

**FILE**

OCC EXHIBIT \_\_\_\_\_

**BEFORE THE  
PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of )  
Vectren Energy Delivery of Ohio, Inc., for )  
Authority to Amend its Filed Tariffs to )  
Increase the Rates and Charges for Gas )  
Services and Related Matters. )

Case No. 07-1080-GA-AIR

In the Matter of the Application of )  
Vectren Energy Delivery of Ohio, Inc., for )  
Approval of An Alternative Rate Plan for )  
a Distribution Replacement Rider to )  
Recover the Costs of a Program for the )  
Accelerated Replacement of Cast Iron )  
Mains and Bare Steel Mains and Service )  
Lines, a Sales Reconciliation Rider to )  
Collect Difference Between Actual and )  
Approved Revenues, and Inclusion in )  
Operating Expense of the Costs of Certain )  
Reliability Programs. )

Case No. 07-1081-GA-ALT

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**DIRECT TESTIMONY AND EXHIBITS**

of

**ROGER D. COLTON**

**ON BEHALF OF THE**

**OFFICE OF THE OHIO CONSUMERS' COUNSEL**

10 West Broad St., Suite 1800

Columbus, OH 43215

**July 23, 2008**

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1   ***Q1. PLEASE STATE YOUR NAME AND ADDRESS.***

2   ***A1.***   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   ***Q2. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?***

6   ***A2.***   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   ***Q3. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?***

12   ***A3.***   I am testifying on behalf of the Office of the Ohio Consumers' Counsel (OCC) of  
13           Columbus, Ohio.

14  
15   ***Q4. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.***

16   ***A4.***   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 Tacoma Public Utilities). In addition to state- and utility-specific work, I engage in national  
4 work in the United States and Canada. For example, I am currently working on a national  
5 study of the responses of water utilities to the payment troubles of residential customers for  
6 the American Water Works Association Research Foundation. In 2007, I was part of a team  
7 that performed a multi-sponsor public/private national study of low-income energy  
8 assistance programs.

9  
10 **Q5. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

11 **A5.** 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 **Q6. HAVE YOU AUTHORED ARTICLES ON PUBLIC UTILITY REGULATORY**  
17 **ISSUES?**

18 **A6.** 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.  
23

**Q7. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY  
COMMISSIONS?**

**A7.** Yes. I have previously testified before the Public Utilities Commission of Ohio ("PUCO" or "Commission") on a variety of low-income energy and telecommunication issues. In addition, I have testified in regulatory proceedings in more than 30 states and various Canadian provinces on a wide range of low-income water, telecommunications and energy issues. Proceedings in which I have previously appeared as an expert witness are listed in Attachment RC-1.

**Q8. PLEASE EXPLAIN THE PURPOSE OF YOUR TESTIMONY.**

**A8.** My testimony supports certain OCC objections to the PUCO Staff Report and addresses issues raised by those objections. Specifically, I will address the following items:

- First, I will consider the context within which low-income customers face natural gas rate increases in Ohio;
- Second, I will examine the relationship between income and natural gas expenditures;
- Third, I will consider whether a population of customers participating in the Ohio Percentage of Income Payment Plan (PIPP) program is a good surrogate for assessing the usage of low-income customers in general;
- Finally, I will assess the bill impact on low-use customers of the fixed-variable rate design proposal advanced by Vectren and PUCO Staff.

1 I conclude that income is directly related to natural gas consumption and expenditures.

2 As income increases, natural gas usage increases. As a result, I conclude that a move to a  
3 straight fixed variable rate structure will disproportionately harm low-income, low-use  
4 customers. The increase in bills to low-income customers places an unfair burden on  
5 those customers least able to afford such an increase.

6  
7 **I. LOW-INCOME ENERGY BURDENS IN OHIO**

8  
9 ***Q9. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.***

10 ***A9.*** In this section of my testimony, I consider the context within which Vectren Energy  
11 Delivery of Ohio ("Vectren" or "Company") is proposing a rate increase for low-income  
12 customers. In addition to proposing an overall revenue increase through increased rates,  
13 the Company is proposing to reduce expenses collected through its volumetric charges  
14 and to reallocate the collection of those expenses to the fixed customer charge. This  
15 process of reallocation from volumetric to fixed charges will have the effect, as I describe  
16 in detail below, of further increasing rates to low-use, low-income customers. I conclude  
17 that the Company's low-income customers are not capable of absorbing the increased  
18 natural gas rates that are included in the Company's filing.

**A. Low-Income Home Energy Affordability**

**Q10. PLEASE DESCRIBE THE STATUS OF HOME ENERGY AFFORDABILITY IN OHIO.**

**A10.** Home energy bills, including natural gas bills, pose a crushing burden to low-income households in Ohio 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.<sup>1</sup> In Ohio, 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 Level<sup>2</sup> reached \$1,571 per household.<sup>3</sup> Ohio's 2007 Affordability Gap represents an increase of more than 125% over the Affordability Gap experienced by Ohio households as recently as 2004. The 2004 Home Energy Affordability Gap in Ohio was \$694 per household.<sup>4</sup>

---

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> There is no magic to the use of the 185% of Poverty Level figure. The annual Home Energy Affordability Gap is calculated for households at or below 185% of the Federal Poverty Level. It does not extend to 200% of the Federal Poverty Level. In addition, while Affordability Gap figures are published for particular ranges of the Federal Poverty Level (e.g., 0 – 50% of Poverty; 50 – 75% of Poverty), the aggregate statewide figure is published for all households at or below 185% of Poverty Level.

<sup>4</sup> Programs such as Ohio's PIPP are seen to help fill the Affordability Gap, not to reduce it.

**Q11. IS THE INCREASE IN THE OVERALL PER-HOUSEHOLD HOME ENERGY AFFORDABILITY GAP THE ONLY AFFORDABILITY CONCERN IN OHIO?**

**A11.** No. One concern about the Home Energy Affordability Gap in Ohio is the extent to which the unaffordability of home energy is now reaching into the more moderate income levels. Schedule RDC-1 shows the home energy burdens by Federal Poverty Level for each year 2004 through 2007, the most recent year available. As can be seen from Schedule RDC-1, in 2007, home energy bills approached 10% of income for households at 150 – 185% of Federal Poverty Level for the first time. These more moderate income households experienced a home energy burden of only 6.7% in 2004.

At the same time, the burden of home energy bills continues to escalate for the lowest income Ohio households. The home energy burden for households with income below 50% of the Federal Poverty Level increased to more than 65%. What this means is that \$0.65 of every dollar of income for these households is devoted simply to home energy bills. For households with income between 50% and 74% of the Federal Poverty Level, home energy bills exceeded 25% of income, while for households with income between 75% and 125% of Federal Poverty Level, home energy burdens were between 12% and 15% of household income.

**Q12. ARE THERE SIGNIFICANT NUMBERS OF OHIO HOUSEHOLDS WHO LIVE WITH THESE HOME ENERGY BURDENS?**

**A12.** A substantial number of Ohio households live with the annual incomes associated with these unaffordable home energy burdens. While more than 215,000 Ohio households



lived with income at or below 50% of the Federal Poverty Level at the time of the 2000 Census, 125,000 more lived with income between 50% and 74% of Poverty. An additional roughly 135,000 more households lived with income between 75% and 99% of the Federal Poverty Level. The numbers of Ohio households by Poverty Level are set forth in Schedule RDC-2. While I have not specifically examined the number or proportion of households at or below 185% of Federal Poverty Level using natural gas as their primary heating fuel, published data (see, e.g., Schedule RDC-15) indicates that roughly 550,000 Ohio households at or below 150% of Poverty Level (67%) use natural gas. This is consistent with the state's overall 65 – 70% penetration of natural gas within the residential population as a whole. I discuss the specific numbers of households that use natural gas, disaggregated by income level, in more detail below.

***Q13. HAVE NATURAL GAS PRICES CONTRIBUTED TO THIS INCREASE IN THE OHIO HOME ENERGY AFFORDABILITY GAP?***

***A13.*** Yes. According to the Energy Information Administration (EIA) of the U.S. Department of Energy (DOE), winter natural gas prices in Ohio have increased more than 33% since 2004 (from \$0.956/ccf to \$1.275/ccf).<sup>5</sup>

***Q14. WHAT IS THE IMPACT OF INCREASING HOME ENERGY BURDENS IN OHIO?***

***A14.*** One of the impacts of the increasing home energy burdens in Ohio is the extent to which such burdens place fundamental needs at risk. One such fundamental need is the

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<sup>5</sup> Energy Information Administration, Natural Gas Monthly, Table 21 (May 2004), Table 19 (May 2007).

1 accessibility to affordable shelter. Like home energy, the affordability of shelter is  
2 measured by the "burden" which shelter costs place upon household income. Households  
3 are considered to be at risk if their shelter costs exceed 30% of household income.<sup>6</sup>  
4 "Shelter costs" include not only rent and mortgage payments, but include home utilities  
5 as well (excepting telephone).<sup>7</sup> Schedule RDC-3 shows the increasing shelter burdens  
6 being borne by low-income households in Ohio. While 68% of renters with annual  
7 income below \$10,000 had gross rent burdens—"gross rents" include utility costs—of  
8 more than 30% at the time of the 2000 Census, that proportion had increased to 72% by  
9 the time of the 2006 American Community Survey. As with the Home Energy  
10 Affordability Gap analysis, the impact of moving more moderate households into  
11 unaffordable burdens is seen with these gross rents. While 24% of households with  
12 income between \$20,000 and \$34,999 had gross rent burdens of more than 30% at the  
13 time of the 2000 Census, that proportion had increased to 43% by the time of the  
14 American Community Survey. While 4% of Ohio households with incomes of between  
15 \$35,000 and \$50,000 had gross rent burdens of more than 30% at the time of the 2000  
16 Census, that proportion had tripled (to 12%) by the time of the 2006 American  
17 Community Survey.

---

<sup>6</sup> Throughout HUD's affordable housing programs, the term "cost burden" is a term of art. It is defined as the percentage of household income spent for mortgage costs or gross rent. According to HUD programs, households spending more than 30 percent of income for these housing costs are considered to be "cost-burdened." Households spending more than 50 percent are considered to be "severely cost-burdened." See, e.g., 24 CFR Subtitle A, Section 91.5 (definition of "cost burden"). This 30-percent standard is generally accepted. Consider, for example, the annual survey of housing affordability published by the National Low-Income Housing Coalition (NLIHC) ("Out of Reach: Why Everyday People Can't Afford Housing"). NLIHC describes the contents of its report as follows: "For each jurisdiction, the report calculates the amount of money a household must earn in order to afford a rental unit at a range of sizes (0, 1, 2, 3, and 4 bedrooms) at the area's Fair Market Rent (FMR), based on the generally accepted affordability standard of paying no more than 30% of income for housing costs." <http://www.nlihc.org/oor/oor2008> (accessed July 19, 2008).

**Q15. CAN YOU ATTRIBUTE THESE INCREASING SHELTER BURDENS TO HOME ENERGY COSTS?**

**A15.** Yes. I have examined home energy prices as a percentage of the Fair Market Rent (FMR) for two-bedroom units in each Ohio county. FMRs are published annually by the U.S. Department of Housing and Urban Development (HUD) to represent rents at the 40<sup>th</sup> percentile. This means that 40% of all rents are lower than the FMR, while 60% are more than the FMR. As I discuss above, FMRs are like the “gross rent” reported by the Census, including not only the contract rent for the housing itself, but all utilities (except telephone service). In 2004, 54 of Ohio’s counties had FMRs in which home energy exceeded 22% of the FMR, while home energy exceeded 25% of the FMR in 30 counties. In only two (2) Ohio counties did home energy exceed 30% of the FMR. By 2007, however, home energy exceeded 22% of FMR in 87 of Ohio’s 88 counties. Indeed, in 2007, in 73 counties, home energy exceeded 25% of FMR, while home energy exceeded 30% of FMR in 59 counties. Clearly, recent increases in home energy prices are threatening the affordability of basic shelter in Ohio.

**II. THE RELATIONSHIP BETWEEN INCOME AND NATURAL GAS USAGE**

**Q16. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.**

**A16.** In this section of my testimony, I examine the natural gas expenditure patterns in Ohio to assess what relationship, if any, exists between income and natural gas consumption. I

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<sup>7</sup> See e.g., 24 CFR §5.100 (2008).

1 conclude that a direct relationship exists between income and natural gas consumption.

2 As income increases, natural gas usage and expenditures increase as well. A variety of  
3 data supports this conclusion.

4  
5 **A. State-Specific Ohio Data.**

6 **1. Income and Usage.**

7 ***Q17. HAVE YOU EXAMINED OHIO SPECIFIC DATA TO ASSESS THE***  
8 ***RELATIONSHIP BETWEEN NATURAL GAS USAGE AND INCOME?***

9 ***A17.*** I have examined data produced by the U.S. Census Bureau setting forth natural gas bills  
10 by income level for the State of Ohio. While the Census data does not contain usage data,  
11 per se, the data on expenditures will, nonetheless, provide reasonable insights into the  
12 relative use of natural gas by income level.

13  
14 The Ohio data is set forth in Schedule RDC-4. In this schedule, I present natural gas  
15 monthly expenditures as reported by the 2006 American Community Survey, the most  
16 recent Census data available. The American Community Survey collects annual data on  
17 selected household and housing characteristics in years between the Decennial Census.

18 As can be seen, natural gas expenditures increase as each income tier increases in Ohio.

19 Indeed, the monthly 2006 expenditures for households with income between \$150,000  
20 and \$250,000 are twice as high as the monthly expenditures for households with income  
21 less than \$10,000 (\$158.60 vs. \$65.90). Indeed, the median income in Ohio in 2006 was

22 \$44,532. The monthly natural gas expenditure for the income range encompassing that

23 median income (\$40,000 - \$50,000) was \$98.20, more than 50% higher than expenditures

1 at the lowest income level (\$65.90), but only 60% of expenditures at the highest income  
2 level (\$158.60). Schedule RDC-5 presents the same data graphically. The graphic  
3 presentation of the data reveals in clear terms the continuous increase in natural gas  
4 consumption as household income increases.

5  
6 ***Q18. WOULD THE RESULTS OF YOUR ANALYSIS CHANGE IF YOU EXAMINED***  
7 ***THE POVERTY LEVEL OF A HOUSEHOLD RATHER THAN HOUSEHOLD***  
8 ***INCOME?***

9 ***A18.*** 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-6 presents monthly natural gas bills for  
14 Ohio by increasing levels of the Federal Poverty Level. In Ohio, the monthly natural gas  
15 expenditure at 300% of Poverty or more is more than 130% of the natural gas  
16 expenditures for households with income below 50% of Federal Poverty Level.

17  
18 ***Q19. HAS THERE BEEN OTHER EMPIRICAL ANALYSIS THAT HAS BEEN***  
19 ***UNDERTAKEN OF THE RELATIONSHIP BETWEEN INCOME AND NATURAL***  
20 ***GAS EXPENDITURES THAT IS CONSISTENT WITH THIS OHIO DATA?***

21 ***A19.*** Yes. The U.S. Department of Energy, Energy Information Administration ("DOE/EIA")  
22 has published regular periodic reports entitled the *Residential Energy Consumption*  
23 *Survey* ("RECS"). In a document released in June 2001 (and modified in April 2002),

1 DOE/EIA released its analysis of RECS data titled *Natural Gas Use in American*  
2 *Households*. In the section of its analysis that examines the relationship between income  
3 and natural gas usage, DOE/EIA states:

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

10  
11 (EIA/DOE, *Natural Gas Use in American Households*, Household Income, at text  
12 accompanying Figures 1 – 3) (June 2001).

13  
14 ***Q20. DOES THE DEPARTMENT OF ENERGY'S OBSERVATION THAT "HIGHER***  
15 ***INCOME HOUSEHOLDS LIVE IN LARGER HOUSING UNITS, WHICH***  
16 ***REQUIRE MORE ENERGY FOR HEATING" APPLY TO OHIO?***

17 ***A20.*** Yes. This is an empirically demonstrable fact in Ohio. Schedule RDC-7 presents Ohio  
18 data on natural gas expenditures by income and housing unit size. In Schedule RDC-7,  
19 the size of the housing unit is measured in terms of the number of bedrooms. Two  
20 observations can be drawn from Schedule RDC-7. First, there is a moderate relationship  
21 between income and natural gas usage within each housing unit size. As a general rule,  
22 as income increases, holding the housing unit size constant, the natural gas expenditures  
23 increase as well. Second, and even more significantly, the difference in the average

1 expenditures by income is far greater than the difference in expenditures by income  
2 within any given housing unit size. This is because the distribution of households by  
3 housing unit size is not similar between income ranges (see, Schedule RDC-9 and  
4 Schedule RDC-10 below, along with accompanying text). While there may be a  
5 moderate distinction between a higher-income household in a four-bedroom housing unit  
6 and a lower-income household in a four-bedroom housing unit, because there are far  
7 fewer lower-income households in four-bedroom units, the overall difference in  
8 consumption is much greater.

9  
10 The same impacts can be seen in Schedule RDC-8. This data also presents the  
11 distribution of natural gas expenditures by housing unit size. In Schedule RDC-8, housing  
12 unit size is measured in terms of the total number of rooms (not merely the number of  
13 bedrooms). As can be seen, holding the number of rooms constant, there tends to be a  
14 moderate increase in the natural gas expenditures as income increases. However, the  
15 average total natural gas expenditures in Ohio varies sharply by income. As with the  
16 number of bedrooms, the reason for this is that the higher-income households live in  
17 larger housing units.

18  
19 ***Q21. IS YOUR CONCLUSION THAT HIGHER-INCOME HOUSEHOLDS LIVE IN***  
20 ***LARGER HOUSING UNITS A DATA-BASED OBSERVATION?***

21 ***A21.*** Yes. This conclusion is based on two different data-based observations. First, Schedule  
22 RDC-9 presents the average income in Ohio by the number of rooms in a housing  
23 structure, as well as the average income in Ohio by the number of bedrooms in a housing

1 structure. Schedule RDC-9 clearly shows that as housing structures get larger in Ohio,  
2 average income increases. There are two standard ways to measure the size of a housing  
3 unit. One way is to look at the number of total rooms. The other way is to look at the  
4 number of bedrooms. Both of these approaches document that smaller sized units have  
5 lower-income households.

6 ➤ While the average income of an Ohio household living in a unit with one room is  
7 \$22,677, the average income of a household living in an eight-room unit is  
8 \$85,670.

9 ➤ The same relationship holds true for housing size measured by the number of  
10 bedrooms. While the average income for an Ohio household living in a unit with  
11 one bedroom is \$21,584, the average income of a household living in a housing  
12 unit with five or more bedrooms is \$91,346.

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

15  
16 In addition, Schedule RDC-10 presents a distribution of Ohio households by the size of  
17 the housing unit in which they live, separately examining the size of the housing unit  
18 measured by the number of rooms and the number of bedrooms. The data shows that a  
19 higher proportion of lower-income households live in smaller housing units. For  
20 example, while 66% of households with income less than \$10,000 live in units with two  
21 bedrooms or less, only 7% of households with income greater than \$250,000 (and only  
22 8% of households with income between \$150,000 and \$250,000) live in units that small.  
23 Conversely, while 68% of households with income of \$250,000 or more live in units with



1 four or more bedrooms (and 59% of households with income between \$150,000 and  
2 \$250,000 do), only 7% of households with income below \$10,000 live in units that large  
3 (and only 8% of households with income between \$10,000 and \$20,000 do).

4  
5 The same observations can be made about the relationship of income and housing unit  
6 size measured in terms of the number of rooms (not merely number of bedrooms). While  
7 73% of Ohio households with income greater than \$250,000 live in housing units with  
8 eight or more rooms (and 63% of households with income between \$150,000 and  
9 \$250,000 do), only 5% of households with income less than \$10,000 (and only 6% of  
10 households with income between \$10,000 and \$20,000) do.

11  
12 ***Q22. ARE THERE OTHER WAYS THROUGH WHICH TO GAIN INSIGHTS INTO THE***  
13 ***RELATIONSHIP BETWEEN HOUSING UNIT SIZE AND INCOME?***

14 ***A22.*** Yes. One of the implications of housing unit size documented above is a difference in  
15 housing unit type as well. One extension of the observation that low-income households  
16 live in smaller housing units is the further observation that low-income households tend  
17 to live in denser housing units as well. To assess the extent to which this is true in Ohio,  
18 I examined the relationship between income and the type of building in which customers  
19 have their housing units. Building type is disaggregated by the type of construction  
20 (single family, multi-family, mobile home), and the number of units in each building.

21  
22 Schedule RDC-11 shows that residents of multi-family housing units are significantly  
23 disproportionately over-represented by low-income households. While 33% of gas-

1 consuming households with income less than \$10,000 live in building units with three or  
2 more units, and 22% of gas-consuming households with income between \$10,000 and  
3 \$20,000 do, fewer than 2% of gas-consuming households with income of \$75,000 or  
4 more live in buildings with three or more units. Conversely, while between 94% and  
5 96% of gas-consuming households with income \$75,000 or higher live in single family  
6 detached homes, only 43% of gas-consuming households with income less than \$10,000  
7 do (and only 57% of households with income between \$10,000 and \$20,000 do).

8  
9 ***Q23. WHAT IS THE SIGNIFICANCE OF THESE DIFFERENCES IN THE TYPES OF***  
10 ***BUILDINGS IN WHICH LOW-INCOME HOUSEHOLDS LIVE?***

11 ***A23.*** The significance arises in two ways. First, this data further supports the conclusion that  
12 low-income households have lower natural gas consumption. Schedule RDC-11 further  
13 presents natural gas expenditure data broken down by building type and income. While  
14 there is less of a relationship between gas consumption and income -- holding building  
15 type constant -- than there was between gas consumption and income -- holding unit size  
16 constant -- the relationship nonetheless exists. There is an increase from \$108 for  
17 households with income less than \$10,000 living in single-family detached homes to  
18 \$133 for households with income between \$150,000 and \$250,000 (and \$164 for  
19 households with income greater than \$250,000) living in single family detached homes.  
20 More importantly, given the higher distribution of low-income households living in  
21 multi-family units, there is a constant increase in natural gas expenditures as income  
22 increases, from \$77.60 (households with income below \$10,000) to \$162 (households  
23 with income greater than \$250,000) for the housing unit types that I examined.

1       The second way in which this data is significant is the observation that the equal  
2       imposition of fixed charges on low-income, low-use customers through the proposed  
3       straight fixed variable ("SFV") rate design would be inequitable given the lower fixed  
4       distribution costs imposed by the low-income customers due to their higher density  
5       housing. Despite these stark differences between customer types, based on income, this  
6       cost-shifting will occur even though the load and density characteristics show that low-  
7       income customers do not contribute equally to causing the costs. This cost-shifting will  
8       occur even though these low-use, lower-income customers can least afford to pay the  
9       higher fixed costs.

10  
11   ***Q24. DOES VECTREN HAVE THIS TYPE OF HOUSING DATA FOR ITS SERVICE***  
12   ***TERRITORY?***

13   ***A24.*** No. The Office of Consumers' Counsel requested Vectren to provide data on the number  
14       and percentage of customers who either rent generally (without specifying housing type)  
15       or who rent an apartment, but Vectren does not maintain such information.<sup>8</sup> OCC asked  
16       Vectren to provide data on the number and percentage of PIPP customers who rent, who  
17       rent apartments, or who rent homes, but Vectren does not maintain this information.<sup>9</sup>

18  

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<sup>8</sup> OCC-INT-363, OCC-INT-364.

<sup>9</sup> OCC-INT-365, OCC-INT-366, OCC-INT-367.

1 **Q25. IS YOUR CONCLUSION THAT THERE IS SIMPLY A DIFFERENCE AT THE**  
2 **EXTREMES, I.E., THAT THE HIGHEST INCOME HOUSEHOLDS HAVE**  
3 **HIGHER NATURAL GAS EXPENDITURES THAN THE LOWEST INCOME**  
4 **HOUSEHOLDS DO?**

5 **A25.** No. While it is accurate to observe that the consumption for the highest income level is  
6 higher than consumption for the lowest income level, I conclude more than that. My  
7 conclusion is that as income progressively increases, so, too, does natural gas  
8 consumption increase. Each Schedule (RDC-4 through RDC-11) shows that there is an  
9 direct relationship between natural gas expenditures and income throughout the full range  
10 of incomes.

11  
12 **2. Income and Density.**

13 **Q26. PLEASE COMMENT ON THE PUCO STAFF'S REVIEW OF THE COMPANY'S**  
14 **SFV RATE DESIGN PROPOSAL.**

15 **A26.** The Staff Report recommends that Vectren Energy move to "a rate structure primarily  
16 based on a fixed distribution charge."<sup>10</sup> In making this recommendation, the Staff asserts  
17 that "in reality, most distribution related costs are fixed. The distribution facilities  
18 required to serve a small residence are most likely the same as those required to serve a  
19 larger residence."<sup>11</sup> As I will document below, the Staff Report not only mis-states the  
20 questions, but also mis-analyzes the response.

21  

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<sup>10</sup> Staff Report, at 30.

<sup>11</sup> Id.

1 **Q27. HOW DOES STAFF MIS-STATE THE QUESTION OF WHETHER A STRAIGHT**  
2 **FIXED-VARIABLE RATE DESIGN IS APPROPRIATE?**

3 **A27.** In stating that “the distribution facilities required to serve a small residence are most  
4 likely the same as those required to serve a larger residence,” the Staff omits a critical  
5 part of the statement. What Staff means to assert, I believe, is that “the distribution  
6 facilities required to serve a small residence are most likely the same as those required to  
7 serve a larger residence, everything else equal.” (emphasis added). The data I examined  
8 in detail above, however, clearly demonstrates that everything else is not equal and that  
9 there are real cost differences based on housing size and income. The data I examine  
10 documents that small units are not simply associated with lower consumption, but they  
11 are also associated with increased density. I presented data supporting this conclusion  
12 above, when I considered how lower usage is associated with higher density buildings  
13 (e.g., multi-family as contrasted to single-family detached homes). (Schedule RDC-11).  
14 The conclusion is further confirmed here, as I discuss the data relating to income and the  
15 density of housing within a given geographic area.

16  
17 **Q28. HOW DID YOU CONSIDER THE DENSITY OF HOUSING AS MEASURED BY**  
18 **THE NUMBER OF HOUSING UNITS PER GEOGRAPHIC AREA?**

19 **A28.** I examined housing density data for each Census tract within Montgomery County, a  
20 county that Vectren serves in Ohio. Census data is comprised of several different levels.  
21 One of the smallest levels is the Census tract, a geographic area comprised of sufficient  
22 land for the Census Bureau to report data on roughly 4,000 to 8,000 persons. Because  
23 Census tracts can have varying population densities to them, they do not necessarily

1 represent the same size of geography. Through its "Census Tract Relationship Files,"  
2 however, the Census provides sufficient data to calculate housing unit densities. The  
3 Census reports "land area" in thousands of square meters. I have converted those  
4 thousand square meters into acres (a thousand square meters is roughly 0.247 acres) and  
5 determined the number of housing units per square acre for each Census tract. I then  
6 rank each Census tract by income (as measured by per capita income) and by the density  
7 of housing. Montgomery County has 145 Census tracts, of which 115 present usable  
8 data.

9  
10 ***Q29. WHAT DID YOU FIND?***

11 ***A29.*** The implicit condition contained in the Staff Report's assertion that distribution costs size  
12 do not vary based on housing unit size all else equal fails in that the "all else equal"  
13 condition fails in fact. I find that the presence of multi-family housing and higher density  
14 are positively correlated in Montgomery County. More importantly from an affordability  
15 perspective, housing density and income are correlated in the Montgomery County  
16 Census tracts. Montgomery County's ten (10) lowest income Census tracts have five of  
17 the 20 highest densities in the county. Indeed, Montgomery County's 20 lowest income  
18 Census tracts have nine of the 20 highest densities in the county. In contrast, the 56  
19 highest income Census tracts have exactly zero (0) of the highest densities in  
20 Montgomery County.

21  
22 To the extent that natural gas distribution costs decrease as housing unit density  
23 increases, lower income households impose a lower distribution cost on the Company.

1 There can be little question but that income and density are correlated in the Company's  
2 service territory. While the 20 highest income Census tracts in Montgomery County have  
3 a housing unit density of 1.3 units per "land acre," the 20 poorest Census tracts in  
4 Montgomery County have a housing unit density of 3.4 housing units per land acre.  
5 Staff's implicit assertion in support of the proposed SFV rate design that all housing units  
6 are equal is demonstrably in error.

7  
8 **Q30. WHAT DO YOU CONCLUDE?**

9 **A30.** I conclude that the PUCO Staff Report mis-specifies the analysis to be undertaken in  
10 considering the equity in imposing uniform fixed distribution charges through its  
11 recommended SFV rate design. In addition to looking at the level of consumption, and at  
12 the size of the housing unit standing alone, Staff should have further considered the  
13 implications of the size of a housing unit. Staff should have further considered the  
14 density of housing. In fact, the density of housing sharply varies within the Company's  
15 Ohio service territory. Moreover, the density of housing is related to income as well. In  
16 addition to the proposed SFV rate design shifting costs from higher-income to lower-  
17 income households because of usage, the SFV rate design shifts costs from higher-  
18 income to lower-income households based on density as well.

19  
20 As a result, not only will low-income households be charged higher rates, they will be  
21 charged higher rates for costs that they did not cause the Company to incur. One basic  
22 principle of ratemaking is that rates should reflect costs. To the extent practicable, one set  
23 of customers should not be charged for costs that a different set of customers causes a

1 utility to incur. Because higher density customers do not cause the Company to incur the  
2 same level of distribution expenses, charging those low-use, high-density customers a  
3 fixed charge at the same level as higher-use, lower density customers will create a cross-  
4 subsidy. Because of this cross-subsidy inherent in the SFV rate design, and because the  
5 cross-subsidy flows from low-income customers who are having a difficult time in  
6 affording their bills with which to begin to higher-use, higher income customers, the  
7 recommendations in the Staff Report urging adoption of the SFV rate design should be  
8 rejected.

9  
10 **3. Usage and Aging**

11 ***Q31. IS THERE A CORRELATION BETWEEN LOW USAGE AND ANY OTHER***  
12 ***VULNERABLE POPULATION GROUP?***

13 ***A31.*** Yes. Schedule RDC-12 presents data on the association between natural gas  
14 expenditures and age. Schedule RDC-12 (page 1 of 2) presents Ohio-specific data. This  
15 Ohio-specific data shows that monthly natural gas expenditures increase as householders  
16 grow older and move into the working population. The natural gas expenditures top out  
17 in the prime working years, as householders might have families and own larger homes.  
18 As Ohio residents grow older past their working years, however, they begin to downsize  
19 their living units and their natural gas expenditures begin to decline. After age 75, a  
20 consumer's natural gas expenditures exhibit a noticeable decline.

21  
22 Schedule RDC-12 (page 2 of 2) confirms that this Ohio-specific data is not atypical. This  
23 schedule presents similar data published by the U.S. Department of Labor through its



1 annual Consumer Expenditures Survey ("CEX"). While the CEX data does not provide  
2 state-specific information, it does provide regional data by age of the householder. As  
3 with the Ohio data, the Midwestern data shows an increase in natural gas expenditures  
4 through the years that a householder participates in the work force, maintains a family  
5 and likely owns a home. As families and housing units begin to downsize, the natural gas  
6 consumption of these households begins to decrease. In particular, the consumption in  
7 the oldest age tier (75 and older for CEX data) shows a natural gas expenditure  
8 substantially lower than those expenditures of householders in their prime earning,  
9 primary family, years.

10  
11 It is evident, that unlike the direct relationship between income and natural gas  
12 consumption, there is a clear trigger point at which aging householders begin to  
13 experience a declining natural gas consumption. Like low-income low-use households,  
14 these lower use aging householders would be harmed by the SFV rate design proposal  
15 advanced by the PUCO Staff and Company in this proceeding.

16  
17 **B. The Federal Data**

18 ***Q32. IS THE DIFFERENCE IN EXPENDITURES BASED ON INCOME***  
19 ***ATTRIBUTABLE TO USAGE RATHER THAN TO A RATE STRUCTURE?***

20 ***A32.*** Yes. The association documented above, based on comprehensive Ohio-specific  
21 information, shows two relationships. These are the same relationships identified by the  
22 U.S. Department of Energy ("DOE") in its assessment of the association between natural  
23 gas consumption and income. Low-income households tend to live in smaller housing

1 units. As a result, their natural gas consumption tends to be lower than the natural gas  
2 consumption of higher income households.  
3

4 **Q33. IS THE OHIO DATA YOU DISCUSS ABOVE CONCERNING THE**  
5 **RELATIONSHIP BETWEEN HOUSEHOLD INCOME AND NATURAL GAS**  
6 **CONSUMPTION CONSISTENT WITH OTHER DATA ON NATURAL GAS**  
7 **EXPENDITURES AND CONSUMPTION?**

8 **A33.** Yes. Schedule RDC-13 presents U.S DOE data on the relationship between income and  
9 natural gas consumption. This data, based on the tri-annual Residential Energy  
10 Consumption Survey ("RECS"), shows that natural gas consumption increases as income  
11 increases. This is true not only for total natural gas consumption generally, but for  
12 natural gas space heating and water heating specifically as well. In each instance, a  
13 lower-income household not only has consumption lower than the next tier of higher-  
14 income households, but also has consumption lower than the residential average.  
15

16 **Q34. IS THE DOE DATA SPECIFIC TO OHIO?**

17 **A34.** No. The state-specific data I reported above is obtained from the American Community  
18 Survey prepared annually by the U.S. Census Bureau. The U.S. DOE, however, does not  
19 generate state-specific data (other than for the nation's four largest states).  
20

**Q35. IS THE STATE AND NATIONAL DATA CONSISTENT WITH THE REGIONAL DATA REPORTED BY THE FEDERAL GOVERNMENT?**

**A35.** Yes. The U.S. Department of Labor ("DOL") reports natural gas expenditures by region by income. Ohio is in the Midwest regional data reported by the Department of Labor's Consumer Expenditures Survey ("CEX"). Schedule RDC-14 presents the CEX data for the past three years (2005-2006; 2004-2005; 2003-2004). The CEX data corroborates the state-specific and national data on the relationship between natural gas consumption and income. In every one of the 24 cells (but one: \$30,000 - \$39,999 for 2005-2006), the Midwest natural gas expenditures for the higher income tier was more than the natural gas expenditures for the preceding lower-income tiers. Natural gas expenditures for the lowest income tiers (below \$10,000) were roughly half the residential average.

**Q36. WHAT IS YOUR CONCLUSION?**

**A36.** The data showing a direct relationship between income and natural gas consumption in Ohio is compelling. The differences that are evident in the data are not small. Low-income customers have lower usage not only as compared to high-income customers, but also when compared to average customers as well. In addition, the national data is consistent. The national data developed by the U.S. DOE, the regional data developed by the U.S. DOL, and the state-specific data developed by the Census Bureau all find the same relationship. Finally, the data is internally consistent. While DOE reports that income is related to natural gas usage because of differences in housing unit sizes, that relationship is confirmed when housing unit size is overlaid on income and natural gas expenditures in the State of Ohio using state-specific data.

**C. Low-Income Surrogates**

**Q37. HOW DOES THE COMPANY EVALUATE THE CONSUMPTION OF LOW-INCOME OHIO CUSTOMERS?**

**A37.** The Company argues that low-income consumers have natural gas consumption that is as high as residential customers generally. The Company uses its PIPP population as its sample of low-income customers upon which to base this analysis.

**Q38. IS THERE REASON TO USE PARTICIPANTS IN OHIO'S PIPP AS A SURROGATE FOR LOW-INCOME HOUSEHOLDS FOR PURPOSES OF DETERMINING THE RELATIONSHIP BETWEEN INCOME AND NATURAL GAS CONSUMPTION?**

**A38.** There is no reason to use Ohio's PIPP customers as a surrogate for Ohio's low-income population. The population of PIPP customers, in order to be an adequate surrogate for the low-income population as a whole, would need to demonstrate characteristics as to income mix, household size mix, and housing unit size mix, that are similar to the low-income population as a whole. There is no reason to turn to PIPP as a surrogate, with its attendant difficulties in establishing comparability, when the most comprehensive statewide data base of low-income Ohio households available is otherwise reasonably accessible. The Census Bureau provides statewide data on low-income households. There is no question of whether the data generated by the Census Bureau through the American Community Survey is representative of the low-income population as a whole.

**Q39. IS THERE REASON TO BELIEVE THAT PARTICIPANTS IN OHIO'S PIPP PROGRAM ARE NOT AN APPROPRIATE SURROGATE FOR OHIO'S LOW-INCOME CUSTOMERS?**

**A39.** Yes. Using Ohio's PIPP customers as a surrogate for low-income households is not only unnecessary, but the PIPP population is an inappropriate surrogate for the low-income population as a whole. The PIPP population is not representative of Ohio's low-income population as a whole. Under the Ohio PIPP program, a customer is responsible for paying a designated percentage of income for his or her home energy bill. PIPP requires that a household pay 10% of his or her income toward the jurisdictional utility providing the primary source of heat and 5% of income toward the jurisdictional utility providing the secondary source of heating. These PIPP requirements will likely exclude households with lower energy bills. That level of exclusion is substantial.

**Q40. UPON WHAT DO YOU BASE YOUR CONCLUSION THAT THE PIPP'S PERCENTAGE OF INCOME PAYMENT WOULD RESULT IN A SUBSTANTIAL EXCLUSION OF LOW-USE CUSTOMERS?**

**A40.** I was a member of a team that prepared a multi-state study of low-income rate assistance programs throughout the nation in 2007. Along with staff of Apprise, Inc., a New Jersey-based consulting firm, we prepared a detailed analysis of low-income assistance programs in 13 states. Ohio was one of the states we studied.

Our 2007 multi-sponsor study made several Ohio findings that are relevant to whether the PIPP population is representative of the broader low-income population. Our 2007 study

1 found that the number of Ohio low-income households –“low-income” was, for purposes  
2 of this study, defined as having income at or below 150% of the Federal Poverty Level—  
3 with natural gas burdens disaggregated by burden level. Our findings are presented in  
4 Schedule RDC-15. We found that exactly half (50%) of Ohio’s low-income natural gas  
5 customers had natural gas burdens of below the minimum necessary for those households  
6 to gain benefits from participation in the Ohio PIPP. Indeed, nearly one-quarter of  
7 Ohio’s low-income natural gas customers had natural gas burdens of less than 5% (half  
8 that needed for those customers to receive benefits through participation in PIPP).  
9

10 ***Q41. IS THIS INCONSISTENT WITH YOUR ARTICULATION OF HOME ENERGY***  
11 ***BURDENS EARLIER IN YOUR TESTIMONY?***

12 ***A41.*** No. My testimony about the Home Energy Affordability Gap examined average burdens  
13 for total energy consumption for all fuels. The home energy burdens reported above  
14 were not limited exclusively to natural gas bills.  
15

16 ***Q42. IS THERE ANY OTHER EMPIRICAL EVALUATION EXAMINING THE***  
17 ***RELATIVE CONSUMPTION OF PIPP AND NON-PIPP CUSTOMERS?***

18 ***A42.*** Yes. The July 2006 evaluation of the Ohio weatherization program reports that PIPP  
19 participants use 20% more natural gas than do non-PIPP participants. This is true, that  
20 evaluation found, even though lower use customers are beginning to turn to PIPP as

1 natural gas prices increase. PIPP participants have homes that are 30% leakier, have more  
2 occupants, and are less likely to live in mobile homes than are non-PIPP participants.<sup>12</sup>

3  
4 ***Q43. WHAT IS THE SIGNIFICANCE OF THIS DATA?***

5 ***A43.*** The data indicate that the Ohio PIPP population is not representative of the non-PIPP  
6 customers. In essence, PIPP is targeted toward the highest usage, highest-burden  
7 households. It is inaccurate, and inappropriate, to take a program that excludes, by  
8 design, the 50% of households with the lowest consumption and lowest natural gas  
9 burdens, and then to assert that the consumption of program participants is representative  
10 of the low-income population as a whole.

11  
12 ***Q44. WHY WOULD A LOW-USE, LOW-BURDEN HOUSEHOLD NOT PARTICIPATE***  
13 ***IN PIPP?***

14 ***A44.*** A customer that already has low-consumption, and thus a low burden, would not  
15 participate in PIPP because the PIPP objective of reducing natural gas bills by tying those  
16 bills to a percentage of income would not be served. For low-use, low-burden customers,  
17 rather than experiencing an improvement in their home energy affordability, participation  
18 in PIPP would instead increase the payments they would be required to make. Indeed,  
19 under PIPP, the customer would be required, even in the non-heating season, to make  
20 *either the percentage of income payment or the actual bill payment whichever is higher.*

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<sup>12</sup> M. Sami Khawaja, et al. (July 2006). Ohio Home Weatherization Assistance Program Impact Evaluation, prepared for Ohio Office of Energy Efficiency, at 29, quantec, LLC: Portland (OR).

1 (emphasis added). A low-use, low-burden customer would not reasonably choose to  
2 participate in such a program.

3  
4 ***Q45. WHAT IS YOUR ULTIMATE CONCLUSION?***

5 ***A45.*** My ultimate conclusion is that lower income households use less natural gas than do  
6 higher income households. This conclusion is based not only on the state-specific data  
7 from Ohio, but on the complete consistency in the data at all levels of inquiry. The U.S.  
8 DOE reports that lower-income households use less natural gas because they live in  
9 smaller housing units. The Ohio state-specific data confirms that households living in  
10 smaller housing units have lower natural gas bills; that substantially more lower-income  
11 households live in smaller housing units; and that lower-income households have lower  
12 natural gas bills.

13  
14 I conclude further that, as I describe in more detail below, a move to a fixed-variable rate  
15 design will unjustifiably impose the burden of bearing more of the revenue responsibility,  
16 and the entire rate increase, on these low-income, low-use households. As a result, the  
17 proposed move to a fixed-variable rate design will have a substantially greater adverse  
18 impact on the households that can least afford to pay their natural gas bills with which to  
19 begin.



**III. THE VECTREN PROPOSED STRAIGHT FIXED-VARIABLE RATE DESIGN**

***Q46. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.***

***A46.*** In this section of my testimony, I will assess the impact of the Company's proposed straight fixed-variable ("SFV") rate design on low-income customers. I conclude that the rate design proposal will disproportionately increase bills to low-income customers, increase the natural gas burdens borne by those customers, and substantively impede the ability of low-income customers to maintain affordable natural gas service.

***Q47. PLEASE EXPLAIN THE COMPANY'S SFV PROPOSAL AS YOU UNDERSTAND IT.***

***A47.*** The Company's SFV proposal is presented in the Direct Testimony of Edwin Overcast and Jerrold Ulrey. According to Mr. Ulrey, the Company intends to phase in its SFV rate design proposal over a two-year period. In Phase 1, the Company proposes to increase its fixed monthly customer charge from \$7.00 per customer per month to an average summer/winter rate of \$13.375 per customer per month. The Company will accomplish this result by allocating the entire base revenue rate increase to the customer charge.<sup>13</sup> In Phase 2, the Company proposes to further reduce its volumetric charge and to increase the customer charge to \$16 per customer per month. According to Mr. Ulrey, this "Stage 2 is not a revenue increase; it only shifts cost recovery from the volumetric charge to the customer charges."<sup>14</sup>

---

<sup>13</sup> Ulrey Prefiled Direct Testimony, at 6.

<sup>14</sup> Id.

1  
2 Finally, the Company proposes to repeat the process in its next rate case. In that rate  
3 case, the Company would again allocate the entire revenue increase to the customer  
4 charge. The Company would follow that allocation of the increase to the customer  
5 charge with a Stage 2 change one or two years later, with a further decrease in volumetric  
6 charges and an allocation of those reduced revenues to a fixed charge, with no net  
7 revenue increase to the Company.<sup>15</sup> The customer charge would then average roughly  
8 \$21 per month.<sup>16</sup>  
9

10 ***Q48. HOW DOES THE COMPANY SEEK TO JUSTIFY THE IMPACTS ON LOW USE,***  
11 ***LOW-INCOME CUSTOMERS?***

12 ***A48.*** The Company makes two assertions in justification of its SFV cost proposal. Both  
13 assertions are demonstrably in error.  
14

15 ***Q49. PLEASE IDENTIFY THE FIRST ERRONEOUS ASSERTION MADE BY THE***  
16 ***COMPANY.***

17 ***A49.*** First, Mr. Overcast asserts that: “for residential customers, the relative homogeneity of  
18 the residential class permits the residential rate design to consist of an annual customer  
19 charge for delivery service, payable in twelve equal monthly installments. . .”<sup>17</sup>  
20

---

<sup>15</sup> Id.

<sup>16</sup> Id.

<sup>17</sup> Overcast Prefiled Testimony, at 15.

1   ***Q50. HOW IS THAT STATEMENT IN ERROR?***

2   ***A50.*** The “relative homogeneity” asserted by Mr. Overcast does not exist in the residential  
3       customer class. As described in detail above, there is a difference in natural gas usage of  
4       more than 300% between the lowest income and highest income customers. In particular,  
5       low-income customers impose a smaller heating load on the Company because they tend  
6       to live in smaller housing units. As a result, these low-income customers make less of a  
7       contribution to the need for transmission and distribution capacity. To impose an equal  
8       fixed cost on all customers through which to recover those fixed charges represents a cost  
9       subsidy from low use, low-income customers to higher use, higher-income customers.  
10      Such a reverse subsidy cannot be justified.

11

12   ***Q51. WHAT IS THE SECOND ERRONEOUS STATEMENT MADE BY THE***  
13       ***COMPANY?***

14   ***A51.*** Mr. Overcast asserts that “the elimination of volumetric rates from delivery service  
15       provides the most benefit to the customers least able to afford heat. The reason these  
16       customers benefit is that unlike volumetric rates, under SFV rates, customers’ distribution  
17       bills will not increase as usage increases. And those customers often have higher usage  
18       than average customers. . .”<sup>18</sup>

19

---

<sup>18</sup> Id., at 16 – 17.

1   **Q52.   HOW IS THAT STATEMENT IN ERROR?**

2   **A52.**   As I have documented in detail above, Mr. Overcast's assertion that low-income  
3           customers will have higher consumption than average, and thus will benefit from a move  
4           to the proposed SFV rate design, is simply wrong. Each data-based analysis of the  
5           association between natural gas usage and income shows not only that usage and income  
6           are related, but that low-income customers have substantially lower usage than both  
7           average customers and higher income customers.

8  
9   **Q53.   HAVE YOU SIMULATED THE EXTENT TO WHICH THE PROPOSED COST-**  
10       **SHIFTING TO FIXED COSTS WOULD AFFECT LOW-INCOME CUSTOMERS?**

11   **A53.**   Yes. Schedule RDC-16 documents how the proposed increase in the assignment of costs  
12       to the fixed customer charge will adversely affect low-income customers. In Schedule  
13       RDC-16, I begin with the actual natural gas bills reported for Ohio in the American  
14       Community Survey ("ACS"). After subtracting a \$7 per customer per month fixed  
15       customer charge from each bill, I allocate the remainder of the bill between fixed charges  
16       and commodity charges (using various proportions for fixed charges). I then calculate a  
17       total revenue per 100 customers, using the same distribution of natural gas customers  
18       over income levels as actually exists for the State of Ohio. Finally, I reduce the fixed  
19       charges by 35% and redistribute those fixed charges as an addition to the \$7 fixed

1 monthly customer charge.<sup>19</sup> Having done that, I can determine the new level of total  
2 revenue from each income tier.

3  
4 **Q54. WHAT IS THE RESULT OF YOUR ANALYSIS?**

5 **A54.** My analysis shows that allocating any proportion of non-customer charge revenue to  
6 fixed charges, reducing those fixed charges, and allocating the reduced revenue to the  
7 customer charge in a revenue neutral fashion (no net increase in revenue to the  
8 Company), will result in increased bills to customers with income at or below \$40,000,  
9 while customers with income at or above \$75,000 will see a net reduction in their bills.  
10 Customers with incomes between \$40,000 and \$75,000 will experience a change in their  
11 bills of less than 1%. When I allocate 40% of the non-customer charge revenues to the  
12 fixed charges, reduce those charges by 35% and reallocate the revenue reduction to the  
13 customer charge, for example, customers with income below \$10,000 see a 7% bill  
14 increase, while customers with income between \$10,000 and \$20,000 see a 4% bill  
15 increase (even though there is no net revenue increase to the Company). In contrast,  
16 customers with income over \$250,000 experience a bill decrease of 5%, while customers  
17 with income between \$150,000 and \$250,000 see a bill decrease of 3%. If higher  
18 proportions of total non-customer charge revenues are assigned to the fixed charges, the  
19 percentages increase.<sup>20</sup>

---

<sup>19</sup> Mr. Ulrey states: "VEDO has also proposed a Stage 2 rate change to be Residential rate schedules that would reduce their Volumetric charge by about 35% and increase the Customer Charge to recover those costs." (Ulrey Prefiled Direct Testimony, at 6).

<sup>20</sup> For example, Mr. Ulrey states that Vectren has reduced "the volumetric charge" by 35% and allocated the resulting revenue shortfall to the customer charge. I have merely reduced a portion of "the volumetric charge" by 35%.

1 My ultimate conclusion is that the process of reducing volumetric rates for "fixed  
2 charges," and reassigning those revenues to the fixed monthly customer charge, will  
3 result in reduced bills to higher-income, higher-use customers and increased bills to  
4 lower-income, lower-use customers.

5  
6 **Q55. DOES THIS CONCLUDE YOUR TESTIMONY?**

7 **A55.** Yes, it does. However, I reserve the right to incorporate any new information that may  
8 subsequently become available. I also reserve the right to supplement my testimony in  
9 the event the PUCO Staff fails to support the recommendations made in the Staff Report,  
10 and/or if there is any change to positions made in the Staff Report.

*Direct Testimony of Roger D. Colton  
On Behalf of the Office of the Ohio Consumers' Counsel  
PUCO Case No 07-1080-GA-AIR et al.*

Schedule RDC-1

| Ohio Home Energy Burdens: 2004 – 2007  |       |       |         |         |
|--|-------|-------|---------|---------|
|  | 2004  | 2005  | 2006    | 2007    |
| Poverty Level  |       |       |         |         |
| Below 50%  | 44.5% | 46.6% | 53.9%   | 65.4%   |
| 50 – 74%   | 17.8% | 18.6% | 21.6%   | 26.2%   |
| 75 – 99%   | 23.7% | 13.3% | 15.4%   | 18.7%   |
| 100 – 124%   | 9.9%  | 10.4% | 12.0%   | 14.6%   |
| 125 – 149%   | 8.2%  | 8.5%  | 9.8%    | 12.0%   |
| 150 – 185%   | 6.7%  | 7.0%  | 8.1%    | 9.9%    |
| Ohio Home Energy Affordability Gap (per household)   |       |       |         |         |
| Total below 185%   | \$694 | \$789 | \$1,084 | \$1,571 |
| SOURCE: <a href="http://www.HomeEnergyAffordabilityGap.com">www.HomeEnergyAffordabilityGap.com</a> . |       |       |         |         |





*Direct Testimony of Roger D. Colton  
On Behalf of the Office of the Ohio Consumers' Counsel  
PUCO Case No 07-1080-GA-AIR et al.*

Schedule RDC-2

| Ohio Households by Ratio of Income to Federal Poverty Level  |                      |
|--|----------------------|
| Ratio of Income to Federal Poverty Level   | Number of Households |
| Below 50%  | 215,269              |
| 50 – 74%   | 123,479              |
| 75 – 99%   | 135,728              |
| 100 – 124%   | 157,432              |
| 125 – 149%   | 175,437              |
| 150 – 185%   | 259,273              |
| SOURCE: Home Energy Affordability Gap: 2007 (Ohio Fact Sheet) (April 2008) (based on 2000 Census). |                      |

*Direct Testimony of Roger D. Colton  
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PUCO Case No 07-1080-GA-AIR et al.*

Schedule RDC-3

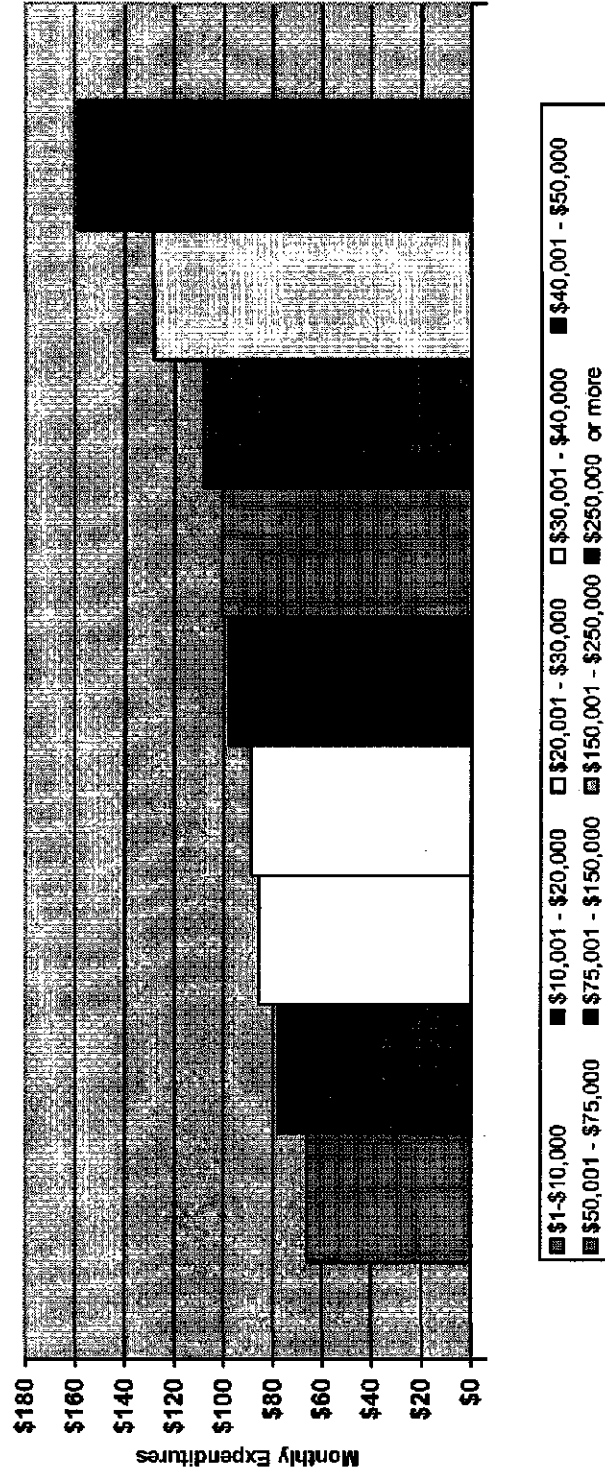
| Gross Rent as Percentage of Income by Income Level (Ohio)                 |                |                   |           |                |                   |           |                |                   |           |                |                   |           |
|---|----------------|-------------------|-----------|----------------|-------------------|-----------|----------------|-------------------|-----------|----------------|-------------------|-----------|
|   | Renters (2000) |                   |           | Renters (2004) |                   |           | Renters (2005) |                   |           | Renters (2006) |                   |           |
| Income  | Total          | Rent Burden > 30% | Pct > 30% | Total          | Rent Burden > 30% | Pct > 30% | Total          | Rent Burden > 30% | Pct > 30% | Total          | Rent Burden > 30% | Pct > 30% |
| Below \$10,000  | 264,828        | 180,703           | 68%       | 284,970        | 197,328           | 69%       | 282,866        | 203,630           | 72%       | 271,289        | 196,091           | 72%       |
| \$10,000 - \$19,999   | 281,381        | 187,647           | 67%       | 285,901        | 214,764           | 75%       | 293,348        | 228,329           | 78%       | 292,790        | 232,349           | 79%       |
| \$20,000 - \$34,999   | 355,232        | 83,531            | 24%       | 350,818        | 132,975           | 38%       | 337,086        | 142,442           | 42%       | 338,869        | 146,704           | 43%       |
| \$35,000 - \$49,999   | 216,372        | 8,923             | 4%        | 206,897        | 17,404            | 8%        | 209,726        | 19,377            | 9%        | 204,990        | 24,545            | 12%       |
| SOURCE: 2000 Census (STF3). American Community Survey (2004, 2005, 2006). |                |                   |           |                |                   |           |                |                   |           |                |                   |           |

*Direct Testimony of Roger D. Colton  
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Schedule RDC-4

| Monthly Gas Expenditures by Income (Ohio)<br>2006 American Community Survey |                            |
|---|----------------------------|
|   | Gas Expenditures (monthly) |
| \$1-\$10,000  | \$65.90                    |
| \$10,001 - \$20,000   | \$77.90                    |
| \$20,001 - \$30,000   | \$85.60                    |
| \$30,001 - \$40,000   | \$88.80                    |
| \$40,001 - \$50,000   | \$98.20                    |
| \$50,001 - \$75,000   | \$100.70                   |
| \$75,001 - \$150,000  | \$108.40                   |
| \$150,001 - \$250,000   | \$128.60                   |
| \$250,000 or more   | \$158.60                   |

# Monthly Gas Expenditures by Income (Ohio 2006)



*Direct Testimony of Roger D. Colton  
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PUCO Case No 07-1080-GA-AIR et al.*

Schedule RDC-6

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

|              | Gas      | Avg Poverty Level within Range |
|--------------|----------|--------------------------------|
| 1 - 50%      | \$82.50  | 21.6%                          |
| 51 - 100%    | \$87.20  | 76.0%                          |
| 101 - 150%   | \$94.50  | 126.8%                         |
| 151 - 200%   | \$99.60  | 176.4%                         |
| 201 - 250%   | \$105.80 | 225.7%                         |
| 251 - 300%   | \$100.20 | 276.1%                         |
| 301% or more | \$111.30 | 441.9%                         |

*Direct Testimony of Roger D. Colton  
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Schedule RDC-7

| Monthly Natural Gas Expenditures by Number of Bedrooms in Home and Income (Ohio)<br>(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  | \$12.10        | \$12.40         | \$27.80         | \$16.60         | \$42.10         | \$13.00         | \$5.40           | xxx              | \$3.00     |  |
| 1 bedroom   | \$28.70        | \$26.10         | \$30.20         | \$29.10         | \$29.30         | \$30.10         | \$35.90          | \$23.20          | \$56.50    |  |
| 2 bedrooms  | \$63.40        | \$73.50         | \$71.40         | \$75.50         | \$71.10         | \$79.10         | \$82.90          | \$84.20          | \$91.90    |  |
| 3 bedrooms  | \$94.50        | \$104.30        | \$102.80        | \$99.50         | \$109.50        | \$103.80        | \$104.30         | \$111.70         | \$119.70   |  |
| 4 bedrooms  | \$132.60       | \$121.60        | \$132.90        | \$123.90        | \$128.10        | \$123.60        | \$121.90         | \$142.50         | \$174.70   |  |
| 5+ bedrooms   | \$135.30       | \$113.20        | \$131.50        | \$123.40        | \$148.60        | \$123.10        | \$136.20         | \$158.80         | \$194.00   |  |
| Total   | \$65.90        | \$77.90         | \$85.60         | \$88.80         | \$98.10         | \$100.70        | \$108.40         | \$128.60         | \$158.60   |  |

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Schedule RDC-8

| No. of Rooms | Monthly Natural Gas Expenditures by Number of Rooms in Home and Annual Income (Ohio)<br>(American Community Survey: 2006) |                 |                 |                 |                 |                 |                  |                   |            |  |
|--------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-------------------|------------|--|
|              | \$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+ |  |
| 2 room       | \$12.00   | \$14.70         | \$18.10         | \$15.40         | \$17.80         | \$20.80         | \$8.90           | \$70.00           | xxx        |  |
| 3 room       | \$28.30   | \$24.90         | \$27.90         | \$29.90         | \$29.50         | \$29.10         | \$29.30          | \$15.10           | \$25.40    |  |
| 4 room       | \$53.90   | \$61.40         | \$59.70         | \$61.70         | \$55.40         | \$64.60         | \$75.40          | \$77.90           | \$52.10    |  |
| 5 room       | \$79.60   | \$91.50         | \$86.80         | \$86.80         | \$87.30         | \$91.40         | \$89.00          | \$90.80           | \$92.90    |  |
| 6 room       | \$102.30  | \$107.40        | \$107.60        | \$103.40        | \$113.10        | \$105.00        | \$106.30         | \$100.60          | \$100.30   |  |
| 7 room       | \$116.40  | \$109.40        | \$122.90        | \$113.90        | \$119.90        | \$112.30        | \$110.80         | \$108.20          | \$166.20   |  |
| 8 room       | \$129.90  | \$117.40        | \$123.30        | \$110.00        | \$117.00        | \$121.00        | \$114.10         | \$131.80          | \$151.80   |  |
| 9 or more    | \$128.70  | \$133.00        | \$126.20        | \$127.60        | \$140.70        | \$119.30        | \$127.20         | \$156.30          | \$179.60   |  |
| Total        | \$65.90   | \$77.90         | \$85.60         | \$88.80         | \$98.10         | \$100.70        | \$108.40         | \$128.60          | \$158.60   |  |

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

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Schedule RDC-9

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

| Number of Rooms/Bedrooms | Rooms     | Bedrooms |
|--------------------------|-----------|----------|
| 1                        | \$22,677  | \$21,584 |
| 2                        | \$23,098  | \$25,237 |
| 3                        | \$26,181  | \$38,737 |
| 4                        | \$33,408  | \$58,915 |
| 5 /a/                    | \$43,739  | \$91,346 |
| 6                        | \$54,116  |          |
| 7                        | \$67,657  |          |
| 8                        | \$85,670  |          |
| 9 /b/                    | \$114,606 |          |
| Total                    | \$58,106  | \$58,106 |

**NOTES:**

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

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



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Schedule RDC-10

Distribution of Housing Units by Income and Housing Unit Size (Bedrooms and Rooms)  
(American Community Survey: 2006)

|                    | \$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 |
|--------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-------------------|-------------------|
| Bedrooms           |                |                 |                 |                 |                 |                 |                  |                   |                   |
| No bedroom         | 2%             | 1%              | 1%              | 0%              | 0%              | 0%              | 0%               | 0%                | 0%                |
| 1 Bedroom          | 27%            | 19%             | 13%             | 8%              | 5%              | 3%              | 1%               | 1%                | 1%                |
| 2 Bedrooms         | 37%            | 38%             | 34%             | 32%             | 28%             | 21%             | 10%              | 7%                | 6%                |
| 3 Bedrooms         | 26%            | 33%             | 41%             | 47%             | 50%             | 54%             | 51%              | 33%               | 24%               |
| 4 Bedrooms         | 5%             | 7%              | 10%             | 10%             | 14%             | 19%             | 32%              | 47%               | 48%               |
| 5 or more bedrooms | 2%             | 1%              | 2%              | 2%              | 2%              | 3%              | 5%               | 12%               | 20%               |
| Total BDS          | 100%           | 100%            | 100%            | 100%            | 100%            | 100%            | 100%             | 100%              | 100%              |
|                    |                |                 |                 |                 |                 |                 |                  |                   |                   |
| Rooms              |                |                 |                 |                 |                 |                 |                  |                   |                   |
| 1 Room             | 1%             | 1%              | 1%              | 0%              | 0%              | 0%              | 0%               | 0%                | 0%                |
| 2 Rooms            | 7%             | 4%              | 3%              | 2%              | 1%              | 1%              | 0%               | 0%                | 0%                |
| 3 Rooms            | 19%            | 14%             | 9%              | 6%              | 4%              | 2%              | 1%               | 1%                | 1%                |
| 4 Rooms            | 25%            | 23%             | 19%             | 16%             | 12%             | 9%              | 4%               | 3%                | 1%                |
| 5 Rooms            | 22%            | 25%             | 28%             | 27%             | 25%             | 21%             | 12%              | 6%                | 6%                |
| 6 Rooms            | 14%            | 18%             | 21%             | 24%             | 26%             | 26%             | 21%              | 11%               | 8%                |
| 7 Rooms            | 6%             | 9%              | 10%             | 13%             | 16%             | 19%             | 22%              | 16%               | 12%               |
| 8 Rooms            | 3%             | 4%              | 6%              | 7%              | 9%              | 12%             | 20%              | 24%               | 19%               |

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|                 |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|
| 9 Or More Rooms | 2%   | 2%   | 4%   | 5%   | 6%   | 9%   | 20%  | 39%  | 54%  |
| Total RMS       | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

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Schedule RDC-11

| Distribution of Housing Units by Income and Housing Unit Type (Gas Users) (Ohio) (American Community Survey 2005) |                |                 |                 |                 |                 |                 |                  |                   |                   |
|---|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-------------------|-------------------|
| 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   | 8%             | 8%              | 6%              | 5%              | 4%              | 2%              | 1%               | 1%                | 0%                |
| 1-family detached   | 43%            | 57%             | 71%             | 77%             | 81%             | 88%             | 94%              | 95%               | 96%               |
| 1-family attached   | 7%             | 4%              | 4%              | 4%              | 4%              | 3%              | 3%               | 3%                | 2%                |
| 2 apartments  | 9%             | 8%              | 5%              | 4%              | 3%              | 2%              | 1%               | 0%                | 1%                |
| 3 - 4 units   | 9%             | 7%              | 3%              | 3%              | 2%              | 2%              | 0%               | 0%                | 0%                |
| 5 - 9 units   | 12%            | 6%              | 4%              | 3%              | 3%              | 2%              | 1%               | 0%                | 1%                |
| 10 - 19 units   | 8%             | 5%              | 3%              | 3%              | 2%              | 1%              | 1%               | 0%                | 0%                |
| 20 - 49 units   | 2%             | 1%              | 2%              | 1%              | 1%              | 0%              | 0%               | 0%                | 0%                |
| 50 or more units  | 2%             | 3%              | 1%              | 1%              | 1%              | 1%              | 0%               | 0%                | 0%                |
| Total   | 100%           | 100%            | 100%            | 100%            | 100%            | 100%            | 100%             | 100%              | 100%              |
| Median Gas Bill by Housing Unit Type (Ohio) (American Community Survey 2005)                                      |                |                 |                 |                 |                 |                 |                  |                   |                   |
| 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   | \$74.40        | \$64.70         | \$67.10         | \$69.90         | \$77.60         | \$69.90         | \$66.80          | \$64.00           | \$3.00            |
| 1-family detached   | \$108.10       | \$112.70        | \$113.40        | \$108.80        | \$115.00        | \$109.80        | \$113.00         | \$133.20          | \$164.60          |
| 1-family attached   | \$69.60        | \$89.20         | \$90.30         | \$99.30         | \$86.10         | \$84.70         | \$92.10          | \$94.20           | \$71.40           |
| 2 apartments  | \$99.80        | \$104.90        | \$103.20        | \$125.80        | \$91.70         | \$99.10         | \$137.50         | \$123.10          | \$135.10          |
| 3 - 4 units   | \$52.30        | \$60.10         | \$53.50         | \$50.80         | \$78.10         | \$64.30         | \$78.60          | \$184.70          | \$3.00            |
| 5 - 9 units   | \$31.90        | \$31.70         | \$34.50         | \$46.20         | \$57.50         | \$58.80         | \$38.10          | \$2.00            | \$160.20          |
| 10 - 19 units   | \$23.90        | \$17.80         | \$34.10         | \$32.60         | \$35.80         | \$33.90         | \$51.40          | \$26.00           | xxx               |
| 20 - 49 units   | \$12.10        | \$28.80         | \$8.00          | \$33.90         | \$33.10         | \$21.30         | \$52.70          | \$72.50           | \$1.00            |
| 50 or more units  | \$14.20        | \$7.50          | \$10.50         | \$26.80         | \$17.60         | \$17.30         | \$23.20          | \$1.90            | \$2.00            |
| Total   | \$77.60        | \$89.70         | \$98.50         | \$100.50        | \$106.60        | \$104.90        | \$111.00         | \$131.00          | \$162.00          |

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Schedule RDC-12  
(page 1 of 2)

| Relationship Between Natural Gas Expenditures and Age of Householders (Ohio)<br>(American Community Survey: 2006) |                                 |
|---|---------------------------------|
| Age of Householder  | Monthly Natural Gas Expenditure |
| 18 - 30   | \$90.30                         |
| 31 - 55   | \$104.80                        |
| 56 - 65   | \$100.80                        |
| 66 - 75   | \$101.09                        |
| 76 or more  | \$100.40                        |
| 86 or more  | \$94.70                         |
| 90 or more  | \$91.70                         |

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Schedule RDC-12  
(page 2 of 2)

Natural Gas Expenditures (Midwest) by Age of Householder

|             | 2003-2004 | 2004-2005 | 2005-2006 |
|-------------|-----------|-----------|-----------|
| 25-34       | \$570     | \$605     | \$670     |
| 35-44       | \$699     | \$800     | \$876     |
| 45-54       | \$693     | \$743     | \$841     |
| 55-64       | \$695     | \$769     | \$840     |
| 65 and over | \$568     | \$655     | \$746     |
| 65-74       | \$650     | \$722     | \$792     |
| 75 and over | \$489     | \$595     | \$700     |

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

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Schedule RDC-13

| Natural Gas Consumption (thousand cf) by Income (2001)                        |       |                    |                     |                     |                  |                        | Eligible for<br>Federal Assistance |
|---|-------|--------------------|---------------------|---------------------|------------------|------------------------|------------------------------------|
|   | Total | Less than \$10,000 | \$10,000 - \$29,999 | \$30,000 - \$49,999 | \$50,000 or more | Below Poverty<br>Level |                                    |
| 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. |       |                    |                     |                     |                  |                        |                                    |

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Schedule RDC-14

| Natural Gas Expenditures by Household Income Before Taxes (Midwest region)        |                  |                      |                      |                        |                        |                        |                        |                        |                        |                     |
|---|------------------|----------------------|----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------|
|   | Total<br>Midwest | Less than<br>\$5,000 | \$5,000 -<br>\$9,999 | \$10,000 -<br>\$14,999 | \$15,000 -<br>\$19,999 | \$20,000 -<br>\$29,999 | \$30,000 -<br>\$39,999 | \$40,000 -<br>\$49,999 | \$50,000 -<br>\$69,999 | \$70,000 or<br>more |
| 2005 - 2006   | \$750            | \$302                | \$339                | \$524                  | \$565                  | \$692                  | \$673                  | \$722                  | \$808                  | \$1,026             |
| 2004 - 2005   | \$676            | \$288                | \$351                | \$466                  | \$504                  | \$596                  | \$614                  | \$663                  | \$710                  | \$943               |
| 2003 - 2004   | \$613            | \$293                | \$349                | \$456                  | \$506                  | \$539                  | \$543                  | \$598                  | \$661                  | \$842               |
| SOURCE: Table 31, U.S. Department of Labor, Consumer Expenditures Survey (annual) |                  |                      |                      |                        |                        |                        |                        |                        |                        |                     |



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Schedule RDC-15

| Natural Gas Burdens for Low-Income Households (Ohio) (2005) |                      |                       |
|---|----------------------|-----------------------|
|   | Number of Households | Percent of Households |
| 0% to less than 5%  | 132,255              | 23%                   |
| 5% to less than 10%   | 139,874              | 26%                   |
| 10% to less than 15%  | 107,864              | 20%                   |
| 15% or more   | 170,946              | 31%                   |
| Total   | 543,294              | 100%                  |
| State Report: Ohio (2007), at Tables 3B and 5B.             |                      |                       |

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Schedule RDC-16

| Bill Impact by Income Level of Allocating 35% of Fixed Costs to Increased Customer Charge<br>By Varying Proportions of Non-Customer Charge Revenue Allocated to Fixed Costs |  |     |     |     |
|---|--|-----|-----|-----|
|   | Proportion of Non-Customer Charge Revenue Allocated to Fixed Costs |     |     |     |
|   | 30%  | 35% | 40% | 45% |
| \$1 - \$10,000  | 5%   | 6%  | 7%  | 8%  |
| \$10,001 - \$20,000   | 3%   | 3%  | 4%  | 4%  |
| \$20,001 - \$30,000   | 2%   | 2%  | 2%  | 2%  |
| \$30,001 - \$40,000   | 1%   | 1%  | 2%  | 2%  |
| \$0,001 - \$50,000  | 0%   | 0%  | 0%  | 0%  |
| \$50,001 - \$75,000   | 0%   | 0%  | 0%  | 0%  |
| \$75,001 - \$150,000  | -1%  | -1% | -1% | -1% |
| \$150,001 - \$250,000   | -2%  | -3% | -3% | -4% |
| \$205,001 or more   | -4%  | -5% | -5% | -6% |
| Total Company   | 0%   | 0%  | 0%  | 0%  |

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PUCO Case No 07-1080-GA-AIR et al.*

## **Attachment RC-1**

## **Roger D. Colton**

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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)  
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Colton (2003). *Measuring the Outcomes of Home Energy Assistance through a Home Energy Insecurity Scale*, prepared for the U.S. Department of Health and Human Services, Administration for Children and Families.

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Colton (2001). *Group Buying of Propane and Fuel Oil in New York State: A Feasibility Study*, prepared for New York State Community Action Association.

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Colton (1999). *Integration of LIHEAP with Energy Assistance Programs Created through Electric and/or Natural Gas Restructuring*, prepared for U.S. Department of Health and Human Services, Administration for Children and Families (Nov. 1999).

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Colton and Alexander (1998). *The Implications of an Increased Federal Role in the Regulation of Electricity on State Regulation of Consumer Protection and Universal Service Programs*.

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Colton (1998). *The Costs of a Universal Service Fund in Minnesota: Electric and Natural Gas*, prepared for the Energy Cents Coalition.

Colton (1998). *Controlling the Occupational Exposure to Tuberculosis in Homeless Shelters: Applying Federal OSHA Standards to Volunteers*, prepared for the U.S. Occupational Safety and Health Administration.

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b. Volume 2: *An Evaluation of Low-Income Utility Protections in Maine: Payment Arrangements for Maine's Electric Utilities*.

c. Volume 3: *An Evaluation of Low-Income Utility Protections in Maine: Fuel Assistance and Family Crisis Benefits*.

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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 EnPower 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  | Lifetime 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/Vectren for Universal Service Program                            | Witness | Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy | Low-income program design          | Indiana        | 07   |
| I/M/O PPL Electric   | Witness | Office of Consumer Advocate  | Low-income program                 | Pennsylvania   | 07   |

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| CASE NAME   | ROLE    | CLIENT NAME  | TOPIC                                  | JURIS.         | DATE |
|---|---------|--|--|----------------|------|
| 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   |
| 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/Vectren for Universal Service Program   | Witness | Citizens Gas & Coke Utility/Northern Indiana Public Service/Vectren Energy | 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   |

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| CASE NAME   | ROLE    | CLIENT NAME                                      | TOPIC                                   | JURIS.        | DATE |
|---|---------|--|---|---------------|------|
| 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/Vectren                         | Witness | Citizens Action Coalition of Indiana             | Universal service                       | Indiana       | 04   |
| 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                                     | EEOA disparate impacts                  | Ohio          | 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   |

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| CASE NAME   | ROLE    | CLIENT NAME                           | TOPIC                                     | JURIS.        | DATE    |
|---|---------|---------------------------------------|---|---------------|---------|
| 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         | Ohio          | 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      |
| 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. PSC/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      |

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| CASE NAME   | ROLE    | CLIENT NAME                               | TOPIC  | JURIS.            | DATE    |
|---|---------|---|--|-------------------|---------|
| 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      |
| Alleruzzo v. Klarchek                                   | Witness | Barlow Alleruzzo                          | 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 Ohio     | Witness | Edgemont Neighborhood Association         | Merger impacts on low-income consumers       | Ohio              | 98 - 99 |
| Davis v. American General Finance                       | Witness | Thomas Davis                              | Damages in "loan flipping" case              | Ohio              | 98 - 99 |
| Griffin v. Associates Financial Service Corp.           | Witness | Earlie Griffin                            | Damages in "loan flipping" case              | Ohio              | 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 |
| VMHOA v. LaPierre                                       | Witness | Vermont 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 of 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   |

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| CASE NAME   | ROLE    | CLIENT NAME                                | TOPIC                               | JURIS.                  | DATE    |
|---|---------|--|-------------------------------------|-------------------------|---------|
| 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 Kelikuli III                                 | Witness | Joseph Kelikuli 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      |
| 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 Winner Moratorium       | Witness | Philadelphia Public Advocate               | Credit and collection               | Philadelphia            | 95      |
| Re. Dept of Hawaii Homebased 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      |

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| CASE NAME                                  | ROLE    | CLIENT NAME                                   | TOPIC                                | JURIS.                 | DATE |
|--|---------|---|--------------------------------------|------------------------|------|
| 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   |
| 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   |

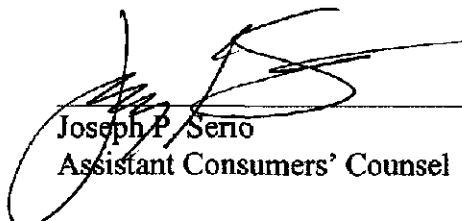


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| CASE NAME  | ROLE       | CLIENT NAME                                      | TOPIC                                    | JURIS.       | DATE |
|--|------------|--|--|--------------|------|
| Philadelphia Gas Works                                     | 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<br>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<br>Service    | Low-income rate proposals                | Vermont      | 89   |
| Generic Investigation into Demand 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<br>XI   | Low-income conservation                  | Montana      | 88   |
| Washington Water Power Co.                                 | Witness    | Idaho Legal Service Corp.                        | Rate base, rate design, cost-allocations | Idaho        | 88   |

### **CERTIFICATE OF SERVICE**

It is hereby certified that a true copy of the foregoing the *Direct Testimony of Roger D. Colton on Behalf of the Office of the Ohio Consumers' Counsel* has been served via First Class US Mail , this 23<sup>rd</sup> day of July, 2008.



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Assistant Consumers' Counsel

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