing for Interest Expense on Long-term Debt?**

17 A. Duncan Rural is proposing \$31,112 for Interest Expense on Long-term Debt as shown on
18 Schedule DTZ-13. The Cooperative's proposed interest expense is composed of \$14,973
19 for existing debt and a \$16,139 pro forma adjustment to reflect its proposed conversion of
20 accounts payable to long-term as discussed below. Duncan Rural proposed a loan amount
21 of \$268,988 and used an interest rate of 6 percent to calculate interest expense on the
22 proposed debt ($\$268,988 \times 6\% = \$16,139$).

23

1 **Q. Did Staff make an independent assessment of the Cooperative's Interest Expense on**
2 **Long-term Debt?**

3 A. Yes. Staff calculated \$23,093 as the Cooperative's interest expense on long-term debt.
4 Staff's calculation includes \$14,087 for existing debt and a \$9,006 pro forma allowance to
5 reflect Staff's recommendation to authorize a \$330,484 conversion of accounts payable to
6 long term debt.

7

8 **Q. How did Staff calculate Duncan Rural's actual and pro forma interest expense?**

9 A. Staff calculated interest expense on existing loans by applying the current⁵ 2.725 percent
10 rate to the test-year end balance of Duncan Rural's three existing long-term debt notes.
11 Staff calculated a pro forma annual interest expense related to the recommended \$330,484
12 conversion of accounts payable to long-term debt by applying 2.725 percent to that
13 amount. (Refer to Schedule DTZ-13.)

14

15 **Q. What adjustment did Staff make to Interest Expense on Long-term Debt?**

16 A. Staff decreased Interest Expense on Long-term Debt by \$8,019 as shown on Schedules
17 DTZ-7 and DTZ-13.

18

19 **IV. COMPLIANCE**

20 **Short-term Debt**

21 **Q. What does Arizona Revised Statute ("ARS") §40-302.D state concerning the**
22 **maximum amount of short-term debt that a regulated utility can borrow without**
23 **prior Commission approval?**

24 A. It states:

25 *A public service corporation may issue notes, not exceeding seven percent*
26 *of total capitalization if operating revenues exceed two hundred fifty*

⁵ September 2, 2005

1 **Q. Has Duncan Rural obtained significant debt from DVEC in the past without**
2 **obtaining Commission authorization?**

3 A. Yes. Duncan Rural requested, and was approved for, similar financing authorization in its
4 prior rate case (Decision No. 64869, dated June 5, 2002). In that case Duncan Rural
5 requested authorization to convert \$400,000 of accounts payable due to DVEC into long
6 term debt. The application in that case stated that DVEC had advanced funds to Duncan
7 Rural over the previous six years for improvements to the gas distribution system and
8 working capital. Duncan Rural did not seek Commission approval prior to obtaining those
9 advances.

10
11 **Q. What is Staff recommending?**

12 A. Staff recommends that the Commission order Duncan Rural to refrain from obtaining any
13 new debt from DVEC without obtaining prior authorization from the Commission.

14
15 **V. FINANCING APPLICATION**

16 **Q. Please provide a brief background for the financing application?**

17 A. Duncan Rural filed a financing application (Docket No. G-02528A-03-0205) on April 4,
18 2003, requesting authorization to incur \$400,000 of long-term debt to repay DVEC for
19 advances intended to pay for plant improvements and to provide working capital for
20 operations. Immediately after the application was filed Duncan Rural called the Chief of
21 the Financial and Regulatory Analysis section at the Commission and requested that Staff
22 not process the application until Duncan Rural filed a permanent rate increase application.
23 Duncan Rural made this request as its existing rates were not sufficient to meet the debt
24 service requirements on the proposed debt. Duncan Rural requested consolidation of the
25 financing application and its current rate application as part of its current rate proceeding.

1 Duncan Rural also changed the amount of debt requested from \$400,000 to \$268,988 in
2 order to not have total debt exceed its rate base.

3

4 **Q. What is the Cooperative requesting in its financing application?**

5 A. Duncan Rural is requesting that the Commission approve as long-term debt \$268,988 of
6 the \$443,584 of cash advanced to or on its behalf by DVEC over approximately the past
7 four years.

8

9 **Q. How are the advanced funds recorded on Duncan Rural's books?**

10 A. The Cooperative has recorded these obligations as accounts payable.

11

12 **Q. How has Duncan Rural used the advanced funds?**

13 A. Duncan Rural states in its application that funds were advanced by DVEC in order to
14 allow it to pay operating expenses and to fund plant additions. The proposed refinancing
15 would formalize the past due accounts payable by converting \$268,988 of accounts
16 payable owed to DVEC to long-term debt owed to DVEC.

17

18 **Q. What were the accounts payable balances that Duncan Rural owed to DVEC**
19 **("DVEC Accounts Payable") for the years 2002, 2003, and 2004?**

20 A. The DVEC Accounts Payable balances for the years ended December 31, 2002, 2003, and
21 2004, were \$174,629, \$311,718, and \$443,584, respectively. Duncan Rural's net losses
22 the years 2002, 2003 and 2004 in the amounts of \$22,423, \$18,859 and \$49,639,
23 respectively, provided no opportunity to it to repay the cash advances from DVEC causing
24 the outstanding balance to grow.

25

1 **Q. What opportunity has been afforded Duncan Rural by accepting cash advances from**
2 **DVEC?**

3 A. The cash advances have provided working capital necessary for Duncan Rural to meet its
4 other financial obligations while allowing the Cooperative to postpone or circumvent
5 regulatory filings for rates and financing despite continuing losses. Duncan Rural has
6 indulged in this convenience for at least 10 years.

7
8 **Q. What have been the changes in Duncan Rural's accounts payable and long-term debt**
9 **balances since 2002?**

10 A. The changes are shown in Table 2.

11
12 **Table 2**

Year	Accounts Payable Beginning Balance	Increase or Decrease	Accounts Payable Ending Balance	Long-term Debt Ending Balance
2001	\$445,061	\$35,724	\$480,785	\$218,148
2002	\$480,785	(\$306,156)	\$174,629	\$572,829
2003	\$174,629	\$137,089	\$311,718	\$515,563
2004	\$311,718	\$131,866	\$443,584	\$472,858

13
14 **Q. What caused the accounts payable balance to decrease in 2002?**

15 A. In Decision No. 64869 the Commission authorized the Cooperative to convert \$400,000 of
16 accounts payable due to DVEC to long term debt. Thus, the \$306,156 reduction in the
17 accounts payable balance resulted from a \$400,000 conversion to long-term debt and
18 incremental accounts payable of \$93,844. Making allowance for the conversion of
19 accounts payable to long-term debt, Table 2 shows that the Cooperative's accounts
20 payable obligations have grown each year.

21

1 **Q. Did the Commission authorize rates in DVEC's previous rate case that provided a**
2 **positive operating margin?**

3 A. No. In Decision No. 67433, the Commission authorized rates to provide an operating loss
4 for DVEC. Operating losses wouldn't likely generate sufficient cash flow from operations
5 for DVEC to advance cash to Duncan Rural.

6
7 **Q. What is the source of the cash that DVEC uses to lend to Duncan Rural?**

8 A. DVEC received \$1.3 million⁷ in cash from a Phelps Dodge contract termination.

9
10 **Q. For what purpose was the \$1.3 million originally intended?**

11 A. The \$1.3 million was originally intended to subsidize DVEC operations and allow DVEC
12 to gradually increase rates until such time as DVEC could break-even.⁸ It mitigates the
13 rate shock that DVEC customers would have experienced in order to recover from the
14 effect of the Phelps Dodge contract termination.

15
16 **Q. What is the implication for DVEC and its customers from the cash advanced to**
17 **Duncan Rural?**

18 A. DVEC has less immediate cash for its own operating requirements. In the event a portion
19 of the advances is not repaid, DVEC's customers would be harmed. Delays in repayment
20 could accelerate and increase the magnitude of DVEC rate adjustments.

21

⁷ According to Decision No. 67433 (page 3, paragraph 10), "Approximately 97 percent of DVEC 1997 revenues came from one large industrial customer, Phelps Dodge Corporation ("Phelps Dodge"). In 1993, Phelps Dodge notified DVEC that it was terminating its power supply contract as of November 1998. Phelps Dodge agreed to pay DVEC \$1.3 million as a result of terminating the contract . . . With the loss of the Phelps Dodge contract, DVEC no longer had sufficient revenues to cover its operating expenses and experienced negative margins."

⁸ Decision No. 67433, page 4, beginning at line 12

1 **Q. Should the practice of DVEC lending to Duncan Rural through the Accounts**
2 **Payable process continue?**

3 A. No. Duncan Rural has had a chronic and unhealthy financial dependence on DVEC to pay
4 a substantial portion of its operating expenses. This dependence has resulted in Duncan
5 Rural not taking prompt action to apply for necessary rate increases when it experienced
6 cash flow problems. It has also led to a “snow balling” effect in which the accounts
7 payable balance increased by \$280,783 in approximately two years (i.e., from \$174,629 at
8 January 1, 2003 to \$455,352 at February 28, 2005).

9
10 **Q. How much of the \$443,584 test-year end accounts payable balance did Duncan Rural**
11 **invest in plant?**

12 A. Staff’s audit revealed that Duncan Rural used \$330,484 of cash advances for plant
13 improvements.

14
15 **Q Does the amount of cash advances used for capital improvements affect the amount**
16 **that should be considered for conversion to long-term debt?**

17 A. Yes. Since capital improvements will continue to provide benefits to Duncan Rural’s
18 ratepayers, advances used for capital improvement should be eligible for consideration for
19 conversion.

20
21 **Q. How does the amount of cash advances used for capital improvements compare to**
22 **the amount of cash advances the Cooperative requests for authorization to convert to**
23 **long term debt?**

24 A. The cash advances used for capital improvements exceeds the requested debt authorization
25 by \$61,496 (\$330,484 - \$268,988).

26

1 **Q. Is Staff recommending conversion of the entire \$330,484 of cash advances that**
2 **Duncan Rural used for capital improvements to long-term debt?**

3 A. Yes. Staff recommends authorization for Duncan Rural to convert \$330,484 of
4 obligations incurred as cash advances from DVEC to long-term debt.

5
6 **Q. What are the proposed terms of the loan?**

7 A. The proposed loan from DVEC would be amortized over a period of 25 years and would
8 have a variable interest rate equal to AEPCO's variable interest rate earned on funds with
9 repayments over 25 years.

10
11 **Q. What is the remaining accounts payable balance after conversion of \$330,484 to long-**
12 **term debt?**

13 A. The remaining balance is \$124,868 (\$455,352 - \$330,484).

14
15 **Q. Is it appropriate to convert amounts borrowed to cover operating expenses to long-**
16 **term debt?**

17 A. No. When operating expenses are converted into long-term debt a cost shift occurs
18 between periods resulting in customers in later periods paying for the benefits received by
19 customers in an earlier period.

20
21 **Q. How does Duncan Rural propose to repay the balance of the DVEC accounts**
22 **payable?**

23 A. The Cooperative proposes to pay the balance when funds are available or to convert the
24 balance into long-term debt.⁹

25

⁹ Direct Testimony of John V. Wallace, page 18, beginning at line 8.

1 **Summary of Staff's Financing Application Recommendations**

2 **Q. Please provide a summary of Staff's recommendations regarding Duncan Rural's**
3 **request to convert \$268,988 of cash advances from DVEC to long-term Debt.**

4 A. Staff recommends authorizing Duncan Rural to convert \$330,484 of obligations incurred
5 as cash advances from DVEC to a 25-year note payable at a variable interest rate equal to
6 AEPCO's variable interest rate earned on funds.

7
8 **VI. CAPITAL STRUCTURE**

9 **Q. What was Duncan Rural's actual Test Year-end capital structure?**

10 A. Duncan Rural's actual Test Year-end capital structure consisted of 142.07 percent debt
11 and negative 42.07 percent patronage equity as shown on the Cooperative's Schedule D-1.

12
13 **Q. How does Duncan Rural's capital structure compare to other cooperatives' capital**
14 **structures?**

15 A. Duncan Rural's capital structure is more leveraged than any of the cooperatives in Staff's
16 sample. None of the sample cooperatives have a negative equity position. Schedule DTZ-
17 14 presents a sample of cooperatives' capital structures at December 31, 2004. The
18 average capital structure of the cooperatives is composed of 68.2 percent debt and 31.8
19 percent patronage equity as opposed to the Cooperative's capital structure composed of
20 142.07 percent debt and a negative 42.07 percent patronage equity.

21
22 **Q. Is Staff concerned with Duncan Rural's actual Test Year-end capital structure?**

23 A. Yes. Duncan Rural's capital structure is highly leveraged as it has remained for several
24 years. The Cooperative's capital structure: (1) restricts its ability to obtain additional
25 capital, (2) may result in less favorable terms for future financings and (3) places upward
26 pressure on rates to cover debt service obligations.

1 **Q. Has the Commission shown concern with highly leveraged cooperatives?**

2 **A.** Yes. The Commission ordered AEPCO (Decision No. 64227, dated November 29, 2001)
3 and Southwest Transmission Cooperative ("SWTCO") (Decision No. 64991, dated June
4 26, 2002) to establish long-range goals to improve their patronage equity positions. In
5 addition, the Commission ordered Trico Electric Cooperative, Inc. ("Trico") to file a
6 capital improvement plan with the Commission (Decision No. 67412, dated November 2,
7 2004). As discussed previously, highly leveraged capital structures present potentially
8 negative consequences.

9
10 **VII. EQUITY IMPROVEMENT PLAN**

11 **Q. What approach does Staff recommend to improve Duncan Rural's capital structure?**

12 **A.** Staff recommends that Duncan Rural develop a capital plan designed to improve its
13 capital structure to at least 30 percent equity within a reasonable time frame. Staff
14 recommends that Duncan Rural be ordered to file a schedule detailing its current capital
15 structure within 90 days of the end of the calendar year, starting with 2005, for each year
16 until its next rate case filing. Staff recommends that in the event Duncan Rural does not
17 improve its equity position by a cumulative average of 5 percent (using its December 31,
18 2005 position as a base) at the end of any calendar year until patronage equity is a
19 minimum of 30 percent of total capital, that the Cooperative be required to file a rate
20 application within 180 days of the end of the calendar year that the 5 percent cumulative
21 average increase in patronage equity is not achieved. However, Duncan Rural may be
22 granted a waiver from filing a rate application if it provides a written explanation as to
23 why it did not achieve its equity goal and it can demonstrate to Staff's satisfaction that it is
24 likely that it will achieve the cumulative equity goal in Staff's recommendation within a
25 reasonable timeframe without any rate adjustment. Such demonstration should be
26 provided within 90 days of the end of the calendar year. In no instance shall Duncan

1 Rural fail to achieve its cumulative equity improvement goal for three consecutive years
2 without filing a rate application. Staff also recommends that the Commission prohibit
3 distribution of patronage dividends until Duncan Rural has achieved a capital structure
4 composed of at least 20 percent patronage equity.

5
6 **Q. Is Staff's position that an optimal capital structure for the Applicant is composed of**
7 **70 percent debt and 30 percent equity?**

8 **A.** No. Staff considers that a capital structure for the Applicant composed of 30 percent
9 equity and 70 percent debt is not optimal, but a minimum capital structure that Duncan
10 Rural should target to achieve.

11
12 **Q. Is Staff's recommended revenue sufficient to improve Duncan Rural's equity**
13 **position in a reasonable timeframe?**

14 **A.** Yes, Staff's recommended revenue provides Duncan Rural with a positive operating
15 margin that supports the recommended growth in patronage equity.

16
17 **Q. Please summarize Staff's recommendations concerning Duncan Rural's equity**
18 **position.**

19 **A.** Staff recommends that the Commission order Duncan Rural to follow Staff's equity
20 recommendation. Staff also recommends that the Commission order the Applicant to file
21 a rate application within 180 days of the end of any calendar year that Duncan Rural is not
22 able to meet the cumulative patronage equity level specified in Staff's proposed plan.
23 However, Duncan Rural may be granted a waiver from filing a rate application if it can
24 demonstrate to Staff's satisfaction that it is likely that the Applicant will achieve the
25 cumulative increase in patronage equity level in Staff's plan within a reasonable
26 timeframe without any rate adjustment. Such demonstration should be provided within 90

1 days of the end of the calendar year. In no instance shall the Applicant fail to achieve
2 Staff's equity plan for three consecutive years without filing a rate application.

3

4 Staff also recommends that the Commission restrict the distribution of future patronage
5 dividends by Duncan Rural until it has achieved a capital structure composed of at least 20
6 percent patronage equity.

7

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

9 A. Yes, it does.

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Operating Income (Loss)	\$ (46,968)	\$ (46,394)
2	Depreciation and Amortization	\$ 49,645	\$ 49,645
3	Long-term Debt Interest Expense	\$ 31,112	\$ 23,093
4	Income Tax Expense	N/A	\$ 12,331
5	Principal Repayment	\$ 45,303	\$ 54,661
6	Recommended Increase in Operating Margin	\$ 108,814	\$ 112,060
7	Gross Revenue Conversion Factor	1.3514	1.3154
8a	Recommended Increase in Operating Revenue	\$ 147,406	\$ 147,406
8b	Percent Increase (Line 8a / Line 9) - Per Staff	N/A	22.70%
8c	Percent Increase (Line 8a / Line 9) - Per Coop	22.70%	N/A
9	Adjusted Test Year Operating Revenue	\$ 649,377	\$ 325,812
10	Recommended Annual Operating Revenue	\$ 796,783	\$ 473,219
11a	Recommended Operating Margin	\$ 61,846	\$ 65,665
11b	Recommended Net Margin	\$ 30,845	\$ 42,682
12a	Recommended Operating TIER (L11a+L4)/L3 - Per Staff	N/A	3.38
12b	Recommended Net TIER Per Coop	2.00	N/A
13a	Recommended DSC (L11a+L2+L4)/(L3+L5) - Per Staff	N/A	1.64
13b	Recommended DSC Per Coop	1.38	N/A
14	Adjusted Rate Base	\$ 772,408	\$ 758,057
15	Rate of Return (L10 / L14)	8.01%	8.66%

References:

Column [A]: Company Schedules A-1, C-1, C-3

Column [B]: Staff Schedules DTZ-2, DTZ-8

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<i>Calculation of Gross Revenue Conversion Factor:</i>					
1	Billings	1.000000			
2	Uncollectible Factor	0.000000			
3	Revenues	1.000000			
4	Less: Combined Federal and State Tax Rate (Line 12)	0.239787			
5	Subtotal (L3 - L4)	0.7602			
6	Revenue Conversion Factor (L1 / L5)	1.31542			
<i>Calculation of Effective Tax Rate:</i>					
7	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
8	Arizona State Income Tax Rate	6.9680%			
9	Federal Taxable Income (L7 - L8)	93.0320%			
10	Applicable Federal Income Tax Rate (Line 34)	18.2848%			
11	Effective Federal Income Tax Rate (L9 x L10)	17.0107%			
12	Combined Federal and State Income Tax Rate (L8 + L11)	23.9787%			
13	Required Operating Income (Schedule DTZ-1, Line 5)	\$ 65,665			
14	Adjusted Test Year Operating Income (Loss) (Schedule DTZ-10, Line 16)	\$ (46,394)			
15	Required Increase in Operating Income (L13 - L14)		\$ 112,060		
16	Income Taxes on Recommended Revenue (Col. (D), L33)	\$ 12,331			
17	Income Taxes on Test Year Revenue (Col. (B), L33)	\$ (23,015)			
18	Required Increase in Revenue to Provide for Income Taxes (L16 - L17)		\$ 35,346		
19	Total Required Increase in Revenue (L15 + L18)		\$ 147,406		
<i>Calculation of Income Tax:</i>					
		Test Year		Staff Recommended	
20	Revenue (Schedule DTZ-9, Columns C and E)	\$ 325,812	\$ -	\$ 473,218	
21	Less: Operating Expenses Excluding Income Taxes	\$ 395,222		\$ 395,222	
22	Less: Synchronized Interest (L37)	\$ 20,657		\$ 20,657	
23	Arizona Taxable Income (L20 - L21 - L22)	\$ (90,066)		\$ 57,340	
24	Arizona State Income Tax Rate	6.968%		6.968%	
25	Arizona Income Tax (L23 x L24)		\$ (6,276)		\$ 3,995
26	Federal Taxable Income (L23 - L25)	\$ (83,791)		\$ 53,344	
27	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)		\$ 7,500	
28	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)		\$ 836	
29	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (2,989)		\$ -	
30	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -		\$ -	
31	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -		\$ -	
32	Total Federal Income Tax		\$ (16,739)		\$ 8,336
33	Combined Federal and State Income Tax (L25 + L32)		\$ (23,015)		\$ 12,331
34	Applicable Federal Income Tax Rate [Col. (D), L32 - Col. (B), L32] / [Col. (C), L26 - Col. (A), L26]				18.2848%
<i>Calculation of Interest Synchronization:</i>					
35	Rate Base (Schedule DTZ-3, Col. (C), Line 13)	\$ 758,057			
36	Weighted Average Cost of Debt	2.73%			
37	Synchronized Interest (L35 x L37)	\$ 20,657			

RATE BASE - ORIGINAL COST

LINE NO.	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	\$ 1,342,397	\$ -	\$ 1,342,397
2	(572,264)	-	(572,264)
3	<u>\$ 770,133</u>	<u>\$ -</u>	<u>\$ 770,133</u>
<u>LESS:</u>			
4	\$ -	\$ -	\$ -
5	\$ -	\$ -	\$ -
6	-	-	-
7	<u>-</u>	<u>-</u>	<u>-</u>
8	\$ 19,554	\$ -	\$ 19,554
9	\$ 20,064	\$ -	\$ 20,064
<u>ADD:</u>			
10	\$ -	\$ -	\$ -
11	\$ 27,542	\$ -	\$ 27,542
12	\$ 14,351	\$ (14,351)	\$ -
13	<u>\$ 772,408</u>	<u>\$ (14,351)</u>	<u>\$ 758,057</u>

References:

Column [A], Company Schedule B-1, Page 1
Column [B]: Schedule DTZ-4
Column [C]: Column [A] + Column [B]

SUMMARY OF RATE BASE ADJUSTMENTS

[A] [B] [C]

LINE NO.	DESCRIPTION	COOPERATIVE AS FILED	PREPAYMENTS ADJ.No.1	STAFF ADJUSTED
<u>PLANT IN SERVICE:</u>				
1	Intangible Plant	\$ -	\$ -	\$ -
2	Land & Land Rights	-	-	-
3	Mains	725,872	-	725,872
4	Mains - Anodes	143,207	-	143,207
5	City Gates	27,130	-	27,130
6	Services	191,962	-	191,962
7	Meters, Regulators & Install	209,535	-	209,535
8	Land & Land Rights	-	-	-
9	Structures & Improvements	-	-	-
10	Office Furniture & Improvements	2,000	-	2,000
11	Transportation Equipment	-	-	-
12	Stores Equipment	1,413	-	1,413
13	Tools & Shop Equipment	22,553	-	22,553
14	Laboratory Equipment	13,369	-	13,369
15	Power Operated Equipment	1,116	-	1,116
16	Communication Equipment	788	-	788
17	Miscellaneous Equipment	3,452	-	3,452
18	Total Plant in Service	\$ 1,342,397	\$ -	\$ 1,342,397
19	Less: Accumulated Depreciation	\$ (572,264)	-	\$ (572,264)
20	Less: Accumulated Amortization	-	-	-
21	Total Accumulated Depreciation & Amortization	\$ (572,264)	-	\$ (572,264)
22	Net Plant in Service	\$ 770,133	\$ -	\$ 770,133
<u>LESS:</u>				
23	Advances in Aid of Construction (AIAC)	\$ -	\$ -	\$ -
24	Contributions in Aid of Construction (CIAC)	-	-	-
25	Less: Accumulated Amortization	-	-	-
26	Net CIAC	\$ -	\$ -	\$ -
27	Deferred Taxes	\$ 19,554	\$ -	\$ 19,554
28	Customer Deposits	\$ 20,064	\$ -	\$ 20,064
<u>ADD:</u>				
29	Construction Work in Progress	\$ -	\$ -	\$ -
30	Materials and Supplies	27,542	-	27,542
31	Prepayments	14,351	(14,351)	-
32	Total Rate Base	\$ 772,408	\$ (14,351)	\$ 758,057

ADJ.No.	References
1	Schedule DTZ-5
Prepayments	

RATE BASE ADJUSTMENT NO. 2 - WORKING CAPITAL, PREPAYMENTS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Cash Working Capital	\$ -	\$ -	\$ -
2	Materials and Supplies	\$ 27,542	\$ -	\$ 27,542
3	Prepayments	\$ 14,351	\$ (14,351)	\$ -
4	Total Working Capital	\$ 41,893	\$ (14,351)	\$ 27,542

- 5 References:
6 Column A: Cooperative Schedule B-1, Page 1
7 Column B: Testimony, DTZ, Schedule DTZ-3
8 Column C: Column [A] + Column [B]

OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED

Line No.	DESCRIPTION	(A) COMPANY TEST YEAR AS FILED	(B) STAFF TEST YEAR ADJUSTMENTS	(C) STAFF TEST YEAR AS ADJUSTED	(D) STAFF PROPOSED CHANGES	(E) STAFF RECOMMENDED
REVENUES:						
1	Sales Revenue of Gas - Base Cost of Gas	\$ 206,689	\$ (206,689)	\$ -	\$ -	\$ -
2	Sales Revenue of Gas - Fuel Adjustor	\$ 118,453	\$ (118,453)	\$ -	\$ -	\$ -
3	Sales Revenue of Gas - Non Base Cost of Gas	\$ 319,025	\$ 1,577	\$ 320,602	\$ 147,406	\$ 468,008
4	Other Operating Revenue	\$ 5,210	\$ -	\$ 5,210	\$ -	\$ 5,210
5	Total Revenues	\$ 649,377	\$ (323,565)	\$ 325,812	\$ 147,406	\$ -473,218
EXPENSES:						
6	Gas Purchases	\$ 325,260	\$ (325,260)	\$ -	\$ -	\$ -
Distribution Expense - Operations						
7	Supervision	\$ 950	\$ -	\$ 950	\$ -	\$ 950
8	Mains & Services	\$ 110,026	\$ -	\$ 110,026	\$ -	\$ 110,026
9	Measuring & Regulation Stations	\$ 13,753	\$ -	\$ 13,753	\$ -	\$ 13,753
10	Meters & House Regulators	\$ 20,214	\$ -	\$ 20,214	\$ -	\$ 20,214
11	Other Expenses	\$ 3,116	\$ -	\$ 3,116	\$ -	\$ 3,116
12	Rents	\$ 6,039	\$ -	\$ 6,039	\$ -	\$ 6,039
13	Total Distribution Expense-Operations	\$ 154,098	\$ -	\$ 154,098	\$ -	\$ 154,098
Distribution Expense - Maintenance						
14	Maintenance-Supervision	\$ -	\$ -	\$ -	\$ -	\$ -
15	Maintenance-Mains & Services	\$ 46,098	\$ -	\$ 46,098	\$ -	\$ 46,098
16	Maintenance-Measuring & Regulation Stations	\$ -	\$ -	\$ -	\$ -	\$ -
17	Maintenance-Services	\$ -	\$ -	\$ -	\$ -	\$ -
18	Maintenance-Meters & House Regulators	\$ 8,726	\$ -	\$ 8,726	\$ -	\$ 8,726
19	Maintenance-Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -
20	Total Distribution Expense-Maintenance	\$ 54,824	\$ -	\$ 54,824	\$ -	\$ 54,824
Consumer Accounts Expense						
21	Meter Reading Expense	\$ 25,048	\$ -	\$ 25,048	\$ -	\$ 25,048
22	Consumer Expense	\$ 30,523	\$ -	\$ 30,523	\$ -	\$ 30,523
23	Reserve for Uncollectible Accounts	\$ 1,500	\$ -	\$ 1,500	\$ -	\$ 1,500
24	Information & Instruction ads	\$ 3,058	\$ -	\$ 3,058	\$ -	\$ 3,058
25	Total Consumer Accounts Expense	\$ 60,129	\$ -	\$ 60,129	\$ -	\$ 60,129
Administrative and General Expense						
26	Salaries	\$ 8,491	\$ -	\$ 8,491	\$ -	\$ 8,491
27	Office Supplies and Expenses	\$ 3,606	\$ -	\$ 3,606	\$ -	\$ 3,606
28	Outside Services Employed	\$ 11,826	\$ -	\$ 11,826	\$ -	\$ 11,826
29	Rate Case	\$ -	\$ -	\$ -	\$ -	\$ -
30	Property Insurance	\$ -	\$ -	\$ -	\$ -	\$ -
31	Injuries and Damage Ins.	\$ 17,568	\$ -	\$ 17,568	\$ -	\$ 17,568
32	Regulatory Commission Expense	\$ 15,802	\$ (6,323)	\$ 9,479	\$ -	\$ 9,479
33	Miscellaneous General	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 5,550
34	Total Administrative and General Expense	\$ 62,843	\$ (6,323)	\$ 56,520	\$ -	\$ 56,520
35	Interest Expense - Customer Deposits	\$ 367	\$ -	\$ 367	\$ -	\$ 367
36	Depreciation and Amortization Expense	\$ 49,645	\$ -	\$ 49,645	\$ -	\$ 49,645
37	Tax Expense - Property	\$ 19,639	\$ -	\$ 19,639	\$ -	\$ 19,639
38	Tax Expense - Income Taxes	\$ (30,460)	\$ 7,445	\$ (23,015)	\$ 35,346	\$ 12,331
39	Total Operating Expenses	\$ 696,345	\$ (324,138)	\$ 372,207	\$ 35,346	\$ 407,553
40	Operating Margin Before Interest on L.T.- Debt	\$ (46,968)	\$ 574	\$ (46,394)	\$ 112,060	\$ 65,665
41	INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS	\$ 31,112	\$ (8,019)	\$ 23,093	\$ -	\$ 23,093
42	MARGINS (LOSS) AFTER INTEREST EXPENSE	\$ (78,080)	\$ 8,593	\$ (69,487)	\$ 112,060	\$ 42,572
43	NON-OPERATING MARGINS	\$ 110	\$ -	\$ 110	\$ -	\$ 110
44	NET MARGINS (LOSS)	\$ (77,970)	\$ 8,593	\$ (69,377)	\$ 112,060	\$ 42,682

References:

Column (A): Cooperative Schedule C-1, Pages 1 and 2
Column (B): Schedule DTZ-8
Column (C): Column (A) + Column (B)
Column (D): Schedules DTZ-1
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Revenue Annualization Ref. Sch DTZ-9	(C) Cost of Gas Base and Fuel Adjustor Ref. Sch DTZ-10	(D) ACC Assessment Charge Ref. Sch DTZ-11	(E) Rate Case Expense Ref. Sch DTZ-12	(F) Income Tax Expense Ref. Sch DTZ-13	(G) Interest Expense on Long Term Debt Ref. Sch DTZ-14	(H) STAFF ADJUSTED
1	Sales Revenue of Gas - Base Cost of Gas	\$ 206,689	\$ -	\$ (206,689)	\$ -	\$ -	\$ -	\$ -	\$ -
2	Sales Revenue of Gas - Fuel Adjustor	118,453	-	(118,453)	-	-	-	-	320,602
3	Sales Revenue of Gas - Margin (Non-gas)	319,025	2,574	-	(957)	-	-	-	5,210
4	Other Operating Revenue	5,210	-	-	-	-	-	-	-
5	Total Revenues	\$ 649,377	\$ 2,574	\$ (325,142)	\$ (957)	\$ -	\$ -	\$ -	\$ 325,812
6	OPERATING EXPENSES:								
7	Gas Purchases	\$ 325,260	\$ -	\$ (325,260)	\$ -	\$ -	\$ -	\$ -	\$ -
8	Distribution Expense - Operations								
9	Supervision	950	-	-	-	-	-	-	950
10	Mains & Services	110,026	-	-	-	-	-	-	110,026
11	Measuring & Regulation Stations	13,753	-	-	-	-	-	-	13,753
12	Meters & House Regulators	20,214	-	-	-	-	-	-	20,214
13	Other Expenses	3,116	-	-	-	-	-	-	3,116
14	Rents	6,039	-	-	-	-	-	-	6,039
15	Distribution Expense - Operations	154,098	-	-	-	-	-	-	154,098
16	Distribution Expense - Maintenance								
17	Supervision								
18	Mains & Services	46,098	-	-	-	-	-	-	46,098
19	Measuring & Regulation Stations								
20	Services								
21	Meters & House Regulators	8,726	-	-	-	-	-	-	8,726
22	Other Equipment								
23	Distribution Expense - Maintenance	54,824	-	-	-	-	-	-	54,824
24	Consumer Accounts Expense								
25	Meter Reading Expense	25,048	-	-	-	-	-	-	25,048
26	Consumer Expense	30,523	-	-	-	-	-	-	30,523
27	Reserve for Uncollectible Accounts	1,500	-	-	-	-	-	-	1,500
28	Information & Instruction aids	3,058	-	-	-	-	-	-	3,058
29	Consumer Accounts Expense	60,129	-	-	-	-	-	-	60,129
30	Administrative and General Expense								
31	Salaries	8,491	-	-	-	-	-	-	8,491
32	Office Supplies and Expenses	3,606	-	-	-	-	-	-	3,606
33	Outside Services Employed	11,926	-	-	-	-	-	-	11,926
34	Rate Case								
35	Property Insurance								
36	Injuries and Damage Ins.	17,568	-	-	(1,472)	(4,851)	-	-	17,568
37	Regulatory Commission Expense	15,802	-	-	-	-	-	-	15,802
38	Miscellaneous General	5,550	-	-	-	-	-	-	5,550
39	Administrative and General Expense	62,843	-	-	(1,472)	(4,851)	-	-	56,520
40	Interest Expense - Customer Deposits	367	-	-	-	-	-	-	367
41	Depreciation and Amortization Expense	49,645	-	-	-	-	-	-	49,645
42	Tax Expense - Property	19,639	-	-	-	-	-	-	19,639
43	Tax Expense - Income Taxes	(30,460)	-	-	-	-	7,445	-	(23,015)
44		39,191	-	-	-	-	7,445	-	46,636
45	Total Operating Expenses	\$ 686,345	\$ -	\$ (325,260)	\$ (1,472)	\$ (4,851)	\$ 7,445	\$ -	\$ 372,207
46	Operating Margin Before Interest on L.T. Debt	\$ (46,968)	\$ 2,574	\$ 118	\$ 475	\$ 4,851	\$ (7,445)	\$ -	\$ (46,964)
47	INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS	\$ 31,112	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (8,019)	\$ 23,093
48	MARGINS (LOSS) AFTER INTEREST EXPENSE	\$ (15,856)	\$ 2,574	\$ 118	\$ 475	\$ 4,851	\$ (7,445)	\$ 8,019	\$ (68,487)
49	NON-OPERATING MARGINS	\$ 110	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 110
50	NET MARGINS (LOSS)	\$ (77,970)	\$ 2,574	\$ 118	\$ 475	\$ 4,851	\$ (7,445)	\$ 8,019	\$ (69,377)

OPERATING INCOME ADJUSTMENT NO. 1 - REVENUE ANNUALIZATION

Line	Classification	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Total
1	Year end number of customers	747	747	747	747	747	747	747	747	747	747	747	747	747
2	Less: Month end number of customers	740	747	740	740	740	740	740	735	734	730	740	747	747
3	Number of Additional Customers	7	0	7	7	7	7	7	18	13	17	7	0	88
4	Total actual therms sold	77,487	83,124	50,043	34,476	32,183	51,718	45,921	30,785	31,811	25,844	42,852	67,982	574,136
5	Average therms per customer	104.73	111.28	67.08	46.59	43.49	69.89	62.99	41.88	43.34	35.13	58.04	91.01	Total Actual Therms Sold
6	Monthly customer charge	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00
7	Commodity charge ¹	\$ 0.80	\$ 0.80	\$ 0.80	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.51405	\$ 0.80	\$ 0.80
8	Less: Base cost of gas	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36	\$ 0.36
9	Margin (i.e. Non-gas) Rate	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.44	\$ 0.44
10	Calculation of Additional Revenue Due to Annualization	\$ 61.08	\$ 83.96	\$ 44.52	\$ 22.18	\$ 21.70	\$ 25.77	\$ 24.70	\$ 21.45	\$ 21.68	\$ 20.41	\$ 40.54	\$ 55.04	\$ 35.25
11	Avg bill based on Margin (Non-gas) Rate	7	7	7	7	7	7	7	12	13	17	7	7	Average Bill
12	Multiplied by: Additional Customers (from Line 3)	\$ 427.56	\$ -	\$ 44.52	\$ 155.24	\$ 151.90	\$ 180.37	\$ 444.87	\$ 257.43	\$ 281.79	\$ 347.00	\$ 283.77	\$ -	\$ 2,574
13	Additional Monthly Margin (Non-gas) Revenue L3 x L9	104.73	111.28	67.08	46.59	43.49	69.89	62.99	41.88	43.34	35.13	58.04	91.01	5,123
14	Calculation of Additional Therms Due to Annualization	733.08	-	67.08	326.12	304.43	489.22	1,133.85	502.81	553.41	587.19	406.30	-	Additional Therms
15	Average therms per customer (from Line 5)	7	7	7	7	7	7	18	12	13	17	7	-	
16	Multiplied by: Customer Variance (from Line 3)	7	7	7	7	7	7	7	7	7	7	7	7	
17	Additional therms sold based on annualization L3 x L5	733.08	-	67.08	326.12	304.43	489.22	1,133.85	502.81	553.41	587.19	406.30	-	

¹ Winter Commodity Charge (November through March) = \$ 0.80 per therm
² Summer Commodity Charge (April through October) = \$0.51405 per therm

**OPERATING INCOME ADJUSTMENT NO. 2
BASE COST OF GAS and FUEL ADJUSTOR
REVENUE AND EXPENSE**

		[A]
LINE NO.	DESCRIPTION	Base Cost of Gas Revenue
1	Revenues	
2	Test Year Sales in therms (From Cooperative's revised 2004 RUS Form 7)	574,136
3	Base Cost of Gas (Col A, per Dec 64869)	\$ 0.360000
4	Revenue from the Base Cost of Gas	\$ 206,689
5	Plus: Fuel Adjustor Revenue (Cooperative Income Statement Adjustment A)	\$ 118,453
6	Staff Adjustment to Remove Total Gas Cost from Revenue	\$ 325,142
7	Expenses	
8	Staff Adjustment to Remove Purchased Gas Expense	\$ 325,260

References:

Column [A]: Testimony, DTZ

Duncan Rural Services Corporation
Docket No. G-02528A-05-0314
Test Year Ended December 31, 2004

Schedule DTZ-10

OPERATING INCOME ADJUSTMENT NO. 3 - ACC GROSS REVENUE ASSESSMENT

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Revenue - ACC Assessment	\$ 997	\$ (997)	\$ -
2	Expense - ACC Assessment	\$ 1,472	\$ (1,472)	\$ -

References:

Column A: Data request response DTZ 2-8

Column B: Testimony, DTZ

Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 4 - RATE CASE EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENT	STAFF AS ADJUSTED
1	Rate Case Expense	15,802	(4,851)	10,951

Calculation of Staff Recommended Rate Case Exp.	
Company proposed rate case expense	\$ 32,852
Normalization period (in years)	3
Normalized Annual Expense	\$ 10,951

References:

Column A: Cooperative Schedule C-2

Column B: Testimony, DTZ

Column C: Column [A] + Column [B]; DTZ 1-25

Duncan Rural Services Corporation
Docket No. G-02528A-05-0314
Test Year Ended December 31, 2004

Schedule DTZ-12

OPERATING INCOME ADJUSTMENT NO. 5 - INCOME TAX EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Income Tax Expense	\$ (30,460)	\$ 7,445	\$ (23,015)

References:

Column A: Cooperative Schedules C-1 and C-2

Column B: Testimony, DTZ

Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 6 - INTEREST EXPENSE ON LONG-TERM DEBT

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Interest Expense on Existing Long-Term Debt	\$ 14,973	\$ (886)	\$ 14,087
2	Interest Expense on Proposed Long-Term Debt	\$ 16,139	\$ (7,133)	\$ 9,006
3	Total Interest Expense on Long-term Debt	\$ 31,112	\$ (8,019)	\$ 23,093

4
5
6
7
8
9
10
11

Calculation of Interest Expense on Existing L.T. Debt			
	31-Dec-04 Ending Balance	Variable Interest Rate	Interest Expense
Note 1	\$ 60,412	2.725%	\$ 1,646
Note 2	\$ 115,962	2.725%	\$ 3,160
Note 3	\$ 340,584	2.725%	\$ 9,281
	\$ 516,958		\$ 14,087

	Loan Amount	Variable Interest Rate	Interest Expense
Proposed Debt	\$ 330,484	2.725%	\$ 9,006

References:

Column A: Cooperative Schedules C-1 and C-2

Column B: Testimony, DTZ

Column C: Column [A] + Column [B]

Sample Cooperatives Capital Structures

Cooperative Utilities	Debt as a percentage of total capital ¹	Equity as a percentage of total capital ¹
1 Garkane Power Association, Inc.	50%	50%
2 Navopache Electric Cooperative, Inc.	75%	25%
3 Graham County Utilities	93%	7%
4 Alaska Electric & Energy Cooperative	76%	24%
5 Cherryland Electric Cooperative	49%	51%
6 Presque Isle Electric & Gas Cooperative	62%	38%
7 Great Lakes Energy Cooperative	60%	40%
8 Midwest Energy Cooperative	63%	37%
9 Thumb Electric Cooperative	67%	33%
10 Western Farmers Electric Cooperative	90%	10%
11 Bayfield Electric Cooperative	66%	34%
<hr/>		
Average	68.2%	31.8%
Duncan Rural Services Corporation ²	142.07%	-42.07%

¹ Information based on annual reports for the year ended 2004

² Based on the Company's rate filing



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THER APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

SURREBUTTAL
TESTIMONY
OF
DANIEL ZIVAN
PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

DECEMBER 5, 2005

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EXECUTIVE SUMMARY
DUNCAN RURAL SERVICES CORPORATION
DOCKET NO. G-02528A-05-0314

The Surrebuttal testimony of Staff witness Daniel Zivan addresses the following issues:

Long-term debt – Staff’s recommendation included in its direct testimony remains unchanged.

Interest expense – Staff’s recommendation included in its direct testimony remains unchanged.

Revenue annualization – After reviewing the information provided in Duncan Rural Services Corporation (“Duncan”) rebuttal testimony, Staff retracts its annualization adjustment included in its direct testimony. Staff’s revised position decreases test year revenue by \$2,574 and precipitates the need for an equal boost to the revenue increase.

Line of credit – Staff recommends approval of a \$70,000 line of credit for Duncan to borrow from Duncan Valley Electric Cooperative for the exclusive purpose of financing increases to its under-collected Purchased Gas Adjustor (“PGA”) bank balance.

Revenue requirement – Staff’s recommendation included in its direct testimony remains unchanged.

Arizona Corporation Commission Assessment Charge (“ACC Assessment”) bill add-on – Staff’s recommendation included in its direct testimony remains unchanged.

1 **I. INTRODUCTION**

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

3 A. My name is Daniel Zivan. I am a Public Utilities Analyst III employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Did you previously file direct testimony in this case?**

8 A. Yes.

9
10 **Q. What is the purpose of your surrebuttal testimony in this proceeding?**

11 A. The purpose of my surrebuttal testimony in this proceeding is to present Staff's response
12 to the rebuttal testimony of Duncan Rural Services Corporation ("Duncan" or the
13 "Cooperative") witnesses Mr. Jack Shilling and Mr. John V. Wallace regarding long-term
14 debt financing, interest expense, revenue annualization, a line of credit, revenue
15 requirement and a bill add-on.

16
17 **Q. What other Staff witnesses are involved in the presentation of Staff's responses to
18 rebuttal testimonies?**

19 A. Staff witness Steve Irvine is presenting Staff responses to the Cooperative's rebuttal
20 testimonies regarding purchased gas adjustor ("PGA") \$0.10 bandwidth, combining
21 Summer and Winter rates, uniform commodity rates across customer classes, and the
22 effect on rates from Staff's revocation of its \$2,574 revenue annualization adjustment.

23
24 **Q. How is your surrebuttal testimony organized?**

25 A. My surrebuttal testimony is organized in seven sections. Section I is this introduction.
26 Section II discusses long-term debt. Section III discusses interest expense. Section IV

1 discusses the Arizona Corporation Commission Assessment Charge ("ACC Assessment").
2 Section V discusses Staff's annualization adjustment. Section VI discusses Staff's
3 recommendation for a line of credit. Section VII discusses the revenue requirement for
4 Duncan.

5
6 **II. LONG-TERM DEBT FINANCING**

7 **Q. Did Duncan change its financing request in its rebuttal testimony?**

8 A. Yes. Duncan initially requested authorization to incur \$268,988 of debt. Duncan's
9 rebuttal increased the requested debt authorization to \$600,000 to cover \$502,000 of
10 current advances from Duncan Valley Electric Cooperative, Inc. ("DVEC") and provide
11 \$98,000 for future advances from DVEC (Shilling Rebuttal at Page 6).

12
13 **Q. Does Staff have concerns with Duncan's proposed loan amount of \$600,000?**

14 A. Yes. Duncan's capital structure at the end of the test year consisted of 142 percent debt
15 and negative 42 percent patronage capital. Issuing any additional long-term debt would
16 further exacerbate Duncan's excessively leveraged capital structure and make achieving
17 Staff's recommended equity goals even more difficult. Additionally, issuing \$600,000 of
18 long-term debt would cause past operating expenses to be converted to long-term debt;
19 therefore, putting the burden of paying past operating expenses on future customers.

20
21 **Q. What amount of long-term debt is Staff recommending?**

22 A. Staff recommends long-term debt financing in the amount of \$330,484. This represents
23 the amount that Duncan spent on plant improvements and the amount that Staff
24 recommended in its direct testimony. In addition, as discussed later, Staff also
25 recommends authorization for a \$70,000 line of credit to finance the under-collected

1 purchased gas adjustor ("PGA") balance to the extent that the under-collection increases
2 from the balance at the time of implementation of new rates as ordered in this rate case.

3
4 **Q. What support does Duncan provide to rebut Staff's position that authorizing debt to**
5 **cover obligations resulting from previously incurred operating expenses would not**
6 **result in cost shifting?**

7 A. Duncan provided the following response.

8
9 DRSC has experienced a decline in its customer base. DRSC's customer
10 base has been the same customers who have taken service from DRSC for
11 years. Consequently, its existing customers were present when these
12 advances were incurred and are still present today (Shilling Rebuttal at
13 Page 6).

14
15 **Q. Would a declining customer base preclude the cost shifting?**

16 A. No. A declining customer base shifts costs from customers that discontinue service to
17 those that retain service since the Cooperative can no longer recover the costs incurred to
18 provide service to customers that leave the system that have effectively been deferred for
19 recovery to a later period.

20
21 **Q. Does the Cooperative's rebuttal testimony correctly state Staff's position regarding**
22 **Duncan's obligations to DVEC that are not authorized for conversion to long-term**
23 **debt?**

24 A. No. The Cooperative states:

25
26 . . . Staff has not recommended that all of DRSC's cash advances be
27 converted to LTD but has only recommended that \$330,484 be converted
28 and the remaining amounts of advances of \$171,516 be repaid when these
29 funds are available (Schilling Rebuttal at Page 4).

30

1 This statement is not accurate as Staff did not make a recommendation in its direct
2 testimony regarding how the remaining advances should be treated.

3
4 **Q. How does Staff view the remaining advances?**

5 A. The remaining cash advances are not debt because they were not authorized by the
6 Commission. However, the cash advances did occur, therefore, Staff views them as equity
7 infusions from DVEC.

8
9 **Q. Is the historical cash-advance relationship that has developed between DVEC and
10 Duncan appropriate?**

11 A. No. Duncan has continually borrowed money from DVEC effectively delaying applying
12 for a rate increase. This behavior is an inappropriate way for Duncan to address its
13 stressed financial situation and only serves to prolong and exacerbate its condition. As
14 stated in Staff's direct testimony, the implication for DVEC from this relationship is less
15 immediate cash available for its own operations and potential harm to its ratepayers in the
16 event the advances are not repaid. Delays in repayment could affect the timing and
17 amount of DVEC rate adjustments. Duncan should request rate relief when dictated by
18 cash flow needs rather than relying on DVEC to pay operating expenses and fund plant
19 improvements.

20
21 **III. INTEREST EXPENSE**

22 **Q. What does Duncan recommend for interest expense?**

23 A. In its rebuttal testimony Duncan recommends interest expense in the amount of \$39,187
24 which includes \$14,087 of interest expense on current loans and \$25,100 of interest
25 expense at 5 percent related to the \$502,000 existing obligation to DVEC that is a portion
26 of the requested \$600,000 loan [$\$14,087 + (\$502,000 \times .05)$] = \$39,187.

1 **Q. Does Staff agree with Duncan's use of 5 percent to determine the annual interest**
2 **expense amount?**

3 A. No. Duncan did not explain why it used an interest rate of 5 percent to calculate its
4 interest expense. The applicable interest rate on long-term debt is equal to the Arizona
5 Electric Power Cooperative Inc.'s ("AEPCO") interest rate charged on "270 Day Fixed
6 Rate Notes", which is currently¹ 2.725 percent. There is no evidence that the rate has
7 changed.

8
9 **Q. Does Staff agree with the Cooperative's proposed interest expense?**

10 A. No. First, Staff recommends interest expense based on existing debt and Staff's
11 recommend \$330,484 additional debt authorization. The Cooperative used the existing
12 debt and \$502,000 of requested debt to calculate interest expense. Second, Staff used an
13 interest rate of 2.725 percent to determine the level of interest expense of \$23,093 which
14 represents \$14,087 for existing long-term debt and \$9,006 for the recommended \$330,484
15 long-term debt. The Cooperative used \$14,087 for the existing debt and applied a 5
16 percent rate to its \$502,000 amount.

17
18 **IV. ACC ASSESSMENT BILL ADD-ON**

19 **Q. Does Duncan agree with Staff's recommended Operating Income Adjustment No. 3**
20 **that removes the ACC Assessment from revenue and expenses?**

21 A. Yes. Duncan agrees to the removal of the ACC Assessment from revenues and expenses
22 (Wallace Rebuttal at Page 6). However, the Cooperative objects to recovering the ACC
23 Assessment through a bill add-on. Staff has interpreted the Cooperative's objection as
24 meaning it does not want to show the ACC Assessment as a separate line item on
25 customer bills but would combine the Assessment with other charges.

¹ September 2, 2005

1 **Q. Is combining the ACC Assessment with other charges on the customer bill acceptable**
2 **to Staff?**

3 A. No. Placing the ACC Assessment on a separate line would require incurring
4 programming costs with the Cooperative's current billing system. The Cooperative is in
5 the process of updating its billing system to one that more readily provides a separate line
6 for the ACC Assessment. The Cooperative is concerned with the cost of programming the
7 current billing system when it is in the process of converting to a new one. The billing
8 system update may take a year to complete. Staff is sympathetic to the Cooperative's
9 circumstances and supports allowing Duncan to postpone presenting the ACC Assessment
10 on a separate line until its billing system is updated.

11
12 **V. REVENUE ANNUALIZATION**

13 **Q. Did Duncan present any support in its rebuttal testimony for its claim that Staff's**
14 **Operating Income Adjustment No. 1 – Revenue Annualization is unnecessary**
15 **because Duncan has not experienced measurable growth?**

16 A. Yes. The Company's RUS Form 7 Report, Part R (Wallace, Rebuttal Attachment), shows
17 that 2005 customer counts are less than the test year level. Therefore, Staff retracts its
18 \$2,574 adjustment to annualize test year revenue.

19
20 **VI. LINE OF CREDIT**

21 **Q Does Staff recognize a potential cash flow need for Duncan in addition to rates?**

22 A. Yes. Due to the magnitude and seasonality of the cost of gas for natural gas distribution
23 utilities there is a significant seasonal lead or lag between recovery and payment of gas
24 costs. For utilities such as Duncan with adjustor mechanisms, this lead or lag is reflected
25 in a PGA bank balance. It is not unusual for a PGA bank balance to exceed the on-going
26 cash flow generated from authorized returns. Accordingly, natural gas distributions

1 utilities need a method to finance under-collected PGA bank balances. Accordingly,
2 Duncan may require additional financing for under-collected gas costs.

3
4 **Q. Does Staff have a recommendation that would assist the Cooperative with cash flow**
5 **needs related to under-collected PGA bank balances?**

6 A. Yes. Staff recommends authorization of a \$70,000 revolving line of credit for Duncan to
7 borrow funds from DVEC with an interest rate equal to the AEPCO's rate of interest
8 charged on "270 Day Fixed Rate Notes", which is currently 2.725 percent.

9
10 **Q. How should the line of credit be used?**

11 A. The line of credit should be approved with the condition that it be used exclusively to
12 address Duncan's under-collected PGA bank balance. Duncan would have use of the line
13 of credit for amounts greater than the balance of the under-collected PGA bank balance at
14 the time that rates from this rate proceeding are implemented. For example, if Duncan's
15 under-collected bank balance at the implementation of the approved rates in this rate case
16 is \$30,000 and then after three months the under-collected PGA bank balance increased to
17 \$45,000, then Duncan would be able to borrow \$15,000 against the line of credit. If the
18 under-collected bank balance subsequently decreased to \$35,000, then Duncan would be
19 required to repay \$10,000 of the line of credit balance to DVEC so that the borrowed
20 balance each month is maintained at, or below, the amount that the under-collected
21 balance exceeds \$30,000. In this example, at no point would Duncan be able to borrow
22 from the line of credit when the under-collected balance drops below \$30,000, the balance
23 at the date new rates become effective.

24

1 **VII. REVENUE REQUIREMENT**

2 **Q. What is Duncan's proposed revenue increase?**

3 A. Duncan requested a revenue increase of \$147,406 in its initial application. The
4 Cooperative's rebuttal testimony boosted the requested revenue increase to \$167,705
5 (Wallace Rebuttal, Page 3). Duncan requested the additional increase to provide a 2.00
6 times interest earned ratio ("TIER") based on the assumption that the Commission
7 authorizes \$502,000 of additional long-term debt at 5 percent. Additionally, Duncan has
8 requested a 5 percent rate increase effective January 1, 2006, which is 17 days after the
9 scheduled December 15, 2005 hearing and another 5 percent increase to become effective
10 January 1, 2007.

11
12 Duncan asserts that its revised revenue requirement is needed to comply with Staff's
13 recommendations to increase equity to 30 percent of total capital and to discontinue use of
14 unauthorized cash advances from DVEC (Schilling Rebuttal at Page 2).

15
16 **Q. Are these reasons adequate justification for Duncan's boosted revenue requests?**

17 A. No. First, as previously discussed, Staff is recommending authorization for a \$70,000 line
18 of credit from DVEC to finance increases in the Cooperative's PGA bank balance.
19 Second, Staff's recommend revenue provides sufficient cash flow to achieve Staff's
20 recommendation for the Cooperative to grow its equity by 5 percent yearly.

21
22 **Q. What net margin must the Cooperative experience to grow equity by 5 percent?**

23 A. The Cooperative's filing shows total capital of \$363,884 at the end of the test year. If total
24 capital remains at \$363,884 at the end of 2005, the Cooperative will need a net margin of
25 \$18,194 ($\$363,000 \times .05$) to achieve Staff's recommended equity growth of five percent.
26 Staff's recommended revenue results in a net margin of \$42,682 providing an excess of

1 Long-term debt – Staff recommends that long-term debt financing in the amount of
2 \$330,484 be approved.

3
4 Interest expense – Staff recommends interest expense in the amount of \$23,093.

5
6 Revenue annualization – Staff retracts the \$2,574 annualization adjustment.

7
8 Line of credit – Staff recommends approval of a \$70,000 line of credit for Duncan to
9 borrow from Duncan Valley Electric Cooperative for the exclusive purpose of financing
10 increases to its under-collected Purchased Gas Adjustor (“PGA”) bank balance.

11
12 Revenue requirement – Staff recommends an increase in revenue of \$149,981.

13
14 ACC Assessment bill add-on – Staff recommends that Duncan be ordered to have a
15 separate bill add-on line for the ACC Assessment, however, Staff supports allowing the
16 Cooperative to postpone presenting the ACC Assessment on a separate line until its billing
17 system is updated.

18
19 **Q. Does this conclude your surrebuttal testimony?**

20 **A. Yes, it does.**

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A] COMPANY ORIGINAL COST	[B] STAFF ORIGINAL COST ¹
1	Adjusted Operating Income (Loss)	\$ (46,968)	\$ (47,976)
2	Depreciation and Amortization	\$ 49,645	\$ 49,645
3	Long-term Debt Interest Expense	\$ 31,112	\$ 23,093
4	Income Tax Expense	N/A	\$ 12,331
5	Principal Repayment	\$ 45,303	\$ 54,661
6	Recommended Increase in Operating Margin	\$ 108,814	\$ 113,641
7	Gross Revenue Conversion Factor	1.3514	1.3198
8a	Recommended Increase in Operating Revenue	\$ 147,406	\$ 149,981
8b	Percent Increase (Line 8a / Line 9) - Per Staff	N/A	23.10%
8c	Percent Increase (Line 8a / Line 9) - Per Coop	22.70%	N/A
9	Adjusted Test Year Operating Revenue	\$ 649,377	\$ 323,238
10	Recommended Annual Operating Revenue	\$ 796,783	\$ 473,219
11a	Recommended Operating Margin	\$ 61,846	\$ 65,665
11b	Recommended Net Margin	\$ 30,845	\$ 42,682
12a	Recommended Operating TIER (L11a+L4)/L3 - Per Staff	N/A	3.38
12b	Recommended Net TIER Per Coop	2.00	N/A
13a	Recommended DSC (L11a+L2+L4)/(L3+L5) - Per Staff	N/A	1.64
13b	Recommended DSC Per Coop	1.38	N/A
14	Adjusted Rate Base	\$ 772,408	\$ 758,057
15	Rate of Return (L10 / L14)	8.01%	8.66%

References:

Column [A]: Company Schedules A-1, C-1, C-3
Column [B]: Staff Schedules DTZ-2, DTZ-8

¹ Staff recommendation reflects Duncan Rural Service Corporations initial revenue increase of \$147,406. In rebuttal testimony the company has requested an increase of \$167,705.

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A) ¹	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Billings	1.000000			
2	Uncollectible Factor	0.000000			
3	Revenues	1.000000			
4	Less: Combined Federal and State Tax Rate (Line 12)	0.242297			
5	Subtotal (L3 - L4)	0.7577			
6	Revenue Conversion Factor (L1 / L5)	1.31978			

<u>Calculation of Effective Tax Rate:</u>					
7	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
8	Arizona State Income Tax Rate	6.9680%			
9	Federal Taxable Income (L7 - L8)	93.0320%			
10	Applicable Federal Income Tax Rate (Line 34)	18.5545%			
11	Effective Federal Income Tax Rate (L9 x L10)	17.2617%			
12	Combined Federal and State Income Tax Rate (L8 +L11)	24.2297%			

13	Required Operating Income (Schedule DTZ-1, Line 5)	\$ 65,665			
14	Adjusted Test Year Operating Income (Loss) (Schedule DTZ-10, Line 16)	\$ (47,976)			
15	Required Increase in Operating Income (L13 - L14)		\$ 113,641		
16	Income Taxes on Recommended Revenue (Col. (D), L33)	\$ 12,331			
17	Income Taxes on Test Year Revenue (Col. (B), L33)	\$ (24,008)			
18	Required Increase in Revenue to Provide for Income Taxes (L16 -L17)		\$ 36,340		
19	Total Required Increase in Revenue (L15 + L18)		\$ 149,980		

	Test Year		Staff Recommended	
20	Revenue (Schedule DTZ-9, Columns C and E)	\$ 323,238	\$ -	\$ 473,218
21	Less: Operating Expenses Excluding Income Taxes	\$ 395,222		\$ 395,222
22	Less: Synchronized Interest (L37)	\$ 20,657		\$ 20,657
23	Arizona Taxable Income (L20 - L21 - L22)	\$ (92,641)		\$ 57,339
24	Arizona State Income Tax Rate	6.968%		6.968%
25	Arizona Income Tax (L23 x L24)		\$ (6,455)	\$ 3,995
26	Federal Taxable Income (L23 - L25)	\$ (86,185)		\$ 53,344
27	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)		\$ 7,500
28	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)		\$ 836
29	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (3,803)		\$ -
30	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -		\$ -
31	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -		\$ -
32	Total Federal Income Tax	\$ (17,553)		\$ 8,336
33	Combined Federal and State Income Tax (L25 + L32)	\$ (24,008)		\$ 12,331
34	Applicable Federal Income Tax Rate [Col. (D), L32 - Col. (B), L32] / [Col. (C), L26 - Col. (A), L26]			18.5545%

<u>Calculation of Interest Synchronization:</u>					
35	Rate Base (Schedule DTZ-3, Col. (C), Line 13)	\$ 758,057			
36	Weighted Average Cost of Debt	2.73%			
37	Synchronized Interest (L35 x L37)	\$ 20,657			

¹ Staff recommendation reflects Duncan Rural Service Corporations initial revenue increase of \$147,406. In rebuttal testimony the company has requested an increase of \$167,705.

OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED

Line No.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED ¹
1	REVENUES:					
2	Sales Revenue of Gas - Base Cost of Gas	\$ 206,689	\$ (206,689)	\$ -	\$ -	\$ -
3	Sales Revenue of Gas - Fuel Adjustor	\$ 118,453	\$ (118,453)	\$ -	\$ -	\$ -
4	Sales Revenue of Gas - Non Base Cost of Gas	\$ 319,025	\$ (997)	\$ 318,028	\$ 149,980	\$ 468,008
5	Other Operating Revenue	\$ 5,210	\$ -	\$ 5,210	\$ -	\$ 5,210
6	Total Revenues	\$ 649,377	\$ (326,139)	\$ 323,238	\$ 149,980	\$ 473,218
7	EXPENSES:					
8	Gas Purchases	\$ 325,260	\$ (325,260)	\$ -	\$ -	\$ -
9	Distribution Expense - Operations					
10	Supervision	\$ 950	\$ -	\$ 950	\$ -	\$ 950
11	Mains & Services	\$ 110,026	\$ -	\$ 110,026	\$ -	\$ 110,026
12	Measuring & Regulation Stations	\$ 13,753	\$ -	\$ 13,753	\$ -	\$ 13,753
13	Meters & House Regulators	\$ 20,214	\$ -	\$ 20,214	\$ -	\$ 20,214
14	Other Expenses	\$ 3,116	\$ -	\$ 3,116	\$ -	\$ 3,116
15	Rents	\$ 6,039	\$ -	\$ 6,039	\$ -	\$ 6,039
16	Total Distribution Expense-Operations	\$ 154,098	\$ -	\$ 154,098	\$ -	\$ 154,098
17	Distribution Expense - Maintenance					
18	Maintenance-Supervision	\$ -	\$ -	\$ -	\$ -	\$ -
19	Maintenance-Mains & Services	\$ 46,098	\$ -	\$ 46,098	\$ -	\$ 46,098
20	Maintenance-Measuring & Regulation Stations	\$ -	\$ -	\$ -	\$ -	\$ -
21	Maintenance-Services	\$ -	\$ -	\$ -	\$ -	\$ -
22	Maintenance-Meters & House Regulators	\$ 8,726	\$ -	\$ 8,726	\$ -	\$ 8,726
23	Maintenance-Other Equipment	\$ -	\$ -	\$ -	\$ -	\$ -
24	Total Distribution Expense-Maintenance	\$ 54,824	\$ -	\$ 54,824	\$ -	\$ 54,824
25	Consumer Accounts Expense					
26	Meter Reading Expense	\$ 25,048	\$ -	\$ 25,048	\$ -	\$ 25,048
27	Consumer Expense	\$ 30,523	\$ -	\$ 30,523	\$ -	\$ 30,523
28	Reserve for Uncollectible Accounts	\$ 1,500	\$ -	\$ 1,500	\$ -	\$ 1,500
29	Information & Instruction ads	\$ 3,058	\$ -	\$ 3,058	\$ -	\$ 3,058
30	Total Consumer Accounts Expense	\$ 60,129	\$ -	\$ 60,129	\$ -	\$ 60,129
31	Administrative and General Expense					
32	Salaries	\$ 8,491	\$ -	\$ 8,491	\$ -	\$ 8,491
33	Office Supplies and Expenses	\$ 3,606	\$ -	\$ 3,606	\$ -	\$ 3,606
34	Outside Services Employed	\$ 11,826	\$ -	\$ 11,826	\$ -	\$ 11,826
35	Rate Case	\$ -	\$ -	\$ -	\$ -	\$ -
36	Property Insurance	\$ -	\$ -	\$ -	\$ -	\$ -
37	Injuries and Damage Ins.	\$ 17,568	\$ -	\$ 17,568	\$ -	\$ 17,568
38	Regulatory Commission Expense	\$ 15,802	\$ (6,323)	\$ 9,479	\$ -	\$ 9,479
39	Miscellaneous General	\$ 5,550	\$ -	\$ 5,550	\$ -	\$ 5,550
40	Total Administrative and General Expense	\$ 62,843	\$ (6,323)	\$ 56,520	\$ -	\$ 56,520
41	Interest Expense - Customer Deposits	\$ 367	\$ -	\$ 367	\$ -	\$ 367
42	Depreciation and Amortization Expense	\$ 49,645	\$ -	\$ 49,645	\$ -	\$ 49,645
43	Tax Expense - Property	\$ 19,639	\$ -	\$ 19,639	\$ -	\$ 19,639
44	Tax Expense - Income Taxes	\$ (30,460)	\$ 6,452	\$ (24,008)	\$ 36,339	\$ 12,331
45	Total Operating Expenses	\$ 696,345	\$ (325,131)	\$ 371,214	\$ 36,339	\$ 407,553
46	Operating Margin Before Interest on L.T.- Debt	\$ (46,968)	\$ (1,008)	\$ (47,976)	\$ 113,641	\$ 65,665
47	INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS	\$ 31,112	\$ (8,019)	\$ 23,093	\$ -	\$ 23,093
48	MARGINS (LOSS) AFTER INTEREST EXPENSE	\$ (78,080)	\$ 7,012	\$ (71,068)	\$ 113,641	\$ 42,572
49	NON-OPERATING MARGINS	\$ 110	\$ -	\$ 110	\$ -	\$ 110
50	NET MARGINS (LOSS)	\$ (77,970)	\$ 7,012	\$ (70,958)	\$ 113,641	\$ 42,682

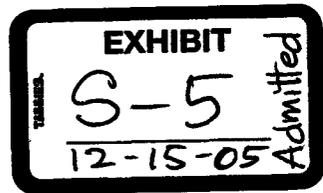
References:

Column (A): Cooperative Schedule C-1, Pages 1 and 2
Column (B): Schedule DTZ-8
Column (C): Column (A) + Column (B)
Column (D): Schedules DTZ-1
Column (E): Column (C) + Column (D).

¹ Staff recommendation reflects Duncan Rural Service Corporations initial revenue increase of \$147,406. In rebuttal testimony the company has requested an increase of \$167,705.

SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Revenue Annualization Ref: Sch DTZ-9	[C] Cost of Gas and Fuel Adjustor Base Ref: Sch DTZ-10	[D] ACC Assessment Charge Ref: Sch DTZ-11	[E] Rate Case Expense Ref: Sch DTZ-12	[F] Income Tax Expense Ref: Sch DTZ-13	[G] Interest Expense on Long Term Debt Ref: Sch DTZ-14	[H] STAFF ADJUSTED
1	Sales Revenue of Gas - Base Cost of Gas	\$ 206,689	\$ -	\$ (206,689)	\$ -	\$ -	\$ -	\$ -	\$ -
2	Sales Revenue of Gas - Fuel Adjustor	118,453	-	(118,453)	-	-	-	-	318,028
3	Sales Revenue of Gas - Margin (Non-gas)	319,025	-	-	(997)	-	-	-	5,210
4	Other Operating Revenue	5,210	-	-	-	-	-	-	323,238
5	Total Revenues	\$ 649,377	\$ -	\$ (325,142)	\$ (997)	\$ -	\$ -	\$ -	\$ -
6	OPERATING EXPENSES:								
7	Gas Purchases	\$ 325,260	\$ -	\$ (325,260)	\$ -	\$ -	\$ -	\$ -	\$ -
8	Distribution Expense - Operations	950	-	-	-	-	-	-	950
9	Supervision	110,026	-	-	-	-	-	-	110,026
10	Mains & Services	13,753	-	-	-	-	-	-	13,753
11	Measuring & Regulation Stations	20,214	-	-	-	-	-	-	20,214
12	Meters & House Regulators	3,116	-	-	-	-	-	-	3,116
13	Other Expenses	6,039	-	-	-	-	-	-	6,039
14	Rent	154,098	-	-	-	-	-	-	154,098
15	Distribution Expense - Operations								
16	Distribution Expense - Maintenance	-	-	-	-	-	-	-	-
17	Supervision	-	-	-	-	-	-	-	-
18	Mains & Services	-46,098	-	-	-	-	-	-	46,098
19	Measuring & Regulation Stations	-	-	-	-	-	-	-	-
20	Services	-	-	-	-	-	-	-	-
21	Meters & House Regulators	8,726	-	-	-	-	-	-	8,726
22	Other Equipment	-	-	-	-	-	-	-	-
23	Distribution Expense - Maintenance	54,824	-	-	-	-	-	-	54,824
24	Consumer Accounts Expense								
25	Meter Reading Expense	25,048	-	-	-	-	-	-	25,048
26	Consumer Expense	30,823	-	-	-	-	-	-	30,823
27	Reserve for Uncollectible Accounts	1,500	-	-	-	-	-	-	1,500
28	Information & Instruction aids	3,058	-	-	-	-	-	-	3,058
29	Consumer Accounts Expense	60,129	-	-	-	-	-	-	60,129
30	Administrative and General Expense								
31	Salaries	8,491	-	-	-	-	-	-	8,491
32	Office Supplies and Expenses	3,608	-	-	-	-	-	-	3,608
33	Outside Services Employed	11,826	-	-	-	-	-	-	11,826
34	Rate Case	-	-	-	-	-	-	-	-
35	Property Insurance	-	-	-	-	-	-	-	-
36	Injuries and Damage Ins.	17,568	-	-	-	-	-	-	17,568
37	Regulatory Commission Expense	15,802	-	-	(1,472)	-	-	-	9,479
38	Miscellaneous General	5,550	-	-	-	-	-	-	5,550
39	Administrative and General Expense	62,843	-	-	(1,472)	-	-	-	56,520
40	Interest Expense - Customer Deposits	367	-	-	-	-	-	-	367
41	Depreciation and Amortization Expense	49,645	-	-	-	-	-	-	49,645
42	Tax Expense - Property	19,639	-	-	-	-	-	-	19,639
43	Tax Expense - Income Taxes	(30,460)	-	-	-	-	6,452	-	(24,008)
44		39,191	-	-	-	-	6,452	-	45,643
45	Total Operating Expenses	\$ 696,345	\$ -	\$ (325,260)	\$ (1,472)	\$ (4,851)	\$ 6,452	\$ -	\$ 371,214
46	Operating Margin Before Interest on L.T. - Debt	\$ (46,868)	\$ -	\$ 118	\$ 475	\$ 4,851	\$ (6,452)	\$ -	\$ (47,976)
47	INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS	\$ 31,112	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (8,019)	\$ 23,093
48	MARGINS (LOSS) AFTER INTEREST EXPENSE	\$ (78,080)	\$ -	\$ 118	\$ 475	\$ 4,851	\$ (6,452)	\$ 8,019	\$ (71,068)
49	NON-OPERATING MARGINS	\$ 110	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 110
50	NET MARGINS (LOSS)	\$ (77,970)	\$ -	\$ 118	\$ 475	\$ 4,851	\$ (6,452)	\$ 8,019	\$ (70,958)



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

DIRECT
TESTIMONY
OF
STEVE IRVINE
PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

NOVEMBER 8, 2005

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**EXECUTIVE SUMMARY
DUNCAN RURAL SERVICES CORPORATION
DOCKET NO. G-02528A-05-0314**

Duncan Rural Services Corporation ("Duncan") is a non-profit corporation that supplies gas service to approximately 750 customers in Greenlee County, Arizona. Duncan's current rates were approved by the Commission in Decision No. 64869 (June 5, 2002).

On April 29, 2005, Duncan submitted an application seeking adjustment to its rates. The application seeks to increase revenue from each customer class. Staff recommends a rate design that balances the goals of equal sharing of a rate increase with equal sharing of system costs. In addition to changes in rates, Staff makes other recommendations that change the rate components. Staff recommends consolidation of the Summer and Winter Commodity Charges. Staff also recommends setting the base cost of gas at \$0.00. In addition to these changes, Staff makes further recommendations related to these matters.

Staff's recommended rate design would have the effect of raising the average winter bill in the 250 cfh & Below class from \$92.28 to \$103.44. The average summer bill in this class would rise from \$29.42 to \$41.72.

Staff's recommendations are as follows:

1. Staff recommends resetting the base cost of gas to zero in the first complete billing period following a decision in this matter, but not sooner than 30 days.
2. Staff recommends that Duncan create and distribute specific customer education materials to explain the resetting of the base cost of gas to zero.
3. Staff recommends that information materials describing the change to the base cost of gas be submitted to the Director of the Utilities Division for review at least two weeks prior to release.
4. Staff recommends that when implementing the zero base cost of gas Duncan calculate the adjustor rate based on the previous 12 months' average total cost of gas.
5. Staff recommends that when implementing the zero base cost of gas the existing \$0.10 band should be referenced against the previous 12 months' total cost of gas rather than the previous twelve months' adjustor rate.
6. Staff recommends that Duncan's PGA balance threshold level remain at \$35,000.
7. Staff recommends that Duncan continue to submit adjustor reports on a monthly basis and that that the reports be filed within 2 months of the month that the report covers.

8. Staff recommends that a Duncan Officer certify, under oath, through an affidavit attached to each adjustor report that all information provided in the adjustor report is true and accurate to the best of his or her information and belief.
9. Staff recommends consolidation of the Summer and Winter Commodity Charges into a single commodity charge that applies all year.
10. Staff recommends approval of rates as proposed in Schedule SPI-1.
11. Staff recommends approval of service charges as proposed in Schedule SPI-1.

1 **INTRODUCTION**

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

3 A. My name is Steve Irvine. I am a Public Utilities Analyst III employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my capacity as a Public Utilities Analyst, I review monthly filings of purchased power
9 adjustors and purchased gas adjustors. My duties also include processing of applications
10 for rate increases, borderline agreements, tariff compliance filings, cost of capital analysis
11 and various applications of other types.
12

13 **Q. Please describe your educational background and professional experience.**

14 A. In 1994, I graduated from Arizona State University, receiving a Bachelor of Science
15 degree in Business Marketing. In 1997, I received a Masters degree in Public
16 Administration from Arizona State University. I have been employed by the Commission
17 since May of 2001. I have worked in the Utilities Division since September of 2002.
18

19 **Q. What is the scope of your testimony in this case?**

20 A. I will address Duncan Rural Services Corporation's ("Duncan", "Company", or
21 "Cooperative") base cost of power, purchased gas adjustor ("PGA") and PGA balance,
22 revenue allocation and rate design, and service charges. Staff witnesses Dan Zivan and
23 Prem Bahl will provide testimony regarding other aspects of Duncan's rate application.

1 **BASE COST OF GAS**

2 **Q. Briefly summarize how Staff determined the base cost of gas.**

3 A. Typically the base cost of gas is determined by dividing the Cooperative's total purchased
4 gas costs from the test year by the total therms sold in the test year. In this case, rather
5 than using this typical method Staff recommends setting the base cost of gas to zero. By
6 setting the base cost of gas to zero, in the future the entire cost of gas will be recovered
7 through the adjustor mechanism.

8
9 **Q. Why does Staff recommend setting the base cost of gas at zero and moving the entire
10 cost of gas to the adjustor mechanism?**

11 A. Staff recommends this method as it makes the cost of gas purchased by Duncan more
12 transparent to the public. Aside from taxes and assessments, currently there are three rate
13 components identified in Duncan's Rate Schedules I, II, and III. The first component is a
14 fixed Monthly Service Charge. The second is a Commodity Charge which is a rate that is
15 multiplied by each therm used. There are different Commodity Charges for winter and
16 summer. The third component is the PGA. The PGA charge is also a rate that is
17 multiplied by each therm used. The cost of the gas purchased for delivery to customers is
18 recovered through a component of the Commodity Charge called the base cost of gas. It is
19 a fixed rate that is charged per therm sold. Should the cost of gas differ from this fixed
20 rate, the amount by which purchased gas costs differ from the base cost of gas is
21 recovered, or alternatively returned, through the PGA. Other costs associated with the
22 delivery of gas such as costs for metering, billing, customer service, personnel, facility
23 costs, etc. are recovered through the Monthly Service Charge and the portion of the
24 Commodity Charge which is not comprised of the base cost of gas. Under this
25 framework, the cost of the gas purchased by Duncan is split between the Commodity
26 Charge and the PGA. Currently, the monthly cost to customers for the gas purchased by

1 Duncan is determined by summing the base cost of gas and the costs reflected in the
2 adjustor. Setting the base cost of gas to zero and moving gas costs entirely to the PGA
3 consolidates purchased gas costs into a single rate component. This process will result in
4 greater price transparency as gas costs can be readily observed in a single pricing
5 component and will not require calculation to determine gas costs. This ability to easily
6 understand the cost of purchased gas is increasingly more important as the cost of gas rises
7 and becomes more volatile. This change would simplify the accounting necessary to be
8 done in regard to the cost of gas in a rate proceeding and tracking of the PGA mechanism.
9

10 **Q. Please discuss how Tables 1 and 2 shown below describe the current pricing method**
11 **as it relates to Staff's proposed pricing method.**

12 A. Table 1 includes the three pricing components mentioned above: Monthly Service
13 Charge, Commodity Charge, and PGA. The right side of Table 1 also shows the kinds of
14 costs included in each of the pricing components. Table 2 also shows the three pricing
15 components and the costs proposed to be included for each of the price components, but
16 with purchased gas costs consolidated into a single pricing component Gas costs would no
17 longer mix with other costs in the Commodity Charge. Note that these tables exclude
18 other charges such as taxes and surcharges.

Table 1

Current Pricing Method

1		
2		
3	Monthly Service Charge	{ Charges related to delivery and service
4		
5	Winter and Summer	{ Charges related to delivery and service combined with
6	Commodity Charge	{ Purchased Gas charges (base cost of gas)
7		
8	Purchased Gas Adjustor	{ Purchased Gas charges (adjustor mechanism)
9		

Table 2

Proposed Pricing Method

10		
11		
12	Monthly Service Charge	{ Charges related to delivery and service
13		
14	Winter and Summer	{ Charges related to delivery and service
15	Commodity Charge	{
16		
17	Purchased Gas Adjustor	{ Total Purchased Gas charges
18		

19 **Q. Are there any drawbacks to setting the base cost of gas at zero and effectively**
20 **combining it with the monthly PGA rate to create a single gas cost component?**

21 A. The only drawback Staff is aware of is that if such a change were to take place, some
22 amount of customer confusion is likely in the short term, as is the case anytime there is a
23 noticeable change to customer bills. However, a well-designed customer education effort
24 to inform customers of this change will help to reduce customer confusion. Staff
25 recommends that if the recommendation to set the base cost of gas at zero is accepted, that
26 Duncan create and distribute specific customer education materials to explain this change.

1 Staff further recommends that such information materials be submitted to the Director of
2 the Utilities Division for review at least two weeks prior to release. This will allow Staff
3 to provide input into the informational materials. Staff also recommends resetting of the
4 base cost of gas to zero in the first complete billing period following a decision in this
5 matter, but not sooner than 30 days. This will allow a period of time for preparation and
6 approval of informational materials.

7
8 **Q. Will any adjustments need to be made to Duncan's current method of determining**
9 **the adjustor rate to accommodate the setting of the base cost of gas to zero?**

10 A. Yes. Currently, Duncan's monthly adjustor rate is calculated using the prior 12 months'
11 average cost of gas. A given month's adjustor rate is determined by calculating the
12 average of the past 12 months' gas costs and then reducing the amount by the base cost of
13 gas. In order to allow the entire cost of gas to be reflected in the adjustor rate, Duncan
14 will need to calculate the adjustor rate in a new manner. In the month in which Duncan
15 resets the base cost of gas set to zero, the adjustor rate will need to be increased so that the
16 adjustor will include costs that were previously recovered in the base cost of gas. In order
17 to increase the adjustor rate, Duncan will need to calculate the adjustor rate based on the
18 previous 12 months' average total cost of gas. Staff recommends that this measure be
19 taken in order to properly shift gas cost from the base cost of gas to the adjustor
20 mechanism.

21
22 **Q. Please discuss the \$0.10 band that currently sets limitations on the adjustor rate and**
23 **describe any considerations that must be given to this band should the base cost be**
24 **reset to zero.**

25 A. A \$0.10 band is in place that limits the extent to which a new adjustor rate can increase or
26 decrease. The band limits any new adjustor rate to no more than \$0.10 difference from

1 any rate in the past 12 months. In the month in which the new adjustor rate is calculated
2 based on the preceding 12 months' average total cost of gas, the new rate may well exceed
3 \$0.10 difference from any of the preceding twelve months' adjustor rates. In order for the
4 new adjustor rate to allow the total cost of gas to be collected through the adjustor, the
5 existing \$0.10 band should be referenced against the previous 12 months' total cost of gas
6 rather than the previous 12 months' adjustor rate. This will likely cause a marked increase
7 in the adjustor rate, but the increase will be offset by a proportional decrease that occurs in
8 the commodity charges from reducing the base cost of gas to zero. In the 13th month
9 following a decision in this matter the \$0.10 band should be referenced against the prior
10 12 months' PGA rates as the total cost of gas will be reflected in the prior 12 months'
11 PGA rates.

12
13 **Q. Has Staff recommended setting the base cost of gas at \$0.00 previously?**

14 A. Yes. Staff has made the same recommendation recently in a rate proceeding for
15 Southwest Gas (G-01551A-04-0876).

16
17 **Q. What is Staff's recommendation for Duncan's base cost of gas?**

18 A. Staff recommends that the base cost of gas be set at \$0.00 per therm.

19
20 **PURCHASED GAS ADJUSTOR AND BALANCE**

21 **Q. Has use of the PGA mechanism maintained a reasonable PGA balance?**

22 A. Yes, in the recent past it has. Decision No. 61225 in December 1998 set a PGA balance
23 threshold of \$35,000 for Duncan. The threshold requires that Duncan either seek a
24 surcharge or surcredit upon reaching a \$35,000 balance, or alternatively seek a waiver
25 from a surcharge or surcredit. Since January of 2003, Duncan's PGA balance has been
26 within the \$35,000 threshold. Prior to that, Duncan's December 2002 balance was

1 \$38,990 in overcollection. On September 30, 2005, Duncan filed an application for a
2 surcharge. Duncan's ending August balance was \$22,000 undercollected. While the
3 August ending balance is within the threshold, Duncan cites in its application that it
4 expects an undercollection of \$192,000 by February of 2006 as a result of anticipated high
5 winter costs and not having hedged gas for the winter. The surcharge application is being
6 processed as a separate matter (Docket No. G-02528A-05-0687).

7
8 **Q. Does Staff have any other recommendations regarding the PGA?**

9 A. Yes. Decision No. 61225 ordered Duncan to file monthly PGA reports. Decision No.
10 61225 also ordered that monthly PGA reports be filed within 2 months of the month that
11 the report covers. For example, the report for January 2006 should be filed by the last day
12 of March 2006. Staff recommends that Duncan continue to submit adjustor reports on a
13 monthly basis and that the reports be filed within 2 months after the month that the report
14 covers.

15
16 **Q. Does Staff have any other recommendations regarding the PGA?**

17 A. Yes. Staff recommends that a Duncan Officer certify, under oath, through an affidavit
18 attached to each adjustor report, that all information provided in the adjustor report is true
19 and accurate to the best of his or her information and belief. Staff has made this
20 recommendation in other rate cases. Increased accountability for PGA reports is
21 appropriate as gas costs are rising. Staff notes that the reports are currently signed by
22 Duncan's C.E.O., but the signature does not speak to the accuracy of the reports.

23

1 **PGA THRESHOLD**

2 **Q. Has Staff given consideration to the possibility of making a change to the \$35,000**
3 **threshold set in Decision No. 61225?**

4 A. Yes.

5
6 **Q. What objectives does Staff consider when evaluating the level of a bank balance**
7 **threshold?**

8 A. There are many factors to be considered in setting a threshold level. A threshold set too
9 high may allow a company to maintain an excessive overcollection or allow an
10 undercollection to develop to a level that later necessitates a high surcharge. A threshold
11 set too low may require a company to file a burdensome number of surcharge or surcredit
12 applications, or alternatively petition many waivers from such filings. In setting a
13 threshold one must balance these and other factors.

14
15 **Q. Can a company file an application for a surcredit or surcharge prior to reaching an**
16 **established bank balance threshold?**

17 A. Yes. Companies are not prohibited from filing for a surcharge or surcredit prior to
18 reaching a balance threshold.

19
20 **Q. What methods or tools might one use to evaluate the appropriateness of a bank**
21 **balance threshold level?**

22 A. When considering the severity of a given bank balance, or appropriateness of a given
23 threshold level, Staff has relied on a formula which frames a bank balance level or
24 threshold, in a meaningful context. Consider Company X whose threshold, or
25 alternatively current balance level, is \$67,000. The number \$67,000 is meaningless to the
26 observer until it is placed in context of the size of the utility and controlled for other

1 factors such as the ratio of residential customers to other customer classes. A balance of
2 \$67,000 may be small to a company such as Arizona Public Service (“APS”) but large to a
3 small cooperative. Similarly, a threshold level of \$67,000 may be small to APS but large
4 to a small cooperative. Additionally, a \$67,000 bank balance or balance threshold may be
5 large for a small cooperative whose therms are sold predominantly to residential
6 customers, but appropriate for a cooperative whose therms are sold predominately to an
7 industrial customer. The formula Staff has employed when considering thresholds and
8 bank balance levels first multiplies a given bank balance level, or balance threshold level
9 by the ratio of residential therm sales to total therm sales. This yields the portion of the
10 balance that is attributable to the residential class. This number is then divided by the
11 average number of residential customers yielding the ratio referred to as balance per
12 residential customer. While portions of an existing PGA bank balance are not formally
13 ascribed to any given customer class or customer, the balance per residential customer
14 ratio frames a given bank balance level or balance threshold in a ratio which is intuitive to
15 the observer. Should Company X’s bank balance referenced previously as \$67,000 be
16 \$2.00 per residential customer, one can reason that a \$67,000 bank balance does not call
17 for remediation through a surcharge. Furthermore, one could also reason that a threshold
18 set at the \$67,000 level may be too low. The balance per residential customer ratio also
19 allows direct comparisons to be made between small and large companies and controls for
20 factors such as varying customer mix.

21
22 **Q. Given that Duncan’s current bank balance threshold level is \$35,000, what is the**
23 **balance per residential customer at that level?**

24 **A. Staff calculates that at \$35,000 Duncan’s balance per residential customer is \$31.92.**
25

1 **Q. How does this compare to other utilities who have established thresholds?**

2 A. Duncan's threshold balance per residential customer is high compared to other gas
3 utilities. Duncan's threshold per residential customer being higher than others may be a
4 result of other utilities' customer base having grown since setting of their thresholds and
5 Duncan's customer base having reduced somewhat in the same period of time.

6
7 **Q. What threshold level does Staff recommend for Duncan?**

8 A. Given that Duncan's customer base has remained relatively stable, Staff recommends that
9 Duncan's PGA balance threshold level remain at \$35,000.

10

11 **REVENUE ALLOCATION AND RATE DESIGN**

12 **Q. Before describing Staff's proposal for Revenue Allocation and Rate Design, please**
13 **discuss how Duncan's customer classes differ from other Arizona utilities.**

14 A. Typically, the rate classes of other utilities describe the kinds of users in the rate classes.
15 Examples of more typical rate classes are Residential, Commercial, Irrigation, and
16 Industrial. Duncan is unusual in that each rate class is determined by the potential volume
17 per hour of the gas service delivered. For instance, Rate Schedule 1 – 250 cfh & Below
18 consists of customers of meter sizes of 250 cubic feet per hour and below. Customers in
19 this rate class could be either residential or commercial customers so long as their meter
20 size is of 250 cfh or less. For this reason, general descriptions of the customers in each
21 class are included in Table 3 below.

22

Table 3

Class	Description*	Approximate No. of customers**
Rate Schedule 1 – 250 cfh & Below	Residential and Commercial	691 Residential 47 Commercial
Rate Schedule 2 – Above 250 cfh to 425 cfh	Irrigation and Commercial	18 Irrigation 1 Commercial
Rate Schedule 3 – Above 425 cfh to 1,000 cfh	Commercial	2 Commercial

*Descriptions of users in each category are not formal, but general descriptions of the customers.

**These figures are an approximation provided by the Company.

Q. What are Staff's underlying objectives in its recommended revenue allocation and rate design?

A. Many factors are considered and balanced when performing revenue allocation. Equalization of contribution to the system rate of return is generally an objective in revenue allocation and rate design. Staff also gave consideration to other factors such as rate shock, gradualism in change, customer class price sensitivity, historic prices, and pricing simplicity. In light of the large increases needed and the rising cost of gas, Staff gave greater consideration to equal sharing of needed price increases among customer classes than to each class's contribution to system rate of return. Had Staff's revenue allocation emphasized equalization of rate of return for each class over equal sharing of rate increase, larger changes from present to new rates would have occurred for those rate classes (Rate Schedule 1 and 3) that currently contribute less than system rate of return.

1 **Q. How did Staff calculate the rates of return that would be contributed by each class**
2 **given Staff's proposed revenue allocation?**

3 A. To calculate rates of return contributed by each class given Staff's proposed revenue
4 allocation, Staff used the formulas from Worksheets G1 and G2 of Staff's cost of service
5 study. Worksheets G1 and G2 of the cost of service study calculate, among other things,
6 rates of return on revenue and a Return Index for each rate class. To calculate rates of
7 return given Staff's proposed revenue allocation, Staff's proposed revenue increases for
8 each class were entered in the Operating Revenues line of Schedule G2 in Staff's cost of
9 service study. Staff's Schedule G2, which includes Staff's proposed revenue allocation, is
10 shown in Exhibit SPI-3.

11
12 **Q. Please explain the Return Index mentioned previously.**

13 A. The Return Index that appears in Worksheets G1 and G2 of Staff's cost of service study is
14 a ratio that indicates whether the rate of return on revenue contributed by a given class is
15 above, equal to, or below the system rate of return on revenue. The ratio is determined by
16 dividing the revenue contributed by a given class by the revenue needed for that class to
17 have a rate of return equal to that contributed by each of the other classes. A Return Index
18 above 1.00 indicates that a class contributes more than the system rate of return.
19 Alternatively, a Return Index below 1.00 indicates that a class contributes less than the
20 system rate of return.

21
22 **Q. Please describe Duncan's proposed revenue allocation.**

23 A. The company has proposed equal increases in the commodity based component of rates.
24 Currently, each of the three rate classes has a Winter Commodity Rate of \$0.80 per therm.
25 Duncan proposes that this rate increase to \$1.25450 for each customer class. Each class
26 has a Summer Commodity Rate of \$0.51405 per therm. Duncan proposes that this rate

1 increase to \$0.80580 for each customer class. Duncan has also proposed equally
2 proportional increases to the Monthly Service Charge of each class. In total, Duncan's
3 proposed rate design is aimed at equal sharing of the revenue increase. While equal
4 sharing of revenues appears to be Duncan's prime consideration in rate design and
5 revenue allocation, based on Duncan's cost of service study, Duncan's rate design also has
6 the effect of making each class's rate of return more equal to the system rate of return.
7

8 **Q. Does Staff's revenue allocation differ from Duncan's?**

9 A. Yes. Some differences exist that result from systematic differences in rate design and the
10 cost of service studies. First, Staff's cost of service study differs from that of Duncan
11 resulting in differing return indices. Differences in the cost of service studies are
12 described in the testimony of Staff witness Prem Bahl. Second, Staff is proposing that the
13 base cost of gas be set to zero and that all future gas costs flow through the adjustor
14 mechanism. This has the effect of changing the revenue requirements shown in the cost of
15 service study as revenues meant to recover costs for the base cost of gas are no longer
16 needed in the revenue requirement. For this reason, Duncan has proposed a higher
17 revenue requirement than Staff.
18

19 **Q. Please describe Staff's proposed revenue allocation.**

20 A. Like Duncan's, Staff's revenue allocation pursues equal sharing of the costs associated
21 with an increased revenue requirement; however, Staff does not propose exactly equal
22 increases for each rate class. As discussed previously, these increases appear in the form
23 of revenue reductions for each class as Staff has proposed that gas costs formerly included
24 in each class's revenue requirements be collected through the adjustor mechanism. Staff
25 recommends a revenue reduction for the 250 cfh & Below class of 22.94 percent, a

1 revenue reduction for the Above 250 cfh to 425 cfh class of 41.05 percent, and a revenue
2 reduction for the Above 425 cfh to 1,000 cfh class of 21.55 percent.

3
4 **Q. Does Staff's proposal for revenue allocation give consideration to the return indices**
5 **of each of the rate classes?**

6 A. Staff did give consideration to the return indices of each of the rate classes when
7 determining revenue allocation. While equalization of the return indices of each of the
8 rate classes is generally desirable, Staff's primary goal was not equalizing the return
9 indices. As discussed previously, Duncan has filed an application seeking a \$0.60 per
10 therm surcharge in anticipation of high winter gas costs. Gas costs have not only been
11 rising recently but have also responded to the effects of hurricane Katrina. This problem
12 is exacerbated by Duncan's lack of gas hedging for the winter. While the Commission has
13 not yet issued a decision on Duncan's surcharge application, rate increases to address the
14 new revenue requirement coupled with increasing gas costs will have a significant effect
15 on customer bills. Regardless of the Commission's decision in the surcharge application,
16 at least some portion of higher gas costs will pass on through Duncan's PGA rolling
17 average. In light of these new costs, efforts to reallocate revenues among classes in order
18 to equalize contribution to revenue requirement would have the effect of further
19 significantly increasing bills of customers in rate classes that currently contribute less than
20 the system average rate of return. For this reason, Staff's recommended revenue
21 allocation considers equal sharing of new costs, before considering equalization of return
22 indices.

23
24 **Q. What is the effect of Staff's recommended revenue allocation on the return indices?**

25 A. Staff's recommended revenue allocation would decrease the Return Index of the 250 cfh
26 & Below class from 0.74 to 0.34. While this change moves the class further away from

1 equal contribution to rate of return, the class will still collect revenue in excess of
2 expenses. The Return Index of the Above 250 cfh to 425 cfh class increases from 4.12 to
3 9.03. The Return Index of the Above 425 cfh to 1,000 cfh class decreases from 0.61 to
4 0.15. One should note the current return indices referenced here are based on Staff's cost
5 of service study rather than Duncan's. It should also be noted that while in each of these
6 rate classes the return indices move further from equal rate of return, each rate class's rate
7 of return remains positive. Each rate class continues to collect revenues in excess of
8 expenses.

9
10 **Q. Please describe Staff's proposed rate design generally.**

11 A. A summary of Staff's proposed rate design is provided in Schedule SPI-1. Duncan's
12 present rate design is based on a Monthly Service Charge and Summer and Winter
13 Commodity Charges. Staff accepts the Cooperative's proposed Monthly Service Charges.
14 Equivalent increases in the Monthly Service Charges were approved in Duncan Valley
15 Electric Cooperative's first three rate classes in its most recent rate case. Duncan
16 recommends that equal increases be made to the Summer and Winter Commodity Charges
17 of each rate class. Staff agrees with the concept of equivalent increases to the commodity
18 component of each rate class.

19
20 **Q. Does Staff recommend any changes to the structure of Duncan's rate classes?**

21 A. Yes. Staff recommends consolidation of the Summer and Winter Commodity Charges
22 into a single commodity charge that applies all year. Costs recovered by the commodity
23 charges, above the base cost of gas, do not change seasonally. There is no cost-based
24 rationale for having different commodity charges for the summer and winter season.

25

1 **Q. Please describe Staff's proposed rate design for the 250 cfh & Below class and its**
2 **effect on the class.**

3 A. Staff finds the Cooperative's proposed monthly customer charge of \$20.00 to be
4 reasonable. Staff recommends that the Commodity Charge be set at \$0.52 per therm.
5 Based on average monthly usage of 76 therms in winter, a customer in this class would
6 pay \$103.44, an increase of 12.09 percent, or \$11.16. Based on average monthly usage of
7 20 therms in summer, a customer would pay \$41.72, an increase of 41.77 percent, or
8 \$12.29. These bill calculations include the Monthly Minimum Charge, Commodity
9 Charge, and an estimated PGA rate. Taxes, assessments, surcharges, and surcredits are
10 not included in the calculations. While an increase of 41.77 percent appears to be a large
11 increase, this increase occurs in summer when average bills for this class are lower than
12 winter bills. Effects of rate changes on customer bills over a range of use levels for each
13 of the rate classes are shown in Schedule SPI-2.

14
15 **Q. Please describe Staff's proposed rate design for the Above 250 cfh to 425 cfh class**
16 **and its effect on the class.**

17 A. Staff finds the Cooperative's proposed monthly customer charge of \$30.00 to be
18 reasonable. Staff recommends that the Commodity Charge be set at \$0.42 per therm.
19 Based on average monthly usage of 262 therms in winter, a customer in this class would
20 pay \$288.99, an increase of 0.47 percent, or \$1.36. Based on average monthly usage of
21 997 therms in summer, a customer would pay \$1,014.93, an increase of 36.12 percent, or
22 \$269.33. These bill calculations include the Monthly Minimum Charge, Commodity
23 Charge, and an estimated PGA rate. Taxes, assessments, surcharges, and surcredits are
24 not included in the calculations. Staff would endeavor to reduce the increase to this class
25 even further, but such efforts would further add to the large increases experiences by other
26 classes. Proportionally, increases to this class are smaller than those of other classes as the

1 class already contributes more than its share of rate of return. Effects of rate changes on
2 customer bills over a range of use levels for each of the rate classes are shown in Schedule
3 SPI-2.

4
5 **Q. Please describe Staff's proposed rate design for the Above 425 cfh to 1,000 cfh class**
6 **and its effect on the class.**

7 A. Staff finds the Cooperative's proposed monthly customer charge of \$40.00 to be
8 reasonable. Staff recommends that the Commodity Charge be set at \$0.74 per therm.
9 Based on average monthly usage of 1,430 therms in winter, a customer in this class would
10 pay \$1,915.57, an increase of 29.80 percent, or \$439.84. Based on average monthly usage
11 of 128 therms in summer, a customer would pay \$207.88, an increase of 69.28 percent, or
12 \$85.08. These bill calculations include the Monthly Minimum Charge, Commodity
13 Charge, and an estimated PGA rate. Taxes, assessments, surcharges, and surcredits are
14 not included in the calculations. While a percentage increase of 69.28 is remarkably high,
15 this increase occurs in summer when average bills are nearly one-tenth that of winter bills.
16 One should also note that these summer bills are presently even smaller than either the
17 average summer or winter bills in the Above 250 cfh to 425 cfh class. Furthermore,
18 Staff's proposed rate design results in a decrease of the Return Index of this class and
19 results in a significant increase in the Return Index of the Above 250 cfh to 425 cfh class.
20 Effects of rate changes on customer bills over a range of use levels for each of the rate
21 classes are shown in Schedule SPI-2.

22
23 **SERVICE CHARGES**

24 **Q. What are Staff's recommendations regarding service charges?**

25 A. Staff recommends that the services charges proposed by Duncan be approved. These
26 service related charges are shown in Schedule SPI-1.

1 **Q. Please discuss Duncan's proposal for service charges.**

2 A. Duncan proposes that service charges remain the same with the exception of Interest Rate
3 on Customer Deposits and Late/Deferred Payment. Duncan recommends that the interest
4 rate on Customer Deposits be changed from 3 percent to a variable rate which is based on
5 the Three Month Non-Financial Commercial Paper Rate ("NTMCP") as published by the
6 Federal Reserve. While a variable interest rate is applied to deposits for some electric
7 utilities in Arizona, all other natural gas utilities in Arizona currently have a flat interest
8 rate of 6 percent and none currently use a variable rate. Staff recommends that Duncan's
9 interest rate on deposits be increased from 3 percent to 6 percent in order to make it
10 consistent with other Arizona gas utilities, but given Duncan's current financial condition
11 the Commission could also consider maintaining the rate at its current level of 3 percent.
12

13 **Q. What is Staff's recommendation regarding Late/Deferred Payment?**

14 A. Duncan proposes that the rate for Late/Deferred Payment (per month) be changed from
15 0.0 percent to 1.5 percent. Staff recommends that this rate be approved. The fee would
16 provide an incentive for timely payment and has been approved for other Arizona gas
17 utilities.
18

19 **SUMMARY OF STAFF RECOMMENDATIONS**

20 **Q. Please provide a brief summary of Staff's recommendations.**

21 A. Staff's recommendations are as follows:

- 22
- 23 1. Staff recommends resetting the base cost of gas to zero in the first complete billing
24 period following a decision in this matter, but not sooner than 30 days.
 - 25 2. Staff recommends that Duncan create and distribute specific customer education
26 materials to explain the resetting of the base cost of gas to zero.

- 1 3. Staff recommends that informational materials describing the change to the base
2 cost of gas be submitted to the Director of the Utilities Division for review at least
3 two weeks prior to release.
- 4 4. Staff recommends that when implementing the zero base cost of gas, Duncan
5 calculate the adjustor rate based on the previous 12 months' average total cost of
6 gas and not reduce this number by the amount of the base cost of gas as it has done
7 in the past.
- 8 5. Staff recommends that when implementing the zero base cost of gas the existing
9 \$0.10 band should be referenced against the previous 12 months' total cost of gas.
- 10 6. Staff recommends that Duncan's PGA balance threshold level remain at \$35,000.
- 11 7. Staff recommends that Duncan continue to submit adjustor reports on a monthly
12 basis and that the reports be filed within 2 months of the month that the report
13 covers.
- 14 8. Staff recommends that a Duncan Officer certify, under oath, through an affidavit
15 attached to each adjustor report, that all information provided in the adjustor report
16 is true and accurate to the best of his or her information and belief.
- 17 9. Staff recommends consolidation of the Summer and Winter Commodity Charges
18 into a single commodity charge that applies all year.
- 19 10. Staff recommends approval of rates as shown on page 1 of Schedule SPI-1.
- 20 11. Staff recommends approval of service charges as shown on page 1 of Schedule
21 SPI-1.

22
23 **Q. Does this conclude your direct testimony?**

24 **A. Yes, it does.**

Rate Design
Duncan Rural Services Corp.
Docket No. G-02528A-05-0314
Test Year Ended Dec. 31, 2004

RATE DESIGN

	Company		Staff		
	Present rates	Proposed Rates	% change	Proposed Rates	% change
Monthly Minimum Charge					
<250	\$15.00	\$20.00	33%	\$20.00	33.33%
250<425	\$22.50	\$30.00	33%	\$30.00	33.33%
425<1000	\$30.00	\$40.00	33%	\$40.00	33.33%
Energy (Commodity) Rate - Per Therm					
<250					
winter	\$0.80000	\$1.25405	57%	\$0.52480	-34.40%
summer	\$0.51405	\$0.80580	57%	\$0.52480	2.09%
250<425					
winter	\$0.80000	\$1.25405	57%	\$0.42080	-47.40%
summer	\$0.51405	\$0.80580	57%	\$0.42080	-18.14%
425<1000					
winter	\$0.80000	\$1.25405	57%	\$0.74480	-6.90%
summer	\$0.51405	\$0.80580	57%	\$0.74480	44.89%
Service Related Charges					
Establishment of Service - Regular Hours	\$35.00	\$35.00	0.00%	\$35.00	0.00%
Establishment of Service - After Hours	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Reconnect/Re-establishment of Service - Regular Hour	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Reconnect/Re-establishment of Service - After Hour	\$75.00	\$75.00	0.00%	\$75.00	0.00%
After Hours Service Call*	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Meter Re-read (No charge for Read error)	\$30.00	\$30.00	0.00%	\$30.00	0.00%
Meter Test Fee	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Insufficient Funds Check	\$20.00	\$20.00	0.00%	\$20.00	0.00%
Interest on Consumer Deposits	3.00%	Variable**		6.00%	
Late/Deferred Payment (Per Month)	0.00%	1.50%		1.50%	

*One hour minimum
**Based on Three Month Non-Financial
Federal Reserve Commercial Paper Rate

**TYPICAL BILL ANALYSIS
 BASED ON AVERAGE THERM CONSUMPTION**

Company Proposed

	Avg Therms Used Per Bill	Present Rates*	Proposed Rates	Dollar Increase	Percent Increase
250 cfh & Below	76	\$92.28	\$115.86	\$ 23.58	25.55%
250 cfh & Below	20	\$29.42	\$36.03	\$ 6.61	22.45%
Above 250 cfh to 425 cfh	262	\$287.63	\$358.87	\$ 71.24	24.77%
Above 250 cfh to 425 cfh	997	\$745.60	\$833.64	\$ 88.04	11.81%
Above 425 cfh to 1,000 cfh	1,430	\$1,475.73	\$1,833.29	\$ 357.56	24.23%
Above 425 cfh to 1,000 cfh	128	\$122.81	\$143.14	\$ 20.34	16.56%

Staff Proposed

	Avg Therms Used Per Bill	Present Rates*	Proposed Rates*	Dollar Increase	Percent Increase
250 cfh & Below	76	\$92.28	\$103.44	\$11.16	12.09%
250 cfh & Below	20	\$29.42	\$41.72	\$12.29	41.77%
Above 250 cfh to 425 cfh	262	\$287.63	\$288.99	\$ 1.36	0.47%
Above 250 cfh to 425 cfh	997	\$745.60	\$1,014.93	\$269.33	36.12%
Above 425 cfh to 1,000 cfh	1,430	\$1,475.73	\$1,915.57	\$439.84	29.80%
Above 425 cfh to 1,000 cfh	128	\$122.81	\$207.88	\$85.08	69.28%

*Note that Staff has proposed a single annual rate. This column represents bills given average seasonal usage.

BASED ON VARIOUS THERM CONSUMPTION LEVELS

250 cfh & Below

Therm Consumption	Company Winter			Company Summer			Staff Year			
	Winter Present Rates	Winter Proposed Rates	% Change	Summer Present Rates	Summer Proposed Rates	% Change	Proposed Rates	% Change	% Change	
									over winter	over summer
0	\$ 15.00	\$ 20.00	33.33%	\$ 15.00	\$ 20.00	33.33%	\$20.00	33.33%	33.33%	
25	\$ 40.28	\$ 51.35	27.50%	\$ 33.13	\$ 40.15	21.19%	\$47.29	17.42%	42.76%	
50	\$ 65.55	\$ 82.70	26.17%	\$ 51.25	\$ 60.29	17.63%	\$74.58	13.77%	45.51%	
60	\$ 75.66	\$ 95.24	25.88%	\$ 58.50	\$ 68.35	16.83%	\$85.50	13.00%	46.14%	
70	\$ 85.77	\$ 107.78	25.67%	\$ 65.75	\$ 76.41	16.20%	\$96.41	12.41%	46.62%	
75	\$ 90.83	\$ 114.05	25.58%	\$ 69.38	\$ 80.44	15.94%	\$101.87	12.16%	46.83%	
80	\$ 95.88	\$ 120.32	25.49%	\$ 73.00	\$ 84.46	15.70%	\$107.33	11.94%	47.01%	
90	\$ 105.99	\$ 132.86	25.36%	\$ 80.25	\$ 92.52	15.29%	\$118.24	11.56%	47.33%	
100	\$ 116.10	\$ 145.40	25.24%	\$ 87.51	\$ 100.58	14.94%	\$129.16	11.25%	47.60%	
125	\$ 141.38	\$ 176.76	25.03%	\$ 105.63	\$ 120.73	14.29%	\$156.45	10.66%	48.11%	
150	\$ 166.65	\$ 208.11	24.88%	\$ 123.76	\$ 140.87	13.83%	\$183.74	10.25%	48.47%	
175	\$ 191.93	\$ 239.46	24.77%	\$ 141.88	\$ 161.02	13.48%	\$211.03	9.95%	48.73%	
200	\$ 217.20	\$ 270.81	24.68%	\$ 160.01	\$ 181.16	13.22%	\$238.32	9.72%	48.94%	
250	\$ 267.75	\$ 333.51	24.56%	\$ 196.26	\$ 221.45	12.83%	\$292.90	9.39%	49.24%	
300	\$ 318.30	\$ 396.21	24.48%	\$ 232.52	\$ 261.74	12.57%	\$347.48	9.17%	49.44%	
350	\$ 368.85	\$ 458.92	24.42%	\$ 268.77	\$ 302.03	12.38%	\$402.05	9.00%	49.59%	
400	\$ 419.40	\$ 521.62	24.37%	\$ 305.02	\$ 342.32	12.23%	\$456.63	8.88%	49.71%	
450	\$ 469.95	\$ 584.32	24.34%	\$ 341.27	\$ 382.61	12.11%	\$511.21	8.78%	49.80%	
500	\$ 520.50	\$ 647.02	24.31%	\$ 377.53	\$ 422.90	12.02%	\$565.79	8.70%	49.87%	
750	\$ 773.25	\$ 960.54	24.22%	\$ 558.79	\$ 624.35	11.73%	\$838.69	8.46%	50.09%	
1000	\$ 1,026.00	\$ 1,274.05	24.18%	\$ 740.05	\$ 825.80	11.59%	\$1,111.58	8.34%	50.20%	

NOTE:

Fuel Adjustor Included in Present Rates	\$0.2110
Fuel Adjustor Included in Staff Proposed Rates	\$0.5668
Fuel Adjustor Included in Company Proposed Rates	\$0.0000

BASED ON VARIOUS THERM CONSUMPTION LEVELS
 Above 250 cfh to 425 cfh

Therm Consumption	Company Winter			Company Summer			Staff Year			
	Winter Present Rates	Winter Proposed Rates	% Change	Summer Present Rates	Summer Proposed Rates	% Change	Proposed Rates	% Change	% Change	
									over winter	over summer
0	\$ 22.50	\$ 30.00	33.33%	\$ 22.50	\$ 30.00	33.33%	\$30.00	33.33%	33.33%	
25	\$ 47.78	\$ 61.35	28.42%	\$ 40.63	\$ 50.15	23.43%	\$54.69	14.47%	34.62%	
50	\$ 73.05	\$ 92.70	26.90%	\$ 58.75	\$ 70.29	19.64%	\$79.38	8.66%	35.11%	
60	\$ 83.16	\$ 105.24	26.55%	\$ 66.00	\$ 78.35	18.70%	\$89.26	7.33%	35.23%	
70	\$ 93.27	\$ 117.78	26.28%	\$ 73.25	\$ 86.41	17.96%	\$99.13	6.28%	35.33%	
75	\$ 98.33	\$ 124.05	26.17%	\$ 76.88	\$ 90.44	17.63%	\$104.07	5.84%	35.37%	
80	\$ 103.38	\$ 130.32	26.06%	\$ 80.50	\$ 94.46	17.34%	\$109.01	5.44%	35.41%	
90	\$ 113.49	\$ 142.86	25.88%	\$ 87.75	\$ 102.52	16.83%	\$118.88	4.75%	35.47%	
100	\$ 123.60	\$ 155.40	25.73%	\$ 95.01	\$ 110.58	16.39%	\$128.76	4.17%	35.53%	
125	\$ 148.88	\$ 186.76	25.44%	\$ 113.13	\$ 130.73	15.55%	\$153.45	3.07%	35.64%	
150	\$ 174.15	\$ 218.11	25.24%	\$ 131.26	\$ 150.87	14.94%	\$178.14	2.29%	35.72%	
175	\$ 199.43	\$ 249.46	25.09%	\$ 149.38	\$ 171.02	14.48%	\$202.83	1.71%	35.78%	
200	\$ 224.70	\$ 280.81	24.97%	\$ 167.51	\$ 191.16	14.12%	\$227.52	1.25%	35.82%	
250	\$ 275.25	\$ 343.51	24.80%	\$ 203.76	\$ 231.45	13.59%	\$276.90	0.60%	35.89%	
300	\$ 325.80	\$ 406.21	24.68%	\$ 240.02	\$ 271.74	13.22%	\$326.28	0.15%	35.94%	
350	\$ 376.35	\$ 468.92	24.60%	\$ 276.27	\$ 312.03	12.95%	\$375.65	-0.18%	35.97%	
400	\$ 426.90	\$ 531.62	24.53%	\$ 312.52	\$ 352.32	12.74%	\$425.03	-0.44%	36.00%	
450	\$ 477.45	\$ 594.32	24.48%	\$ 348.77	\$ 392.61	12.57%	\$474.41	-0.64%	36.02%	
500	\$ 528.00	\$ 657.02	24.44%	\$ 385.03	\$ 432.90	12.43%	\$523.79	-0.80%	36.04%	
750	\$ 780.75	\$ 970.54	24.31%	\$ 566.29	\$ 634.35	12.02%	\$770.69	-1.29%	36.09%	
1000	\$ 1,033.50	\$ 1,284.05	24.24%	\$ 747.55	\$ 835.80	11.81%	\$1,017.58	-1.54%	36.12%	
1250	\$ 1,286.25	\$ 1,597.56	24.20%	\$ 928.81	\$ 1,037.26	11.68%	\$1,264.48	-1.69%	36.14%	
1500	\$ 1,539.00	\$ 1,911.07	24.18%	\$ 1,110.08	\$ 1,238.71	11.59%	\$1,511.38	-1.79%	36.15%	
1750	\$ 1,791.75	\$ 2,224.59	24.16%	\$ 1,291.34	\$ 1,440.16	11.52%	\$1,758.27	-1.87%	36.16%	
2000	\$ 2,044.50	\$ 2,538.10	24.14%	\$ 1,472.60	\$ 1,641.61	11.48%	\$2,005.17	-1.92%	36.17%	
2500	\$ 2,550.00	\$ 3,165.12	24.12%	\$ 1,835.13	\$ 2,044.51	11.41%	\$2,498.96	-2.00%	36.17%	
3000	\$ 3,055.50	\$ 3,792.15	24.11%	\$ 2,197.65	\$ 2,447.41	11.37%	\$2,992.75	-2.05%	36.18%	
4000	\$ 4,066.50	\$ 5,046.20	24.09%	\$ 2,922.70	\$ 3,253.22	11.31%	\$3,980.34	-2.12%	36.19%	
5000	\$ 5,077.50	\$ 6,300.24	24.08%	\$ 3,647.75	\$ 4,059.02	11.27%	\$4,967.92	-2.16%	36.19%	

NOTE:
 Fuel Adjustor Included in Present Rates \$0.2110
 Fuel Adjustor Included in Staff Proposed Rates \$0.5668
 Fuel Adjustor Included in Company Proposed Rates \$0.0000

BASED ON VARIOUS THERM CONSUMPTION LEVELS
Above 425 cfh to 1,000 cfh

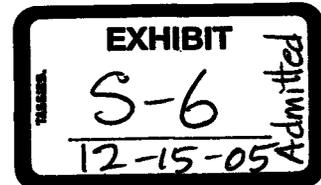
Therm Consumption	Winter Present Rates	Company Winter Proposed Rates	% Change	Summer Present Rates	Company Summer Proposed Rates	% Change	Staff Year Proposed Rates	% Change over winter	% Change over summer
	0	\$ 30.00	\$ 40.00	33.33%	\$ 30.00	\$ 40.00	33.33%	\$40.00	33.33%
10	\$ 40.11	\$ 52.54	30.99%	\$ 37.25	\$ 48.06	29.01%	\$53.12	32.43%	42.59%
20	\$ 50.22	\$ 65.08	29.59%	\$ 44.50	\$ 56.12	26.10%	\$66.23	31.88%	48.83%
50	\$ 80.55	\$ 102.70	27.50%	\$ 66.25	\$ 80.29	21.19%	\$105.58	31.07%	59.36%
100	\$ 131.10	\$ 165.40	26.17%	\$ 102.51	\$ 120.58	17.63%	\$171.16	30.56%	66.98%
150	\$ 181.65	\$ 228.11	25.58%	\$ 138.76	\$ 160.87	15.94%	\$236.74	30.33%	70.61%
200	\$ 232.20	\$ 290.81	25.24%	\$ 175.01	\$ 201.16	14.94%	\$302.32	30.20%	72.74%
250	\$ 282.75	\$ 353.51	25.03%	\$ 211.26	\$ 241.45	14.29%	\$367.90	30.11%	74.14%
300	\$ 333.30	\$ 416.21	24.88%	\$ 247.52	\$ 281.74	13.83%	\$433.48	30.06%	75.13%
350	\$ 383.85	\$ 478.92	24.77%	\$ 283.77	\$ 322.03	13.48%	\$499.05	30.01%	75.87%
400	\$ 434.40	\$ 541.62	24.68%	\$ 320.02	\$ 362.32	13.22%	\$564.63	29.98%	76.44%
450	\$ 484.95	\$ 604.32	24.62%	\$ 356.27	\$ 402.61	13.01%	\$630.21	29.95%	76.89%
500	\$ 535.50	\$ 667.02	24.56%	\$ 392.53	\$ 442.90	12.83%	\$695.79	29.93%	77.26%
750	\$ 788.25	\$ 980.54	24.39%	\$ 573.79	\$ 644.35	12.30%	\$1,023.69	29.87%	78.41%
1000	\$ 1,041.00	\$ 1,294.05	24.31%	\$ 755.05	\$ 845.80	12.02%	\$1,351.58	29.84%	79.01%
1250	\$ 1,293.75	\$ 1,607.56	24.26%	\$ 936.31	\$ 1,047.26	11.85%	\$1,679.48	29.81%	79.37%
1500	\$ 1,546.50	\$ 1,921.07	24.22%	\$ 1,117.58	\$ 1,248.71	11.73%	\$2,007.38	29.80%	79.62%
1750	\$ 1,799.25	\$ 2,234.59	24.20%	\$ 1,298.84	\$ 1,450.16	11.65%	\$2,335.27	29.79%	79.80%
2000	\$ 2,052.00	\$ 2,548.10	24.18%	\$ 1,480.10	\$ 1,651.61	11.59%	\$2,663.17	29.78%	79.93%
2500	\$ 2,557.50	\$ 3,175.12	24.15%	\$ 1,842.63	\$ 2,054.51	11.50%	\$3,318.96	29.77%	80.12%
3000	\$ 3,063.00	\$ 3,802.15	24.13%	\$ 2,205.15	\$ 2,457.41	11.44%	\$3,974.75	29.77%	80.25%
3500	\$ 3,568.50	\$ 4,429.17	24.12%	\$ 2,567.68	\$ 2,860.32	11.40%	\$4,630.55	29.76%	80.34%
4000	\$ 4,074.00	\$ 5,056.20	24.11%	\$ 2,930.20	\$ 3,263.22	11.37%	\$5,286.34	29.76%	80.41%
4500	\$ 4,579.50	\$ 5,683.22	24.10%	\$ 3,292.73	\$ 3,666.12	11.34%	\$5,942.13	29.75%	80.46%
5000	\$ 5,085.00	\$ 6,310.24	24.10%	\$ 3,655.25	\$ 4,069.02	11.32%	\$6,597.92	29.75%	80.51%
5500	\$ 5,590.50	\$ 6,937.27	24.09%	\$ 4,017.78	\$ 4,471.93	11.30%	\$7,253.71	29.75%	80.54%
6000	\$ 6,096.00	\$ 7,564.29	24.09%	\$ 4,380.30	\$ 4,874.83	11.29%	\$7,909.51	29.75%	80.57%

NOTE:

Fuel Adjustor Included in Present Rates	\$0.2110
Fuel Adjustor Included in Staff Proposed Rates	\$0.5668
Fuel Adjustor Included in Company Proposed Rates	\$0.0000

**DUNCAN RURAL SERVICES CORPORATION
 COST OF SERVICE SUMMARY - PROPOSED RATES
 TEST YEAR ENDED DECEMBER 31, 2004**

<u>DESCRIPTION</u>	<u>TOTAL</u>	<u>250cfh & Below</u>	<u>>250 & < 425 cfh</u>	<u>>425 & < 1k cfh</u>
Operating Revenues	477,825	385,400	78,360	14,065
<u>Operating Expenses:</u>				
Purchased Gas	-	-	-	-
Distribution Expense - Operations	154,097	134,924	12,508	6,665
Distribution Expense - Maintenance	54,824	48,107	4,413	2,304
Customer Account Expense	60,129	58,455	1,509	165
Administrative & General Expense	56,520	50,520	4,490	1,510
Depreciation	49,646	44,090	3,809	1,747
Property Taxes	19,639	17,021	1,656	962
Tax Expense - Other (Income, etc.)	12,305	10,999	978	328
Interest Expense -Other	367	357	9	1
Total Operation Expenses	407,524	364,473	29,372	13,682
Operating Income (Loss)	70,301	20,927	48,988	383
Rate Base	758,058	672,374	58,472	27,212
% Return - Proposed Rates	9.27%	3.11%	83.78%	1.41%
Return Index	1.00	0.34	9.03	0.15
Allocated Interest - Long-Term	23,007	20,407	1,775	826



BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
DUNCAN RURAL SERVICES CORPORATION)
FOR A RATE INCREASE)
_____)

DOCKET NO. G-02528A-05-0314

SURREBUTTAL
TESTIMONY
OF
STEVE IRVINE
PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

DECEMBER 5, 2005

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**EXECUTIVE SUMMARY
DUNCAN RURAL SERVICES CORPORATION
DOCKET NO. G-02528A-05-0314**

The surrebuttal testimony of Staff witness Steve Irvine addresses the following issues:

PGA Adjustor Bandwidth – Duncan Rural Services Corporation (“Duncan”) proposes applying the existing \$0.10 PGA Adjustor bandwidth limit on a monthly basis, i.e., allowing \$0.10 variances each month instead of over the course of 12 months. Staff does not support this recommendation. This could result in increased variability in the PGA rate at a time when customer’s bills are rising due to other conditions such as a recently approved surcharge, this rate case, and rising gas costs. Staff recommends approval of a line of credit from Duncan Valley Electric Cooperative to be used exclusively to finance growth of the under-collected PGA balance.

Combination of Summer and Winter Rates – Duncan proposes a higher winter per therm rate than the summer per therm rate. Given that customers will experience higher rates associated with the factors mentioned previously, Staff does not find it prudent to recommend a rate design that has higher costs in winter. Duncan’s design would create an unnecessary cost burden during the winter season when use peaks for many customers. Staff recommends consolidation of the summer and winter commodity charges into a single commodity charge that applies all year, as shown in Staff Exhibit SPI-4.

Uniform Commodity Rates – Duncan proposes uniform Summer and uniform Winter commodity rates for all three customer classes. Staff adopted Duncan’s proposed monthly service charges and subsequently determined the commodity rates giving consideration to Staff’s cost of service study. Given that Staff’s cost of service study indicates a different cost of service for each rate class, Staff recommends distinct commodity rates for each of the three rate classes as contained in SPI-4.

Revenue Annualization Adjustment – Surrebuttal Testimony of Staff witness Dan Zivan retracts an annualization adjustment that had increased test year revenue by \$2,574. However, Staff inadvertently used the unadjusted billing determinants to design the rates in its Direct Testimony. Since Staff’s rate design already reflects the appropriate billing determinants, retraction of the revenue annualization adjustment has no effect on Staff’s rate design (SPI-1 and SPI-4).

Adjusted Rate Design – Two implementation errors occurred when developing the rate design Staff recommended in its Direct Testimony (SPI-1). Staff now recommends the rate design as contained in SPI-4 to correct these errors. The commodity rate in the 250 cfh & Below class has changed from \$0.53480 to \$0.57280 per therm. The commodity rate in the 250 cfh to 425 cfh class has changed from \$0.42080 to \$0.28480. The commodity rate in the 425 cfh to 1000 cfh class has changed from \$0.74480 to \$0.74880.

In summary, Staff continues to advocate adoption of the same fundamental rate structure recommended in its Direct Testimony modified to correct implementation errors. Staff’s recommended rate design is presented in Staff Exhibit SPI-4.

1 **INTRODUCTION**

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

3 A. My name is Steve Irvine. I am a Public Utilities Analyst III employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Did you previously file Direct Testimony in this case?**

8 A. Yes.

9
10 **Q. What matters are addressed in your Surrebuttal Testimony?**

11 A. This surrebuttal testimony addresses comments contained in the rebuttal testimonies of
12 Duncan Rural Services Corporation ("Duncan") witnesses Mr. Jack Shilling and Mr. John
13 V. Wallace regarding the Purchased Gas Adjustor's ("PGA") \$0.10 bandwidth, combining
14 Summer and Winter rates and uniform commodity rates across customer classes. This
15 surrebuttal also addresses the effect on rates from Staff's revocation of its \$2,574 revenue
16 annualization adjustment and submits a new rate design (SPI-4) as a result of
17 implementation errors present in Staff's original rate design (SPI-1).

18
19 **PGA ADJUSTOR \$0.10 BANDWIDTH**

20 **Q. How is Duncan's current PGA adjustor rate calculated?**

21 A. Currently, Duncan's adjustor rate is determined each month by calculating the average of
22 the past 12 months' gas cost and subtracting base cost of gas. Use of this method results
23 in less change in customers' bills from one month to the next than what would occur
24 should rates change each month based on the actual cost of gas. The adjustor rate that this
25 formula yields is further subject to a constraint that reduces the variability in the cost of
26 gas paid by customers. That constraint comes in the form of a \$0.10 bandwidth that limits

1 any new month's PGA rate to no more than a \$0.10 per therm difference from any rate
2 present in the previous 12 months.

3
4 **Q. What is Duncan proposing regarding the \$0.10 bandwidth on the PGA adjustor?**

5 A. Duncan proposes to apply the \$0.10 bandwidth limit on a monthly basis, i.e., allow \$0.10
6 variances each month instead of over the course of 12 months (Shilling Rebuttal at Page
7 8). Duncan's proposal to allow the PGA rate to change by as much as \$0.10 per therm
8 each month has the potential to dramatically increase the variability in the PGA rate.

9
10 **Q. Does Staff agree with Duncan's proposal to change the \$0.10 bandwidth to allow a**
11 **\$0.10 per therm change from one month to the next?**

12 A. No. Several factors exist currently that make such a change untimely: Decision No. 68297
13 (November 14, 2005) approved a \$0.45 per therm surcharge, this rate case contemplates
14 an increase in rates, and gas prices have been volatile and rising in the recent past.
15 Changing the bandwidth implementation method at this time could result in increased
16 burden to Duncan customers. Staff recognizes that a more restrictive bandwidth
17 application can result in a larger under-collected PGA balance and increased financial
18 burden for Duncan. Accordingly, Staff recommends approval of a line of credit from
19 Duncan Valley Electric Cooperative to be ^{used} ~~use~~ exclusively to finance growth of the Duncan
20 under-collected PGA balance. Specifically, Staff recommends a \$70,000 credit line to
21 finance the under-collected PGA balance to the extent that the under-collection increases
22 from the balance at the time of implementation of new rates as ordered in this rate case.
23 This recommendation for a revolving line of credit is discussed in detail in Surrebuttal
24 Testimony of Staff witness Daniel Zivan.

25

1 **UNIFORM SUMMER AND WINTER RATES**

2 **Q. What has Duncan proposed regarding the summer and winter commodity rates?**

3 A. In both Direct and Surrebuttal Testimony, Mr. Wallace proposes a higher winter per therm
4 rate than the summer per therm rate.
5

6 **Q. What are Staff's comments regarding Mr. Wallace's proposal for distinct summer
7 and winter rates?**

8 A. As cited earlier, there are presently several conditions that lend to higher rates for Duncan
9 customers: a recently approved \$0.45 per therm surcharge, an increased revenue
10 requirement contemplated in this rate case, and the rising cost of gas. Duncan's current
11 summer commodity rate currently is \$0.51 per therm and the winter commodity rate is
12 \$0.80 per therm. Given that customers will experience higher rates associated with the
13 factors mentioned previously, Staff does not find it prudent to recommend a rate design
14 that has higher costs in Winter. Duncan's rate design would create an unnecessary cost
15 burden during the Winter season when use peaks for many customers. Staff continues to
16 recommend consolidation of the summer and winter commodity rate into a single
17 commodity rate that applies all year, as shown in Staff Exhibit SPI-1.
18

19 **UNIFORM COMMODITY RATES**

20 **Q. What is Duncan's proposal for the commodity rates for the three customer classes?**

21 A. Duncan proposes uniform summer and uniform winter commodity rates for all three
22 customer classes (Wallace Rebuttal at Page 10). More specifically, Duncan proposes a
23 \$0.73 per therm winter commodity rate for all three rate classes and a \$0.26 per therm the
24 summer commodity rate for all three customer classes.
25

1 **Q. What support does Duncan provide for its proposal for uniform commodity rates**
2 **among the three customer classes?**

3 A. Duncan offers the following statement (Wallace Rebuttal at Page 10).

4
5 Besides the differences in the service line and meter that are recovered in
6 the fixed monthly charge, the other distribution costs to serve the three
7 customer classes are similar. Therefore, DRSC is recommending that the
8 summer and winter rates be equal for all three classes.

9
10 **Q. What does Staff's cost of service study reveal regarding whether Staff's or Duncan's**
11 **rate design more closely matches the cost to serve the three customer classes?**

12 A. Staff's cost of service study indicates that Staff's proposed rate design is closer to the
13 actual cost of service than the rate design proposed by Duncan.

14
15 **Q. What is Staff's recommendation for commodity rates?**

16 A. Staff recommends the same monthly customer charges proposed by Duncan. Staff also
17 recommends all but one of Duncan's proposed service charges. Given these components
18 of the rate design, the commodity rates must be determined to provide the revenue
19 requirement. Since Staff's cost of service study indicates that the three customer classes
20 do not contribute equally to the system rate of return, Staff selected a distinct commodity
21 rate for each of the three rate classes. Accordingly, Staff recommends the commodity
22 rates presented in SPI-4.

23

24 **STAFF'S REVENUE ANNUALIZATION ADJUSTMENT**

25 **Q. How does retraction of Staff's previous recommendation for a revenue annualization**
26 **adjustment of \$2,574 affect Staff's rate design?**

27 A. The Surrebuttal Testimony of Staff witness Dan Zivan retracts an annualization
28 adjustment that had increased test year revenue by \$2,574. Properly reflecting the now

1 retracted annualization adjustment would have required increasing billing determinants.
2 Spreading the revenue requirement over a larger billing determinant base would have
3 resulted in lower rates. However, Staff inadvertently used the unadjusted billing
4 determinants to design the rates in its Direct Testimony. The unadjusted billing
5 determinants should be used with Staff's revised position. Since Staff's rate design
6 already reflects the appropriate billing determinants, retraction of the revenue
7 annualization adjustment has no effect on Staff's rate design (SPI-1 and SPI-4).
8

9 **ADJUSTED RATE DESIGN**

10 **Q. Does Staff continue to recommend the rate design contained in its Direct Testimony**
11 **(SPI-1)?**

12 A. No. Staff discovered two implementation errors in development of its rate design. One
13 error double counted revenues from service related charges. The other error incorrectly
14 derived relative customer class data from the cost of service study. Staff now
15 recommends the rate design contained in SPI-4 to correct the errors.
16

17 **Q. Do the changes in SPI-4 represent a significant change in the structure of Staff's rate**
18 **design?**

19 A. The structure of Staff's revised rate design is unchanged. However, the revenue spread
20 among customer classes changed.
21

22 **Q. Please provide a summary of changes from present rates to Staff's recommended**
23 **rates.**

24 A. The commodity rate in the 250 cubic feet per hour ("cfh") & Below class has changed
25 from \$0.53480 to \$0.57280 per therm. The commodity rate in the 250 cfh to 425 cfh class
26 has changed from \$0.42080 to \$0.28480. The commodity rate in the 425 cfh to 1000 cfh

1 class has changed from \$0.74480 to \$0.74880. Schedules SPI-4 and SPI-5 reflect these
2 adjustments. It should also be noted that SPI-5, Page 1 of 4, now includes typical monthly
3 bills based on an average usage for a whole year in addition to bills based on seasonally
4 averaged winter and summer usage. This line is marked 'Annual'.

5
6 **Q. What are the effects of this change to rates in the 250 cfh & Below class?**

7 A. The "Return Index" for this class decreases from its present level of 0.74 to 0.68. Based
8 on average monthly usage of 44 therms, a customer would pay \$69.70, an increase of
9 24.93 percent, or \$13.91. This bill calculation includes the monthly minimum charge,
10 commodity charge, and an estimated PGA rate. Taxes, assessments, surcharges, and
11 surcredits are not included in the calculations. Effects of rate changes on customer bills
12 over a range of use levels for each of the rate classes are shown in Schedule SPI-5.

13
14 **Q. What are the effects of this change to rates in the 250 cfh to 425 cfh class?**

15 A. The "Return Index" increases from its present level of 4.12 to 5.10. Based on average
16 monthly usage of 741 therms, a customer would pay \$660.62, an increase of 12.81
17 percent, or \$75.00. This bill calculation includes the monthly minimum charge,
18 commodity charge, and an estimated PGA rate. Taxes, assessments, surcharges, and
19 surcredits are not included in the calculations. Effects of rate changes on customer bills
20 over a range of use levels for each of the rate classes are shown in Schedule SPI-5.

21
22 **Q. What are the effects of this change to rates in the in the 425 cfh to 1000 cfh class?**

23 A. The "Return Index" decreases from its present level of 0.61 to 0.19. Based on average
24 monthly usage of 701 therms, a customer would pay \$962.07, an increase of 33.98
25 percent, or \$243.97. This bill calculation includes the monthly minimum charge,
26 commodity charge, and an estimated PGA rate. Taxes, assessments, surcharges, and

1 surcredits are not included in the calculations. Effects of rate changes on customer bills
2 over a range of use levels for each of the rate classes are shown in Schedule SPI-5.

3
4 **SUMMARY OF STAFF RECOMMENDATIONS**

5 **Q. Please provide a brief summary of Staff's recommendations.**

6 A. Staff's recommendations are as follows:

7
8 1. Staff recommends approval of a \$70,000 credit line to finance the under-collected
9 PGA balance to the extent that the under-collection increases from the balance at
10 the time of implementation of new rates as ordered in this rate case.

11
12 2. Staff recommends approval of rates shown on page 1 of Schedule SPI-1.

13
14 **Q. Does this conclude your Surrebuttal Testimony?**

15 A. Yes, it does.

Rate Design
Duncan Rural Services Corp.
Docket No. G-02528A-05-0314
Test Year Ended Dec. 31, 2004

RATE DESIGN

Present rates	Company		Staff	
	Proposed Rates	% change	Proposed Rates	% change

Monthly Minimum Charge	Present rates	Company Proposed Rates	Company % change	Staff Proposed Rates	Staff % change
<250	\$15.00	\$20.00	33.33%	\$20.00	33.33%
250<425	\$22.50	\$30.00	33.33%	\$30.00	33.33%
425<1000	\$30.00	\$40.00	33.33%	\$40.00	33.33%

Energy (Commodity) Rate - Per Therm

Category	Present rates	Company Proposed Rates	Company % change	Staff Proposed Rates	Staff % change
<u><250</u>					
winter	\$0.80000	\$0.73000	-8.75%	\$0.57280	-28.40%
summer	\$0.51405	\$0.26000	-49.42%	\$0.57280	11.43%
<u>250<425</u>					
winter	\$0.80000	\$0.73000	-8.75%	\$0.28480	-64.40%
summer	\$0.51405	\$0.26000	-49.42%	\$0.28480	-44.60%
<u>425<1000</u>					
winter	\$0.80000	\$0.73000	-8.75%	\$0.74880	-6.40%
summer	\$0.51405	\$0.26000	-49.42%	\$0.74880	45.67%

Service Related Charges

Establishment of Service - Regular Hour	\$35.00	\$35.00	0.00%	\$35.00	0.00%
Establishment of Service - After Hour	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Reconnect/Re-establishment of Service - Regular Hour	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Reconnect/Re-establishment of Service - After Hour	\$75.00	\$75.00	0.00%	\$75.00	0.00%
After Hours Service Call*	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Meter Re-read (No charge for Read error)	\$30.00	\$30.00	0.00%	\$30.00	0.00%
Meter Test Fee	\$50.00	\$50.00	0.00%	\$50.00	0.00%
Insufficient Funds Check	\$20.00	\$20.00	0.00%	\$20.00	0.00%
Interest on Consumer Deposits	3.00%	**Variable		6.00%	
Late/Deferred Payment (Per Month)	0.00%	1.50%		1.50%	

*One hour minimum

**Based on Three Month Non-Financial Federal Reserve Commercial Paper Rate

Typical Bill Analysis
Duncan Rural Services Corp.
Docket No. G-02528A-05-0314
Test Year Ended Dec. 31, 2004

**TYPICAL BILL ANALYSIS
BASED ON AVERAGE THERM CONSUMPTION**

Company Proposed

	Avg Therms Used Per Bill	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
250 cfh & Below	76	\$92.28	\$119.13	\$ 26.85	29.09%
250 cfh & Below	20	\$29.42	\$36.45	\$ 7.02	23.87%
250 cfh & Below	44	\$55.79	\$71.13	\$ 15.34	27.49%
Above 250 cfh to 425 cfh	262	\$287.63	\$370.08	\$ 82.45	28.66%
Above 250 cfh to 425 cfh	997	\$745.60	\$854.56	\$ 108.96	14.61%
Above 250 cfh to 425 cfh	741	\$585.61	\$685.31	\$ 99.70	17.02%
Above 425 cfh to 1,000 cfh	1,430	\$1,475.73	\$1,894.40	\$ 418.67	28.37%
Above 425 cfh to 1,000 cfh	128	\$122.81	\$145.83	\$ 23.02	18.75%
Above 425 cfh to 1,000 cfh	701	\$718.09	\$915.20	\$ 197.11	27.45%

Staff Proposed

	Avg Therms Used Per Bill	Present Rates	Proposed Rates*	Dollar Increase	Percent Increase
250 cfh & Below	76	\$92.28	\$107.11	\$14.83	16.07%
250 cfh & Below	20	\$29.42	\$42.67	\$13.25	45.02%
250 cfh & Below	44	\$55.79	\$69.70	\$13.91	24.93%
Above 250 cfh to 425 cfh	262	\$287.63	\$253.33	-\$34.31	-11.93%
Above 250 cfh to 425 cfh	997	\$745.60	\$879.30	\$133.69	17.93%
Above 250 cfh to 425 cfh	741	\$585.61	\$660.62	\$75.00	12.81%
Above 425 cfh to 1,000 cfh	1,430	\$1,475.73	\$1,921.29	\$445.56	30.19%
Above 425 cfh to 1,000 cfh	128	\$122.81	\$208.39	\$85.59	69.69%
Above 425 cfh to 1,000 cfh	701	\$718.09	\$962.07	\$243.97	33.98%

*Note that Staff has proposed a single annual rate. This column represents bills given average seasonal usage.

BASED ON VARIOUS THERM CONSUMPTION LEVELS
 250 cfh & Below

Therm Consumption	Winter Present Rates	Company Winter Proposed Rates	% Change	Summer Present Rates	Company Summer Proposed Rates	% Change	Staff Year Proposed Rates	% Change	% Change
									over winter
0	\$ 15.00	\$ 20.00	33.33%	\$ 15.00	\$ 20.00	33.33%	\$ 20.00	33.33%	33.33%
25	\$ 40.28	\$ 38.25	-5.03%	\$ 33.13	\$ 26.50	-20.00%	\$ 48.49	20.40%	46.38%
50	\$ 65.55	\$ 56.50	-13.81%	\$ 51.25	\$ 33.00	-35.61%	\$ 76.98	17.44%	50.20%
60	\$ 75.66	\$ 63.80	-15.68%	\$ 58.50	\$ 35.60	-39.15%	\$ 88.38	16.81%	51.06%
70	\$ 85.77	\$ 71.10	-17.10%	\$ 65.75	\$ 38.20	-41.90%	\$ 99.77	16.32%	51.73%
75	\$ 90.83	\$ 74.75	-17.70%	\$ 69.38	\$ 39.50	-43.07%	\$ 105.47	16.12%	52.02%
80	\$ 95.88	\$ 78.40	-18.23%	\$ 73.00	\$ 40.80	-44.11%	\$ 111.17	15.94%	52.27%
90	\$ 105.99	\$ 85.70	-19.14%	\$ 80.25	\$ 43.40	-45.92%	\$ 122.56	15.64%	52.72%
100	\$ 116.10	\$ 93.00	-19.90%	\$ 87.51	\$ 46.00	-47.43%	\$ 133.96	15.38%	53.09%
125	\$ 141.38	\$ 111.25	-21.31%	\$ 105.63	\$ 52.50	-50.30%	\$ 162.45	14.91%	53.79%
150	\$ 166.65	\$ 129.50	-22.29%	\$ 123.76	\$ 59.00	-52.33%	\$ 190.94	14.57%	54.28%
175	\$ 191.93	\$ 147.75	-23.02%	\$ 141.88	\$ 65.50	-53.84%	\$ 219.43	14.33%	54.65%
200	\$ 217.20	\$ 166.00	-23.57%	\$ 160.01	\$ 72.00	-55.00%	\$ 247.92	14.14%	54.94%
250	\$ 267.75	\$ 202.50	-24.37%	\$ 196.26	\$ 85.00	-56.69%	\$ 304.90	13.87%	55.35%
300	\$ 318.30	\$ 239.00	-24.91%	\$ 232.52	\$ 98.00	-57.85%	\$ 361.88	13.69%	55.64%
350	\$ 368.85	\$ 275.50	-25.31%	\$ 268.77	\$ 111.00	-58.70%	\$ 418.85	13.56%	55.84%
400	\$ 419.40	\$ 312.00	-25.61%	\$ 305.02	\$ 124.00	-59.35%	\$ 475.83	13.46%	56.00%
450	\$ 469.95	\$ 348.50	-25.84%	\$ 341.27	\$ 137.00	-59.86%	\$ 532.81	13.38%	56.13%
500	\$ 520.50	\$ 385.00	-26.03%	\$ 377.53	\$ 150.00	-60.27%	\$ 589.79	13.31%	56.23%
750	\$ 773.25	\$ 567.50	-26.61%	\$ 558.79	\$ 215.00	-61.52%	\$ 874.69	13.12%	56.53%
1000	\$ 1,026.00	\$ 750.00	-26.90%	\$ 740.05	\$ 280.00	-62.16%	\$ 1,159.58	13.02%	56.69%

NOTE:
 Fuel Adjustor Included in Present Rates \$0.2110
 Fuel Adjustor Included in Staff Proposed Rates \$0.5668
 Fuel Adjustor Included in Company Proposed Rates \$0.5668

BASED ON VARIOUS THERM CONSUMPTION LEVELS
 Above 250 cfh to 425 cfh

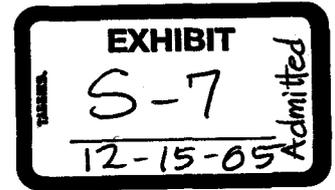
Therm Consumption	Winter Present Rates	Company Winter Proposed Rates	% Change	Summer Present Rates	Company Summer Proposed Rates	% Change	Staff Year Proposed Rates	% Change	% Change
									over winter
0	\$ 22.50	\$ 30.00	33.33%	\$ 22.50	\$ 30.00	33.33%	\$ 30.00	33.33%	33.33%
25	\$ 47.78	\$ 48.25	0.99%	\$ 40.63	\$ 36.50	-10.16%	\$ 51.29	7.36%	26.25%
50	\$ 73.05	\$ 66.50	-8.97%	\$ 58.75	\$ 43.00	-26.81%	\$ 72.58	-0.64%	23.53%
60	\$ 83.16	\$ 73.80	-11.26%	\$ 66.00	\$ 45.60	-30.91%	\$ 81.10	-2.48%	22.87%
70	\$ 93.27	\$ 81.10	-13.05%	\$ 73.25	\$ 48.20	-34.20%	\$ 89.61	-3.92%	22.33%
75	\$ 98.33	\$ 84.75	-13.81%	\$ 76.88	\$ 49.50	-35.61%	\$ 93.87	-4.53%	22.10%
80	\$ 103.38	\$ 88.40	-14.49%	\$ 80.50	\$ 50.80	-36.90%	\$ 98.13	-5.08%	21.89%
90	\$ 113.49	\$ 95.70	-15.68%	\$ 87.75	\$ 53.40	-39.15%	\$ 106.64	-6.03%	21.52%
100	\$ 123.60	\$ 103.00	-16.67%	\$ 95.01	\$ 56.00	-41.06%	\$ 115.16	-6.83%	21.21%
125	\$ 148.88	\$ 121.25	-18.56%	\$ 113.13	\$ 62.50	-44.75%	\$ 136.45	-8.35%	20.61%
150	\$ 174.15	\$ 139.50	-19.90%	\$ 131.26	\$ 69.00	-47.43%	\$ 157.74	-9.42%	20.17%
175	\$ 199.43	\$ 157.75	-20.90%	\$ 149.38	\$ 75.50	-49.46%	\$ 179.03	-10.23%	19.84%
200	\$ 224.70	\$ 176.00	-21.67%	\$ 167.51	\$ 82.00	-51.05%	\$ 200.32	-10.85%	19.59%
250	\$ 275.25	\$ 212.50	-22.80%	\$ 203.76	\$ 95.00	-53.38%	\$ 242.90	-11.75%	19.21%
300	\$ 325.80	\$ 249.00	-23.57%	\$ 240.02	\$ 108.00	-55.00%	\$ 285.48	-12.38%	18.94%
350	\$ 376.35	\$ 285.50	-24.14%	\$ 276.27	\$ 121.00	-56.20%	\$ 328.05	-12.83%	18.75%
400	\$ 426.90	\$ 322.00	-24.57%	\$ 312.52	\$ 134.00	-57.12%	\$ 370.63	-13.18%	18.60%
450	\$ 477.45	\$ 358.50	-24.91%	\$ 348.77	\$ 147.00	-57.85%	\$ 413.21	-13.45%	18.48%
500	\$ 528.00	\$ 395.00	-25.19%	\$ 385.03	\$ 160.00	-58.44%	\$ 455.79	-13.68%	18.38%
750	\$ 780.75	\$ 577.50	-26.03%	\$ 566.29	\$ 225.00	-60.27%	\$ 668.69	-14.35%	18.08%
1000	\$ 1,033.50	\$ 760.00	-26.46%	\$ 747.55	\$ 290.00	-61.21%	\$ 881.58	-14.70%	17.93%
1250	\$ 1,286.25	\$ 942.50	-26.72%	\$ 928.81	\$ 355.00	-61.78%	\$ 1,094.48	-14.91%	17.84%
1500	\$ 1,539.00	\$ 1,125.00	-26.90%	\$ 1,110.08	\$ 420.00	-62.16%	\$ 1,307.38	-15.05%	17.77%
1750	\$ 1,791.75	\$ 1,307.50	-27.03%	\$ 1,291.34	\$ 485.00	-62.44%	\$ 1,520.27	-15.15%	17.73%
2000	\$ 2,044.50	\$ 1,490.00	-27.12%	\$ 1,472.60	\$ 550.00	-62.65%	\$ 1,733.17	-15.23%	17.69%
2500	\$ 2,550.00	\$ 1,855.00	-27.25%	\$ 1,835.13	\$ 680.00	-62.95%	\$ 2,158.96	-15.33%	17.65%
3000	\$ 3,055.50	\$ 2,220.00	-27.34%	\$ 2,197.65	\$ 810.00	-63.14%	\$ 2,584.75	-15.41%	17.61%
4000	\$ 4,066.50	\$ 2,950.00	-27.46%	\$ 2,922.70	\$ 1,070.00	-63.39%	\$ 3,436.34	-15.50%	17.57%
5000	\$ 5,077.50	\$ 3,680.00	-27.52%	\$ 3,647.75	\$ 1,330.00	-63.54%	\$ 4,287.92	-15.55%	17.55%

NOTE:
 Fuel Adjustor Included in Present Rates \$0.2110
 Fuel Adjustor Included in Staff Proposed Rates \$0.5668
 Fuel Adjustor Included in Company Proposed Rates \$0.5668

BASED ON VARIOUS THERM CONSUMPTION LEVELS
Above 425 cfh to 1,000 cfh

Therm Consumption	Winter Present Rates	Company Winter Proposed Rates	% Change	Summer Present Rates	Company Summer Proposed Rates	% Change	Staff Year Proposed Rates	% Change	% Change
								over winter	over summer
0	\$ 30.00	\$ 40.00	\$0.33	\$ 30.00	\$ 40.00	33.33%	\$ 40.00	33.33%	33.33%
10	\$ 40.11	\$ 47.30	\$0.18	\$ 37.25	\$ 42.60	14.36%	\$ 53.16	32.53%	42.70%
20	\$ 50.22	\$ 54.60	\$0.09	\$ 44.50	\$ 45.20	1.57%	\$ 66.31	32.04%	49.01%
50	\$ 80.55	\$ 76.50	-\$0.05	\$ 66.25	\$ 53.00	-20.00%	\$ 105.78	31.32%	59.66%
100	\$ 131.10	\$ 113.00	-\$0.14	\$ 102.51	\$ 66.00	-35.61%	\$ 171.56	30.86%	67.37%
150	\$ 181.65	\$ 149.50	-\$0.18	\$ 138.76	\$ 79.00	-43.07%	\$ 237.34	30.66%	71.04%
200	\$ 232.20	\$ 186.00	-\$0.20	\$ 175.01	\$ 92.00	-47.43%	\$ 303.12	30.54%	73.20%
250	\$ 282.75	\$ 222.50	-\$0.21	\$ 211.26	\$ 105.00	-50.30%	\$ 368.90	30.47%	74.62%
300	\$ 333.30	\$ 259.00	-\$0.22	\$ 247.52	\$ 118.00	-52.33%	\$ 434.68	30.42%	75.62%
350	\$ 383.85	\$ 295.50	-\$0.23	\$ 283.77	\$ 131.00	-53.84%	\$ 500.45	30.38%	76.36%
400	\$ 434.40	\$ 332.00	-\$0.24	\$ 320.02	\$ 144.00	-55.00%	\$ 566.23	30.35%	76.94%
450	\$ 484.95	\$ 368.50	-\$0.24	\$ 356.27	\$ 157.00	-55.93%	\$ 632.01	30.33%	77.40%
500	\$ 535.50	\$ 405.00	-\$0.24	\$ 392.53	\$ 170.00	-56.69%	\$ 697.79	30.31%	77.77%
750	\$ 788.25	\$ 587.50	-\$0.25	\$ 573.79	\$ 235.00	-59.04%	\$ 1,026.69	30.25%	78.93%
1000	\$ 1,041.00	\$ 770.00	-\$0.26	\$ 755.05	\$ 300.00	-60.27%	\$ 1,355.58	30.22%	79.54%
1250	\$ 1,293.75	\$ 952.50	-\$0.26	\$ 936.31	\$ 365.00	-61.02%	\$ 1,684.48	30.20%	79.91%
1500	\$ 1,546.50	\$ 1,135.00	-\$0.27	\$ 1,117.58	\$ 430.00	-61.52%	\$ 2,013.38	30.19%	80.16%
1750	\$ 1,799.25	\$ 1,317.50	-\$0.27	\$ 1,298.84	\$ 495.00	-61.89%	\$ 2,342.27	30.18%	80.34%
2000	\$ 2,052.00	\$ 1,500.00	-\$0.27	\$ 1,480.10	\$ 560.00	-62.16%	\$ 2,671.17	30.17%	80.47%
2500	\$ 2,557.50	\$ 1,865.00	-\$0.27	\$ 1,842.63	\$ 690.00	-62.55%	\$ 3,328.96	30.16%	80.66%
3000	\$ 3,063.00	\$ 2,230.00	-\$0.27	\$ 2,205.15	\$ 820.00	-62.81%	\$ 3,986.75	30.16%	80.79%
3500	\$ 3,568.50	\$ 2,595.00	-\$0.27	\$ 2,567.68	\$ 950.00	-63.00%	\$ 4,644.55	30.15%	80.89%
4000	\$ 4,074.00	\$ 2,960.00	-\$0.27	\$ 2,930.20	\$ 1,080.00	-63.14%	\$ 5,302.34	30.15%	80.95%
4500	\$ 4,579.50	\$ 3,325.00	-\$0.27	\$ 3,292.73	\$ 1,210.00	-63.25%	\$ 5,960.13	30.15%	81.01%
5000	\$ 5,085.00	\$ 3,690.00	-\$0.27	\$ 3,655.25	\$ 1,340.00	-63.34%	\$ 6,617.92	30.15%	81.05%
5500	\$ 5,590.50	\$ 4,055.00	-\$0.27	\$ 4,017.78	\$ 1,470.00	-63.41%	\$ 7,275.71	30.14%	81.09%
6000	\$ 6,096.00	\$ 4,420.00	-\$0.27	\$ 4,380.30	\$ 1,600.00	-63.47%	\$ 7,933.51	30.14%	81.12%

NOTE:
 Fuel Adjustor Included in Present Rates \$0.2110
 Fuel Adjustor Included in Staff Proposed Rates \$0.5668
 Fuel Adjustor Included in Company Proposed Rate \$0.5668



BASED ON VARIOUS THERM CONSUMPTION LEVELS
 Above 250 cfh to 425 cfh

Therm Consumption	Winter Present Rates	Company Winter Proposed Rates	% Change	Summer Present Rates	Company Summer Proposed Rates	% Change	Staff Year Proposed Rates	% Change	% Change
								over winter	over summer
0	\$ 22.50	\$ 30.00	33.33%	\$ 22.50	\$ 30.00	33.33%	\$ 30.00	33.33%	33.33%
25	\$ 47.78	\$ 62.42	30.65%	\$ 40.63	\$ 50.67	24.72%	\$ 51.29	7.36%	26.25%
50	\$ 73.05	\$ 94.84	29.83%	\$ 58.75	\$ 71.34	21.42%	\$ 72.58	-0.64%	23.53%
60	\$ 83.16	\$ 107.81	29.64%	\$ 66.00	\$ 79.61	20.61%	\$ 81.10	-2.48%	22.87%
70	\$ 93.27	\$ 120.77	29.49%	\$ 73.25	\$ 87.87	19.96%	\$ 89.61	-3.92%	22.33%
75	\$ 98.33	\$ 127.26	29.43%	\$ 76.88	\$ 92.01	19.68%	\$ 93.87	-4.53%	22.10%
80	\$ 103.38	\$ 133.74	29.37%	\$ 80.50	\$ 96.14	19.43%	\$ 98.13	-5.08%	21.89%
90	\$ 113.49	\$ 146.71	29.27%	\$ 87.75	\$ 104.41	18.98%	\$ 106.64	-6.03%	21.52%
100	\$ 123.60	\$ 159.68	29.19%	\$ 95.01	\$ 112.68	18.60%	\$ 115.16	-6.83%	21.21%
125	\$ 148.88	\$ 192.10	29.03%	\$ 113.13	\$ 133.35	17.87%	\$ 136.45	-8.35%	20.61%
150	\$ 174.15	\$ 224.52	28.92%	\$ 131.26	\$ 154.02	17.34%	\$ 157.74	-9.42%	20.17%
175	\$ 199.43	\$ 256.94	28.84%	\$ 149.38	\$ 174.69	16.94%	\$ 179.03	-10.23%	19.84%
200	\$ 224.70	\$ 289.36	28.77%	\$ 167.51	\$ 195.36	16.62%	\$ 200.32	-10.85%	19.59%
250	\$ 275.25	\$ 354.20	28.68%	\$ 203.76	\$ 236.70	16.16%	\$ 242.90	-11.75%	19.21%
300	\$ 325.80	\$ 419.04	28.62%	\$ 240.02	\$ 278.04	15.84%	\$ 285.48	-12.38%	18.94%
350	\$ 376.35	\$ 483.87	28.57%	\$ 276.27	\$ 319.37	15.60%	\$ 328.05	-12.83%	18.75%
400	\$ 426.90	\$ 548.71	28.53%	\$ 312.52	\$ 360.71	15.42%	\$ 370.63	-13.18%	18.60%
450	\$ 477.45	\$ 613.55	28.51%	\$ 348.77	\$ 402.05	15.28%	\$ 413.21	-13.45%	18.48%
500	\$ 528.00	\$ 678.39	28.48%	\$ 385.03	\$ 443.39	15.16%	\$ 455.79	-13.68%	18.38%
750	\$ 780.75	\$ 1,002.59	28.41%	\$ 566.29	\$ 650.09	14.80%	\$ 668.69	-14.35%	18.08%
1000	\$ 1,033.50	\$ 1,326.78	28.38%	\$ 747.55	\$ 856.78	14.61%	\$ 881.58	-14.70%	17.93%
1250	\$ 1,286.25	\$ 1,650.98	28.36%	\$ 928.81	\$ 1,063.48	14.50%	\$ 1,094.48	-14.91%	17.84%
1500	\$ 1,539.00	\$ 1,975.18	28.34%	\$ 1,110.08	\$ 1,270.18	14.42%	\$ 1,307.38	-15.05%	17.77%
1750	\$ 1,791.75	\$ 2,299.37	28.33%	\$ 1,291.34	\$ 1,476.87	14.37%	\$ 1,520.27	-15.15%	17.73%
2000	\$ 2,044.50	\$ 2,623.57	28.32%	\$ 1,472.60	\$ 1,683.57	14.33%	\$ 1,733.17	-15.23%	17.69%
2500	\$ 2,550.00	\$ 3,271.96	28.31%	\$ 1,835.13	\$ 2,096.96	14.27%	\$ 2,158.96	-15.33%	17.65%
3000	\$ 3,055.50	\$ 3,920.35	28.30%	\$ 2,197.65	\$ 2,510.35	14.23%	\$ 2,584.75	-15.41%	17.61%
4000	\$ 4,066.50	\$ 5,217.14	28.30%	\$ 2,922.70	\$ 3,337.14	14.18%	\$ 3,436.34	-15.50%	17.57%
5000	\$ 5,077.50	\$ 6,513.92	28.29%	\$ 3,647.75	\$ 4,163.92	14.15%	\$ 4,287.92	-15.55%	17.55%

NOTE:
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 Fuel Adjustor Included in Company Proposed Rates \$0.5668