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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

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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Q1. PLEASE STATE YOUR NAME AND ADDRESS.

A1. My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public Finance and General Economics, 34 Warwick Road, Belmont, Massachusetts, 02478.

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

A2. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a variety of federal and state agencies, consumer organizations and public utilities on rate and customer service issues involving telephone, water/sewer, natural gas and electric utilities.

Q3. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

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

Q4. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.

A4. I work primarily on low-income utility issues. This involves regulatory work on rate and customer service issues, as well as research into low-income usage, payment patterns, and affordability programs. At present, I am working on various projects in the states of New Hampshire, New Jersey, Maryland, Pennsylvania, North Carolina, Ohio, Indiana, Iowa, Arkansas, Colorado, New Mexico, Oregon and Washington. My clients include state agencies (*e.g.*, Pennsylvania Office of Consumer Advocate, Maryland Office of Peoples Counsel, North Carolina Department of Justice, Iowa Department of Human Rights), federal agencies (*e.g.*, U.S. Department of Health and Human Services), community-based organizations (*e.g.*, Community Action of New Mexico, Coalition to Keep Indiana Warm, Community Action Partnership of Oregon), and private utilities (*e.g.*, Entergy Services, Tacoma Public Utilities). In addition to state- and utility-specific work, I engage in national work in the United States and Canada. For example, I am currently working on a national study of the responses of water utilities to the payment troubles of residential customers for the American Water Works Association Research Foundation. In 2007, I was part of a team that performed a multi-sponsor public/private national study of low-income energy assistance programs.

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

A5. After receiving my undergraduate degree from Iowa State University (1975), I obtained further training in both law and economics. I received my law degree from the University of Florida in 1981. I received my Masters Degree (economics) from the McGregor School (Antioch University) in 1993.

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

A6. Yes. I have published more than 80 articles in scholarly and trade journals, primarily on low-income utility and housing issues. I have published an equal number of technical reports for various clients on energy, water, telecommunications and other associated low-income utility issues. A list of my professional publications is appended as Attachment RC-1.

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.

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

I. LOW-INCOME ENERGY BURDENS IN OHIO

Q9. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A9. In this section of my testimony, I consider the context within which Vectren Energy Delivery of Ohio ("Vectren" or "Company") is proposing a rate increase for low-income customers. In addition to proposing an overall revenue increase through increased rates, the Company is proposing to reduce expenses collected through its volumetric charges and to reallocate the collection of those expenses to the fixed customer charge. This process of reallocation from volumetric to fixed charges will have the effect, as I describe in detail below, of further increasing rates to low-use, low-income customers. I conclude that the Company's low-income customers are not capable of absorbing the increased 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.[1] 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[2] reached $1,571 per household.[3] 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.[4]

[1] 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.

[2] 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.

[3] 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.

[4] 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).[5]

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

[5] Energy Information Administration, Natural Gas Monthly, Table 21 (May 2004), Table 19 (May 2007).

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

[6] 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 40th 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

[7] See e.g., 24 CFR §5.100 (2008).

conclude that a direct relationship exists between income and natural gas consumption. As income increases, natural gas usage and expenditures increase as well. A variety of data supports this conclusion.

A. State-Specific Ohio Data.

1. Income and Usage.

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

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

The Ohio data is set forth in Schedule RDC-4. In this schedule, I present natural gas monthly expenditures as reported by the 2006 American Community Survey, the most recent Census data available. The American Community Survey collects annual data on selected household and housing characteristics in years between the Decennial Census. As can be seen, natural gas expenditures increase as each income tier increases in Ohio. Indeed, the monthly 2006 expenditures for households with income between \$150,000 and \$250,000 are twice as high as the monthly expenditures for households with income less than \$10,000 (\$158.60 vs. \$65.90). Indeed, the median income in Ohio in 2006 was \$44,532. The monthly natural gas expenditure for the income range encompassing that median income (\$40,000 - \$50,000) was \$98.20, more than 50% higher than expenditures at the lowest income level ($65.90), but only 60% of expenditures at the highest income level ($158.60). Schedule RDC-5 presents the same data graphically. The graphic presentation of the data reveals in clear terms the continuous increase in natural gas consumption as household income increases.

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

A18. No. Poverty Level is a measure of income taking into account household size. Poverty Level recognizes, for example, that a three-person household with an income of $10,000 is "poorer" than a two-person household with an income of $10,000. Overlaying household size onto income by considering the Poverty Level of a household does not change the results of my inquiry. Schedule RDC-6 presents monthly natural gas bills for Ohio by increasing levels of the Federal Poverty Level. In Ohio, the monthly natural gas expenditure at 300% of Poverty or more is more than 130% of the natural gas expenditures for households with income below 50% of Federal Poverty Level.

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

A19. Yes. The U.S. Department of Energy, Energy Information Administration ("DOE/EIA") has published regular periodic reports entitled the *Residential Energy Consumption Survey* ("RECS"). In a document released in June 2001 (and modified in April 2002), DOE/EIA released its analysis of RECS data titled *Natural Gas Use in American Households*. In the section of its analysis that examines the relationship between income and natural gas usage, DOE/EIA states:

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

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

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

A20. Yes. This is an empirically demonstrable fact in Ohio. Schedule RDC-7 presents Ohio data on natural gas expenditures by income and housing unit size. In Schedule RDC-7, the size of the housing unit is measured in terms of the number of bedrooms. Two observations can be drawn from Schedule RDC-7. First, there is a moderate relationship between income and natural gas usage within each housing unit size. As a general rule, as income increases, holding the housing unit size constant, the natural gas expenditures increase as well. Second, and even more significantly, the difference in the average expenditures by income is far greater than the difference in expenditures by income within any given housing unit size. This is because the distribution of households by housing unit size is not similar between income ranges (see, Schedule RDC-9 and Schedule RDC-10 below, along with accompanying text). While there may be a moderate distinction between a higher-income household in a four-bedroom housing unit and a lower-income household in a four-bedroom housing unit, because there are far fewer lower-income households in four-bedroom units, the overall difference in consumption is much greater.

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

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

A21. Yes. This conclusion is based on two different data-based observations. First, Schedule RDC-9 presents the average income in Ohio by the number of ***rooms*** in a housing structure, as well as the average income in Ohio by the number of ***bedrooms*** in a housing structure. Schedule RDC-9 clearly shows that as housing structures get larger in Ohio, average income increases. There are two standard ways to measure the size of a housing unit. One way is to look at the number of total rooms. The other way is to look at the number of bedrooms. Both of these approaches document that smaller sized units have lower-income households.

- While the average income of an Ohio household living in a unit with one room is $22,677, the average income of a household living in an eight-room unit is $85,670.
- The same relationship holds true for housing size measured by the number of bedrooms. While the average income for an Ohio household living in a unit with one bedroom is $21,584, the average income of a household living in a housing unit with five or more bedrooms is $91,346.

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

In addition, Schedule RDC-10 presents a distribution of Ohio households by the size of the housing unit in which they live, separately examining the size of the housing unit measured by the number of rooms and the number of bedrooms. The data shows that a higher proportion of lower-income households live in smaller housing units. For example, while 66% of households with income less than $10,000 live in units with two bedrooms or less, only 7% of households with income greater than $250,000 (and only 8% of households with income between $150,000 and $250,000) live in units that small. Conversely, while 68% of households with income of $250,000 or more live in units with four or more bedrooms (and 59% of households with income between $150,000 and $250,000 do), only 7% of households with income below $10,000 live in units that large (and only 8% of households with income between $10,000 and $20,000 do).

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

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

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

Schedule RDC-11 shows that residents of multi-family housing units are significantly disproportionately over-represented by low-income households. While 33% of gas-consuming households with income less than $10,000 live in building units with three or more units, and 22% of gas-consuming households with income between $10,000 and $20,000 do, fewer than 2% of gas-consuming households with income of $75,000 or more live in buildings with three or more units. Conversely, while between 94% and 96% of gas-consuming households with income $75,000 or higher live in single family detached homes, only 43% of gas-consuming households with income less than $10,000 do (and only 57% of households with income between $10,000 and $20,000 do).

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

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

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

Q24. DOES VECTREN HAVE THIS TYPE OF HOUSING DATA FOR ITS SERVICE TERRITORY?

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

[8] OCC-INT-363, OCC-INT-364.

[9] OCC-INT-365, OCC-INT-366, OCC-INT-367.

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

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

2. Income and Density.

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

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

[10] Staff Report, at 30.

[11] Id.

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

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

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

A28. I examined housing density data for each Census tract within Montgomery County, a county that Vectren serves in Ohio. Census data is comprised of several different levels. One of the smallest levels is the Census tract, a geographic area comprised of sufficient land for the Census Bureau to report data on roughly 4,000 to 8,000 persons. Because Census tracts can have varying population densities to them, they do not necessarily represent the same size of geography. Through its "Census Tract Relationship Files," however, the Census provides sufficient data to calculate housing unit densities. The Census reports "land area" in thousands of square meters. I have converted those thousand square meters into acres (a thousand square meters is roughly 0.247 acres) and determined the number of housing units per square acre for each Census tract. I then rank each Census tract by income (as measured by per capita income) and by the density of housing. Montgomery County has 145 Census tracts, of which 115 present usable data.

Q29. WHAT DID YOU FIND?

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

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

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

Q30. WHAT DO YOU CONCLUDE?

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

As a result, not only will low-income households be charged higher rates, they will be charged higher rates for costs that they did not cause the Company to incur. One basic principle of ratemaking is that rates should reflect costs. To the extent practicable, one set of customers should not be charged for costs that a different set of customers causes a utility to incur. Because higher density customers do not cause the Company to incur the same level of distribution expenses, charging those low-use, high-density customers a fixed charge at the same level as higher-use, lower density customers will create a cross-subsidy. Because of this cross-subsidy inherent in the SFV rate design, and because the cross-subsidy flows from low-income customers who are having a difficult time in affording their bills with which to begin to higher-use, higher income customers, the recommendations in the Staff Report urging adoption of the SFV rate design should be rejected.

3. Usage and Aging

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

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

Schedule RDC-12 (page 2 of 2) confirms that this Ohio-specific data is not atypical. This schedule presents similar data published by the U.S. Department of Labor through its annual Consumer Expenditures Survey ("CEX"). While the CEX data does not provide state-specific information, it does provide regional data by age of the householder. As with the Ohio data, the Midwestern data shows an increase in natural gas expenditures through the years that a householder participates in the work force, maintains a family and likely owns a home. As families and housing units begin to downsize, the natural gas consumption of these households begins to decrease. In particular, the consumption in the oldest age tier (75 and older for CEX data) shows a natural gas expenditure substantially lower than those expenditures of householders in their prime earning, primary family, years.

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

B. The Federal Data

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

A32. Yes. The association documented above, based on comprehensive Ohio-specific information, shows two relationships. These are the same relationships identified by the U.S. Department of Energy ("DOE") in its assessment of the association between natural gas consumption and income. Low-income households tend to live in smaller housing units. As a result, their natural gas consumption tends to be lower than the natural gas consumption of higher income households.

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

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

Q34. IS THE DOE DATA SPECIFIC TO OHIO?

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

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

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

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

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

A42. Yes. The July 2006 evaluation of the Ohio weatherization program reports that PIPP participants use 20% more natural gas than do non-PIPP participants. This is true, that evaluation found, even though lower use customers are beginning to turn to PIPP as natural gas prices increase. PIPP participants have homes that are 30% leakier, have more occupants, and are less likely to live in mobile homes than are non-PIPP participants.[12]

Q43. WHAT IS THE SIGNIFICANCE OF THIS DATA?

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

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

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

[12] M. Sami Khawaja, et al. (July 2006). Ohio Home Weatherization Assistance Program Impact E valuation, prepared for Ohio Office of Energy Efficiency, at 29, quantec, LLC: Portland (OR).

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

Q45. WHAT IS YOUR ULTIMATE CONCLUSION?

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

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

[13] Ulrey Prefiled Direct Testimony, at 6.

[14] Id.

Finally, the Company proposes to repeat the process in its next rate case. In that rate case, the Company would again allocate the entire revenue increase to the customer charge. The Company would follow that allocation of the increase to the customer charge with a Stage 2 change one or two years later, with a further decrease in volumetric charges and an allocation of those reduced revenues to a fixed charge, with no net revenue increase to the Company.[15] The customer charge would then average roughly $21 per month.[16]

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

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

Q49. PLEASE IDENTIFY THE FIRST ERRONEOUS ASSERTION MADE BY THE COMPANY.

A49. First, Mr. Overcast asserts that: "for residential customers, the relative homogeneity of the residential class permits the residential rate design to consist of an annual customer charge for delivery service, payable in twelve equal monthly installments. . ."[17]

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[15] Id.

[16] Id.

[17] Overcast Prefiled Testimony, at 15.

Q50. HOW IS THAT STATEMENT IN ERROR?

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

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

A51. Mr. Overcast asserts that "the elimination of volumetric rates from delivery service provides the most benefit to the customers least able to afford heat. The reason these customers benefit is that unlike volumetric rates, under SFV rates, customers' distribution bills will not increase as usage increases. And those customers often have higher usage than average customers. . ."[18]

[18] Id., at 16 – 17.

Q52. HOW IS THAT STATEMENT IN ERROR?

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

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

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

Q54. WHAT IS THE RESULT OF YOUR ANALYSIS?

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

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[19] Mr. Ulrey states: "VEDO has also proposed a Stage 2 rate change to he 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).

[20] 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 <u>*portion*</u> of "the volumetric charge" by 35%.

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

Q55. DOES THIS CONCLUDE YOUR TESTIMONY?

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

Schedule RDC-1

Ohio Home Energy Burdens: 2004 – 2007				
	2004	2005	2006	2007
Poverty Level	Home Energy Burdens by 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: www.HomeEnergyAffordabilityGap.com.

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).	

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%

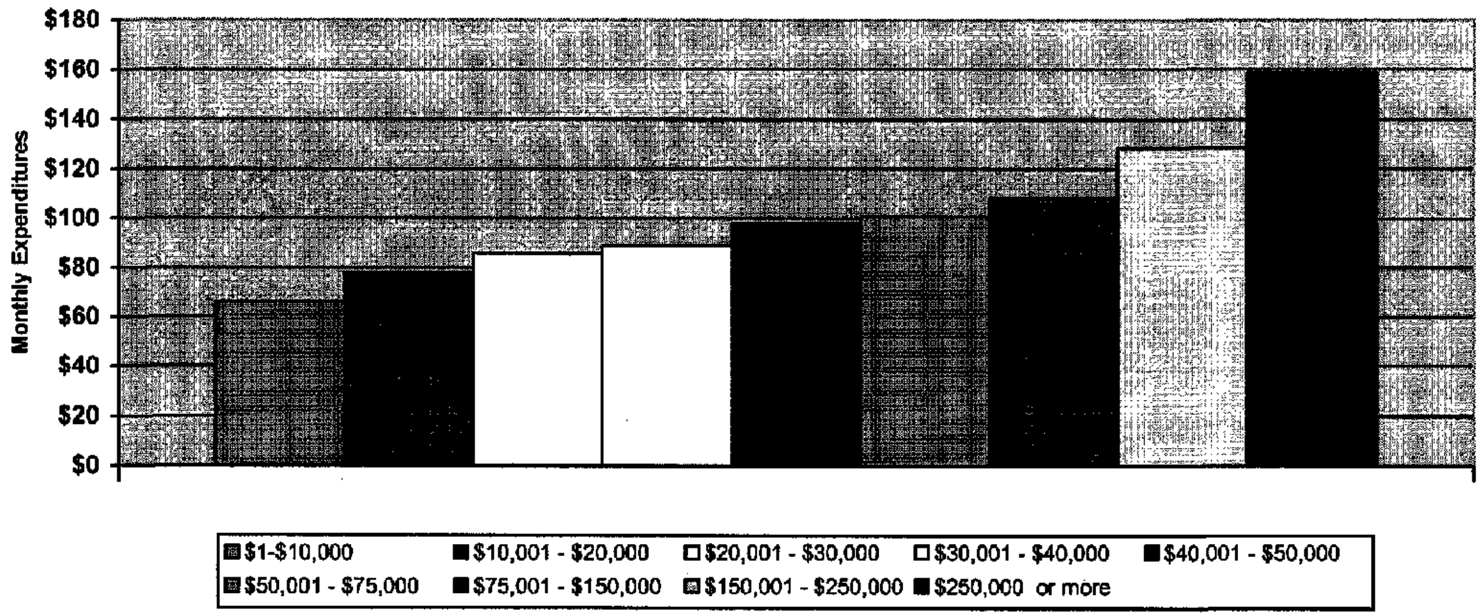
SOURCE: 2000 Census (STF3). American Community Survey (2004, 2005, 2006).

Schedule RDC-4

Monthly Gas Expenditures by Income (Ohio) 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

Schedule RDC-5

Monthly Gas Expenditures by Income (Ohio 2006)



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%

Schedule RDC-7

Monthly Natural Gas Expenditures by Number of Bedrooms in Home and Income (Ohio)
(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

Schedule RDC-8

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

No. of Rooms	$1 - $10,000	$10 - $20,000	$20 - $30,000	$30 - $40,000	$40 - $50,000	$50 - $75,000	$75 - $150,000	$150- $250,000	$250,000+
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.

Schedule RDC-9

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

	Average Income by Number of Rooms/Bedrooms	
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.

Schedule RDC-10

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

Bedrooms	$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
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 - $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
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%

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

Schedule RDC-11

Distribution of Housing Units by Income and Housing Unit Type (Gas Users) (Ohio) (American Community Survey: 2006)									
Building Type	$1 - $10,000	$10 - $20,000	$20 - $30,000	$30 - $40,000	$40 - $50,000	$50 - $75,000	$75 - $150,000	$150- $250,000	$250,000 or more
Mobile home	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%
Natural Gas Bill By Housing Unit Type (Ohio) (American Community Survey: 2006)									
Housing Unit Type	$1 - $10,000	$10 - $20,000	$20 - $30,000	$30 - $40,000	$40 - $50,000	$50 - $75,000	$75 - $150,000	$150- $250,000	$250,000 or more
Mobile home	$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

Schedule RDC-12
(page 1 of 2)

Relationship Between Natural Gas Expenditures and Age of Householders (Ohio) (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

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).

Schedule RDC-13

Natural Gas Consumption (thousand cf) by Income (2001)							
	Total	Less than $10,000	$10,000 - $29,999	$30,000 - $49,999	$50,000 or more	Below Poverty Level	Eligible for Federal Assistance
Total energy (gas)	70	54	63	68	81	56	64
Space heating (gas)	54	45	50	52	59	45	50
Water heating (gas)	19	15	17	19	22	16	17
SOURCE: Residential Energy Consumption Survey, Tables CE1-3c, CE2-3c, CE4-3c.							

Schedule RDC-14

Natural Gas Expenditures by Household Income Before Taxes (Midwest region)										
	Total Midwest	Less than $5,000	$5,000 - $9,999	$10,000 - $14,999	$15,000 - $19,999	$0,000 - $29,999	$30,000 - $39,999	$40,000 - $49,999	$50,000 - $69,999	$70,000 or 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)										

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.		

Schedule RDC-16

Bill Impact by Income Level of Allocating 35% of Fixed Costs to Increased Customer Charge
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%

Attachment RC-1

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EDUCATION:

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

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

B.A. Iowa State University (1975)

PROFESSIONAL EXPERIENCE:

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

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

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

National Consumer Law Center (NCLC): 1986 - 1994

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

Community Action Research Group (CARG): 1981 - 1985

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

PROFESSIONAL AFFILIATIONS:

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

PROFESSIONAL ASSOCIATIONS:

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

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COLTON EXPERIENCE AS EXPERT WITNESS

1988 - PRESENT

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

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

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	ECOA 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

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. PSCO/NSP Merger	Witness	Colorado Energy Assistance Foundation	Merger impacts on low-income	Colorado	99 - 00
I/M/O Peoples Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99

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I/M/O Columbia Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O PG Energy Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
I/M/O Equitable Gas Company	Witness	Office of Consumer Advocate	Universal service	Pennsylvania	99
Allerruzzo v. Klarchek	Witness	Barlow Allerruzzo	Mobile home fees and sales	Illinois	99
I/M/O Restructuring New Jersey's Natural Gas Industry	Witness	Division of Ratepayer Advocate	Universal service	Pennsylvania	99
I/M/O Bell Atlantic Local Competition	Witness	Public Utility Law Project	Lifeline telecommunications rates	New Jersey	99
I/M/O Merger Application for SBC and Ameritech Ohio	Witness	Edgemont Neighborhood Association	Merger impacts on low-income consumers	Ohio	98 - 99
Davis v. American General Finnce	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 ct: Illinois	98
Re. Restructuring Plan of Atlantic City Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Jersey Central Power & Light	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Public Service Electric & Gas	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98
Re. Restructuring Plan of Rockland Electric	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97-98

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Appleby v. Metropolitan Dade County Housing Agency	Witness	Legal Services of Greater Miami	HUD utility allowances	Fed. court: So. Florida	97 - 98
Re. Restructuring Plan of PECO Energy Company	Witness	Energy Coordinating Agency of Philadelphia	Universal service	Pennsylvania	97
Re. Atlantic City Electric Merger	Witness	New Jersey Division of Ratepayer Advocate	Low-income issues	New Jersey	97
Re. IES Industries Merger	Witness	Iowa Community Action Association	Low-income issues	Iowa	97
Re. New Hampshire Electric Restructuring	Witness	NH Comm. Action Ass'n	Wires charge	New Hampshire	97
Re. Natural Gas Competition in Wisconsin	Witness	Wisconsin Community Action Association	Universal service	Wisconsin	96
Re. Baltimore Gas and Electric Merger	Witness	Maryland Office of Peoples Counsel	Low-income issues	Maryland	96
Re. Northern States Power Merger	Witness	Energy Cents Coalition	Low-income issues	Minnesota	96
Re. Public Service Co. of Colorado Merger	Witness	Colorado Energy Assistance Foundation	Low-income issues	Colorado	96
Re. Massachusetts Restructuring Regulations	Witness	Fisher, Sheehan & Colton	Low-income issues/energy efficiency	Massachusetts	96
Re. FERC Merger Guidelines	Witness	National Coalition of Low-Income Groups	Low-income interests in mergers	Washington D.C.	96
Re. Joseph Keliikuli III	Witness	Joseph Keliikuli III	Damages from lack of homestead	Honolulu	96
Re. Theresa Mahaulu	Witness	Theresa Mahaulu	Damages from lack of homestead	Honolulu	95
Re. Joseph Ching, Sr.	Witness	Re. Joseph Ching, Sr.	Damages from lack of homestead	Honolulu	95
Joseph Keaulana, Jr.	Witness	Joseph Keaulana, Jr.	Damages from lack of homestead	Honolulu	95
Re. Utility Allowances for Section 8 Housing	Witness	National Coalition of Low-Income Groups	Fair Market Rent Setting	Washington D.C.	95
Re. PGW Customer Service Tariff Revisions	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. Customer Responsibility Program	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	95
Re. Houston Lighting and Power Co.	Witness	Gulf Coast Legal Services	Low-Income Rates	Texas	95
Re. Request for Modification of Winter Moratorium	Witness	Philadelphia Public Advocate	Credit and collection	Philadelphia	95
Re. Dept of Hawaii Homelands Trust Homestead Production	Witness	Native Hawaiian Legal Corporation	Prudence of trust management	Honolulu	94
Re. SNET Request for Modified Shutoff Procedures	Witness	Office of Consumer Counsel	Credit and collection	Connecticut	94

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Re. Central Light and Power Co.	Witness	United Farm Workers	Low-income rates/DSM	Texas	94
Blackwell v. Philadelphia Electric Co.	Witness	Gloria Blackwell	Role of shutoff regulations	Penn. courts	94
U.S. West Request for Waiver of Rules	Witness	Wash. Util. & Transp. Comm'n Staff	Telecommunications regulation	Washington	94
Re. U.S. West Request for Full Toll Denial	Witness	Colorado Office of Consumer Counsel	Telecommunications regulation	Colorado	94
Washington Gas Light Company	Witness	Community Family Life Services	Low-income rates & energy efficiency	Washington D.C.	94
Clark v. Peterborough Electric Utility	Witness	Peterborough Community Legal Centre	Discrimination of tenant deposits	Ontario, Canada	94
Dorsey v. Housing Auth. of Baltimore	Witness	Baltimore Legal Aide	Public housing utility allowances	Federal district court	93
Penn Bell Telephone Co.	Witness	Penn. Utility Law Project	Low-income phone rates	Pennsylvania	93
Philadelphia Gas Works	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	93
Central Maine Power Co.	Witness	Maine Assn Ind. Neighborhoods	Low-income rates	Maine	92
New England Telephone Company	Witness	Mass Attorney General	Low-income phone rates	Massachusetts	92
Philadelphia Gas Co.	Witness	Philadelphia Public Advocate	Low-income DSM	Philadelphia	92
Philadelphia Water Dept.	Witness	Philadelphia Public Advocate	Low-income rates	Philadelphia	92
Public Service Co. of Colorado	Witness	Land and Water Fund	Low-income DSM	Colorado	92
Sierra Pacific Power Co.	Witness	Washoe Legal Services	Low-income DSM	Nevada	92
Consumers Power Co.	Witness	Michigan Legal Services	Low-income rates	Michigan	92
Columbia Gas	Witness	Penn. State Office of Consumer Advocate (OCA)	Energy Assurance Program	Pennsylvania	91
Mass. Elec. Co.	Witness	Mass Elec Co.	Percentage of Income Plan	Massachusetts	91
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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

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 Directors	Low-income rate proposals	Montana	90
Columbia Gas Co.	Witness	Penn. OCA	Energy Assurance Program	Pennsylvania	90
Philadelphia Gas Works	Witness	PPA	Energy Assurance Program	Philadelphia	89
Southwestern Bell Telephone Co.	Witness	SEMLSC	Formula ratemaking	Mississippi	90
Generic Investigation into Low-income Programs	Witness	Vermont State Department of Public Service	Low-income rate proposals	Vermont	89
Generic Investigation into Dmnd Side Management Measures	Consultant	Vermont DPS	Low-income conservation programs	Vermont	89
National Fuel Gas	Witness	Penn OCA	Low-income fuel funds	Pennsylvania	89
Montana Power Co.	Witness	Human Resource Develop. Council District XI	Low-income conservation	Montana	88
Washington Water Power Co.	Witness	Idaho Legal Service Corp.	Rate base, rate design, cost-allocations	Idaho	88

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 23rd day of July, 2008.

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