When Work Is Not Enough

Home Energy Affordability Gap in Pennsylvania

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Abstract

With the current rise of home energy rates and electricity rate caps soon to expire across most of Pennsylvania, a home energy affordability crisis is growing. The gap between energy use and ability to pay, already wide for many, will continue to increase and to involve more households. While there are valuable measures that can be taken to moderate its effect, without some significant change to avert a home energy crisis among low- and moderate-income families, more challenging times are ahead. The community impact will spread beyond those directly affected.

Acknowledgements

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Disclaimer

This report is a digest of the main issues related to the home energy affordability gap. It is offered to encourage an understanding of the issues at the local level. Where it lacks depth of research, it offers information at the local level that is not published elsewhere. The author is employed by the Center for Independent Living of Central Pennsylvania, which makes no warrantee, expressed or implied, as to the accuracy or completeness of any information contained within. The views expressed are those of the author. Questions should be directed to Stephen Scanlon at 717-731-1900 or at sscanlon@cilcp.org.

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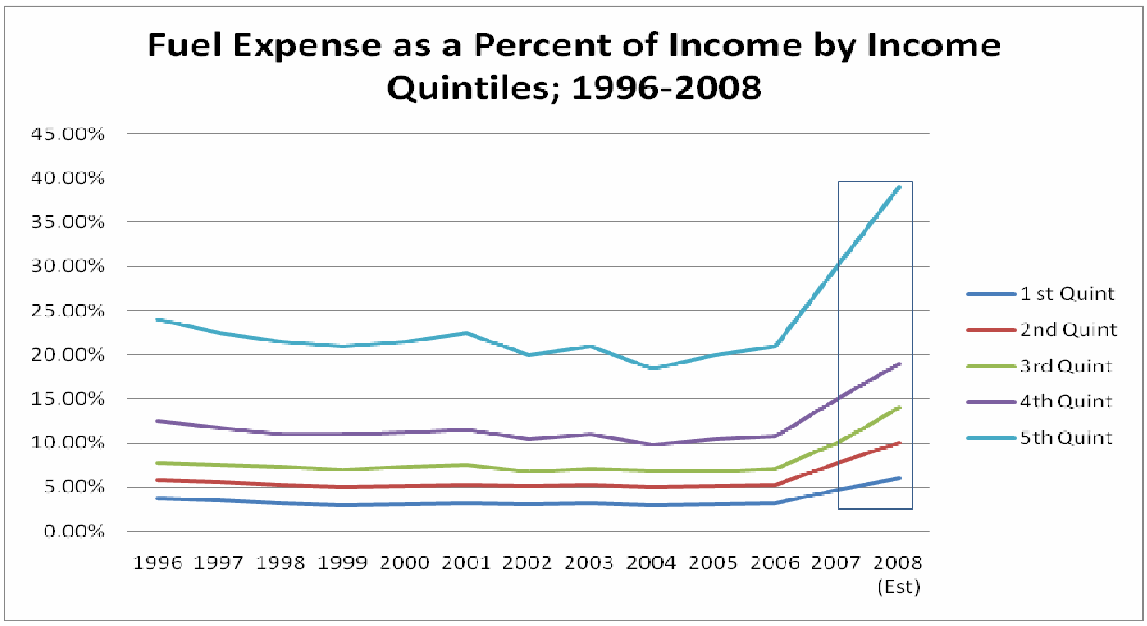
Foreword

The graph below caught my attention when Ira Goldstein from The Reinvestment Fund presented it as part of the luncheon talk he gave at the June 2008 Pennsylvania Housing Finance Agency annual conference in Gettysburg. I was already interested in the impact of rising energy prices on the poor when this succinct representation of the issue appeared.

How could this information be made useful to human services staff at the local level? They will be the ones on the frontline when the cold weather breaks and heating bills come due. This report is my attempt to start discussions at the local level. If local agency staffs are better informed, they will be more effective in providing service.

My hope is that where this digest lacks in depth of research its focus on local information will give it significance. The appendices present county level information that will help readers to understand better local conditions.



Sources: U.S. Department of Labor; Consumer Expenditure Survey and InflationData.com; Ira Goldstein, The Reinvestment Fund.

The companion booklet, **Home Energy Gap in Pennsylvania: ABC Strategies for Coping,** is being provided by the Regional Housing Coordinator (RHC) program whose goal is to improve or create housing choice for people regardless of age or disability by improving communication and information flow between the affordable housing community and service providers. The RHC program is a collaborative effort between the DPW/PDA Office of Long-term Living, Pennsylvania Housing Finance Agency, and the Self-Determination Housing Project.

The Center for Independent Living of Central Pennsylvania (CILCP) is a nonprofit, community-based resource and advocacy center, which is managed by and for people with disabilities. It sponsors the RHCs of central Pennsylvania.

When Work Is Not Enough:
Home Energy Affordability Gap in Pennsylvania

Purpose

Everyone is feeling the effect of rising energy prices. Perhaps we have even altered our lifestyles somewhat. But low-income households are feeling the impact disproportionately. This report was written to promote dialogue at the local level about how human service focused advocates can be more effective in stabilizing low-income households when they face the harsh reality of increasingly unaffordable home energy costs.

Executive Summary

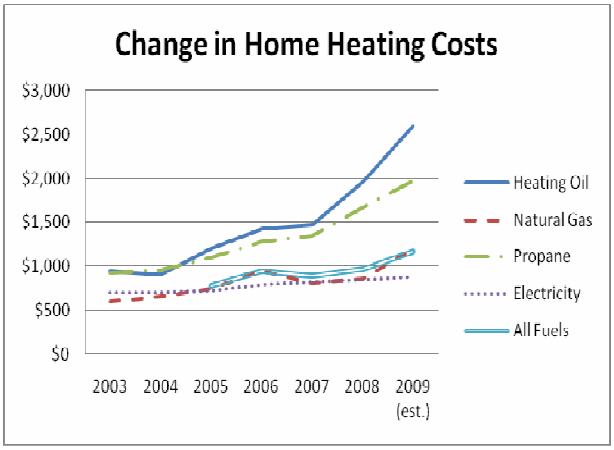
The Home Energy Affordability Gap

Rising energy costs are a force for social change. When heating bills come due this winter, many more households than in the past will experience a gap between what they can afford and what they will be charged. For a growing number of households, this will be less a matter of better budgeting and frugal living than a growing disconnect between rising home energy prices and incomes too low to afford necessities.

The growing income shortfall leads to declines in other areas of consumption. Many households tightly limit their use of energy resources and other needs in ways that compromise safety. For many elderly and persons with disabilities, who are twice as likely to be low-income, this has meant making choices among heat, food and medicine. Together, insufficient heat and food can lead to hypothermia and death.

Children of low-income households are at increased risk for developmental delays that will have lasting consequences. Unaffordable home energy costs contribute to high mobility among low-income households. Children in these families are more likely to be below grade level.

Home heating represents nearly half of the average home energy budget in Pennsylvania. However, expenditures differ dramatically across the state. Rural counties have a high dependence on bulk fuels (fuel oils and propane) that have doubled in price over the past two years. Natural gas, primarily an urban fuel, may increase by 40% over last winter's prices. On the other



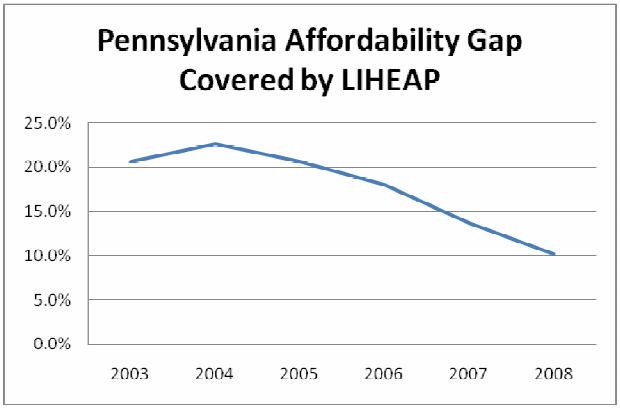
hand, most of Pennsylvania's electric customers have enjoyed comparatively stable prices since the industry was deregulated a decade ago. With the inflation in price of other energy sources, electricity has become the most affordable form of energy. That will change when most rate caps expire at the end of 2009 and 2010.

A basic measure of economic stability and well-being is a family's ability to afford its basic needs without outside assistance. Rising energy prices in particular and stagnant incomes put this out of the reach of an increasing number of families. More families are unable to balance their budgets unassisted. When work is not enough, public policy plays a critical role in helping households address the mismatch between housing costs for safe and decent living conditions and what can be afforded.

Relief

Programs exist to help families through their energy budget crises. Cash grants, weatherization programs and other public and private benefits provide supplementary energy assistance. The Low Income Home Energy Assistance Program (LIHEAP) is perhaps the most widely known. However, its impact had been halved in recent years because of the dramatically increased need for assistance with rising heating costs. An infusion of new funds has increased LIHEAP's importance. Significantly, eligibility has expanded to include households earning up to 210% of median income.

Residents of publicly subsidized housing receive a utility allowance in order to ensure that their total housing costs stay near to a target 30% of their income. They are sheltered from the worst of the inflation of energy prices.



Regulated public utility providers are mandated to assist low-income ratepayers through universal service programs. These are accommodations designed to help ratepayers meet or their obligations. They include budget-billing, debt repayment and forgiveness programs, direct assistance, and energy appliance and weatherization upgrades. In contrast, bulk fuel suppliers and rural electric cooperatives as well as municipal utilities and authorities operating within their boundaries are not regulated public utilities. Their consumers do not have the same level of accommodations available to them.

Households can reduce energy consumption and make what they use go farther. Learning budgeting and energy conservation strategies can be a worthwhile investment of time that will address expenses years into the future. However, existing resources to address the fundamental issue of low-income home energy unaffordability are not sufficient to meet the growing need. This is the core of the problem.

Public Health Consequences

Energy affordability is more than an economic class issue. Someone healthy and financially secure today may become disabled and live on a limited fixed income tomorrow. Communities suffer when people are unable to contribute as well as they might due to stress or illness.

When there is a heat or eat dilemma, paying an unaffordable energy bill could mean basic needs such as food and medical care go unmet. Those who are elderly, disabled and the very young are the most affected. Persons who are elderly and disabled are more likely to have unique health related energy needs. Inadequately addressed health issues sap limited public health resources or they go untreated leading to further consequences.

Business Considerations

Landlords need successful renters who will pay rent and utilities on time, take care of the property and practice fire safety. Beyond the property owner, maintenance and fire safety is a neighborhood concern.

Businesses need both consumers who can afford their services and healthy and unstressed workers to provide them. It is in their best interest to be proactive in addressing the high turnover and absenteeism related, in part, to low-income housing insecurity. Actively encouraging employees to access sources of energy assistance and related budgeting and life skills measures works towards this goal.

Energy companies only make a profit when they are paid for the services that they deliver. Business expenses related to the energy affordability gap include the carrying of arrears, debt write-offs and collections. For energy companies the loss of paying customers is a problem.

Insurance companies would benefit by supporting energy efficiency measures. An energy efficient home is a safer home. Risky heating strategies are a liability.

Recommendations

Government can address the growing affordability gap for households earning above the income cut-off for most relief. Government can develop incentives for private property owners to invest in the energy efficiency of their rental units. This will help to stabilize rental households by lowering their energy usage. Drawing the energy affordability gap into the current national dialogue on home foreclosures will draw needed attention to the issue.

At the local level, it is vitally important to increase awareness of strategies that case managers can use to address the affordability gap. Case managers can coach clients through the process of 1) obtaining assistance grants, 2) better knowledge of how to reduce energy costs through use of universal service programs, and 3) cost avoidance by reducing energy consumption. Front line workers are in an excellent position to evaluate home heating safety practices when, for example, many consumers turn to portable space heaters as part of their heating strategy.

Stabilizing households through one heating season is a valuable beginning for the families involved, but the challenge is bigger than one year. By building local understanding and leadership, professional communities will continue to stabilize families as government and industry policies adjust, and technologies develop to address the challenge.

When Work Is Not Enough:

Home Energy Affordability Gap in Pennsylvania

Home Energy Affordability Gap

Human services advocates need to be aware of the profound impact of rising home energy prices. When heating bills come due this winter, many more households than in previous years will experience a gap between what they will be charged and what they can afford to pay. For a growing number of households this will be less a matter of better budgeting and frugal living than a growing disconnect between rising home energy prices and incomes too low to afford necessities.

Growing numbers of low-income Pennsylvania families are facing dire financial straits as demonstrated in Table 1. While their real income is nearly stagnant, their expenses are not. As a subset of this, the elderly and persons with disabilities are twice as likely to be poor. The least able are increasingly facing difficulty affording what they need for their health and safety (Nelson, 2008.)

Table 1

Pennsylvania Population with Income by Multipliers Above the Federal Poverty Level

	100%-124%	150%-185%
2005	10.3%	6.9%
2006	11.0%	7.4%
2007	12.8%	8.6%
2008	15.1%	10.2%

Source: Fisher, Sheehan and Colton, 2005, 2006, 2007, 2008

While the information is dated, the 2000 decennial census, Table 2, identifies the extent of low income among Pennsylvania's families. For the purpose of this report a low-income household is defined as a household whose income is at or below 150% of the federal poverty guidelines. Those earning just above the 150% threshold, the new low-income, face many of the same affordability challenges but they are ineligible for most sources of assistance.

Table 2

Pennsylvania Home Energy Burdened Households by Poverty Multipliers

	< 50%	50-74%	75-99%	100-124%	125-149%	150-185%
1999	243,430	132,636	153,168	175,888	198,934	292,402

Source: U.S. Census Bureau, 2000 Census SF3 P88

Dramatically rising home energy costs noted in Table 3 have a major impact on low-income households. The growing shortfall of necessary income for these families must lead to financial crises in other areas of consumption and can only contribute to increasing stress levels. The trend toward continued increasing prices demands attention. Appendices A.1 and A.2 show how rising costs differ dramatically across the state. Rural counties that have a high dependence on bulk fuels (heating oil, kerosene and propane) and older housing stock have the greatest income shortfalls.

Table 3

Pennsylvania Home Energy Affordability Gap, Household Shortfall by Multipliers Above Federal Poverty Level

	100%-124%	150%-185%
2005	$674	$219
2006	$802	$336
2007	$1,123	$643
2008	$1,562	$1,076

Source: Fisher, Sheehan and Colton, 2005, 2006, 2007, 2008

Home energy is the total of energy resources used to heat and cool a home, provide hot water, run appliances and provide light. Home heating represents nearly half of the average home energy budget in Pennsylvania. Unlike other energy demands, heating is billed typically over just the heating season. Most low-income households do not have the savings, the credit, or the flexible income necessary to meet their financial obligation for heat during the heating season.

When customers cannot or do not pay their bills, they can attempt to work out repayment agreements and they may solicit financial assistance through a combination of public and private programs. However, these resources are limited and with increasing need without reciprocal increases in funding assistance, the price trend suggests big challenges ahead.

The Responsible Utility Consumer Protection Act of 2004 (RUCPA) was put in place to eliminate opportunities for customers capable of paying to avoid paying their utility bills. It provides utility companies with the means to reduce their uncollectible accounts by modifying the procedures for delinquent account collections. At the same time, it ensures that energy security is available to all customers based on reasonable terms. As a result, companies may seek security deposits from

non-creditworthy customers and they may charge for restoring service after it has been shut off. The Act limits the number of payment agreements that the Pennsylvania Public Utilites Commission (PUC) will establish between the consumer and provider and sets limits to payment periods.

Low-income households use less energy than other income classes but they pay a far larger portion of their income for that energy. It is the consumer's responsibility to contact the utility provider before getting behind in payments. Any customer, regardless of income, can establish a payment plan or make payment arrangements. Companies will provide third party notification as a further way to ensure follow through. Customers who are in arrears and who fail to work with their utility provider will ultimately receive shut-off notices as soon as state regulations permit.

Service terminations are last resort actions by utility companies. Yet, only about one in four indebted residential customers has made an agreement with their regulated electric and gas companies. Low-income households represent approximately one-half of residential accounts that are in arrears. In Pennsylvania 18% of regulated electric customers and 21% of regulated gas customers are low-income (Pennsylvania, 2008b).

During the 2007 service year terminations outpaced reconnections by a three to two ratio for both electric and gas companies. While 3% and 4% of customers, respectively, had service terminated at some point during the year, nearly half of those terminations were for low-income households. Some 9% of low-income electric consumers and 10% low-income gas consumers experienced a shut-off (Ibid.).

Protection is available should a shut-off be threatened due to a landlord's failure to make obligated utility payments. The Utilities Services Tenants Rights Act (USTRA) protects a tenant's right to continue utility services. The tenant may respond to a service shut-off notice by paying the previous 30-day bill. That amount may then be deducted from the rent without retaliation by the landlord or it may be taken from an escrow account that the tenant has set up in lieu of rent payment.

In Pennsylvania, 20% of residential electrical accounts and 18% of natural gas accounts were in arrears during some period between April 1, 2003 and March 31, 2004 (Power, 2008.) That was when energy prices were comparatively tame. During the winter of 2006/2007, 18% of Low-Income Home Energy Assistance Program (LIHEAP) users were unable to use their main source of heat due to system breakdown, depletion of bulk fuel sources, or disconnected service (Wolfe, 2007).

A home's primary heating fuel is a predictor of which households will experience the greatest budgetary strains. Already high-cost, bulk fuels have seen rapid price increases in recent years. Natural gas has most recently seen comparatively modest rate hikes after significant increases a few years back. But as recent as June 2008 the federal Energy Information Administration projected a 16.5% increase in next winter's gas price. However, over the course of the first half of 2008, prices have shot up as much as 65% on the spot market before declining somewhat in July. The consumer's price will reflect long-term contracts. An average rate increase in the range of 40% above last winter's unit cost falls in the middle of recent projections; however, prices are expected to decline in 2009 (Wall Street Journal, 8/4/2008).

Electric rates have been comparatively stable but this will change across most of the state by 2010 and 2011 when the majority of rate caps expire.

It is important to consider the type of heating fuel a household uses since it will affect its energy burden. In addition to fuel sources, the age of a home, the quality of its weatherization (including insulation), energy usage habits, and the efficiency of its appliances and lighting are significant factors in a household's energy budget.

Geography plays an important role too. Rural counties tend to be the heaviest users of bulk fuel sources. There, lower average household budgets and assistance budgets may be taxed even more severely than in urban regions of the state where natural gas is the most common heating fuel.

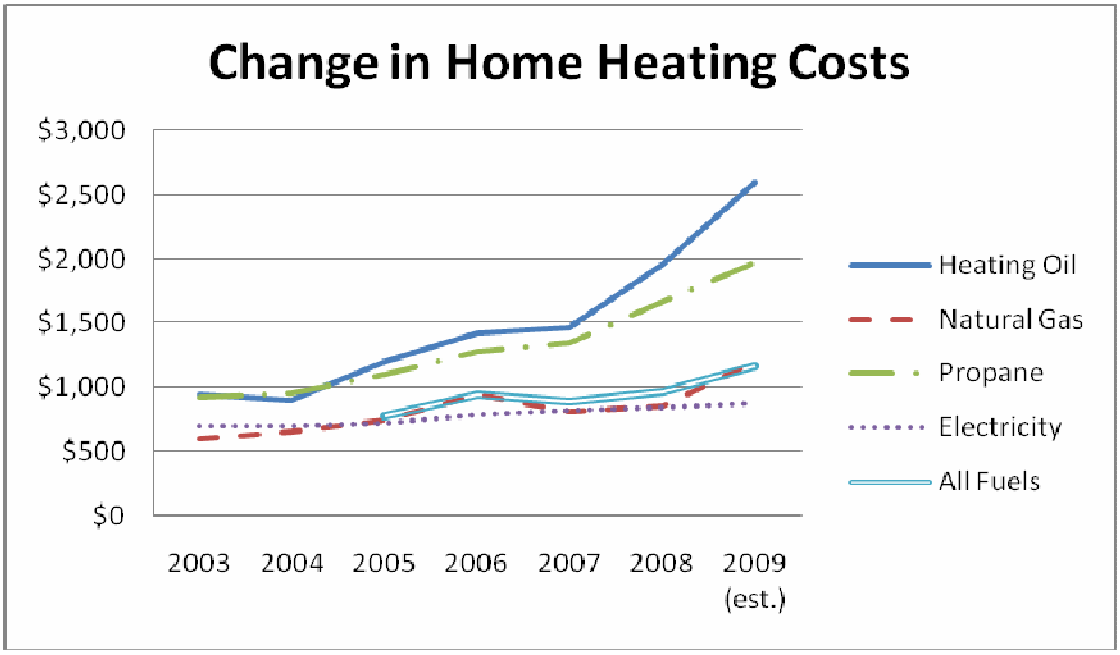
The national average price increase of home heating by fuel source ranges widely, demonstrated in Table 4 and its accompanying graph. The price rise of

Table 4

Estimated National Change in Home Heating Costs (FY 03-09)

	Heating Oil	Natural Gas	Propane	Electricity	All Fuels
2003	$951	$600	$926	$697	
2004	$903	$659	$962	$699	
2005	$1,198	$743	$1,102	$717	$783
2006	$1,430	$945	$1,281	$782	$945
2007	$1,468	$813	$1,349	$823	$889
2008	$1,962	$858	$1,670	$842	$972
2009 (est.)	$2,593	$1,201	$1,967	$875	$1,166

Sources: US Energy Information Administration state reports, calculations by Mark Wolfe in National Energy Assistance Directors Association Issue Brief, 11/26/07, and "Winter Home Prices Projected" press release, 6/23/08, Wall Street Journal, 8/4/08, and author's calculations.



heating oil and propane between 2007 and 2008 alone represents a significant drain on low- and moderate-income households. The more than $600 projected increase in fuel oil heating for the coming year is beyond the bounds of any reasonable expectation of affordability for low-income households.

Fisher et al (2003-2008) have calculated the year round home energy burden of households as a percent of poverty level (Table 5). A home energy burden at or below 6% of annual income is considered to be affordable. A burden of between 7% and 12% is regarded as a trigger for probable payment problems, at least for some point during the year (Colton, June 2008). Some incomes, however, are so low as to make nearly any energy expense unaffordable. Where income is not enough there must be trade-offs over what bills to pay. Many households will tightly limit their use of energy sources and other needs in ways that cannot be safely sustained (Power, 2008.)

Table 5

Pennsylvania Home Energy Burden as Percent of Poverty Level Income

	< 50%	50-74%	75-99%	100-124%	125-149%	150-185%
2002	46.0%	19.0%	13.0%	10.0%	9.0%	7.0%
2003	44.6%	18.0%	12.9%	10.1%	8.3%	6.8%
2004	45.7%	18.4%	13.2%	10.3%	8.4%	6.9%
2005	48.5%	19.6%	14.0%	11.0%	9.0%	7.4%
2006	56.4%	22.8%	16.3%	12.8%	10.5%	8.6%
2007	65.9%	26.7%	19.2%	15.1%	12.4%	10.2%

Source: Fisher, Sheehan and Colton, 2003, 2004, 2005, 2006, 2007, 2008

The rule of thumb is that households paying more than 6% of income toward home energy are living beyond their means without outside sources of financial assistance (Colton, 2006.) It is no surprise then that families living near the poverty level are overburdened. The indication that families with incomes at 150% to 185% of the poverty level are increasingly overburdened reflects a growing population that is bordering on being impoverished.

Dollars that might have reduced the home energy affordability gap are dollars spent instead on rent, food and medical care. Rising utility and bulk fuel prices indicate that the financial strain on the poor and those with moderate income has continued its increase, especially for bulk fuel users. The National Energy Assistance Directors Association (NEADA) reports that "preliminary data … suggest that arrearages and shut-offs could reach record levels this year." (US Dept. of Health, May 2008) In 2008, the impact of rising home energy prices has spread to families with moderate income.

Fisher et al have calculated the gap between the 6% of income considered affordable for home energy costs and the average home energy burden, shown in Table 6. For Pennsylvania in 2007, the average gap was $1,629 for families with incomes less than 185% of the poverty level. The more than $900 of additional unaffordable energy consumed by the working poor in 2007 above the 2005 expense far surpasses any new resources to meet those obligations. The higher state rank noted in the table favorably compares Pennsylvania's low-income energy burdens

against other states. The higher ranking indicates low-income Pennsylvanians face slightly better conditions in terms of their average affordability gap.

Table 6

Pennsylvania Energy Expense Exceeds Affordability

	Households with Income 150% - 185% Poverty Level	State Rank
2002	$742	37
2003	$691	29
2004	$745	29
2005	$872	28
2006	$1,194	35
2007	$1,629	32

Source: Fisher, Sheehan and Colton, 2003, 2004, 2005, 2006, 2007, 2008

The impact of changing prices for fuel affects the universe of owner-occupiers and renters differently. The median household income of renters is nearly half that of owner-occupiers. The implication for energy affordability is profound as renters, overall, have fewer resources. The finding, shown in Table 7 that Pennsylvania renters have a comparatively low incidence of fuel oil generated heat as compared to owner-occupiers, suggests that the crisis may be somewhat less severe for the time being than would be predicted by grouping these households.

A breakdown for all American households allows a comparison between Pennsylvania and national heating fuel sources. Pennsylvania has a significantly lower rate of electric usage and a higher rate of fuel oil usage. (The northeast is the largest user of fuel oil.)

Table 7

2005 Tenure by Household Primary Heating Fuel*

	All PA HHs	Owner	Renter	All HHs U.S.
		72%	28%	
Utility Gas	51%	51%	53%	54%
Electricity	18%	14%	27%	31%
Fuel Oil, Kerosene, etc.	23%	26%	15%	8%
Wood	2%	3%	1%	3%
Bottled, Tank, or LP Gas	4%	4%	3%	6%

Source: U.S. Census Bureau, 2006 American Community Survey, B05010; Energy Information Administration, Office of Energy Markets, Forms EIA-457 A, B, C of the 2005 Residential Energy Consumption Survey.
*Columns do not add to 100%; sources including solar and no heat are not included.

Renters tend to use a higher proportion of electric heating, most likely because it is the least expensive appliance type for proprietors to install. Coal, coke and wood represent significant heating energy sources in some rural counties. Homeowners are the primary users of these sources. Appendix B.1 is a county breakdown of primary heating fuels by tenure from the 2000 Census. The attached Appendix B.2 provides a state level update from 2006 American Community Survey data.

There is a great deal of variation across the Commonwealth. The county level statistics can be used as a predictive tool for identifying the number of households that will be affected by price changes among the fuel types.

Electricity Rate Caps

Most of Pennsylvania's electric customers have enjoyed stable prices since 1996 when the industry was deregulated and temporary caps on the price of electricity went into effect. With the inflation in the price of other energy sources, electricity has become the most affordable form of energy. Deregulation did not work as intended, as new sources of power did not materialize to stimulate price competition.

Price predictions, once rate caps expire, range widely but all agree that there will be a significant increase. Customers in Pike County, Pennsylvania, saw their rates skyrocket 72% overnight when their caps came off in 2006, in part the result of an electricity price spike resulting from damage caused by Hurricane Katrina. When Maryland's own rate caps expired in 2006, rates for its largest utility, Baltimore Gas and Electric, rose 50%.

Most of the Commonwealth's rate caps expire at the end of 2009 and 2010. As a hint of things to come, PPL Electric Utilities anticipates that its rate will increase approximately 34% on January 1, 2010. The impact will be widely felt but this change, unlike that for bulk fuels, should come as no surprise.

Subsidy Programs

LIHEAP

Public and private programs exist to provide supplementary energy assistance to households with severely limited means. Perhaps the most widely known is the Low Income Home Energy Assistance Program (LIHEAP). The U.S. Department of Health and Human Services allocates federal LIHEAP funds to the states as block grants. In Pennsylvania, county assistance offices distribute funds at the local level.

The program has three components: cash benefits to help pay for heating costs, crisis payments to address energy-related emergencies, and home weatherization services. Recipients may not exceed 150% of the poverty level ($31,800 for a family of four), and benefits must target those households with the highest energy costs in relation to income and household size.

In Pennsylvania, in 2007, this meant that most LIHEAP participating households had at least one member who was elderly (33%), disabled (29%), or had children under five years old (19%) (US Dept of Health and Human Services, 2008a). In 2008, LIHEAP served 398,374 Pennsylvania households, an 8.6% increase from the previous year, about half of the estimated 800,000 income eligible households. Anecdotal evidence suggests that many low-income elderly do

not apply for LIHEAP because they do not think of themselves as poor.

Since 2002, the number of households receiving LIHEAP assistance nationwide rose from 4.2 million to 5.8 million in FY 2007 covering only 16% of income eligible households. Nationwide, in FY 2007 the majority of these LIHEAP participating households had at least one member who was elderly (41%) or was disabled (43%). These households carried an average energy cost burden of 15% of income. The average for the other America was 3.4% (Wolfe, 2007). Clearly, Pennsylvania, a cold weather state, demonstrates greater demand for LIHEAP assistance and that assistance reaches a broader spectrum of the population. With increasing energy costs, it is likely that more income eligible Pennsylvanians will seek assistance.

The growing need in relation to wavering but generally stagnant grants has reduced the impact of LIHEAP assistance. In Pennsylvania, the average FY 2007 grant was $245, essentially the same as the $239 average in 2004. The average crisis grant in 2007 was $322. Even as the energy affordability gap has increased over time and more families that are eligible apply for assistance, the proportion of need being covered shrank by half between 2002 and 2007.

Controversy arose when the Pennsylvania FY 2008 LIHEAP closed on March 21. Pennsylvania had plans to provide a combined total of 540,000 LIHEAP grants but only 478,000 were awarded. Program closure was earlier than usual and it was the first state in the region to cease operations. Since the level of LIHEAP funding is not known far in advance and has been unstable over the years, the $13 million in funds remaining were held back in order to supplement FY 2009 funds (US Dept. of Health and Human Services, May 2008).

National LIHEAP funding for FY 2009 is projected to be $2.57 billion. States have called on Congress to increase funding to its fully authorized level of $5.1 billion in order to address the decline in impact and to increase the number of households being served (Wolfe, 2007). The Pennsylvania total allocation for FY 2008 was $183.7 million. That included $50.4 million in additional contingency funds provided later in the heating season to address household heating emergencies including termination notices. While that was an increase from the previous year's $140.5 million base and contingency funds, it is lower than the $202 million total of FY 2006. In short, since its inception in 1981, program funding has shifted but has not made lasting gains. The index shown in Table 8 clearly identifies the impact of the rising affordability gap and the declining impact of budgeted LIHEAP base allocations. Over just the past two heating seasons, LIHEAP's impact has been halved.

Addendum: October 15

The federal government has made an infusion of funds into LIHEAP raising Pennsylvania's funding to $275 million. Income eligibility has been raised to 210% of median income ($44,443 for a family of four). This year's average cash grant projection is $300; it is $800 for crisis grants (Times Tribune, Oct 15, 2008).

This is significant new relief that will better address the low-income energy-funding crisis. Moreover, it is a hand up to moderately low-income families. There remains the challenge of getting the word out to those who are newly eligible.

Table 8

Pennsylvania Home Energy Affordability Gap Index

	Affordability Gap	Basic LIHEAP Allocation*	Index
2002	$887,284,236	$114,141,586	100 (base year)
2003	$826,595,126	$120,181,131	93.2
2004	$891,120,860	$120,253,711	100.4
2005	$1,043,604,465	$126,770,906	117.6
2006	$1,428,655,388	$133,272,895	161
2007	$1,948,579,691	$133,272,895	219.6 (U.S . = 226.6)

Source: Fisher, Sheehan and Colton, 2003, 2004, 2005, 2006, 2007, 2008
* Block grant allocated to Pennsylvania at the beginning of the program year.

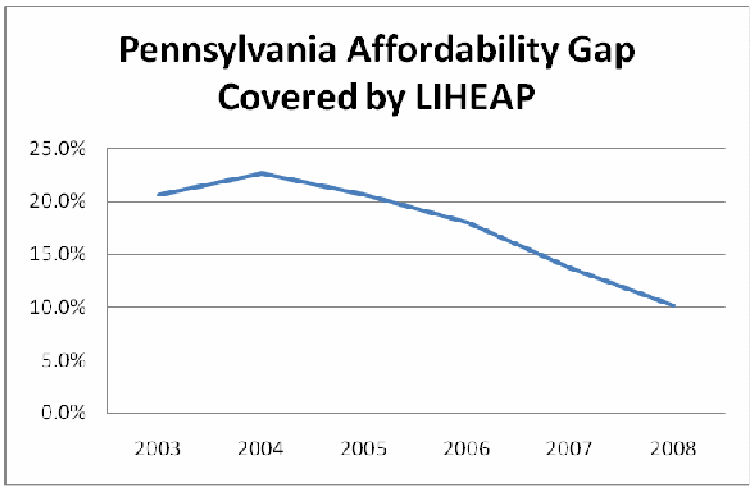
As a logical consequence, LIHEAP's impact has rapidly shrunk in Pennsylvania, reflecting a nationwide pattern as shown in Table 9 and its accompanying graph. Pennsylvania's stable ranking among states indicates that this is the case nationwide even as the need for assistance grows. LIHEAP funding has not kept pace with energy price inflation.

Table 9

Pennsylvania Affordability Gap covered by LIHEAP

		State Rank
2002	20.6%	29
2003	22.6%	31
2004	20.6%	30
2005	18.0%	30
2006	13.7%	30
2007	10.2%	27

Source: Fisher, Sheehan and Colton, 2003, 2004, 2005, 2006, 2007, 2008



Subsidized Housing Utility Allowances

By far, the largest home energy assistance budget is for residents of publicly subsidized rental housing. These are the HUD associated public housing units and Housing Choice Vouchers (Section 8) used in the private rental market, and other publicly subsidized rental units including Low-income Housing Tax-Credit and USDA-Rural Development properties. It is HUD's goal that total housing expenses for families should not exceed 30% of income. However, as a practical matter it allows for up to 40% of income to be spent on housing related expenses.

Total housing expenses include the value of utility usage of a household of modest means (excluding phone, cable and internet) and water, sewer and refuse removal. Usually, a utility allowance formula is applied rather than actual expenses. Generally, formulas are based on a home's energy sources and local rates, building type and age, and number of bedrooms. In practice, this means that residents of subsidized housing may not pay more than 40% of income toward these expenses.

When these expenses are not covered by rent, a utility allowance is granted in the form of a rent reduction or a subsidy check. Residents of subsidized housing are generally sheltered from the worst of energy price inflation. The pool of subsidized housing units and rental vouchers is limited and is designated for the poor and the poorest of the poor.

Two caveats need to be addressed regarding the utility allowance program. Since HUD is not fully funded, housing authorities struggle to make the best of the funding they do have. Depending on the particular housing authority, this could mean drawing from reserves, deferring maintenance, abandoning vacant units and limiting acceptance of the poorest of the poor in favor of better off households that would receive lower subsidies. It can also mean a conservative interpretation of "moderate" usage and exclude some uses from what is covered. Typically, in Pennsylvania, air conditioning is excluded. Housing authorities do not do such tightening of the belt lightly, but given years of funding decline, they must become adept at the art of choosing the alternative with the least negative impact.

Tenants of subsidized housing, including public housing and Section 8, who pay their own energy costs and receive a utility allowance *are* eligible to apply for a LIHEAP grant and other subsidies whether or not their utility allowance covers expenses. (US Dept of Health and Human Services, December 2007 and Commonwealth, May 2008, Appendix B.)

The handling of utility allowances can be problematic. When a tenant receives a utility allowance check, there is no guarantee that those funds will pay for home energy. Other financial needs may demand greater attention. Recipients might rationalize that if a utility can be held off until April, when low-income households are no longer protected from shut-offs, utility funds might be able to help with more immediate financial crises. And, no doubt, some will squander their allowance. When April comes and there are no funds what is to be done?

Responsible money management is not a precondition for public housing subsidies but utility shut-offs must ultimately lead to eviction. Once evicted, households will face difficulty in obtaining a future subsidy through any housing authority. Here is

where LIHEAP emergency assistance might be used. When a financially strapped household loses the stability of a home the financial and social burden it might pose on society could easily exceed the assistance it would get from an additional subsidy.

In order to avoid this possibility, some housing authorities write utility allowance checks payable to both the tenant and the utility company.

Additional Resources, Public and Private

Weatherization services programs are a means to reduce significantly future expenses through investment in permanent weatherization measures. It applies to both owner-occupied and rental homes as long as the resident meets income criteria. In Pennsylvania LIHEAP devotes 15% of its budget to weatherization. The Pennsylvania Department of Community and Economic Development (DCED) and the U.S. Department of Energy also provide weatherization funding. Among the three resources, a projected 9,819 homes will receive weatherization services during FY 2009 (Commonwealth, 2008 Appendix C). In addition, utility companies may offer weatherization services if the utility is the primary source of heat energy. Some nonprofits and religious organizations direct resources to provide this assistance.

Weatherization is an investment in future savings. The amount of service is based on an anticipated savings to investment ratio, ensuring that the least weather tight homes will be passed over. The programs assume that once weatherized the projected efficiency improvements will continue unchanged. Programs do not allow for weatherization maintenance**.** According to the U.S. Department of Energy, weatherization can reduce home heating costs by 31%.

Keystone **Home Energy Loan Program (HELP)** loans are Pennsylvania Treasury Department sponsored unsecured low interest loans that will allow home-owners to purchase energy efficient heating systems and make other Energy Star® improvements to their home. Efficiency improvements should ultimately pay for themselves. Contact www.keystonehelp.com.

The **USDA Rural Development Section 504 Direct Loan** is a very low interest (1%) home repair loan for low-income households. It can involve outright grants to elderly householders. Contact www.rurdev.usda.gov/ia/rhs504.html.

Water companies may offer **Low-Flow Showerheads** to income eligible households. Low-flow showerheads can reduce hot water use as well as water use in general.

The **Emergency Food and Shelter Program (EFSP)**, a Federal Emergency Management Agency (FEMA) program, supplements the work of local social service organizations, both public and private. In some counties, it extends limited funds for emergency assistance for up to one month's bill and for shut-off prevention. Some counties use these funds to prevent disconnection of services that could lead to homelessness.

The **Homeless Assistance Program (HAP)** is available in some counties to provide energy assistance to households (up to 200% of poverty level) that are otherwise able to afford their housing after assistance is provided.

The **Food Stamp** program offers indirect energy affordability related relief. Excess shelter costs, including energy costs, (those that exceed 50% of a family's total adjusted income) can be deducted from a family's income. The excess shelter cost deduction can lead to a larger Food Stamp allotment. With rising home energy costs, more families will qualify.

Industry Accommodations

Utility providers offer assistance to low-income ratepayers through **Universal Service Programs** that are mandates resulting from the electric and gas restructuring legislation. The Pennsylvania Public Utilities Commission (PUC) provides oversight. In contrast, rural electric cooperatives and bulk fuel suppliers as well as municipal utilities and authorities operating within their boundaries are not public utilities. Their consumers do not have the same protections afforded to users of monopoly energy sources.

The names of the Universal Service Programs may vary and additional non-mandated programs may be available through some companies. These are accommodations that help ratepayers to control their costs. The programs work with existing household budgets and include reduced monthly payments. They help ratepayers meet realistic obligations as well as provide cost saving features and weatherization upgrades that will reduce usage.

The Universal Service Programs in combination with subsidy programs and cost avoidance strategies (conservation) are vital tools for bringing the home energy affordability gap under control. Remarkably, only one quarter of customers with arrears have made an agreement with their utility company.

The **Customer Assistance Plan (CAP)** offers affordable payment plans for customers with low incomes and long-term bill payment problems. It forgives preprogram arrears and offers discounted bill payment plans below what a budget-billing plan would be otherwise. CAPs are usually percentage of bill or percentage of income payment plans designed to reflect what the consumer can afford. They can benefit responsible consumers because participants are expected to meet every payment on schedule. Consumers without a history of regular payments may benefit from the assistance of a representative payee. Consumers may be well served by using this program to develop a strategy that will build on other sources of assistance.

Budget-billing Plans, also called level billing, even out seasonal usage peaks by annualizing monthly expenses based on projections. While each energy supplier has its own program, all require participants to have a good payment record. In effect, those who most need to spread out their billing may be least able to use the option. It is worthwhile to learn what the minimum standards are for participation.

Budget-billing is less often an option for bulk fuel users. Furthermore, those who are low-income are unlikely to have surplus funds to take advantage of lower off-season pricing.

Customer Assistance Referral and Evaluation Service programs (CARES) help consumers with special needs such as a family emergency during which a budget is upset. The goal is to offer administrative support that will help households get on track to pay their utility bills.

Low-Income Usage Reduction Program (LIURP) helps consumers reduce the amount of electricity and natural gas they use, achieved through measures such as installation of energy saving features for that utility.

Select the billing date is an option offered by many utilities. It is helpful for those who have the needed funds but have difficulty with the timing of bills.

Hardship funds provide cash allowances to utility customers as a resource when all other resources have been exhausted. The fuel funds are available year round and they include households whose income is too high for other sources of assistance. The funds are generated through the contributions of ratepayers, employees, shareholders and the utility companies. The Dollar Energy Fund is a significant utility partnership serving much of Pennsylvania.

Emergency charitable assistance is, typically, last resort funding with limited resources. Private sources, including pooled contributions from individuals, corporations, faith-based organizations and foundations offer financial assistance but may require applicants first to exhaust available public resources such as LIHEAP. Those earning above 150% of the poverty level will not be eligible for some resources, those above 200%, even fewer. Local knowledge is the best way to learn about these resources. In addition, Appendix C is a list of statewide websites that provide links to local resources.

The existing resources to address the fundamental issue of unaffordable low-income home energy are insufficient to the growing need. Budget counseling and energy conservation education can be worthy investments of the consumer's time that will address future expenses years into the future.

Fair Market Rent

HUD calculates what it considers fair market rent for each county based on the value of an apartment in the 40th percentile in a county or designated census region. Different apartment sizes are reported. Subsidized housing rents may not exceed this rate. Fair market rent levels are intended to include the value of all shelter costs; however, they have not accounted for the recent dramatic rise in home energy costs (Colton, March 2008).

In 2008, families earning 150%-185% of the poverty level were paying an average ranging between 10% and 14% of income for home energy, depending on county (Fisher et al, 2008). That represents an average monthly shortfall of $108 in additional housing costs. Appendix D shows fair market rents and the proportion of income being spent on home energy for metropolitan areas and rural counties.

Rising energy costs are a force of social change. What used to be enough income to get by is no longer sufficient. On average, housing expenses in the 30% range, or the "fair market rent," are not a reality with the important exception of subsidized housing programs. Households earning just above the low-income standard are, in effect, the new low income. Nonetheless, they are beyond the reach of most energy related assistance programs.

Basic Family Budget

A basic measure of economic stability and well-being is a family's ability to afford its basic needs. This is a basic family budget. Its standard is modest living without outside assistance. It is not related to the poverty threshold, which is used as a measure of economic hardship.

A major problem with the poverty threshold is that it is a single index for the entire country (the lower 48) even while the cost of living varies widely. Basic family budgets reflect the cost of moderate living in local regions by family composition. Nationwide in 2005, 28% of families had incomes below the basic family budget. Pennsylvania fared better with 23% of its families living below the budget for their region (Allegretto, 2005.) Appendix E shows basic family budgets for census designated metropolitan areas.

By way of comparison, nationwide in 2005, 28% of families had income below 200% of the poverty threshold. Nearly two out of ten families headed by a full time worker fell below basic family budget levels. Households with minority heads, single parent families, and those with less than a college education disproportionately represent families below basic family budgets. The percentage of these families is higher in cities (42%) than in suburbs (23%) or rural areas (30%) (Ibid).

What Will the Burden Be This Year?

Each county has a unique proportional mix of fuel types. Urbanized counties have a high proportion of natural gas use while rural counties rely, to a large degree, on bulk fuels. This will help to explain the wide variation among projected county average household heating costs for the 2008/2009 heating season.

Appendix F projects costs based on the county mix of home heating fuel sources and an earlier history of energy consumption. Unknown factors include variations in weather, changes in household appliances and home weatherization. In particular, actual fuel prices may vary from the June 2008 Energy Information Administration projections on which these projections are based. (For example, natural gas was projected to increase by 16.5%, which is significantly below projections that are more current.) The information is valid for comparison among counties but should not be relied upon beyond a general predictive value. A review of Appendix B, Tenure by Household Heating Fuel, may be helpful to understand better local conditions.

Besides heating fuel, other factors contribute to regional variation. These include the smaller average square footage and high incidence of common walls that contribute to lower urban heating costs. Of course, climatic variation across Pennsylvania plays an important role.

Coping Strategies

Trade-off strategies help households get through home energy affordability hardships. The most common hardships are hunger, skipped medical or dental care, unsafe temperatures for human health, deferred home maintenance and delayed or missed rent or mortgage payments (Sevel, 2005). Managing these necessities involves choices, which become a strategy for survival.

The most common coping strategies involve alternatives such as heating or eating, medicine or electric bill, and dental attention or heat. Many families double up by moving in with family or friends in order to conserve resources. For many it becomes a strategy of the least bad choice (Ibid). Those who run out of options become homeless.

Some look for a more affordable apartment, including energy costs. Some use an electric space heater or stove for heat and avoid using the installed whole home heating source to save funds. Sometimes the fuel source is shut off, a minimum delivery cannot be paid for, or the heating system is broken. Moreover, sometimes the consumer defers payment on a utility with the understanding that a cold weather shut-off moratorium keeps the electric and natural gas supply turned on from December 1 to March 31. This protection covers households, which demonstrate that they earn less that 250% of the federal poverty level (150% in Philadelphia) or if elderly or youth are involved or a medical emergency would result from the shut-off.

Given budgets that often do not make sense most families make it through the year to begin the new heating season with their utilities in place. Limited disposable income and cutbacks on other expenses combine with outside sources to make this possible. When work is not enough, public policy plays a critical role in helping households address the mismatch between housing costs for safe and decent living conditions and what can be afforded.

In addition to sources of energy assistance, many families combine other after tax resources. These include Temporary Assistance for Needy Families (TANF commonly known as "welfare"), Food Stamp Program, Women and Infants and Children Program (WIC), childcare subsidies and tax credits, subsidies for housing and transportation, Medicare and Medicaid, public health clinics, free medical samples, food and clothing banks, and gift giveaways.

The **Earned Income Tax Credit** (EITC) arrives at the end of the heating season just when shut-offs are most threatened. Claims going back three years are valid. The IRS estimates that from 15% to 25% of eligible households do not claim their credit.

The **Pennsylvania Property Tax / Rent Rebate** provides rebates on the previous year's property taxes or rent for income eligible senior citizens (65+), widows or widowers 50+, or persons with a permanent disability 18 years old or older. Contact your community action agency or the PA Department of Revenue at 1-888-222-9190 or at www.revenue.state.pa.us/revenue.

The **Food Stamp** standard utility allowance and the Food Stamp excess shelter deductions should be considered as they may raise benefit levels.

Not to be overlooked is the strong impact of the **informal economy** such as when families support one another by providing services including childcare and resource sharing.

Unclaimed residential utility deposits, as well as other unclaimed funds, are transferred to the Pennsylvania Treasury Department's Bureau of **Unclaimed Property** after five years. There they linger until claimed. The high mobility of low-income families makes it more likely than average that their deposits are forgotten. Human services staff can provide a quick and possibly valuable service by searching

the Unclaimed Property database for their clients at www.patreasury.org/Unclaimed/Search.html.

There are many strategies for reducing heating costs. Lowering room temperature (unless there is a health concern) while adding clothing layers will have the most impact on heating costs. In addition, turning thermostats back even further when people are not at home and at night while putting on extra bedding layers will significantly reduce fuel consumption. Automatic setback thermostats are a handy tool for this. Shutting off the direct heat supply to little used rooms is another strategy to reduce consumption provided that care is taken to protect water pipes from freezing.

Weatherizing the home, even if it is limited to installing a layer of plastic over windows during cold weather, will preserve heat. Closing curtains and pulling window shades at night when the sun is not shining through similarly reduces heat loss. Appendix G offers a list of do-it-yourself methods for trimming energy costs.

For this year, at least, electricity is the relatively low cost heat source for most households. An affordable way to heat the most used spaces is the safe use of an Underwriters Laboratory (UL) listed supplemental room heater. Note, however, that these are only safe when used according to the recommended operating instructions. The option of **supplemental space heating** is a reality that needs to be understood and addressed. Safe use can trim a heating bill but careless use may lead to disaster. Selecting an appropriate device and using it according to directions can make all the difference. Note too that some leases limit or prohibit space heaters.

Area space heating can be a viable option, especially if the primary heat source is unaffordable or shut off. Space heating offers significant savings over whole house heating for selected room heating needs. However, because they are not built into a home, they require careful oversight. In addition to safety concerns over the potential for fire and burns, some space heaters require outdoor air ventilation and precautions to address the danger of carbon monoxide poisoning and oxygen depletion.

Alternatives such as using a cook stove or employing exposed flames or unventilated combustion are dangerous and are always to be avoided. Space heating can be safe but it is necessary to follow instructions on a UL listed appliance. Local fire departments advocate for home safety and fire prevention. They will offer advice and may be willing to offer trainings to agency staff in order to have an impact on family and community safety.

While the use of supplementary electrical heat for living space will likely reduce overall energy consumption, consumers need to be aware that their electric bills will rise accordingly. Participation in a budget-billing plan will be critical in helping households to annualize their seasonal heating expense.

After home heating, water heating and refrigeration are the next biggest energy users. Table 10 illustrates the change over time of the average price impact of these uses on Pennsylvanians' home energy budgets. The steady increase of home heating as a proportion of the budget and in dollar terms is alarming. The trend will continue through this year, at least. The proportional decline of electric and home cooling reflects the stabilizing impact of the soon to end electric rate caps.

Table 10

Pennsylvania Household Average Annual Energy Expense

	Electric		Hot Water		Home Heating		Home Cooling		Total
2002	$541	35%	$291	19%	$649	41%	$86	5%	$1,567
2003	$563	37%	$241	16%	$645	42%	$87	6%	$1,536
2004	$570	35%	$265	16%	$691	43%	$87	5%	$1,613
2005	$585	33%	$294	17%	$796	45%	$89	5%	$1,764
2006	$626	30%	$367	17%	$1,028	49%	$92	4%	$2,113
2007	$699	27%	$474	18%	$1,302	50%	$105	4%	$2,580

Source: Fisher, Sheehan and Colton, 2003, 2004, 2005, 2006, 2007, 2008

Simple measures can reduce home energy consumption. A water heater's temperature does not need to be at a high setting unless it is part of the home heating system and then only during the home heating season. Recommendations ranging around 120° Fahrenheit are common. Low flow showerheads, short showers, not running the tap while washing dishes and eliminating dripping faucets are simple measures for saving on water heating and consumption expenses. Compact fluorescent light bulbs use approximately one quarter the power that traditional incandescent bulbs do. A poorly sealed refrigerator door and dusty coils force a refrigerator to overwork. Air conditioning does not need to be cool to be effective.

Old appliances may be very wasteful compared to ones designed to Energy Star® standards. When electric rates rise there will be will be a quicker payback for new appliances. Again, a more complete listing of simple energy saving strategies is available in Appendix G

High energy costs are likely to eat up any discretionary income that most low- and moderately low-income homeowners and renters might otherwise invest in energy saving efforts. Outside sources of assistance can help families to invest in a longer-term savings strategy by addressing the causes of high energy bills. LIURP and weatherization programs do this but most other forms of assistance focus on immediate need.

Budget counseling can help a family learn to better control its resources and obligations. If a household's history with a utility allows it, going on a budget-billing plan will even out annual billing spikes. If it does not, a counselor can help a family to work toward that goal.

Families that participate in publicly subsidized housing should already be protected from the worst of an energy affordability gap. Housing authorities are required to update their utility allowances annually. If energy costs paid by a tenant have changed 10% or more, they can apply for a change to their utility allowance. This may be worth checking even if the housing authority, given its budgetary constraints, has had to adjust the way it determines its utility allowances.

Bulk fuels are not a public utility. Consumers do not have the same protections afforded to users of regulated energy

sources. Minimum deliveries are beyond the reach of many when the price for fuel oil was pushing $5 a gallon in July 2008. In addition, per gallon premiums on locking in fuel rates for the season are very high and many suppliers have stopped the practice. Some companies may allow customers with good credit to participate in a budget-billing plan.

Bulk fuel using households, on average, will experience the greatest challenges this winter. A significant geographic consideration is that bulk fuels are the principal heating fuel in rural areas. Rural human services staff in particular can play a vital role by promoting the safe use of space heaters.

Fuel oils and propane consumers are at the greatest disadvantage not only because they currently pay the highest rates but also because their expenses are incurred and billed only during part of the year. Bulk fuel suppliers are not required to offer budget-billing plans. Consumers need to inquire about what options are available and shop around.

Some property owners may be happy to exchange a reduction in rent for snow removal or other services. If a family has the ability to provide a service it might find a willing owner. If put in terms of being able to afford housing expenses an owner might be more willing. At a time when householders find it difficult to hire neighborhood youth to perform basic outdoor services a family may, with a little entrepreneurial effort, be able to earn needed extra income by using the winter snow to its advantage.

Strategies for saving or raising money that are not recommended include risky behaviors such as driving uninsured or under insured motor vehicles, gambling or playing the lottery, deferred maintenance on vehicles and property (including repairs on the heating system), pawning valuables and taking out payday, cash advance and tax refund anticipation loans. Hiding income and assets from government agencies is illegal. Finally, there is clearly illegal behavior born out of desperation.

In summary, the ways of coping are an ABC strategy:

- **A**ssistance grants,
- **B**etter managing energy costs through use of public utilities' accommodations, and
- **C**ost avoidance by finding ways to limit energy use.

Ultimately, it comes down to personal responsibility. Some outside assistance can help. However, households must make their best effort to struggle with the confusing tangle of demands on their resources.

Public Health Consequences of the Growing Affordable Energy Gap

This is not just a class issue. Communities are composed of many kinds of people at different life stages. Someone healthy and financially secure today may become disabled and live on a limited fixed income tomorrow. A healthy community cares for its least advantaged, if not because it is the right thing to do, then because the consequence of not doing so negatively affects everyone.

For example, property maintenance is a whole community concern even though only the owner and possibly a tenant have responsibility for it. When people

experience stress or illness they are unable to contribute at work or to participate in their education as well as they might. Avoidable health issues sap limited public health resources or they go untreated leading to further consequences.

Persons who are elderly, disabled or ill may have unique energy needs. Dangerous health effects can result from too cool or too warm home temperatures. Security concerns lead some householders to keep windows locked and the cost of home heating and cooling acts as a disincentive for their desirable use. Hypothermia and heat exhaustion are very real threats.

Medically necessary equipment for health and mobility contributes to energy costs. These include refrigerators for medicine, ventilators, powered lifts and powered ramps, recharging power chairs and scooters, and specialized communications equipment. Secure sources of energy are a life necessity for some and allow many to participate in society.

Risky heating strategies can lead to house fires, burns and carbon monoxide poisoning. Home safety is a neighborhood concern.

Unaffordable home energy costs contribute to excessive mobility among low-income households. Children in highly mobile families are more likely to be below grade level. Investments in youth are an investment in a community's future.

Heat or Eat Dilemma

In poor families, rising energy expenditures are associated with declining expenditures on food. "The winter resource shift was confirmed by the finding that adults and children in poor households reduce their caloric intake by 10% in the winter months" (Frank et al, 2006). Other studies have demonstrated that rates of food insecurity increase during temperature extremes. When an unaffordable energy bill is paid other basic needs such as food and medical care get short shrift.

Studies have demonstrated that health status is related to a family's energy security. "In northern states … poor families with children spend less on food, and children eat fewer calories, compared with higher-income families" (Bhattacharya et al, 1993 in Wolfe, 2007). "Young children from families that are eligible for but not enrolled in energy assistance are more likely than children from families receiving LIHEAP to be small for their age (underweight) and more likely to need hospital admission on the day of a health care visit" (Frank et al, 2006).

Findings of the Children's Sentinel Nutrition Assessment Program concluded that "the health consequences of trade-offs in spending can be serious especially for the youngest children (Children's, 2007). Babies and toddlers who live in energy insecure households are more likely to be in poor health; have a history of hospitalization; be at risk of developmental problems and be food insecure" (Ibid.).

The problem is not limited to the young: "Poor seniors in the north are also likely to go hungry in late winter and early spring…" (Nod and Kantor 2006 in Wolfe, 2008). "…[G]reater proportions of poor households, especially poor elderly households, experienced low food security … during times of the year when home heating and cooling costs were high, controlling for important covariates" (Journal of Nutrition, November 2006 in Colton, March 2008).

The Food Stamp program's excess shelter deduction recognizes that those with severely limited funds will pay a greater proportion of income for food than others. This program recognizes the importance of increasing allotments for the neediest in order to avert malnutrition brought on by high energy costs. (Colton, June 2008).

Costs for Business

Business expenses related to the affordability gap include the carrying of arrears, debt write-offs and collections. For energy companies the loss of paying customers is a problem.

Many employers face the problem of high turnover and absenteeism that is related in part to low-income housing insecurity. The problem affects both employers and employees. It is in business's best interest to be proactive in encouraging their employees to access sources of energy assistance and related budgeting and life skills measures.

Customers who do not have a good credit history may be charged a utility deposit, which is often two months of average usage. This business practice aggravates the timely payment problem. In many cases, people have poor credit *because* their budgets are insufficient. Utilities may benefit by recognizing different levels of credit worthiness. They could consider recognizing financial literacy training and family budgeting or guarantees as a substitute. (Colton, June 2008). (Note: LIHEAP grants can help to pay off arrears; however, they may not be used toward deposits.)

It is in the interest of energy suppliers to support better funding of HUD. It is no benefit to them when budgetary pressures in Washington influence utility allowances.

Insurance companies would benefit by supporting energy efficiency measures through offering energy efficiency credits to homeowner and renter policyholders. An energy efficient home is a safer home. Much as the industry supports safety measures such as auto air bags and antilock brakes in cars and smoke alarms for homes, it can promote weatherization and energy efficient appliances as damage and accident prevention measures (Colton, 2008). Claims resulting from frozen water pipes and faulty electrical equipment and appliances are examples of insured losses that the industry could work to limit.

To be successful, landlords need successful renters but many families struggle below a basic family budget. Energy companies only make a profit when they deliver services and are paid. Home energy affordability is much more than a low-income issue. Even so, the greatest impact is on the poor, especially those who are elderly, disabled and the very young. Business needs consumers who can afford their services.

Potential Roles for Government

Congress can act to raise LIHEAP allocations to its authorized level of $5.1 billion. 2009 funding is half that amount. A new emphasis on weatherization and on furnace maintenance will offer lasting benefits. Consideration for extending some kind of benefit to relieve households earning above 150% of the poverty level is merited. Use of the single poverty threshold for the country with widely varying costs of living needs new consideration. The basic family budget can act as a guide.

Pennsylvania can target new state supplemental heating assistance funds to where the need is most severe. Communities with a high reliance on bulk fuels will have the greatest need with particular emphasis on those that have higher rates of renters that use bulk fuels. These funds would help to stabilize communities facing widespread severe energy affordability gaps.

The anticipated expiration of electric rate caps followed by significant rate increases should come as no surprise to Pennsylvanians. However, nothing concrete has yet been done to anticipate what will be a rate shock for low- and moderate-income families.

HUD can provide an incentive for property owners to upgrade their properties to Energy Star® standards by adopting an "energy efficient" utility allowance for subsidized housing.

Government can develop incentives such as tax credits for property owners to invest in the energy efficiency and improved weatherization of their rental units. This will help to stabilize rental households by lowering their utility bills. Such investments will help to keep a good tenant or to make a rental unit more competitive. Furthermore, incentives might be targeted to encourage more property owners to participate in the Section 8 program where the number of apartments is often insufficient.

Rising home energy costs have undoubtedly contributed to the current rise in home foreclosures. Government should recognize this and develop energy-related policies that will help to prevent mortgage foreclosures. This is especially important when a rental unit is the subject of a foreclosure.

Recommendations

Increase awareness among case managers and community liaisons of the ABC strategies to address the affordability gap. The Universal Service Programs in combination with subsidy programs and cost avoidance are vital tools for bringing the home energy affordability gap under control. But to be effective, staff awareness needs to lead to coaching. This works best when silos are broken down to allow staff to address a broad range of issues. Staff training should include an outline of the three types of coping strategies.

- Assistance grants: know how to access sources of low-income home energy assistance and related housing assistance.
- Better manage energy costs through the industry's Universal Service Programs: know practices and how to coach a client to access such practices as customer assistance programs, budget-billing and weatherization assistance programs.
- Cost avoidance: understand practices that reduce home energy consumption.

Front line workers are in an excellent position to evaluate home heating safety practices. Many low-income consumers use portable space heaters or rely on stoves for heat. Whether they make home visits or do interviews, this is an opportunity for service workers to promote safe practices.

Ultimately, it comes down to personal responsibility. Some consumers will benefit from coaching. By helping consumers to help themselves a portion of the home energy affordability crisis will be brought under better control.

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Appendices

Appendix A1	County Home Energy Costs, Owner Occupiers
Appendix A2	County Home Energy Costs, Renters
Appendix B.1	County Primary Home Heating Fuel by Tenure
Appendix B.2	2000 to 2005 Change in Tenure by House Hold Heating Fuel
Appendix C	Statewide Links to Local Resources
Appendix D	Fair Market Rent and Home Energy Burden for Families Earning 150% -185% of Poverty Level, 2008
Appendix E	Basic Family Budget Annual Income Needs: 2008
Appendix F	Projected Pennsylvania County Mean Home Heating Expenses FY 2009
Appendix G	Simple Energy Saving and Safety Strategies

Appendix A.1

Home Energy Affordability Gap:
Pennsylvania
Household Shortfalls, 100%-124% of Federal Poverty Level

	2004/5 Winter	2005/6 Winter	2006/7 Winter	2007/8 Winter
Adams	$770	$905	$1,217	$1,744
Allegheny	$674	$767	$1,120	$1,337
Armstrong	$702	$814	$1,174	$1,496
Beaver	$631	$735	$1,056	$1,383
Bedford	$659	$881	$1,194	$2,100
Berks	$662	$820	$1,128	$1,730
Blair	$696	$837	$1,196	$1,651
Bradford	$804	$992	$1,360	$2,068
Bucks	$710	$860	$1,160	$1,736
Butler	$818	$949	$1,338	$1,730
Cambia	$734	$905	$1,278	$1,862
Cameron	$808	$949	$1,330	$1,797
Carbon	$611	$792	$1,070	$1,811
Centre	$618	$757	$1,011	$1,570
Chester	$743	$892	$1,191	$1,782
Clarion	$827	$952	$1,364	$1,696
Clearfield	$772	$981	$1,348	$2,153
Clinton	$656	$864	$1,174	$2,012
Columbia	$718	$894	$1,211	$1,897
Crawford	$846	$992	$1,379	$1,882
Cumberland	$623	$749	$1,005	$1,498
Dauphin	$579	$701	$955	$1,429
Delaware	$649	$769	$1,078	$1,494
Elk	$876	$1,006	$1,429	$1,771
Erie	$765	$871	$1,256	$1,522
Fayette	$631	$773	$1,089	$1,601
Forest	$860	$996	$1,393	$1,834
Franklin	$622	$749	$989	$1,501
Fulton	$618	$805	$1,073	$1,856
Greene	$680	$798	$1,126	$1,513
Huntington	$642	$857	$1,172	$2,041
Indiana	$676	$810	$1,145	$1,605
Jefferson	$879	$1,020	$1,453	$1,848
Juniata	$682	$891	$1,189	$2,060
Lackawanna	$800	$940	$1,321	$1,751
Lancaster	$661	$792	$1,055	$1,580
Lawrence	$706	$836	$1,187	$1,599
Lebanon	$655	$840	$1,152	$1,874

Appendix A.1 cont.

	2004/5 Winter	2005/6 Winter	2006/7 Winter	2007/8 Winter
Lehigh	$652	$787	$1,053	$1,577
Luzerne	$711	$853	$1,184	$1,676
Lycoming	$660	$832	$1,145	$1,803
McKean	$937	$1,070	$1,543	$1,826
Mercer	$724	$847	$1,211	$1,578
Mifflin	$606	$796	$1,092	$1,850
Monroe	$754	$906	$1,169	$1,821
Montgomery	$679	$808	$1,115	$1,570
Montour	$671	$809	$1,079	$1,629
Northampton	$691	$845	$1,146	$1,732
Northumberland	$676	$847	$1,156	$1,814
Perry	$615	$794	$1,056	$1,811
Philadelphia	$548	$629	$916	$1,169
Pike	$776	$909	$1,171	$1,749
Potter	$967	$1,104	$1,567	$1,917
Schuylkill	$747	$955	$1,256	$2,114
Snyder	$693	$870	$1,159	$1,871
Somerset	$679	$874	$1,197	$1,962
Sullivan	$711	$947	$1,274	$2,252
Susquehanna	$909	$1,145	$1,510	$2,522
Tioga	$936	$1,078	$1,539	$1,902
Union	$638	$799	$1,052	$1,723
Venango	$809	$928	$1,324	$1,660
Warren	$878	$1,000	$1,419	$1,754
Washington	$724	$841	$1,193	$1,532
Wayne	$832	$1,029	$1,364	$2,184
Westmoreland	$708	$833	$1,184	$1,573
Wyoming	$804	$1,018	$1,348	$2,252
York	$682	$804	$1,117	$1,550
Pennsylvania	$674	$802	$1,123	$1,562

Source: Fisher et al, 2003,2004, 2005, 2006, 2007, 2008

Appendix A.2

Home Energy Affordability Gap:
Pennsylvania
Household Shortfalls, 150%-185% of Federal Poverty Level

	2004/5 Winter	2005/6 Winter	2006/7 Winter	2007/8 Winter
Adams	$295	$417	$714	$1,224
Allegheny	$230	$310	$649	$849
Armstrong	$241	$341	$687	$991
Beaver	$173	$264	$571	$881
Bedford	$194	$404	$703	$1,591
Berks	$192	$337	$631	$1,215
Blair	$239	$367	$712	$1,150
Bradford	$337	$513	$866	$1,557
Bucks	$225	$362	$647	$1,205
Butler	$349	$468	$842	$1,216
Cambia	$281	$439	$799	$1,365
Cameron	$355	$484	$850	$1,300
Carbon	$153	$321	$585	$1,309
Centre	$158	$286	$525	$1,066
Chester	$262	$399	$682	$1,256
Clarion	$367	$479	$877	$1,192
Clearfield	$314	$510	$863	$1,650
Clinton	$200	$395	$692	$1,512
Columbia	$261	$425	$728	$1,397
Crawford	$382	$515	$887	$1,373
Cumberland	$168	$282	$524	$999
Dauphin	$126	$236	$475	$933
Delaware	$178	$285	$580	$978
Elk	$416	$534	$943	$1,268
Erie	$300	$393	$763	$1,012
Fayette	$174	$303	$605	$1,099
Forest	$418	$541	$925	$1,348
Franklin	$159	$273	$499	$993
Fulton	$153	$328	$582	$1,347
Greene	$218	$323	$637	$1,006
Huntington	$184	$386	$687	$1,539
Indiana	$215	$336	$657	$1,099
Jefferson	$420	$548	$967	$1,344
Juniata	$207	$403	$686	$1,539
Lackawanna	$348	$476	$843	$1,255
Lancaster	$181	$300	$548	$1,055
Lawrence	$245	$362	$699	$1,093
Lebanon	$192	$364	$662	$1,366

Appendix A.2 cont.

	2004/5 Winter	2005/6 Winter	2006/7 Winter	2007/8 Winter
Lehigh	$190	$312	$564	$1,070
Luzerne	$263	$393	$711	$1,185
Lycoming	$202	$362	$660	$1,301
McKean	$483	$604	$1,062	$1,328
Mercer	$266	$376	$726	$1,075
Mifflin	$143	$320	$601	$1,342
Monroe	$266	$405	$651	$1,285
Montgomery	$211	$326	$619	$1,056
Montour	$213	$340	$596	$1,128
Northampton	$223	$365	$651	$1,219
Northumberland	$228	$387	$682	$1,323
Perry	$142	$308	$555	$1,293
Philadelphia	$86	$154	$426	$662
Pike	$298	$418	$664	$1,225
Potter	$498	$622	$1,071	$1,403
Schuylkill	$296	$492	$779	$1,619
Snyder	$220	$384	$658	$1,353
Somerset	$220	$402	$711	$1,458
Sullivan	$268	$491	$805	$1,765
Susquehanna	$441	$665	$1,015	$2,010
Tioga	$473	$603	$1,049	$1,395
Union	$173	$322	$560	$1,214
Venango	$349	$456	$838	$1,156
Warren	$422	$532	$936	$1,254
Washington	$266	$370	$708	$1,030
Wayne	$367	$551	$873	$1,675
Westmoreland	$252	$365	$702	$1,074
Wyoming	$334	$535	$851	$1,737
York	$215	$325	$623	$1,039
Pennsylvania	$219	$336	$643	$1,076

Source: Fisher et al, 2003,2004, 2005, 2006, 2007, 2008

Appendix B.1

Tenure by Household Heating Fuel: Pennsylvania Counties

		All Sources		All Sources		Utility Gas		Propane		Electricity		Fuel Oil, Kerosene		Coal or Coke		Wood	
	Total	Owner Occupied		Renter Occupied		Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter
Adams	33,652	25,853	77%	7,799	23%	29%	42%	13%	8%	20%	27%	29%	19%	2%	0%	7%	2%
Allegheny	537,150	360,021	67%	177,129	33%	94%	77%	0%	1%	3%	19%	2%	1%	0%	0%	0%	0%
Armstrong	29,005	22,417	77%	6,588	23%	76%	78%	3%	3%	5%	10%	13%	7%	1%	1%	2%	0%
Beaver	72,576	54,379	75%	18,197	25%	72%	72%	3%	2%	6%	16%	17%	8%	0%	0%	1%	0%
Bedford	19,768	15,850	80%	3,918	20%	2%	5%	2%	2%	13%	18%	65%	64%	4%	3%	12%	6%
Berks	141,570	104,693	74%	36,877	26%	32%	35%	3%	3%	14%	22%	47%	38%	2%	1%	2%	1%
Blair	51,518	37,561	73%	13,957	27%	59%	66%	1%	1%	6%	16%	30%	15%	2%	0%	2%	1%
Bradford	24,453	18,457	75%	5,996	25%	28%	36%	7%	6%	8%	20%	44%	32%	2%	1%	10%	4%
Bucks	218,725	169,177	77%	49,548	23%	30%	37%	2%	2%	21%	37%	45%	23%	0%	0%	1%	0%
Butler	65,862	51,245	78%	14,617	22%	68%	62%	5%	3%	9%	25%	16%	8%	0%	0%	2%	1%
Cambria	60,531	45,242	75%	15,289	25%	44%	56%	2%	2%	6%	16%	39%	22%	7%	3%	1%	0%
Cameron	2,465	1,848	75%	617	25%	54%	56%	10%	6%	4%	25%	23%	9%	1%	1%	7%	3%
Carbon	23,701	18,525	78%	5,176	22%	6%	12%	5%	3%	17%	27%	60%	49%	10%	7%	1%	0%
Centre	49,323	29,673	60%	19,650	40%	12%	25%	3%	2%	27%	50%	46%	20%	6%	1%	5%	1%
Chester	157,905	120,500	76%	37,405	24%	26%	27%	8%	4%	23%	39%	42%	28%	0%	0%	1%	1%
Clarion	16,052	11,592	72%	4,460	28%	77%	73%	5%	4%	3%	15%	9%	5%	1%	0%	4%	1%
Clearfield	32,785	25,950	79%	6,835	21%	21%	34%	6%	3%	6%	18%	55%	37%	8%	5%	2%	1%
Clinton	14,773	10,778	73%	3,995	27%	6%	18%	3%	3%	12%	31%	69%	46%	5%	2%	6%	2%
Columbia	24,915	17,993	72%	6,922	28%	18%	29%	5%	4%	18%	29%	49%	35%	5%	1%	3%	1%
Crawford	34,678	26,155	75%	8,523	25%	46%	67%	14%	7%	6%	10%	23%	12%	0%	0%	10%	3%
Cumberland	83,015	60,635	73%	22,380	27%	25%	28%	3%	3%	30%	43%	38%	24%	2%	0%	2%	1%
Dauphin	102,670	67,116	65%	35,554	35%	27%	37%	3%	2%	24%	39%	42%	19%	3%	0%	1%	0%
Delaware	206,320	148,293	72%	58,027	28%	62%	52%	1%	2%	7%	26%	30%	18%	0%	0%	0%	0%
Elk	14,124	11,211	79%	2,913	21%	72%	73%	6%	5%	7%	16%	8%	4%	3%	0%	4%	2%
Erie	106,507	73,708	69%	32,799	31%	87%	78%	4%	2%	2%	17%	4%	1%	0%	0%	2%	1%
Fayette	59,969	43,859	73%	16,110	27%	42%	52%	4%	3%	10%	18%	39%	25%	2%	2%	2%	0%
Forest	2,000	1,652	83%	348	17%	54%	51%	14%	11%	1%	25%	14%	9%	0%	0%	15%	4%
Franklin	50,633	37,469	74%	13,164	26%	15%	24%	4%	3%	36%	40%	37%	29%	1%	0%	7%	2%
Fulton	5,660	4,473	79%	1,187	21%	0%	1%	3%	3%	19%	27%	53%	59%	2%	1%	23%	8%
Greene	15,060	11,158	74%	3,902	26%	56%	64%	6%	4%	14%	15%	20%	15%	1%	0%	4%	2%
Huntington	16,759	12,999	78%	3,760	22%	4%	19%	2%	3%	9%	18%	67%	54%	5%	1%	12%	4%
Indiana	34,123	24,491	72%	9,632	28%	51%	53%	5%	3%	7%	26%	30%	16%	3%	0%	3%	1%
Jefferson	18,375	14,177	77%	4,198	23%	69%	78%	7%	4%	3%	10%	13%	6%	3%	1%	4%	1%
Juniata	8,584	6,671	78%	1,913	22%	0%	0%	4%	6%	15%	33%	61%	51%	3%	1%	16%	7%
Lackawanna	86,218	58,284	68%	27,934	32%	60%	64%	4%	3%	11%	17%	22%	13%	2%	1%	1%	0%
Lancaster	172,560	122,264	71%	50,296	29%	21%	27%	5%	5%	30%	37%	37%	28%	3%	2%	3%	1%
Lawrence	37,091	28,660	77%	8,431	23%	62%	65%	3%	2%	9%	18%	24%	13%	0%	0%	A	1%
Lebanon	46,551	33,863	73%	12,688	27%	18%	28%	3%	3%	15%	21%	60%	45%	2%	1%	2%	1%

Appendix B.1 cont.

		All Sources		All Sources		Utility Gas		Propane		Electricity		Fuel Oil, Kerosene		Coal or coke		Wood	
	Total	Owner Occupied		Renter Occupied		Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter
Lehigh	121,906	83,896	69%	38,010	31%	23%	31%	2%	2%	31%	44%	42%	22%	2%	1%	1%	0%
Luzerne	130,687	91,880	70%	38,807	30%	32%	52%	3%	3%	16%	21%	32%	21%	4%	2%	1%	0%
Lycoming	47,003	32,653	69%	14,350	31%	22%	39%	2%	2%	14%	21%	52%	35%	4%	1%	6%	1%
McKean	18,024	13,482	75%	4,542	25%	86%	84%	3%	2%	3%	10%	2%	2%	0%	0%	6%	1%
Mercer	46,712	35,613	76%	11,099	24%	67%	72%	3%	2%	9%	16%	18%	8%	0%	0%	3%	1%
Mifflin	18,413	13,639	74%	4,774	26%	8%	26%	2%	2%	13%	21%	62%	44%	3%	1%	11%	5%
Monroe	49,454	38,742	78%	10,712	22%	3%	14%	10%	8%	36%	43%	41%	32%	4%	1%	4%	2%
Montgomery	286,098	210,237	73%	75,861	27%	51%	40%	1%	2%	14%	36%	32%	21%	0%	0%	0%	0%
Montour	7,085	5,155	73%	1,930	27%	17%	34%	6%	4%	28%	37%	39%	23%	4%	0%	4%	1%
Northampton	101,541	74,451	73%	27,090	27%	27%	35%	2%	2%	23%	31%	44%	30%	2%	1%	1%	0%
Northumberland	38,835	28,577	74%	10,258	26%	21%	34%	2%	3%	17%	24%	51%	34%	8%	4%	2%	0%
Perry	16,695	13,288	80%	3,407	20%	0%	1%	6%	4%	19%	32%	57%	56%	7%	2%	10%	4%
Philadelphia	590,071	349,651	59%	240,420	41%	85%	72%	1%	2%	3%	16%	10%	8%	0%	0%	0%	0%
Pike	17,433	14,787	85%	2,646	15%	8%	15%	16%	15%	36%	36%	30%	29%	2%	1%	7%	4%
Potter	7,005	5,421	77%	1,584	23%	69%	76%	7%	3%	3%	13%	6%	3%	1%	0%	14%	5%
Schuylkill	60,530	47,177	78%	13,353	22%	3%	8%	2%	1%	15%	28%	63%	51%	16%	11%	1%	0%
Snyder	13,654	10,451	77%	3,203	23%	9%	18%	4%	3%	23%	30%	48%	42%	7%	1%	8%	4%
Somerset	31,222	24,368	78%	6,854	22%	15%	24%	3%	3%	10%	22%	54%	41%	13%	7%	4%	2%
Sullivan	2,660	2,138	80%	522	20%	0%	0%	5%	4%	7%	32%	68%	58%	4%	2%	15%	4%
Susquehanna	16,529	13,144	80%	3,385	20%	1%	1%	15%	14%	10%	26%	58%	50%	3%	2%	13%	6%
Tioga	15,925	12,125	76%	3,800	24%	68%	77%	5%	3%	3%	8%	8%	5%	3%	1%	12%	5%
Union	13,178	9,671	73%	3,507	27%	4%	7%	4%	3%	29%	40%	50%	43%	6%	3%	6%	2%
Venango	22,747	17,378	76%	5,369	24%	72%	76%	8%	4%	4%	10%	9%	6%	0%	0%	6%	2%
Warren	17,696	13,847	78%	3,849	22%	70%	77%	11%	5%	2%	11%	6%	4%	0%	0%	10%	2%
Washington	81,130	62,570	77%	18,560	23%	69%	63%	2%	2%	12%	25%	15%	8%	0%	0%	2%	0%
Wayne	18,350	14,772	81%	3,578	19%	7%	20%	13%	12%	17%	23%	49%	39%	3%	1%	9%	4%
Westmoreland	149,813	116,847	78%	32,966	22%	67%	60%	2%	2%	8%	23%	21%	13%	0%	0%	1%	0%
Wyoming	10,762	8,499	79%	2,263	21%	3%	3%	13%	11%	14%	29%	58%	52%	4%	1%	8%	3%
York	148,219	112,816	76%	35,403	24%	50%	55%	6%	3%	13%	26%	27%	14%	1%	0%	3%	1%
Pennsylvania	4,777,003	3,406,167	71%	1,370,836	29%	50%	53%	3%	3%	13%	25%	29%	17%	2%	1%	2%	1%

Source: U.S. Census Bureau, 2000, Table HCT10, author's calculations.

Appendix B.2

2000 to 2005 Change in Tenure by House Hold Heating Fuel

	Total	Owner Occupied		Renter Occupied		Utility Gas		Propane		Electricity		Fuel Oil, Kerosene		Coal or coke		Wood	
Pennsylvania '05	4,845,603	3,475,105	72%	1,370,498	28%	51%	53%	4%	3%	14%	27%	26%	15%	2%	1%	3%	1%
Pennsylvania '00	4,777,003	3,406,167	71%	1,370,836	29%	50%	53%	3%	3%	13%	25%	29%	17%	2%	1%	2%	1%
Increase	68,600	68,938		-338													

Source: U.S. Census Bureau, 2006 American Community Survey, B05010, authors calculations.

Appendix C

Statewide Links to Local Resources

Community Action Agency listings: www.communityactionpartnershi.com

County Assistance Offices:
http://www.dpw.state.pa/ServicesPrograms/CashAsstEmployment/003670281.htm

Dollar Energy Fund: http://www.dollarenergy.org/

Home energy audit:
http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_audits

National Fuel Funds Network: www.nationalfuelfunds.org

Pennsylvania Public Utility Commission: www.puc.state.pa.gov

To identify the Regional Housing Coordinator serving your county,
look to the Service and Housing Resources Database at
http://www.phfa.org/applications/housing_services_resources.aspx.

Pennsylvania Treasury Department's Bureau of Unclaimed Property database:
http://www.patreasury.org/Unclaimed/Search.html

Appendix D

Fair Market Rent and Home Energy Burden for Families Earning 150%-185% of Poverty Level, 2008

	2 BR FMR	2 BR Mean Expense	Monthly Mean Shortfall	Home Energy Burden % of Monthly Inc	Counties Included
Pennsylvania Mean	$755				
Metropolitan Areas					
Allentown-Bethlehem-Easton HUD Metro FMR Area	$816	$916	$100	10.7%	Carbon, Lehigh, Northampton
Altoona MSA	$581	$677	$96	10.5%	Blair
Armstrong County HUD Metro FMR Area	$546	$629	$83	9.9%	Armstrong
Erie MSA	$631	$715	$84	9.9%	Erie
Harrisburg-Carlisle MSA	$722	$812	$90	10.2%	Cumberland, Dauphin, Perry
Johnstown MSA	$546	$660	$114	11.4%	Cambria
Lancaster MSA	$715	$803	$88	10.0%	Lancaster
Lebanon MSA	$643	$757	$114	11.3%	Lebanon
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA	$932	$1,018	$86	9.9%	Bucks. Chester, Delaware, Montgomery, Philadelphia
Pike County HUD Metro FMR Area	$923	$1,025	$102	10.6%	Pike
Pittsburg HUD Metro FMR Area	$666	$751	$85	10.0%	Allegheny, Beaver, Butler, Fayette, Washigton, Westmoreland
Reading MSA	$715	$816	$101	10.7%	Berks
Sranton-Wilkesbarre MSA	$627	$743	$116	11.5%	Lackawanna, Lucerne, Wyoming
Sharon HUD Metro FMR Area	$583	$673	$90	10.2%	Mercer
State College MSA	$788	$877	$89	10.2%	Centre
Williamsport MSA	$587	$695	$108	11.1%	Lycoming
York-Hanover MSA	$713	$800	$87	10.0%	York
Non-Metropolitan Counties					
Adams	$670	$772	$102	10.6%	
Bedford	$546	$679	$133	12.2%	
Bradford	$546	$676	$130	12.0%	
Cameron	$548	$656	$108	11.2%	
Clarion	$546	$645	$99	10.7%	
Clearfield	$546	$684	$138	12.5%	
Clinton	$596	$722	$126	12.0%	
Columbia	$589	$705	$116	11.5%	
Crawford	$546	$660	$114	11.3%	
Elk	$546	$652	$106	11.0%	
Forest	$546	$658	$112	11.5%	
Franklin	$610	$693	$83	9.9%	
Fulton	$546	$658	$112	11.2%	
Greene	$546	$630	$84	9.9%	
Huntington	$546	$674	$128	12.0%	
Indiana	$584	$676	$92	10.3%	
Jefferson	$546	$658	$112	11.3%	
Juniata	$549	$677	$128	11.8%	
Lawrence	$610	$701	$91	10.3%	
McKean	$551	$662	$111	11.3%	
Mifflin	$546	$658	$112	11.2%	
Monroe	$862	$969	$107	10.7%	
Montour	$645	$739	$94	10.4%	
Northumberland	$546	$656	$110	11.3%	
Potter	$546	$663	$117	11.4%	
Schuylkill	$546	$681	$135	12.5%	
Snyder	$586	$699	$113	11.1%	
Somerset	$546	$668	$122	11.7%	
Sullivan	$554	$701	$147	13.2%	
Susquehanna	$566	$734	$168	13.7%	
Tioga	$572	$688	$116	11.4%	
Union	$631	$732	$101	10.7%	
Venango	$546	$642	$96	10.5%	
Warren	$546	$651	$105	10.9%	
Wayne	$670	$810	$140	12.5%	

Source: Economic Policy Institute Basic Family Budget Calculator for Pennsylvania metro regions, Fisher,Sheehan and Colton 2008, and author's calculations.

Appendix E

Basic Family Budget Annual Income Needs: 2008

	2 BR FMR	1P1C HH Annual Total	1P2C HH Annual Total	2P1C HH Annual Total	2P2C HH Annual Total
Allentown-Bethlehem-Easton HUD Metro FMR Area	$816	$36,694	$44,662	$42,834	$50,697
Altoona MSA	$581	$31,661	$39,899	$37,861	$45,839
Armstrong County HUD Metro FMR Area	$546	$30,598	$39,090	$37,056	$45,016
Erie MSA	$631	$32,032	$40,192	$37,826	$45,804
Harrisburg-Carlisle MSA	$722	$34,753	$42,667	$40,939	$48,801
Johnstown MSA	$546	$30,758	$39,251	$37,207	$45,200
Lancaster MSA	$715	$33,959	$41,871	$39,473	$47,380
Lebanon MSA	$643	$33,585	$41,645	$39,546	$47,551
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA	$932	$40,132	$48,475	$46,252	$54,488
Pike County HUD Metro FMR Area	$932	$38,702	$46,570	$44,502	$52,267
Pittsburg HUD Metro FMR Area	$666	$33,472	$41,489	$39,451	$47,412
Reading MSA	$715	$34,306	$42,302	$39,878	$47,867
Rural PA	$598	$32,849	$40,225	$39,125	$46,452
Sranton-Wilkesbarre MSA	$627	$33,561	$41,712	$39,896	$47,992
Sharon HUD Metro FMR Area	$583	$31,609	$39,838	$37,802	$45,761
State College MSA	$788	$36,565	$44,614	$42,466	$50,408
Williamsport MSA	$587	$31,712	$39,918	$37,885	$45,841
York-Hanover MSA	$713	$33,918	$41,831	$39,431	$47,339

Source: Economic Policy Institute Basic Family Budget Calculator, Pennsylvania metro regions.

Appendix F

Projected Pennsylvania County Mean Home Heating Expenses FY 2009 *

	Proj 2009 Mean Heating Expense (all fuels)	Total Households	% Utility Gas (low estimate)	% Propane	% Electricity	% Fuel Oil or Kerosene	% Coal or Coke	% Wood
National Projected Home Heating Expenses FY 2009 by Fuel Type			$978	$1,967	$875	$2,593	not avail.	not avail.
Adams	$1,534	33,652	32%	12%	22%	27%	1%	5%
Armstrong	$1,173	29,005	76%	3%	6%	11%	1%	2%
Beaver	$1,182	72,576	72%	3%	8%	15%	0%	1%
Bedford	$1,867	19,768	3%	2%	14%	65%	4%	11%
Berks	$1,679	141,570	32%	3%	16%	45%	1%	1%
Blair	$1,368	51,518	61%	1%	9%	26%	1%	2%
Bradford	$1,706	24,453	30%	7%	11%	41%	2%	9%
Bucks	$1,678	218,725	32%	2%	25%	40%	0%	1%
Butler	$1,334	65,862	66%	4%	12%	15%	0%	2%
Cambria	$1,513	60,531	47%	2%	9%	35%	6%	1%
Cameron	$1,392	2,465	55%	9%	9%	20%	1%	6%
Carbon	$1,739	23,701	8%	4%	19%	58%	9%	1%
Centre	$1,403	49,323	17%	3%	36%	36%	4%	3%
Chester	$1,719	157,905	26%	7%	27%	38%	0%	1%
Clarion	$1,191	16,052	76%	4%	6%	8%	1%	3%
Clearfield	$1,853	32,785	24%	6%	9%	52%	7%	2%
Clinton	$1,872	14,773	9%	3%	17%	63%	4%	5%
Columbia	$1,691	24,915	21%	5%	21%	45%	4%	3%
Crawford	$1,461	34,678	51%	12%	7%	20%	0%	8%
Cumberland	$1,417	83,015	26%	3%	33%	34%	1%	2%
Dauphin	$1,378	102,670	30%	3%	29%	34%	2%	1%
Delaware	$1,387	206,320	59%	1%	12%	26%	0%	0%
Elk	$1,214	14,124	73%	5%	9%	7%	2%	3%
Erie	$1,093	106,507	84%	3%	7%	3%	0%	2%
Fayette	$1,474	59,969	45%	4%	12%	35%	2%	2%
Forest	$1,286	2,000	54%	14%	5%	13%	0%	13%
Franklin	$1,417	50,633	17%	3%	37%	35%	1%	6%
Fulton	$1,590	5,660	0%	3%	21%	54%	2%	19%
Greene	$1,269	15,060	58%	5%	14%	19%	1%	3%
Huntington	$1,822	16,759	8%	3%	11%	64%	4%	10%
Indiana	$1,368	34,123	52%	5%	12%	26%	2%	3%
Jefferson	$1,289	18,375	71%	6%	4%	12%	3%	3%
Juniata	$1,809	8,584	0%	4%	19%	59%	2%	14%
Lackawanna	$1,356	86,218	61%	4%	13%	19%	2%	1%
Lancaster	$1,507	172,560	23%	5%	32%	34%	3%	2%
Lawrence	$1,332	37,091	62%	3%	11%	21%	0%	1%
Lebanon	$1,821	46,551	21%	3%	17%	56%	2%	2%

Appendix F, cont.	Proj 2009 Mean Heating Expense (all fuels)	Total Households	% Utility Gas (low estimate)	% Propane	% Electricity	% Fuel Oil or Kerosene	% Coal or Coke	% Wood
National Projected Home Heating Expenses FY 2009 by Fuel Type			$978	$1,967	$875	$2,593	not avail.	not avail.
Lehigh	$1,483	121,906	25%	2%	35%	36%	1%	1%
Luzerne	$1,338	130,687	38%	3%	17%	29%	4%	1%
Lycoming	$1,640	47,003	27%	2%	16%	47%	3%	4%
McKean	$1,125	18,024	86%	3%	4%	2%	0%	4%
Mercer	$1,232	46,712	68%	3%	10%	15%	0%	3%
Mifflin	$1,710	18,413	13%	2%	15%	58%	2%	9%
Monroe	$1,714	49,454	6%	10%	38%	39%	3%	4%
Montgomery	$1,442	286,098	48%	1%	20%	29%	0%	0%
Montour	$1,476	7,085	22%	6%	31%	35%	3%	3%
Northampton	$1,617	101,541	29%	2%	25%	40%	2%	1%
Northumberland	$1,611	38,835	24%	3%	19%	46%	7%	1%
Perry	$1,726	16,695	0%	6%	22%	57%	6%	9%
Philadelphia	$1,035	590,071	80%	2%	9%	9%	0%	0%
Pike	$1,609	17,433	9%	15%	36%	30%	2%	6%
Potter	$1,164	7,005	70%	6%	5%	5%	1%	12%
Schuylkill	$1,724	60,530	4%	2%	18%	60%	15%	1%
Snyder	$1,647	13,654	11%	4%	25%	47%	5%	7%
Somerset	$1,662	31,222	17%	3%	13%	51%	12%	3%
Sullivan	$1,895	2,660	0%	5%	12%	66%	4%	13%
Susquehanna	$2,154	16,529	1%	15%	13%	56%	3%	11%
Tioga	$1,159	15,925	70%	4%	4%	7%	3%	11%
Union	$1,620	13,178	5%	4%	32%	48%	5%	5%
Venango	$1,190	22,747	73%	7%	5%	8%	0%	6%
Warren	$1,176	17,696	72%	9%	4%	5%	0%	8%
Washington	$1,199	81,130	68%	2%	15%	13%	0%	1%
Wayne	$1,908	18,350	10%	13%	18%	47%	3%	8%
Westmoreland	$1,293	149,813	65%	2%	11%	20%	0%	1%
Wyoming	$2,053	10,762	3%	12%	17%	57%	4%	7%
York	$1,375	148,219	51%	5%	16%	24%	1%	2%
Pennsylvania			51%	3%	16%	25%	1%	2%

Source: U.S. Census Bureau, 2000, Table HCT10; 2005 Fisher, Sheehan and Colton; Wolfe, U.S. Energy Information Administration press release June 23, 2008 and authors calculations.

* Factoring based on the county mix of home energy sources and the history of energy consumption during FY 2005. Home energy use for FY 2009 may vary depending on efforts at conservation. variations in weather from 2005 and changes in household appliances and the home insolation envelope. In particular, actual fuel prices may vary from the June 2008 Energy Information Administration projections on which these are based. The information is valid for comparison among counties but beyond a general predictive value should not be relied upon.

Appendix G

SIMPLE ENERGY SAVING AND SAFETY STRATEGIES

- The Pennsylvania "Stay Warm" website, www.turnsealsave.org or 1-866-550-4355 is devoted to the message of cutting costs.
- Adjust heating temperature down to the lowest comfortable temperature. Then lower it further while adding clothing layers for comfort. Use extra bedding layers at night.
- Adjust air conditioning temperatures to tolerable rather than cool.
- Close heating and cooling air vents in unused rooms.
- Use a programmable thermostat or manually lower temperatures when away or in bed.
- Most safety experts warn against supplemental heating sources such as electric or kerosene space heaters. However, if they are used, they need to be used according to manufacturer's instructions. Careless use can cause preventable accidents.
- Never use extension cords with space heaters. The cord could overheat and cause a fire.
- Make sure every level of a home has at least one working smoke detector. A carbon monoxide detector is recommended. Test batteries monthly.
- Install fire extinguishers in readily accessible locations.
- Have heating and cooling units serviced to at least every other year to ensure safe and efficient operation.
- Replace furnace filters regularly.
- Clean clothes drier lint filter after every use.
- Make certain intake and outlet vents for forced air heating and cooling are not blocked and that there is no dust build-up.
- Reduce hot water temperature to 120 degrees.
- Wrap hot water heater in an insulation blanket *if* the model permits it.
- Use less hot water. Avoid running water while washing dishes or while soaping up in a shower. Install a low flow showerhead. Take showers instead of baths. Wash clothes in cold water.
- Turn off lights and appliances that are not in use. Use lighting appropriate to the task. A fully lit room is not usually necessary when just one person is reading.
- Replace incandescent bulbs with compact fluorescent bulbs.
- Use power strips to turn off the power sources to items such as televisions, CDs, computers, and phone chargers. All of these continue to draw power even when "switched off."
- Clean dust from bulbs for brighter light (Use dry cloth on cool bulb.)
- Lower window shades and close curtains on winter nights and cloudy winter days. Do the same to keep the sun out on hot summer days.
- Employ natural cooling by closing windows on summer mornings to keep a night's air inside.
- Avoid sitting next to cold windows and walls in the winter.
- Caulk, seal, and weather-strip cracks and gaps to the outside.
- Install plastic window coverings over interior windows during winter.
- When buying new appliances invest the extra money in Energy Star® rated products. These will pay for themselves in utility savings.
- Insulate. Start with the attic.
- Match the size of the pot to the amount being cooked. Match the size of the burner to the pot.
- Keep a fireplace damper closed when not in use but only after a fire is thoroughly extinguished.

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