



State of North Carolina

Department of Justice
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ROY COOPER
ATTORNEY GENERAL

REPLY TO: PEGGY FORCE
UTILITIES UNIT
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August 13, 2008

Ms. Renne Vance, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

FILED
AUG 13 2008
Clerk's Office
N.C. Utilities Commission

re: Docket Nos. G-5, Sub 495

Dear Ms. Vance:

Please find enclosed an original and 30 copies of the testimony and exhibits of Roger D. Colton, principal in the firm of Fisher Sheehan & Colton, Public Finance and General Economics, for filing on behalf of the Attorney General's Office in the above-captioned docket.

Very truly yours,

Margaret A. Force
Assistant Attorney General

c: Parties of Record

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**STATE OF NORTH CAROLINA
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION**

In the Matter of

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:
:

Public Service Company of North Carolina, Inc. :

Application for a General Increase in its

Rates and Charges

Docket No. G-5, Sub 495

FILED

AUG 13 2008

Clerk's Office
N.C. Utilities Commission

DIRECT TESTIMONY AND EXHIBITS OF

ROGER D. COLTON

ON BEHALF OF

**NORTH CAROLINA DEPARTMENT OF JUSTICE
Raleigh, NC**

August 13, 2008

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

2 A. My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public Finance and
3 General Economics, 34 Warwick Road, Belmont, Massachusetts, 02478.

4
5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General
7 Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a
8 variety of federal and state agencies, consumer organizations and public utilities on rate and
9 customer service issues involving telephone, water/sewer, natural gas and electric utilities.

10
11 **Q. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?**

12 A. I am testifying on behalf of the North Carolina Department of Justice ("DOJ") of Raleigh,
13 North Carolina.

14
15 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

16 A. I work primarily on low-income utility issues. This involves regulatory work on rate and
17 customer service issues, as well as research into low-income usage, payment patterns, and
18 affordability programs. At present, I am working on various projects in the states of New
19 Hampshire, New Jersey, Maryland, Pennsylvania, North Carolina, Ohio, Indiana, Iowa,
20 Arkansas, Colorado, New Mexico, Oregon and Washington. My clients include state
21 agencies (*e.g.*, Pennsylvania Office of Consumer Advocate, Maryland Office of Peoples
22 Counsel, North Carolina Department of Justice, Iowa Department of Human Rights), federal
23 agencies (*e.g.*, U.S. Department of Health and Human Services), community-based

1 organizations (*e.g.*, Community Action of New Mexico, Coalition to Keep Indiana Warm,
2 Community Action Partnership of Oregon), and private utilities (*e.g.*, Entergy Services,
3 Citizens Gas and Coke Utility, Tacoma Public Utilities). In addition to state- and utility-
4 specific work, I engage in national work in the United States and Canada. For example, I
5 am currently working on a national study of the responses of water utilities to the payment
6 troubles of residential customers for the American Water Works Association Research
7 Foundation. In 2007, I was part of a team that performed a multi-sponsor public/private
8 national study of low-income energy assistance programs.

9
10 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

11 A. After receiving my undergraduate degree from Iowa State University (1975), I obtained
12 further training in both law and economics. I received my law degree from the University of
13 Florida in 1981. I received my Masters Degree (economics) from the McGregor School
14 (Antioch University) in 1993.

15
16 **Q. HAVE YOU AUTHORED ARTICLES ON PUBLIC UTILITY REGULATORY**
17 **ISSUES?**

18 A. Yes. I have published more than 80 articles in scholarly and trade journals, primarily on
19 low-income utility and housing issues. I have published an equal number of technical
20 reports for various clients on energy, water, telecommunications and other associated low-
21 income utility issues. A list of my professional publications is appended as Attachment RC-
22 1.

1 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY**
2 **COMMISSIONS?**

3 A. Yes. I have previously testified before the North Carolina Utilities Commission (“NCUC”
4 or “Commission”) on a variety of low-income energy issues. In addition, I have testified in
5 regulatory proceedings in more than 30 states and various Canadian provinces on a wide
6 range of low-income water, telecommunications and energy issues. Proceedings in which I
7 have previously appeared as an expert witness are listed in Attachment RC-1.

8
9 **Q. PLEASE EXPLAIN THE PURPOSE OF YOUR TESTIMONY.**

10 A. My testimony supports certain DOJ objections to the proposal of Public Service
11 Company of North Carolina (“PSNC” or “Company”) to raise its residential customer
12 charge from \$10 per month to \$12 per month in this proceeding. Specifically, I will
13 examine the relationship between income and natural gas expenditures. I conclude that
14 income is directly related to natural gas consumption and expenditures. As income
15 increases, natural gas usage increases and vice versa. I will also examine the relationship
16 between aging and natural gas expenditures. As customers age, their natural gas usage
17 decreases. I conclude that more aged customers use less natural gas. As a result, I
18 conclude that the Company’s proposed rate structure would disproportionately burden
19 low-income, low-use customers. The proposed rate structure will also shift risks from
20 PSNC’s shareholder to its customers.¹

21

¹ PSNC is a wholly-owned subsidiary of SCANA and therefore has only one shareholder.

1
2 As part of this review, I also consider the context within which customers face natural gas
3 rate increases in North Carolina. I conclude that natural gas prices have contributed
4 significantly to the increase in cost of living that consumers face, and now is not the time
5 to shift risks from the utility to its customers through an increase in the fixed monthly
6 charge. The burden of an increase in the fixed charge is particularly great for low and
7 fixed income customers, as gas is increasingly unaffordable to many of them.
8
9

10 **Part 1. The Relationship between Income and Natural Gas Usage.**

11 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
12 **TESTIMONY.**

13 **A.** In this section of my testimony, I examine the natural gas expenditure patterns in North
14 Carolina to assess what relationship, if any, exists between income and natural gas
15 consumption. I conclude that a direct relationship exists between income and natural gas
16 consumption. As income increases, natural gas usage and expenditures increase as well,
17 and as income decreases, natural gas usage and expenditures decrease as well. This point
18 may seem obvious, but contentions have been made by some utilities that lower income
19 households use more natural gas because their housing tends to be less well insulated or
20 their appliances less efficient. The data show, however, that higher income customers
21 live in larger residences and use more natural gas. A variety of data support this
22 conclusion. As a result, the Company's proposal to impose a significant (20%) increase
23 in the customer charge, with adverse impacts falling primarily on low-use customers, will

1 result in the greatest rate increases falling on the most vulnerable customers, the low-
2 income and aging.

3
4 **A. Income and Usage.**

5 **Q. HAVE YOU EXAMINED DATA SPECIFIC TO NORTH CAROLINA TO**
6 **ASSESS THE RELATIONSHIP BETWEEN NATURAL GAS USAGE AND**
7 **INCOME?**

8 A. I have examined data produced by the U.S. Census Bureau setting forth natural gas bills
9 by income level for the State of North Carolina. While the Census data do not contain
10 usage data, per se, the data on expenditures will, nonetheless, provide adequate insights
11 into the relative use of natural gas by income level.

12
13 The North Carolina data are set forth in Schedule RDC-1. In this schedule, I present
14 natural gas monthly expenditures as reported by the 2006 American Community Survey,
15 the most recent Census data available. The American Community Survey collects annual
16 data on selected household and housing characteristics in years between the Decennial
17 Census. As can be seen, natural gas expenditures increase as each income tier increases
18 in North Carolina. For example, the monthly 2006 expenditures for households with
19 incomes of \$250,000 or more are almost three times higher than the monthly
20 expenditures for households with incomes less than \$10,000 (\$104.20 vs. \$34.90).
21 Indeed, the median income in North Carolina in 2006 was \$42,625. The monthly natural
22 gas expenditure for the income range encompassing that median income (\$40,000 -
23 \$50,000) was \$48.30, nearly 40% higher than expenditures at the lowest income level

1 (\$34.90), but less than 50% of expenditures at the highest income level (\$104.20).

2 Schedule RDC-2 presents the same data graphically. The graphic presentation of the data
3 reveals in clear terms the continuous increase in natural gas consumption as household
4 *income increases*.

5
6 **Q. WOULD THE RESULTS OF YOUR ANALYSIS CHANGE IF YOU EXAMINED**
7 **THE POVERTY LEVEL OF A HOUSEHOLD RATHER THAN HOUSEHOLD**
8 **INCOME?**

9 A. No. Poverty Level is a measure of income taking into account household size. Poverty
10 Level recognizes, for example, that a three-person household with an income of \$10,000
11 is “poorer” than a two-person household with an income of \$10,000. Overlaying
12 household size onto income by considering the Poverty Level of a household does not
13 change the results of my inquiry. Schedule RDC-3 presents monthly natural gas bills for
14 North Carolina by increasing levels of the Federal Poverty Level. In North Carolina, the
15 monthly natural gas expenditure at over 300% of Poverty or more is more than 170% of
16 the natural gas expenditures for households with income below 50% of Federal Poverty
17 Level. Natural gas expenditures for households with income between 200% and 300% of
18 Poverty Level is more than 30% higher than gas consumption of households with income
19 less than 50% of Poverty in North Carolina.

20
21 **Q. IS THERE OTHER EMPIRICAL ANALYSIS OF THE RELATIONSHIP**
22 **BETWEEN INCOME AND NATURAL GAS EXPENDITURES THAT IS**
23 **CONSISTENT WITH THIS NORTH CAROLINA DATA?**

1 A. Yes. The U.S. Department of Energy, Energy Information Administration (“DOE/EIA”)
2 has published regular periodic reports entitled the *Residential Energy Consumption*
3 *Survey* (“RECS”). In a document released in June 2001, DOE/EIA released its analysis of
4 RECS data titled *Natural Gas Use in American Households*. In the section of its analysis
5 that examines the relationship between income and natural gas usage, DOE/EIA states:

6 The use of natural gas for any end use and as the main heating fuel was
7 approximately the same regardless of household income category. In
8 contrast, natural gas consumption and expenditures per household did vary
9 by household income—higher income households consumed more and
10 spent more on average. Higher income households lived in larger housing
11 units, which require more energy for heating.

12
13 (EIA/DOE, *Natural Gas Use in American Households*, Household Income, at text
14 accompanying Figures 1 – 3) (June 2001).

15
16 **Q. DOES THE DEPARTMENT OF ENERGY’S OBSERVATION THAT “HIGHER**
17 **INCOME HOUSEHOLDS LIVE IN LARGER HOUSING UNITS, WHICH**
18 **REQUIRE MORE ENERGY FOR HEATING” APPLY TO NORTH CAROLINA?**

19 A. Yes. This is an empirically demonstrable fact in North Carolina. Schedule RDC-4
20 presents North Carolina data on natural gas expenditures by income and housing unit
21 size. In Schedule RDC-4, the size of the housing unit is measured in terms of the number
22 of bedrooms. Two observations can be drawn from Schedule RDC-4. First, there is a
23 slight relationship between income and natural gas usage within each housing unit size.
24 As a general rule, as income increases, holding the housing unit size constant, the natural
25 gas expenditures increase only modestly. Second, and more significantly, however, there
26 is a marked difference in the average expenditures by income for the income groups as a

1 whole. This is because the distribution of households by housing unit size is not similar
2 between income ranges (see, Schedule RDC-6 and Schedule RDC-7 below, along with
3 accompanying text). While there may be little or no distinction between a higher-income
4 household in a four-bedroom housing unit and a lower-income household in a four-
5 bedroom housing unit, because there are far fewer lower-income households in four-
6 bedroom units, the overall difference in consumption is much greater.

7
8 The same impacts can be seen in Schedule RDC-5. This data also presents the
9 distribution of natural gas expenditures by housing unit size. In Schedule RDC-5, housing
10 unit size is measured in terms of the total number of rooms (not merely the number of
11 bedrooms). As can be seen, the average total natural gas expenditures in North Carolina
12 varies sharply by income. As with the number of bedrooms, the reason for this is that the
13 higher-income households live in larger housing units.

14
15 **Q. IS YOUR CONCLUSION THAT HIGHER-INCOME HOUSEHOLDS LIVE IN**
16 **LARGER HOUSING UNITS A DATA-BASED OBSERVATION?**

17 A. Yes. This conclusion is based on two different data-based observations. First, Schedule
18 RDC-6 presents the average income in North Carolina by the number of rooms in a
19 housing structure, as well as the average income in North Carolina by the number of
20 bedrooms in a housing structure. Schedule RDC-6 clearly shows that as housing
21 structures get larger in North Carolina, average income increases. There are two standard
22 ways to measure the size of a housing unit. One way is to look at the number of total

1 rooms. The other way is to look at the number of bedrooms. Both of these approaches
2 document that smaller sized units have lower-income households.

3 ➤ While the average income of a North Carolina household living in a unit with
4 one room is \$22,750, the average income of a household living in an eight-
5 room unit is \$89,641.

6 ➤ The same relationship holds true for housing size measured by the number of
7 bedrooms. While the average income for a North Carolina household living
8 in a unit with one bedroom is \$27,641, the average income of a household
9 living in a housing unit with five or more bedrooms is \$125,570.

10 In both instances (number of rooms, number of bedrooms), the average income increases
11 as the size of the housing unit increases.

12
13 In addition, Schedule RDC-7 presents a distribution of North Carolina households by the
14 size of the housing unit in which they live, separately examining the size of the housing
15 unit measured by the number of rooms and the number of bedrooms. The data show that
16 a higher proportion of lower-income households live in smaller housing units. For
17 example, while 60% of households with incomes less than \$10,000 live in units with two
18 bedrooms or less, only 4% of households with incomes greater than \$250,000 (and only
19 7% of households with incomes between \$150,000 and \$250,000) live in units that small.
20 Conversely, while 72% of households with incomes of \$250,000 or more live in units
21 with four or more bedrooms (and 53% of households with incomes between \$150,000
22 and \$250,000 do), only 6% of households with incomes below \$10,000 live in units that
23 large (and only 7% of households with incomes between \$10,000 and \$20,000 do).

1
2 The same observations can be made about the relationship of income and housing unit
3 size measured in terms of the number of rooms (not merely number of bedrooms). While
4 75% of North Carolina households with incomes greater than \$250,000 live in housing
5 units with eight or more rooms (and 55% of households with incomes between \$150,000
6 and \$250,000 do), only 4% of households with incomes less than \$20,000 do (and only
7 6% of households with incomes between \$20,000 and \$30,000 do).

8
9 **Q. ARE THERE OTHER WAYS THROUGH WHICH TO GAIN INSIGHTS INTO**
10 **THE RELATIONSHIP BETWEEN HOUSING UNIT SIZE AND INCOME?**

11 A. Yes. One extension of the observation that low-income households live in smaller
12 housing units is the further observation that low-income households tend to live in denser
13 housing units as well. To assess the extent to which this is true in North Carolina, I
14 examined the relationship between income and the type of building in which customers
15 have their housing units. Building type is disaggregated by the type of construction
16 (single family, multi-family, mobile home), and the number of units in each building.

17
18 Schedule RDC-8 shows that residents of multi-family housing units are
19 disproportionately low-income households. While 30% of gas-consuming households
20 with incomes less than \$10,000 live in buildings with three or more units, and 21% of
21 gas-consuming households with incomes between \$10,000 and \$20,000 do, only 4% of
22 gas-consuming households with incomes of \$150,000 or more live in buildings with three
23 or more units. Conversely, while between 86% and 94% of gas-consuming households

1 with incomes \$75,000 or higher live in single family detached homes, only 42% of gas-
2 consuming households with incomes less than \$10,000 do (and only 51% of households
3 with incomes between \$10,000 and \$20,000 do).
4

5 **Q. WHAT IS THE SIGNIFICANCE OF THESE DIFFERENCES IN THE TYPES OF**
6 **BUILDINGS IN WHICH LOW-INCOME HOUSEHOLDS LIVE?**

7 A. The significance arises in two ways. First, these data further support the conclusion that
8 low-income households have lower natural gas consumption. Schedule RDC-8 presents
9 natural gas expenditure data broken down by building type and income. Given the
10 differences in natural gas consumption between housing type—single family detached
11 homes clearly have higher natural gas consumption than do any type of multi-family
12 dwelling—and the higher rate at which low-income households live in multi-family units,
13 there is a constant increase in natural gas expenditures as income increases, from \$36
14 (households with income below \$10,000) to \$102 (households with income greater than
15 \$250,000) for the housing unit types that I examined.
16

17 Secondly, these data show that the equal imposition of fixed charges on low-income,
18 low-use customers through the proposed increase in the customer charge would be
19 inequitable, given the lower fixed distribution costs imposed by low-income customers
20 due to their higher density housing. To the extent that higher density housing is multi-
21 family housing, for example, there would be a single service associated with multiple
22 accounts. The cost per account thus would be less. Even if density is on a per land-area
23 basis—“land area” is a term-of-art used by the Census Bureau to calculate density—there

1 would be fewer miles of distribution system for each customer, again lowering costs on a
2 per-customer basis. Under these circumstances, imposing a higher customer charge to
3 recover fixed costs would involve a direct subsidy from the lower-income customers
4 living in the higher-density housing units to the higher-income customers living in the
5 lower density housing units.
6

7 **Q. IS THE NORTH CAROLINA DATA YOU DISCUSS ABOVE CONSISTENT**
8 **WITH OTHER GOVERNMENT DATA ON NATURAL GAS EXPENDITURES**
9 **AND CONSUMPTION?**

10 A. Yes. Schedule RDC-9 presents U.S DOE data on the relationship between income and
11 natural gas consumption. This data, based on the tri-annual Residential Energy
12 Consumption Survey ("RECS"), shows that natural gas consumption increases as income
13 increases. In addition, the U.S. Department of Labor ("DOL") reports natural gas
14 expenditures by region by income. North Carolina is in the South regional data reported
15 by the Department of Labor's Consumer Expenditures Survey ("CEX"). The CEX data
16 (Schedule RDC-10) corroborates the state-specific and national data on the relationship
17 between natural gas consumption and income. As income increases, natural gas
18 expenditures increase as well and vice-versa.
19

20 **B. Aging and Usage.**

21 **Q. IS THERE A CORRELATION BETWEEN LOW USAGE AND ANY OTHER**
22 **VULNERABLE POPULATION GROUP?**

1 A. Yes. Schedule RDC-11 presents data on the association between natural gas
2 expenditures and age. Schedule RDC-11 (page 1 of 2) presents North Carolina-specific
3 data. These North Carolina-specific data show that monthly natural gas expenditures
4 increase as householders grow older and move into the working population. The natural
5 gas expenditures top out in the prime working years, as householders might have families
6 and own larger homes. As North Carolina residents grow older past their working years,
7 however, they begin to downsize their living units and their natural gas expenditures
8 begin to decline. After age 75, consumers' natural gas expenditures exhibit a noticeable
9 decline.

10
11 Schedule RDC-11 (page 2 of 2) confirms that these North Carolina-specific data are not
12 atypical. This schedule presents similar data published by the U.S. Department of Labor
13 through its annual Consumer Expenditures Survey ("CEX"). While the CEX data does
14 not provide state-specific information, it does provide regional data by age of the
15 householder. As with the North Carolina data, the South regional data show an increase
16 in natural gas expenditures through the years that a householder participates in the work
17 force, maintains a family, and likely owns a larger home. As families and housing units
18 begin to downsize, the natural gas consumption of these households begins to decrease.
19 In particular, the consumption in the post-working age tier (65 and older for CEX data)
20 shows a natural gas expenditure noticeably lower than those of householders in their
21 *prime earning years*.

22

1 It is evident that there is a trigger point at which aging householders begin to experience
2 declining natural gas consumption. Like low-income low-use households, these lower
3 use aging householders would be harmed by the high customer charge rate design
4 proposal advanced by the Company in this proceeding.
5

6 **Q. WHY IS IT SIGNIFICANT THAT INCOME AND AGING ARE ASSOCIATED**
7 **WITH NATURAL GAS CONSUMPTION?**

8 The relationship between income, aging, and natural gas consumption has substantial
9 implications for the proposal by PSNC to allocate additional costs to an increase in the
10 customer charge rather than collecting those costs through a volumetric charge. First, the
11 impact of the Company's proposal is to disproportionately increase the burden on low use
12 customers, including low income and aging customers who are least able to bear the
13 burden. This burden-shifting is particularly inappropriate given the relative housing
14 density of lower income customers, and the associated lower infrastructure cost.
15

16 Second, the impact of the Company's proposal is to shift the risks of the utility's rates
17 from investors to ratepayers. The Company's shareholder is less at risk if customers pay
18 more in high fixed rates and less in volumetric rates. In contrast, other providers of retail
19 services must recover their overhead fully based on the volume of purchases their
20 customers make. With the number of Public Service customers increasing at 4% per year,
21 increasing the fixed monthly customer charge increases the risks for customers while at
22 the same time decreasing the risks for the Company shareholder. As the number of
23 customers continues to grow, Company revenues will increase to the extent that such

1 revenues are based on the number of customers served. Taken together, these effects of
2 the proposal not only shift the risks from the Company to its customers, but also shifts the
3 cost of reducing shareholder risk onto the rates of those least able to afford the increases.

4
5 Finally, the impact of the Company's proposed increased in the customer charge reduces
6 both the ability and the incentive for customers to pursue usage reduction activities. It
7 reduces the ability of customers to engage in such conservation because, by reducing the
8 bill savings generated by conservation efforts, the proposal makes it more difficult for the
9 customer to cost-justify his or her investment. It reduces the incentive for customers to
10 pursue usage reduction both because it reduces the savings to be generated and because it
11 reduces the return on each dollar invested in a conservation measure.

12
13 **Part 2. Low-Income Energy Burdens in North Carolina.**

14 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
15 **TESTIMONY.**

16 **A.** In this section of my testimony, I consider the context within which the Company is
17 proposing a rate increase for low-income customers. I conclude that the cost of natural
18 gas service and other home energy costs are increasingly unaffordable for low-income
19 and moderate income households. This is not a good time to shift further costs to such
20 customers. Nor is it a good time to shift risk associated with volumetric charges from
21 PSNC's shareholder to ratepayers in order to shield its shareholder from financial risk.

22

A. The Burden and Timing of Risk Shifting to Low-Income and Aging Customers.

Q. WHAT IS THE IMPLICATION FOR LOW-USE CUSTOMERS OF PLACING ADDED COSTS ON TO THE CUSTOMER CHARGE?

A. First, by placing added costs on to the fixed customer charge for low-use customers the Company is not only imposing a disproportionate rate increase on those low-use customers, but the Company is making it more difficult for customers to respond to increasing home energy bills by adjusting their usage as a budget-control measure.

Second, the impact of rising costs is more burdensome not only on low income but also on fixed income households such as the aging on retirement incomes. For example, consider the income data presented in Schedule RDC-12. This Schedule examines the income for households with various demographics by income for the years 2004 through 2006, the last year for which data is available. Median income in North Carolina grew 8.1% during that three-year period, with households having wage and earnings income experiencing a roughly equal income growth, if not slightly greater (8.5% for households with income from wages and earnings). In contrast, households on Social Security experienced an income growth of only 7.0%, while households with retirement income experienced a growth of only 0.8%. Fixed income households also experienced increasing hardship in the three years 2004 through 2006, with the income of households receiving Supplemental Security Income (SSI) increasing by only 4.9% and public assistance income actually *decreasing* by nearly eight percent (7.9%).

1 In contrast to these changes in income, according to the U.S. Department of Labor's
2 "inflation calculator," items that cost \$100 in 2004 would have cost \$106.72 in 2006, i.e.,
3 the cost of living increased 6.7%.²

4
5 As can be seen, therefore, while households as a whole gained somewhat in their
6 purchasing ability relative to the increased cost-of-living (income grew 8.1% while the
7 cost of living increased 6.7%), households on Social Security barely held even (with an
8 income increase of 7.0%). Other households on fixed income (SSI, public assistance,
9 retirement income) actually lost ground relative to their purchasing power between 2004
10 and 2006.

11
12 Home energy in general, and natural gas energy in particular, have contributed to the
13 increasing cost-of-living. The U.S. Department of Labor measures the cost-of-living
14 using the three-year period 1982 through 1984 as the base (Base=100). By January 2004,
15 the Consumer Price Index for all urban consumers ("CPI-U") for "all items" had
16 increased to 186.2. In the time between January 2004 and June 2008, the CPI-U
17 increased further to 217.4. The importance of the "all items" lies in the comparisons it
18 allows me to make with specific components of a household's budget. From January
19 2004 through June 2008:

- 20 ➤ Household energy (not including transportation) increased from 140.0 to
- 21 207.912;
- 22
- 23 ➤ Utility (piped) gas service increased from 169.2 to 273.766;
- 24

² The DOL "inflation calculation" can be accessed: http://www.bls.gov/data/inflation_calculator.htm.

- Electricity increased from 140.4 to 184.737;
- Food (at home) increased from 183.2 to 213.706;
- Rent (of primary residence) increased from 208.2 to 242.837;
- Clothing decreased from 120.1 to 118.107.

My purpose in reviewing these figures is not to make an assessment of the relative importance of expenditures for any given household. Rather, the review clearly reveals the disproportionately high increase in natural gas prices as compared to increases in the price of other basic household necessities such as food, clothing and shelter.

Q. WHAT DO YOU CONCLUDE?

A. Given the burden customers already face from rising costs, now is not the time to allow a shift of risks in utility rates from the utility to its customers by increasing the fixed customer charge. Many households today are struggling to meet basic needs. The households in particular that I have identified above include those with aging family members as well as those on low- and fixed-incomes. These are precisely the customers, however, who will bear a disproportionately increased burden should the Company's proposal to increase its fixed customer charge by 20% be approved.

B. The Particular Burden on Low-Income Customers.

Q. PLEASE DESCRIBE THE STATUS OF HOME ENERGY AFFORDABILITY IN NORTH CAROLINA.

A. Home energy bills, including natural gas bills, pose an increasing burden to low-income households in North Carolina today. The standard measure of the affordability of home energy is based on home energy burdens. Home energy burdens represent bills as a percentage of income. The difference between an affordable home energy bill and actual home energy bills is known as the Home Energy Affordability Gap.³ In North Carolina, the Home Energy Affordability Gap is large and getting larger. The 2007 Affordability Gap for households with income at or below 185% of the Federal Poverty Level⁴ reached \$1,335 per household. This means that the cost of home energy was \$1,335 more than such households could pay, given the income and other household budget items.

Q. IS THE INCREASE IN THE HOME ENERGY AFFORDABILITY GAP STRICTLY A LOW-INCOME CONCERN IN NORTH CAROLINA?

A. No. Indeed, one concern about the Home Energy Affordability Gap in North Carolina is the extent to which the unaffordability of home energy is now reaching into the more moderate income levels. Schedule RDC-13 shows the home energy burdens by Federal Poverty Level for each year 2004 through 2007, the most recent years available. As can be seen from Schedule RDC-13, in 2007, home energy bills approached 9% of income

³ In calculating the Home Energy Affordability Gap, affordability is defined as a 6% home energy burden. For a household with an income of \$10,000, in other words, an "affordable" home energy bill is \$600. If that household has an actual home energy bill of \$900, the household has an energy burden of 9%, and has a Home Energy Affordability Gap of \$300.

⁴ The generally accepted measure of "being poor" in the United States today indexes a household's income to the "Federal Poverty Level" published each year by the U.S. Department of Health and Human Services (HHS). The Poverty Level looks at income in relation to household size. This measure recognizes that a three-person household with an annual income of \$6,000 is, in fact, "poorer" than a two-person household with an annual income of \$6,000. The federal government establishes a uniform "Poverty Level" for the 48 contiguous states. A household's "level of Poverty" refers to the ratio of that household's income to the Federal Poverty Level. For example, the year 2005 Poverty Level for a two-person household was \$12,830. A two-person household with an income of \$6,415 would thus be living at 50% of Poverty.

1 for households at 150 – 185% of Federal Poverty Level for the first time. These more
2 moderate income households experienced a home energy burden of only 6.9% in 2004.
3 At the same time, the home energy burdens for the lowest-income households in North
4 Carolina continue to escalate further beyond those levels that are seen as affordable.
5

6 **Q. ARE THERE SIGNIFICANT NUMBERS OF NORTH CAROLINA**
7 **HOUSEHOLDS WHO LIVE WITH THESE HOME ENERGY BURDENS?**

8 A. A substantial number of North Carolina households live with the annual incomes
9 associated with these unaffordable home energy burdens. As shown in Schedule RDC-
10 14, while more than 173,000 North Carolina households lived with income at or below
11 50% of the Federal Poverty Level at the time of the 2000 Census, more than 93,000 more
12 lived with income between 50% and 74% of Poverty. An additional roughly 120,000
13 more households lived with income between 75% and 99% of the Federal Poverty Level.
14

15 **Q. HAVE NATURAL GAS PRICES CONTRIBUTED TO THIS INCREASE IN THE**
16 **NORTH CAROLINA HOME ENERGY AFFORDABILITY GAP?**

17 A. Yes. According to the Energy Information Administration (EIA) of the U.S. Department
18 of Energy (DOE), winter natural gas prices in North Carolina have increased more than
19 16% since 2004 (from \$1.199/ccf to \$1.394/ccf). I recommend that the NCUC exercise
20 extreme caution with respect to rate design proposals, such as the Company's proposal to
21 substantially increase its customer charge, that have the impact of contributing even more
22 to these increasing price levels.
23

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

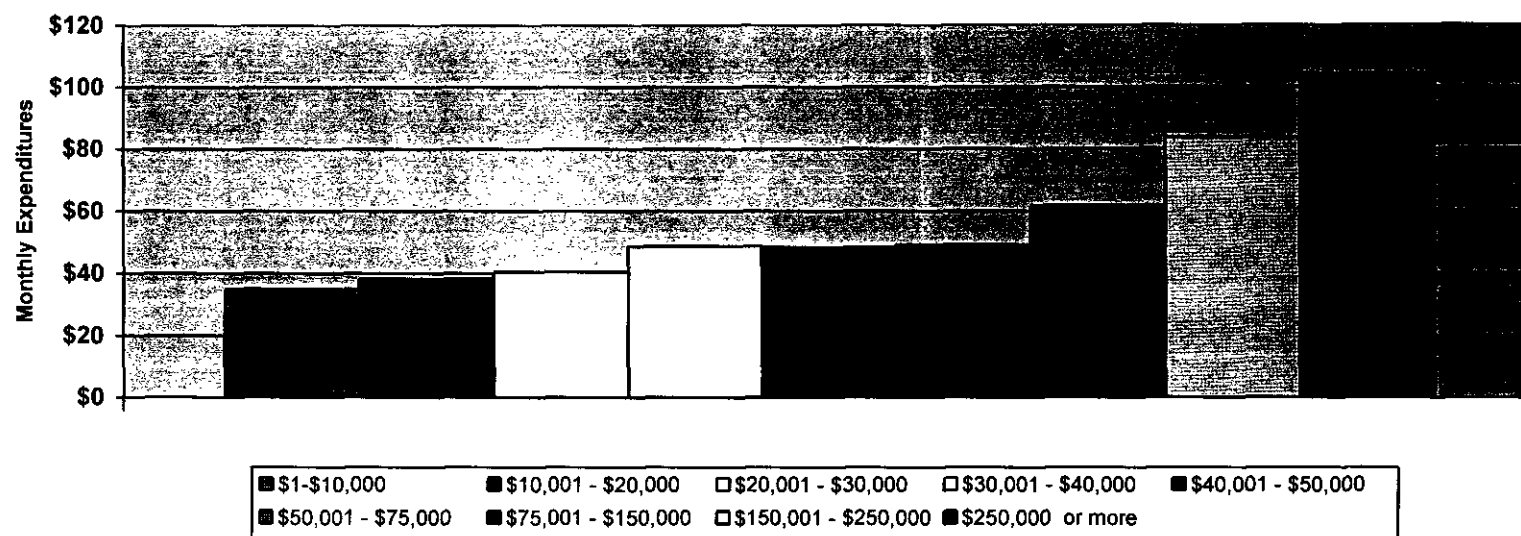
2 A. Yes, it does.

3

Schedule RDC-1

Monthly Natural Gas Expenditures by Annual Income (North Carolina) 2006 American Community Survey	
Annual Income	Natural Gas Expenditures (monthly)
\$1-\$10,000	\$34.90
\$10,001 - \$20,000	\$38.20
\$20,001 - \$30,000	\$40.40
\$30,001 - \$40,000	\$48.70
\$40,001 - \$50,000	\$48.30
\$50,001 - \$75,000	\$49.20
\$75,001 - \$150,000	\$61.60
\$150,001 - \$250,000	\$83.60
\$250,000 or more	\$104.20

Monthly Natural Gas Expenditures by Annual Income (North Carolina 2006)



Schedule RDC-3

Monthly Natural Gas Expenditures by Ratio of Income to Federal Poverty Level (North Carolina)
(American Community Survey: 2006)

Ratio of Income to Federal Poverty Level	Natural Gas Expenditures	Average Poverty Level within Range
1 - 50%	\$35.40	22.6%
51 - 100%	\$34.80	76.7%
101 - 150%	\$37.80	126.3%
151 - 200%	\$42.40	176.0%
201 - 300%	\$46.10	249.7%
301% or more	\$60.30	443.4%

Schedule RDC-4

Monthly Natural Gas Expenditures by Number of Bedrooms in Home and Income (North Carolina)
(American Community Survey: 2006)

No. of BRms	\$1 - \$10,000	\$10 - \$20,000	\$20 - \$30,000	\$30 - \$40,000	\$40 - \$50,000	\$50 - \$75,000	\$75 - \$150,000	\$150- \$250,000	\$250,000+
0 bedrooms	\$10.60	\$6.60	\$19.70	\$34.90	\$6.90	\$16.20	\$61.00	\$3.00	xxx
1 bedroom	\$16.20	\$15.70	\$18.50	\$23.30	\$12.90	\$14.00	\$13.00	\$10.20	\$51.20
2 bedrooms	\$34.10	\$35.50	\$30.90	\$33.20	\$33.20	\$33.60	\$35.60	\$47.30	\$37.80
3 bedrooms	\$45.50	\$48.50	\$42.40	\$49.90	\$47.90	\$48.30	\$55.90	\$73.00	\$72.00
4 bedrooms	\$46.80	\$54.30	\$62.80	\$68.20	\$70.70	\$63.50	\$76.90	\$94.80	\$109.50
5+ bedrooms	\$98.10	\$57.10	\$62.90	\$61.00	\$63.20	\$81.50	\$98.40	\$97.20	\$128.30
Total	\$35.80	\$39.30	\$37.70	\$44.60	\$45.00	\$47.60	\$60.80	\$82.40	\$101.90

Schedule RDC-5

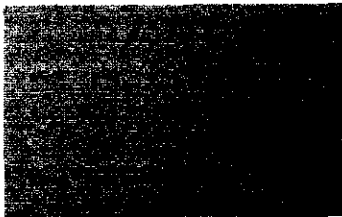
Monthly Natural Gas Expenditures by Number of Rooms in Home and Annual Income (North Carolina)
(American Community Survey: 2006)

No. of Rooms	\$1 - \$10,000	\$10 - \$20,000	\$20 - \$30,000	\$30 - \$40,000	\$40 - \$50,000	\$50 - \$75,000	\$75 - \$150,000	\$150- \$250,000	\$250,000+
1 Room	\$3.20	\$7.00	\$10.90	\$17.60	\$3.00	\$24.60	\$3.00	xxx	xxx
2 room	\$13.70	\$7.50	\$6.10	\$16.00	\$3.60	\$8.40	\$5.10	\$2.60	\$90.40
3 room	\$19.50	\$19.80	\$16.50	\$17.30	\$22.20	\$18.30	\$11.60	\$9.50	\$2.40
4 room	\$30.00	\$30.20	\$25.70	\$28.30	\$25.10	\$25.60	\$32.20	\$13.60	\$38.50
5 room	\$42.80	\$41.80	\$39.60	\$45.30	\$41.20	\$41.30	\$44.00	\$67.90	\$39.60
6 room	\$47.60	\$55.50	\$47.90	\$48.60	\$49.20	\$52.60	\$54.70	\$55.40	\$56.30
7 room	\$62.40	\$59.50	\$58.00	\$63.40	\$59.60	\$50.10	\$66.10	\$85.40	\$62.60
8 room	\$51.00	\$63.60	\$67.30	\$78.00	\$75.50	\$67.50	\$73.40	\$87.00	\$101.90
9 or more	\$88.50	\$76.40	\$64.10	\$91.10	\$79.10	\$80.60	\$86.20	\$101.70	\$121.60
Total	\$35.80	\$39.30	\$37.70	\$44.60	\$45.00	\$47.60	\$60.80	\$82.40	\$101.90

One room units were excluded because higher income ranges had insufficient sample sizes for the Census Bureau to report results.

Schedule RDC-6

Average Income by Number of Rooms or Bedrooms in Housing Unit (North Carolina)
(American Community Survey: 2006)

Number of Rooms/Bedrooms	Average Income by Number of Rooms/Bedrooms	
	Rooms	Bedrooms
0	xxx	\$24,946
1	\$22,750	\$27,641
2	\$28,552	\$35,966
3	\$29,864	\$56,888
4	\$32,865	\$95,482
5 /a/	\$43,774	\$125,570
6	\$56,168	
7	\$71,261	
8	\$89,641	
9 /b/	\$130,581	
Total	\$56,770	\$56,770

NOTES:

/a/ For bedrooms, data is reported for 5 or more.

/b/ For rooms, data is report for 9 or more.

[illegible][illegible]

Schedule RDC-8

Distribution of Housing Units by Income and Housing Unit Type (Gas Users) (North Carolina) (American Community Survey: 2006)

Building Type	\$1 - \$10,000	\$10 - \$20,000	\$20 - \$30,000	\$30 - \$40,000	\$40 - \$50,000	\$50 - \$75,000	\$75 - \$150,000	\$150- \$250,000	\$250,000 or more
Mobile home	21%	21%	20%	17%	15%	11%	5%	2%	0%
1-family detached	42%	51%	56%	62%	67%	75%	86%	91%	94%
1-family attached	3%	3%	4%	4%	4%	3%	3%	4%	2%
2 apartments	5%	4%	3%	2%	2%	1%	0%	0%	0%
3 - 4 units	8%	5%	3%	3%	2%	2%	1%	1%	0%
5 - 9 units	9%	6%	6%	5%	4%	3%	2%	1%	1%
10 - 19 units	7%	5%	5%	5%	4%	3%	2%	1%	0%
20 - 49 units	3%	3%	2%	2%	2%	1%	1%	0%	0%
50 or more units	3%	2%	1%	1%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Natural Gas Bill By Housing Unit Type (North Carolina) (American Community Survey: 2006)

Housing Unit Type	\$1 - \$10,000	\$10 - \$20,000	\$20 - \$30,000	\$30 - \$40,000	\$40 - \$50,000	\$50 - \$75,000	\$75 - \$150,000	\$150- \$250,000	\$250,000 or more
Mobile home	\$23.80	\$20.90	\$22.20	\$23.00	\$20.50	\$22.40	\$19.00	\$27.70	\$5.60
1-family detached	\$60.40	\$57.80	\$52.90	\$60.90	\$57.20	\$56.00	\$66.50	\$86.90	\$106.30
1-family attached	\$38.00	\$40.70	\$30.90	\$27.90	\$32.20	\$43.30	\$60.90	\$74.00	\$54.80
2 apartments	\$28.90	\$37.60	\$18.30	\$19.00	\$37.50	\$38.60	\$17.30	\$11.90	\$1.00
3 - 4 units	\$18.90	\$19.50	\$19.00	\$19.70	\$22.60	\$25.60	\$21.10	\$11.60	\$3.00
5 - 9 units	\$9.00	\$11.80	\$13.90	\$10.20	\$16.60	\$11.00	\$16.90	\$21.10	\$2.70
10 - 19 units	\$7.30	\$8.80	\$7.00	\$8.60	\$5.40	\$6.70	\$11.70	\$2.90	\$109.00
20 - 49 units	\$6.90	\$10.60	\$7.70	\$7.30	\$6.70	\$9.10	\$7.10	\$6.40	\$3.00
50 or more units	\$3.80	\$7.20	\$5.90	\$8.40	\$7.10	\$4.70	\$9.10	\$2.50	\$2.50
Total	\$35.80	\$39.30	\$37.70	\$44.60	\$45.00	\$47.60	\$60.80	\$82.40	\$101.90

Natural Gas Consumption (thousand cf) by Income (2001)							
	Total	Less than \$10,000	\$10,000 - \$29,999	\$30,000 - \$49,999	\$50,000 or more	Below Poverty Level	Eligible for Federal Assistance
Total energy (gas)	70	54	63	68	81	56	64
Space heating (gas)	54	45	50	52	59	45	50
Water heating (gas)	19	15	17	19	22	16	17

SOURCE: Residential Energy Consumption Survey, Tables CE1-3c, CE2-3c, CE4-3c.

Natural Gas Expenditures by Household Income Before Taxes (South region)										
	Total South	Less than \$5,000	\$5,000 - \$9,999	\$10,000 - \$14,999	\$15,000 - \$19,999	\$20,000 - \$29,999	\$30,000 - \$39,999	\$40,000 - \$49,999	\$50,000 - \$69,999	\$70,000 or more
2005 - 2006	\$303	\$230	\$188	\$241	\$216	\$241	\$252	\$270	\$300	\$450
2004 - 2005	\$273	\$155	\$153	\$206	\$209	\$211	\$235	\$272	\$267	\$426
2003 - 2004	\$251	\$110	\$133	\$196	\$183	\$194	\$222	\$273	\$256	\$401

SOURCE: Table 33, U.S. Department of Labor, Consumer Expenditures Survey (annual)

Schedule RDC-11
(page 1 of 2)

Relationship Between Natural Gas Expenditures and Age of Householders (North Carolina) (American Community Survey: 2006)	
Age of Householder	Monthly Natural Gas Expenditure
18 – 30	\$54.10
31 – 55	\$66.20
56 – 65	\$66.40
66 – 75	\$64.70
76 or more	\$62.10
86 or more	\$59.00
90 or more	\$58.80

Schedule RDC-11
(page 2 of 2)

Natural Gas Expenditures (South) by Age of Householder

	2003-2004	2004-2005	2005-2006
25-34	\$195	\$238	\$262
35-44	\$286	\$309	\$329
45-54	\$291	\$309	\$343
55-64	\$280	\$288	\$313
65 and over	\$253	\$280	\$322
65-74	\$257	\$279	\$322
75 and over	\$249	\$280	\$323

SOURCE: US Department of Labor, Consumer Expenditures Survey, (two-year tables) (annual).

Schedule RDC-12

Income by Year (inflation adjusted) by Demographic Factor (North Carolina)				
	2004	2005	2006	Percent change (04 – 06)
Median income	\$39,428	\$40,729	\$42,625	8.1%
Wage and earnings	\$51,266	\$53,136	\$55,609	8.5%
Social Security	\$12,644	\$12,987	\$13,524	7.0%
SSI	\$6,303	\$6,630	\$6,611	4.9%
Public Assistance	\$2,392	\$2,323	\$2,204	-7.9%
Retirement	\$17,951	\$16,982	\$18,095	0.8%

Schedule RDC-13

North Carolina Home Energy Burdens: 2004 – 2007				
	2004	2005	2006	2007
Poverty Level	Home Energy Burdens by Poverty Level			
Below 50%	45.9%	47.8%	51.9%	59.3%
50 – 74%	18.4%	19.2%	20.8%	23.8%
75 – 99%	13.2%	13.8%	14.9%	17.1%
100 – 124%	10.2%	10.7%	11.6%	13.3%
125 – 149%	8.4%	8.7%	9.5%	10.8%
150 – 185%	6.9%	7.2%	7.8%	8.9%
North Carolina Home Energy Affordability Gap (per household)				
Total at or below 185%	\$740	\$832	\$1,010	\$1,335

SOURCE: www.HomeEnergyAffordabilityGap.com.

Schedule RDC-14

North Carolina Households by Ratio of Income to Federal Poverty Level	
Ratio of Income to Federal Poverty Level	Number of Households
Below 50%	173,390
50 – 74%	93,462
75 – 99%	117,733
100 – 124%	132,947
125 – 149%	147,280
150 – 185%	207,868
SOURCE: Home Energy Affordability Gap: 2007 (North Carolina Fact Sheet) (April 2008) (based on 2000 Census).	

Attachment RC-1

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EDUCATION:

J.D. (Order of the Coif), University of Florida (1981)

M.A. (Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975)

PROFESSIONAL EXPERIENCE:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 - present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including: regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than three dozen states. He is particularly noted for creative program design and implementation within tight budget constraints.

National Consumer Law Center (NCLC): 1986 - 1994

As a staff attorney with NCLC, Colton worked on low-income energy and utility issues. He pioneered cost-justifications for low-income affordable energy rates, as well as developing models to quantify the non-energy benefits (e.g., reduced credit and collection costs, reduced working capital) of low-income energy efficiency. He designed and implemented low-income affordable rate and fuel assistance programs across the country. Colton was charged with developing new practical and theoretical underpinnings for solutions to low-income energy problems.

Community Action Research Group (CARG): 1981 - 1985

As staff attorney for this non-profit research and consulting organization, Colton worked primarily on energy and utility issues. He provided legal representation to low-income persons on public utility issues; provided legal and technical assistance to consumer and labor organizations; and provided legal and technical assistance to a variety of state and local governments nationwide on natural gas, electric, and telecommunications issues. He routinely appeared as an expert witness before regulatory agencies and legislative committees regarding energy and telecommunications issues.

PROFESSIONAL AFFILIATIONS:

Member: Board of Directors, Belmont Housing Trust, Inc.
 Member: Advisory Board: Fair Housing Center of Greater Boston.
 Past Member: Fair Housing Committee, Town of Belmont (MA)
 Past Member: Aggregation Advisory Committee, New York State Energy Research and Development Authority.
 Past Member: Board of Directors, Vermont Energy Investment Corporation.
 Past Member: Board of Directors, National Fuel Funds Network
 Past Member: National Advisory Committee, U.S. Department of Health and Human Services, Administration for Children and Families, Performance Goals for Low-Income Home Energy Assistance.
 Past Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
 Past Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*
 Past Member: National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.
 Past Member: National Advisory Board: Energy Financing Alternatives for Subsidized Housing, New York State Energy Research and Development Authority.

PROFESSIONAL ASSOCIATIONS:

National Association of Housing and Redevelopment Officials (NAHRO)
 Association for Enterprise Opportunity (AEO)
 Iowa State Bar Association
 Energy Bar Association
 Association for Institutional Thought (AFIT)
 Association for Evolutionary Economics (AEE)
 Society for the Study of Social Problems (SSSO)
 International Society for Policy Studies
 Association for Social Economics

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COLTON EXPERIENCE AS EXPERT WITNESS

1988 - PRESENT

CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
I/M/O National Grid	Witness	New Hampshire Legal Assistance	Low-income rate assistance	New Hampshire	08
I/M/O EmPower Maryland	Witness	Office of Peoples Counsel	Low-income energy efficiency	Maryland	08
I/M/O Duke Energy Carolinas Save-a-Watt Program	Witness	NC Equal Justice Foundation	Low-income energy efficiency	North Carolina	08
I/M/O Zia Natural Gas Company	Witness	Community Action New Mexico	Low-income/low-use rate design	New Mexico	08
I/M/O Universal Service Fund Support for the Affordability of Local Rural Telecomm Service	Witness	Office of Consumer Advocate	Telecomm service affordability	Pennsylvania	08
I/M/O Philadelphia Water Department	Witness	Public Advocate	Credit and Collections	Philadelphia	08
I/M/O Portland General Electric Company	Witness	Community Action--Oregon	General rate case	Oregon	08
I/M/O Philadelphia Electric Company (electric)	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
I/M/O Philadelphia Electric Company (gas)	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
I/M/O Columbia Gas Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	08
I/M/O Public Service Company of New Mexico	Witness	Community Action New Mexico	Fuel adjustment clause	New Mexico	08
I/M/O Petition of Direct Energy for Low-Income Aggregation	Witness	Office of Peoples Counsel	Low-income electricity aggregation	Maryland	07
I/M/O Office of Consumer Advocate et al. v. Verizon and Verizon North	Witness	Office of Consumer Advocate	Lifeline telecommunications rates	Pennsylvania	07
I/M/O Pennsylvania Power Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07
I/M/O National Fuel Gas Distribution Corporation	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07
I/M/O Public Service of New Mexico--Electric	Witness	Community Action New Mexico	Low-income programs	New Mexico	07
I/M/O Citizens Gas/NIPSCO/Public Service for Universal Service Program	Witness	Citizens Gas & Coke Utility/Northern Indiana Public Service/Public Service	Low-income program design	Indiana	07
I/M/O PPL Electric	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07
I/M/O Section 15 Challenge to NSPI Rates	Witness	Energy Affordability Coalition	Discrimination in utility regulation	Nova Scotia	07
I/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Low-income and residential collections	Pennsylvania	07
I/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Low-income program	Pennsylvania	07

CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
I/M/O Section 11 Proceeding, Energy Restructuring	Witness	Office of Peoples Counsel	Low-income needs and responses	Maryland	06
I/M/O Citizens Gas/NIPSCO/Public Service for Universal Service Program	Witness	Citizens Gas & Coke Utility/Northern Indiana Public Service/Public Service	Low-income program design	Indiana	06
I/M/O Public Service Co. of North Carolina	Witness	North Carolina Attorney General/Dept. of Justice	Low-income energy usage	North Carolina	06
I/M/O Electric Assistance Program	Witness	New Hampshire Legal Assistance	Electric low-income program design	New Hampshire	06
I/M/O Verizon Petition for Alternative Regulation	Witness	New Hampshire Legal Assistance	Basic local telephone service	New Hampshire	06
I/M/O Pennsylvania Electric Co/Metropolitan Edison Co.	Witness	Office of Consumer Advocate	Universal service cost recovery	Pennsylvania	06
I/M/O Duquesne Light Company	Witness	Office of Consumer Advocates	Universal service cost recovery	Pennsylvania	06
I/M/O Natural Gas DSM Planning	Witness	Low-Income Energy Network	Low-income DSM program.	Ontario	06
I/M/O Union Gas Co.	Witness	Action Centre for Tenants Ontario (ACTO)	Low-income program design	Ontario	06
I/M/O Public Service of New Mexico merchant plant	Witness	Community Action New Mexico	Low-income energy usage	New Mexico	06
I/M/O Customer Assistance Program design and cost recovery	Witness	Office of Consumer Advocate	Low-income program design	Pennsylvania	06
I/M/O NIPSCO Proposal to Extend Winter Warmth Program	Witness	Northern Indiana Public Service Company	Low-income energy program evaluation	Indiana	05
I/M/O Piedmont Natural Gas	Witness	North Carolina Attorney General/Dept. of Justice	Low-income energy usage	North Carolina	05
I/M/O PSEG merger with Exelon Corp.	Witness	Division of Ratepayer Advocate	Low-income issues	New Jersey	05
Re. Philadelphia Water Department	Witness	Public Advocate	Water collection factors	Philadelphia	05
I/M/O statewide natural gas universal service program	Witness	New Hampshire Legal Assistance	Universal service	New Hampshire	05
I/M/O Sub-metering requirements for residential rental properties	Witness	Tenants Advocacy Centre of Ontario	Sub-metering consumer protections	Ontario	05
I/M/O National Fuel Gas Distribution Corp.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	05
I/M/O Nova Scotia Power, Inc.	Witness	Dalhousie Legal Aid Service	Universal service	Nova Scotia	04
I/M/O Lifeline Telephone Service	Witness	National Ass'n State Consumer Advocates (NASUCA)	Lifeline rate eligibility	FCC	04
Mackay v. Verizon North	Witness	Office of Consumer Advocate	Lifeline rates—vertical services	Pennsylvania	04
I/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Credit and collections	Pennsylvania	04
I/M/O Citizens Gas & Coke/Public Service	Witness	Citizens Action Coalition of Indiana	Universal service	Indiana	04

CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
I/M/O PPL Electric Corporation	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	04
I/M/O Consumers New Jersey Water Company	Witness	Division of Ratepayer Advocate	Low-income water rate	New Jersey	04
I/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Low-income gas rate	Maryland	04
I/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Low-income gas rate	Maryland	03
Golden v. City of Columbus	Witness	Helen Golden	EOCA disparate impacts	North Carolina	02
Huegel v. City of Easton	Witness	Phyllis Huegel	Credit and collection	Pennsylvania	02
I/M/O Universal Service Fund	Witness	Public Utility Commission staff	Universal service funding	New Hampshire	02
I/M/O Philadelphia Gas Works	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	02
I/M/O Washington Gas Light Company	Witness	Office of Peoples Counsel	Rate design	Maryland	02
I/M/O Consumers Illinois Water Company	Witness	Illinois Citizens Utility Board	Credit and collection	Illinois	02
I/M/O Public Service Electric & Gas Rates	Witness	Division of Ratepayer Advocate	Universal service	New Jersey	01
I/M/O Pennsylvania-American Water Company	Witness	Office of Consumer Advocate	Low-income rates and water conservation	Pennsylvania	01
I/M/O Louisville Gas & Electric Prepayment Meters	Witness	Kentucky Community Action Association	Low-income energy	Kentucky	01
I/M/O NICOR Budget Billing Plan Interest Charge	Witness	Cook County State's Attorney	Rate Design	Illinois	01
I/M/O Rules Re. Payment Plans for High Natural Gas Prices	Witness	Cook County State's Attorney	Budget Billing Plans	Illinois	01
I/M/O Philadelphia Water Department	Witness	Office of Public Advocate	Credit and collections	Philadelphia	01
I/M/O Missouri Gas Energy	Witness	Office of Peoples Counsel	Low-income rate relief	Missouri	01
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Witness	Division of Ratepayer Advocate	Telecommunications universal service	New Jersey	01
I/M/O T.W. Phillips Gas and Oil Co.	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O Peoples Natural Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O UGI Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
I/M/O PFG Gas Company	Witness	Office of Consumer Advocate	Ratemaking of universal service costs.	Pennsylvania	00
Armstrong v. Gallia Metropolitan Housing Authority	Witness	Equal Justice Foundation	Public housing utility allowances	North Carolina	00
I/M/O Bell Atlantic--New Jersey Alternative Regulation	Witness	Division of Ratepayer Advocate	Telecommunications universal service	New Jersey	00
I/M/O Universal Service Fund for Gas and Electric Utilities	Witness	Division of Ratepayer Advocate	Design and funding of low-income programs	New Jersey	00

CASE NAME	ROLE	CLIENT NAME	TOPIC	JURIS.	DATE
I/M/O Consolidated Edison Merger with Northeast Utilities	Witness	Save Our Homes Organization	Merger impacts on low-income	New Hampshire	00
I/M/O UtiliCorp Merger with St. Joseph Light & Power	Witness	Missouri Dept. of Natural Resources	Merger impacts on low-income	Missouri	00
I/M/O UtiliCorp Merger with Empire District Electric	Witness	Missouri Dept. of Natural Resources	Merger impacts on low-income	Missouri	00
I/M/O PacifiCorp	Witness	The Opportunity Council	Low-income energy affordability	Washington	00
I/M/O Public Service Co. of Colorado	Witness	Colorado Energy Assistance Foundation	Natural gas rate design	Colorado	00
I/M/O Avista Energy Corp.	Witness	Spokane Neighborhood Action Program	Low-income energy affordability	Washington	00
I/M/O TW Phillips Energy Co.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O PECO Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O National Fuel Gas Distribution Corp.	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O PFG Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
I/M/O UGI Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	00
Re. PSCO/NSP Merger	Witness	Colorado Energy Assistance Foundation	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O Columbia Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Witness	Barlow Allerruzzo	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Witness	Division of Ratepayer Advocate	Universal service	Pennsylvania	99
I/M/O Bell Atlantic Local Competition	Witness	Public Utility Law Project	Lifeline telecommunications rates	New Jersey	99
I/M/O Merger Application for SBC and Ameritech North Carolina	Witness	Edgemont Neighborhood Association	Merger impacts on low-income consumers	North Carolina	98 - 99
Davis v. American General Finnce	Witness	Thomas Davis	Damages in "loan flipping" case	North Carolina	98 - 99
Griffin v. Associates Financial Service Corp.	Witness	Earlie Griffin	Damages in "loan flipping" case	North Carolina	98 - 99
I/M/O Baltimore Gas and Electric Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Delmarva Power and Light Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Electric Power Co. Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99
I/M/O Potomac Edison Restructuring Plan	Witness	Maryland Office of Peoples Counsel	Consumer protection/basic generation service	Maryland	98 - 99

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VMHOA v. LaPierre	Witness	Vernont Mobile Home Owners Association	Mobile home tying	Vermont	98
Re. Restructuring Plan of Virginia Electric Power	Witness	VMH Energy Services, Inc.	Consumer protection/basic generation service	Virginia	98
Mackey v. Spring Lake Mobile Home Estates	Witness	Timothy Mackey	Mobile home fees	State ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Jersey Central Power & Light	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Appleby v. Metropolitan Dade County Housing Agency	Witness	Legal Services of Greater Miami	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Witness	Energy Coordinating Agency of Philadelphia	Universal service	Pennsylvania	97
Re. Atlantic City Electric Merger	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97
Re. IES Industries Merger	Witness	Iowa Community Action Association	Low-income issues	Iowa	97
Re. New Hampshire Electric Restructuring	Witness	NH Comm. Action Ass'n	Wires charge	New Hampshire	97
Re. Natural Gas Competition in Wisconsin	Witness	Wisconsin Community Action Association	Universal service	Wisconsin	96
Re. Baltimore Gas and Electric Merger	Witness	Maryland Office of Peoples Counsel	Low-income issues	Maryland	96
Re. Northern States Power Merger	Witness	Energy Cents Coalition	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Witness	Colorado Energy Assistance Foundation	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Witness	Fisher, Sheehan & Colton	Low-income issues/energy efficiency	Massachusetts	96
Re FERC Merger Guidelines	Witness	National Coalition of Low-Income Groups	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keliikuli III	Witness	Joseph Keliikuli III	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Witness	Theresa Mahaulu	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Witness	Re. Joseph Ching, Sr.	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Witness	Joseph Keaulana, Jr.	Damages from lack of homestead	Honolulu	95

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Re. Utility Allowances for Section 8 Housing	Witness	National Coalition of Low-Income Groups	Fair Market Rent Setting	Washington D.C.	95
Re. PGW Customer Service Tariff Revisions	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Witness	Gulf Coast Legal Services	Low-Income Rates	Texas	95
Re. Request for Modification of Winter Moratorium	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. Dept of Hawaii Homelands Trust Homestead Production	Witness	Native Hawaiian Legal Corporation	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Witness	Office of Consumer Counsel	Credit and collection	Connecticut	94
Re. Central Light and Power Co.	Witness	United Farm Workers	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Witness	Gloria Blackwell	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Witness	Wash. Util. & Transp. Comm'n Staff	Telecommunications regulation	Washington	94
Re. U.S. West Request for Full Toll Denial	Witness	Colorado Office of Consumer Counsel	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Witness	Community Family Life Services	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Witness	Peterborough Community Legal Centre	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v. Housing Auth. of Baltimore	Witness	Baltimore Legal Aide	Public housing utility allowances	Federal district court	93
Penn Bell Telephone Co.	Witness	Penn. Utility Law Project	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	93
Central Maine Power Co.	Witness	Maine Assn Ind. Neighborhoods	Low-income rates	Maine	92
New England Telephone Company	Witness	Mass Attorney General	Low-income phone rates	Massachusetts	92
Philadelphia Gas Co.	Witness	Philadelphia Public Advocate	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Witness	Land and Water Fund	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Witness	Washoe Legal Services	Low-income DSM	Nevada	92
Consumers Power Co.	Witness	Michigan Legal Services	Low-income rates	Michigan	92
Columbia Gas	Witness	Penn. State Office of Consumer Advocate (OCA)	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Witness	Mass Elec Co.	Percentage of Income Plan	Massachusetts	91

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AT&T	Witness	TURN	Inter-LATA competition	California	91
Generic Investigation into Uncollectibles	Witness	Penn OCA	Controlling uncollectibles	Pennsylvania	91
Union Heat Light & Power	Witness	Kentucky Legal Services (KLS)	Energy Assurance Program	Kentucky	90
Philadelphia Water	Witness	Philadelphia Public Advocate (PPA)	Controlling accounts receivable	Philadelphia	90
Philadelphia Gas Works	Witness	PPA	Controlling accounts receivable	Philadelphia	90
Mississippi Power Co.	Witness	Southeast Mississippi Legal Services Corp.	Formula ratemaking	Mississippi	90
Kentucky Power & Light	Witness	KLS	Energy Assurance Program	Kentucky	90
Philadelphia Electric Co.	Witness	PPA	Low-income rate program	Philadelphia	90
Montana Power Co.	Witness	Montana Ass'n of Human Res. Council Directors	Low-income rate proposals	Montana	90
Columbia Gas Co.	Witness	Penn. OCA	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	Witness	PPA	Energy Assurance Program	Philadelphia	89
Southwestern Bell Telephone Co.	Witness	SEMLSC	Formula ratemaking	Mississippi	90
Generic Investigation into Low-income Programs	Witness	Vermont State Department of Public Service	Low-income rate proposals	Vermont	89
Generic Investigation into Dmnd Side Management Measures	Consultant	Vermont DPS	Low-income conservation programs	Vermont	89
National Fuel Gas	Witness	Penn OCA	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Witness	Human Resource Develop. Council District XI	Low-income conservation	Montana	88
Washington Water Power Co.	Witness	Idaho Legal Service Corp.	Rate base, rate design, cost-allocations	Idaho	88