FSC'S LAW & ECONOMICS INSIGHTS
Issue 08-6 Fisher, Sheehan & Colton, Public Finance and General Economics November/December 2008

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Increased customer charges impose inappropriate risks, and unreasonable costs on low-income customers.

NOTE TO READERS

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A Review of Proposal to Increase Natural Gas Customer Charges Finds Harms to Low-Income Customers in New Hampshire.

National Grid, a natural gas utility serving New England, recently proposed to double the monthly customer charge it charges residential heating customers. In a rate case filed in New Hampshire, National Grid sought regulatory permission to increase its customer charge from $9.88 per month to $19.75 per month.

Low-income intervenors opposed the Company's customer charge proposal. In testimony filed by Roger Colton on behalf of Legal Assistance of New Hampshire (LANH), the New Hampshire state utility commission was told that the proposed 100% increase in the fixed monthly customer charge will have a particularly adverse impact on low-income customers.

Low-income customers disproportionately tend to be low-use customers. The proposed 100% increase in the fixed monthly customer charge would thus have the effect of imposing a much higher rate increase on low-use customers.

THE ROLE OF RISK IN SETTING CUSTOMER CHARGES

The New Hampshire utility's proposal to increase its customer charge was based on policy considerations rather than on any empirical basis. It represented the Company's "balancing" of the impact of an increased fixed monthly customer charge, particularly on small users, with the Company's desire to avoid the risk of decreasing revenues associated with decreasing consumption.

The purpose of the proposed increase, according to the Company, was to respond to a "dramatic reduction in gas usage per customer in recent years." The Company placed a 100% cap on the

increase it proposed for the fixed monthly customer charge.

The Company's proposal to place the bulk of its cost recovery in the fixed monthly customer charge is explicitly designed to tilt the allocation of risk away from the utility and toward its customers. According to the Company, one purpose of the Company's proposed rate design (high customer charges coupled with a declining block rate structure) is to protect the Company against a decrease in revenues due to customer decisions to reduce their natural gas consumption.

When, for example, the customer decision to reduce consumption is based on a need to control the strain that home heating bills place on the household budget, one objective of the Company's rate structure in this proceeding is to deprive the customer of that choice. According to the testimony on behalf of LANH, "now is not the time for such a change in that allocation of risk."

The impact of rising costs is more burdensome not only on low income but also on fixed income households. Colton presented data that examined the income for households with various demographics by income for the years 2004 through 2007, the last year for which data was available. Median income in New Hampshire grew 12.2% during that four year period, with households having wage and earnings income experiencing a roughly equal income growth, if not slightly greater (12.7% for households with income from wages and earnings).

In contrast, households on Social Security experienced an income growth of somewhat more (18.2%), while households with retirement income experienced a growth of 13.8%. Fixed income households, however, did not share this income growth, but instead experienced increasing hardship in the years 2004 through 2007. Households receiving Supplemental Security Income (SSI) experienced income growth of only 7.0% and public assistance income actually a *decrease* in income of more than three percent (-3.4%).

In contrast to these changes in income, according to the U.S. Department of Labor's "inflation calculator," items that cost $100 in 2004 would have cost $109.76 in 2007, i.e., the cost of living increased 9.8%.

As can be seen, Colton noted, while households as a whole gained somewhat in their purchasing ability relative to the increased cost-of-living (income grew 12.2% while the cost of living increased 9.8%), households on public assistance income (SSI, public assistance) lost ground relative to their purchasing power between 2004 and 2007.

NATURAL GAS PRICE INCREASES AND INCREASES IN THE COST OF LIVING.

Home energy in general, and natural gas energy in particular, has contributed to the increasing cost-of-living, Colton said. The U.S. Department of Labor measures the cost-of-living using the three-year period 1982 through 1984 as the base (Base=100). By January 2004, the Consumer Price Index for all urban consumers ("CPI-U") for "all items" had increased to 186.2. In the time between January 2004 and June 2008, the CPI-U increased further to 217.4.

The importance of the "all items" lies in the comparisons it allows with specific components of a household's budget. From January 2004 through June 2008:

- Household energy (not including transportation) increased from 140.0 to 207.912 (*plus* 67.912);
- Utility (piped) gas service increased from 169.2 to 273.766 (*plus* 104.566);
- Electricity increased from 140.4 to 184.737 (*plus* 44.337);
- Food (at home) increased from 183.2 to 213.706 (*plus* 30.506);

- Rent (of primary residence) increased from 208.2 to 242.837 (*plus* 34.637);

- Clothing decreased from 120.1 to 118.107 (*minus* 1.993).

This review, Colton said, clearly reveals the disproportionately high increase in natural gas prices as compared to increases in the price of other basic household necessities such as food, clothing and shelter.

Given the burden customers already face from rising costs, now is not the time to allow a shift of risks in utility rates from the utility to its customers by increasing the fixed customer charge. Many households today are struggling to meet basic needs.

The households in particular identified above include those on low- and fixed-incomes. These are precisely the customers, however, who will bear a disproportionately increased burden should the Company's proposal to increase its fixed customer charge be approved.

CUSTOMER CHARGES AND COST RECOVERY

The purpose of a customer charge is to compensate the Company for the costs the Company incurs in connecting a customer to the system. The customer charge should be designed to include the costs of factors such as the customer's meter, the service, and the basic meter reading and billing activities.

In contrast, the customer charge should <u>*not*</u> be a dumping ground for miscellaneous expenses. No portion of uncollectible expenses should be found in the customer charge. Uncollectibles are associated with usage, not with the mere fact of being connected to the system. No allocated overhead, nor any portion of expenses such as headquarters buildings or executive compensation, should be found in the customer charge.

CUSTOMER CHARGES AND ENERGY EFFICIENCY DECISIONS

Placing excessive costs in the customer charge discourages customers from making investments in usage reduction practices. To the extent that costs are placed into the fixed monthly customer charge, the only way for a customer to avoid paying those costs is to leave the system.

While perhaps, at some gross level of abstraction, it is theoretically conceivable for residential customers to leave the natural gas system by moving to an alternative fuel such as fuel oil or electricity for space heating, in reality, the transaction costs (such as refitting the home for a new heating system) involved with this action makes the choice to switch fuels effectively unavailable.

Quite aside from that general observation, for low-income customers in particular, the same market barriers that impede investments in usage reduction would impede such fuel switching as well. Those barriers include high hurdle rates – hurdle rates range from roughly 30% for residential customers as a whole up to 100% for low-income customers, the lack of investment capital, and the lack of dominion over energy-consuming systems in the home.

For these reasons, Colton concluded that it is reasonable to limit the increase in the fixed monthly customer charge. To do so not only benefits consumers, but it also promotes efficient consumer decisionmaking as well.

CUSTOMER CHARGES AND ECONOMIC THEORY

Increasing customer charges is not consistent with, and is certainly not dictated by, any notion of economic theory, Colton said. In theory, utility rates are designed to serve multiple functions. Those functions include, but are not necessarily limited to:

- Providing a price signal so that consumers understand the full economic cost of their consumption decisions; and

- Matching the costs incurred by the Company with the revenues generated by the Company, both by time and by customer.

In New Hampshire, the utility argued strenuously that its proposed rate structure was necessary to promote economic efficiency. According to Company witness Gary Goble, "in a competitive market, free of imperfections, economic efficiency is maximized in that the proper level of goods and services for society are produced using the minimum level of resources. . .The pricing proposal in this docket encourages economic efficiency by moving prices toward marginal costs. This entails both lowering volumetric charges and raising customer charges."

Colton disagreed. The problem with this argument he said, is that utility prices do not, and cannot, capture the full costs of utility consumption. This is the argument of advocates arguing for the "full cost pricing" of water. According to Colton, even setting aside the environmental and resource depletion costs that utility rates do not capture, without internalizing the full costs of utility consumption, it is not possible for any utility to say that its rate structure is "producing the proper level of goods and services for society using the minimum level of resources."

Colton looked at the full cost of natural gas consumption for low-income households as one example of the failure of natural gas prices to capture the full cost of gas consumption. According to a Congressionally-funded survey of federal fuel assistance recipients by the National Energy Assistance Directors Association (NEADA), for example, 16% of low-income households have experienced illness in their homes because they could not afford to keep their homes sufficiently warm. Indeed, 11% of fuel assistance recipient homes experienced an illness of sufficient severity that the household had to seek medical care. The societal costs of these impacts of high natural gas rates are not reflected in utility rates.

Given this lack, it is simply impossible to conclude that a utility's rate structure produces the "proper level of goods and services for society using the minimum level of resources" as is argued by the Company in support of its rate structure. Colton argued that the New Hampshire natural gas utility could not say that charging higher natural gas prices, and forcing low-income households to accept the resulting higher medical costs "involves producing the proper level of goods and services for society using the minimum level of resources."

Indeed, Colton noted, the rate structure proposed by the Company impedes households making proper economic choices because it does not allow the Company's customers to adjust their choices between competing economic needs. As the Company concedes, the rate structure that the Company proposes is specifically designed to allow a customer to avoid paying money to the utility only by choosing not to take natural gas service at all.

- If a low-income customer needs to spend money on health care rather than natural gas, the Company's rate structure does not allow that choice to be made.

- If a low-income customer needs to spend money on prescription medicine rather than natural gas, the Company's rate structure does not allow that choice to be made.

- If a low-income customer needs to spend money on nutrition rather than natural gas, the Company's rate structure does not allow that choice to be made.

In short, Colton said, the Company's proposed rate structure does not promote economic efficiency in any sense of the phrase. The Company's proposed rate structure prevents customers from making choices rather than enhancing those choices.

The Company's rate structure is not designed to promote economic efficiency by incorporating the full economic costs of their consumption decisions. The Company's rate structure is instead designed to reallocate the risks between utility

investors and utility ratepayers to protect the financial interests of Company investors. It is not "economic efficiency" that drives the proposed rate structure.

CUSTOMER CHARGES AND THE GOAL OF MATCHING COSTS AND REVENUES

Neither is the Company's proposed rate structure designed to provide for an appropriate matching of costs and revenues, Colton said. Rather than matching costs and revenues, the Company seeks to maximize the extent to which revenues are unavoidable. The Company acknowledges that its own marginal cost study "shows that design day demands are the primary driver of marginal costs."

The New Hampshire utility acknowledged that "marginal delivery system costs (other than customer costs) are a function of customer demands on the design day." What the Company *refuses* to acknowledge, however, was that high consumption is indicative of high design day demands.

The Company's reliance on high fixed monthly customer charges requires all customers, high user and lower user, to pay the same, even though the contribution they make to Company costs differs.

Residential energy consumption can be measured by looking at the "intensity" of usage. According to the U.S. Department of Energy's ("DOE") Residential Energy Consumption Survey ("RECS"), natural gas home heating intensity is measured in terms of cubic feet of consumption per thousand square feet of heated space per Heating Degree Days ("HDDs"). One can apply that heating intensity approach to gain insights into the design day demands imposed by customers with varying energy consumption.

Colton applied the natural gas space heating intensity data published by DOE based on the weekly HDD's for Concord and Lebanon, New Hampshire. He consistently found that larger consumers will also impose higher heating demands on a natural gas system, assuming that Company costs are, as the Company asserts, driven by design day demands.

In Concord (NH), Colton compared the weekly natural gas heating demands by households having income at or below $10,000 compared to households with income higher than $50,000.

- During the week of January 12, 2008, a low-income household would have required 2,224 cubic feet compared to 2,881 for a household with income over $50,000;

- During the week of February 12, 2008, a low-income household would have required 2,966 cubic feet compared to 3,841 cubic feet for a household with income over $50,000.

- During the week of February 23, 2008, a low-income household would have required 3,194 cubic feet of natural gas, compared to 4,138 cubic feet for a household with income over $50,000.

The same relationship held true for Lebanon (NH).

- During the week of January 19, 2008, a household with income less than $10,000 would have demanded 3,173 cubic feet of gas, compared to 4,109 for a household with income greater than $50,000.

- During the week of February 9, 2008, a household with income less than $10,000 would have consumed 2,747 cubic feet of gas, while a household with income greater than $50,000 would have consumed 3,559.

- During the week of March 1, 2008, a low-income household (below $10,000) would have consumed 3,467 cubic feet of gas, compared to 4,491 cubic feet by a household with income greater than $50,000.

According to Colton's testimony, while the data he presented discussed information on a weekly basis, what the data *shows* is the relationship between high consumption and the increased demands that are placed on a New Hampshire natural gas system as heating loads increase. The same mathematical relationship would exist on a daily basis as is documented above on a weekly basis (and has been done on a monthly basis).

Despite these widely varying demands placed upon the natural gas system, Colton said, and despite the Company's acknowledgement that the marginal delivery costs are driven by design day demands, the Company proposed to impose higher fixed customer charges on residential customers to collect what the Company refers to as "fixed" costs. The small users, imposing lower costs on the system, nonetheless will be called upon to pay the same fixed monthly customer charge as larger users.

In addition, Colton noted, and as the Company conceded, these small users will be called upon to pay dramatically higher proportionate rate increases. In short, the Company's proposed rate structure failed to fulfill the function of a rate structure to match Company revenues with Company costs.

SUMMARY AND CONCLUSIONS

In sum, based on the data and analysis discussed above, Colton concluded that the Company's proposal to substantially increase its fixed monthly customer charge was not merited by any application of economic theory.

More information on the impact that increasing fixed monthly customer charges has on low-income customers, including the New Hampshire testimony and data tables, can be obtained from:

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Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which *FSC* has worked include energy law and economics, fair housing, affordable housing development, local planning and zoning, energy efficiency planning, community economic development, poverty and telecommunications policy, regulatory economics, and public welfare policy.