



Home Energy Costs: The New Threat to Independent Living for the Nation's Low-Income Elderly

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The movement in support of independent living for older Americans has grown and developed in the past decade. The confluence of technological and community resources to make home care more accessible and government funding initiatives to support home and community-based long-term care services has made it possible for elders, a vast majority of whom articulate a preference for independent living, to remain in their own homes. However, the rising cost of home energy service curtails the ability of many elders, whose finances are often limited, to afford to age in place.

Older Americans have always indicated a strong preference for remaining in their own homes as they age, but never has there been more consumer support for aging in place. A recent AARP study found that almost nine in ten people 50 or older (89 percent) said they wanted to remain in their home for as long as possible. As people get older, the desire to remain in one's home becomes even stronger with 95 percent of the eldest respondents wanting to remain in their homes.¹ "Living independently" is offered as the No. 1 reason why respondents 50 or older want to remain at home.² Nationally four in five Americans over 65 own their home—the highest percentage for any age demographic. Given the high rate of homeownership among elder Americans coupled with the high percentage who desire to live independently in their own home, aging in place is a desirable lifestyle for elder Americans today.

Recognizing this desire, the federal government has introduced a slate of new initiatives to help fund independent living for America's elders. Most long-term care services in the United States are funded through Medicaid.³ Historically Medicaid funding for long-term care services was available only for nursing home care; however, in the 1980's Congress began to change the institutional bias of Medicaid spending, and Medicaid funding for home and community-based living has since increased dramatically.⁴

¹AARP POLICY AND STRATEGY GROUP, *THE STATE OF 50+ AMERICA* 43 (2006).

²*Id.*

³CENTERS FOR MEDICARE AND MEDICAID SERVICES, *NATIONAL HEALTH EXPENDITURES BY TYPE OF SERVICE AND SOURCE OF FUNDS, CALENDAR YEARS 1980–2003*.

⁴KATHRYN LAWLER, *AGING IN PLACE: COORDINATING HOUSING AND HEALTH CARE PROVISIONS FOR AMERICA'S GROWING ELDERLY POPULATION* 10 (2001).

In the 2005 federal fiscal year \$94.5 billion of Medicaid spending went toward long-term care services. Spending in 2005 for home and community-based long-term care was 37 percent of the total long-term care Medicaid budget. The proportion of the Medicaid long-term care budget devoted to community-based care nearly doubled between 1995 and 2005.⁵ Between 1993 and 2005 Medicaid spending for home and community-based care increased more than fivefold, at an average annual growth rate of 15 percent.⁶

Here we illustrate the growing importance of elder home energy security to the national movement toward “aging in place” and living independently.⁷ We posit the theory that, with increasing numbers of older Americans seeking long-term care services in their homes and a greater percentage of Medicaid funding going to support home-care services, the cost of home energy is becoming critical to whether low-income older Americans will be able to age in place safely. We offer a set of program and policy recommendations for assuring that low-income older Americans have access to the basic energy services they need to remain in their homes as long as possible.

I. Elder Household Energy Consumption, Prices, and Expenditures

The challenge of ensuring home energy security for the nation's elderly popu-

lation comes at a time when the U.S. Census Bureau projects that the elderly population in United States will skyrocket between 2000 and 2050 as the baby boomers born between the aftermath of World War II and the early 1960s reach traditional retirement age. The population of individuals 65 or older is projected to more than double from about 35 million in 2000 to seventy-one million in 2030.⁸ The elderly population will grow faster than any other age category during that period. The population of individuals between 65 and 84 will grow 114 percent from 2000 to 2050, and the number of individuals over 85 is projected to grow by nearly 390 percent during that period.

In the United States the elderly population is more likely than the nonelderly population to be living below 200 percent of the federal poverty guidelines. Currently, however, a greater proportion of the nonelderly population is very poor, living at or below 100 percent of the federal poverty guidelines.⁹

In 2005 about 10 percent of the U.S. population 65 years of age or older lived at or below the federal poverty level.¹⁰ About 8.4 million elders or 24 percent of the total elder population lived at or below 150 percent of the poverty level, and over 13 million, or nearly 37 percent of all elders, lived at or below 200 percent of the poverty level.¹¹ Elder poverty is considerably more prevalent in the South. The elder poverty rate—the percentage of the

⁵BRIAN BURWELL ET AL., MEDICAID LONG-TERM CARE EXPENDITURES IN FY 2005 (2006).

⁶AARP Public Policy Institute calculations based on data from BURWELL ET AL., *supra* note 5.

⁷“Home energy security,” as used here, is defined as sustained access to supplies of affordable, reliable residential heat, hot water and electricity services in sufficient quantities to ensure a safe, comfortable home environment.

⁸U.S. CENSUS BUREAU, U.S. INTERIM PROJECTIONS BY AGE, SEX, RACE, AND HISPANIC ORIGIN (2004).

⁹U.S. CENSUS BUREAU, CURRENT POPULATION SURVEY: 2006 ANNUAL SOCIAL AND ECONOMIC SUPPLEMENT. Relatively low elderly population rates below 100 percent of the federal poverty level are attributable to income supports such as social security and the availability of elder housing and health care benefits. However, the projected growth in the elderly population, combined with political uncertainty surrounding funding of social security and other benefit programs, threatens to raise elderly poverty levels. About two-thirds of people 65 or older rely on social security for more than half of their income. About a third of this population relies on social security for more than 90 percent of their income. See Michael Ettlinger & Jeff Chapman, *Social Security and the Income of the Elderly*, ECONOMIC POLICY INSTITUTE ISSUE BRIEF, March 23, 2005.

¹⁰In 2005 the federal poverty guidelines were set at \$9,570 for a one-person household and \$12,830 for a two-person household.

¹¹U.S. CENSUS BUREAU, *supra* note 9.

elderly population living below 100 percent of the federal poverty guidelines—in the South is nearly 19 percent higher than the national average.¹²

High energy prices clearly pose particular energy security problems for elder households with low or moderate incomes. As described more fully below, low- and moderate-income households must devote a relatively high proportion of total income for basic energy services. As demonstrated below, low-income elder households tend to own older, less efficient energy-consuming appliances and heating equipment, further raising the cost of basic energy services.

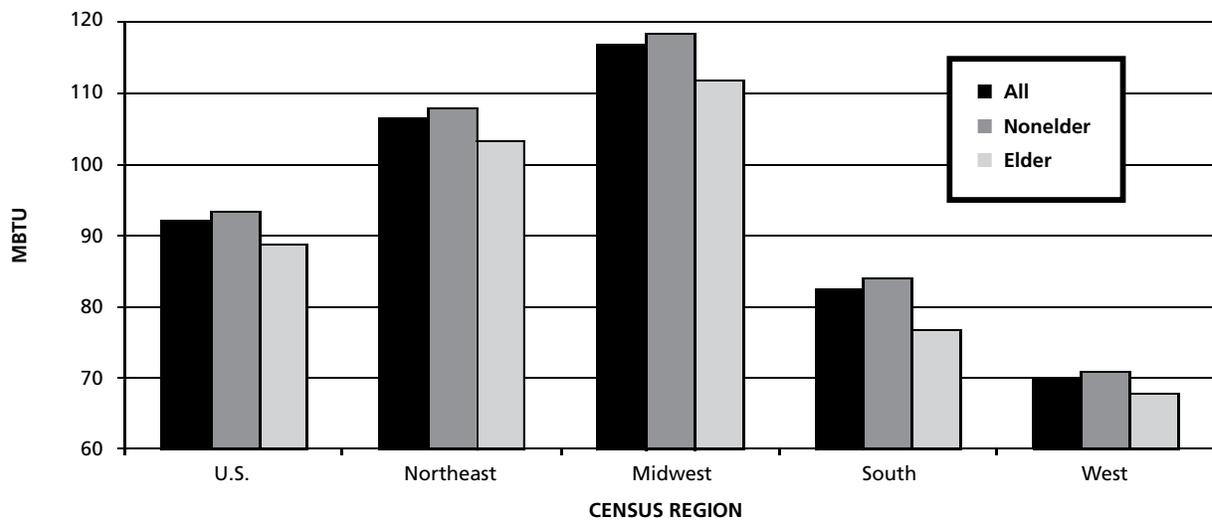
A. Household Energy Consumption

Economic theory states that as energy prices rise, demand will fall. However, a recent in-depth analysis of home energy elasticity of demand demonstrates

that “the relationship between demand and price is small.”¹³ Thus changes in home energy consumption, particularly in the short-run, are driven primarily by nonprice factors such as weather. The analysis below, based on data from the Energy Information Administration’s 2001 Residential Energy Consumption Survey, examines home energy consumption and energy intensity among elder and nonelder households in the United States.¹⁴ The analysis examines variations in energy consumption and energy intensities among low-income and non-low-income elder households in the United States.

As shown in Figure 1 U.S. elder households, on average, use about 5 percent less total household energy than nonelderly households.¹⁵ The lower consumption levels are attributable primarily to elders’ tendency to live in relatively small

Figure 1.—Nonelder and Elder Household End-Use Energy Consumption per Household



Source: U.S. Energy Information Administration, 2001 Residential Energy Consumption Survey (Figure 5).
 Note: MBTU stands for one million British thermal units.

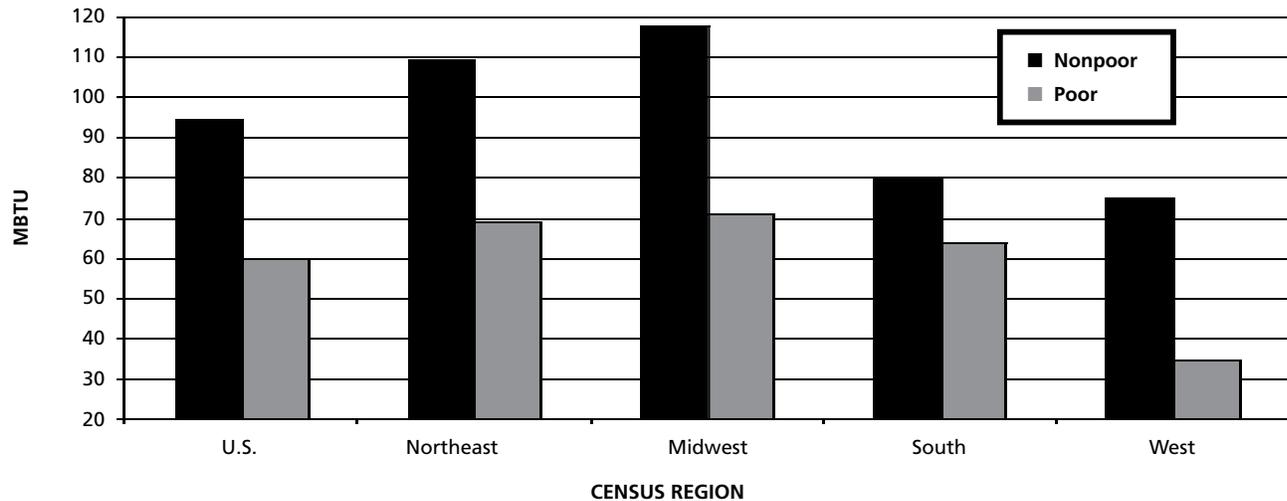
¹²*Id.* tbl. 40.

¹³MARK A. BERNSTEIN & JAMES GRIFFIN, REGIONAL DIFFERENCES IN THE PRICE-ELASTICITY OF DEMAND FOR ENERGY (2005).

¹⁴Among available national sources, the Residential Energy Consumption Survey (RECS) provides the most comprehensive information on residential energy usage and users. The survey comprises 4,822 records detailing individual household energy usage, expenditures, housing and household characteristics, appliance ownership, and weather by census division and census region. For information on RECS, see www.eia.doe.gov/emeu/recs/contents.html.

¹⁵Household energy includes electricity and fuel for household appliances and temperature control; it does not include transportation fuel. See U.S. Energy Information Administration, 2001 Residential Energy Consumption Survey.

Figure 2.—U.S. Elder Total End-Use Energy Consumption per Household by Poverty Status (MBTU)



Source: U.S. Energy Information Administration, 2001 Residential Energy Consumption Survey (Figure 6).
Note: MBTU stands for one million British thermal units.

dwelling units. The disparity is greater in the South census region, where elderly households consume, on average, about 9 percent less energy than nonelderly households. Disparities in household energy consumption are particularly pronounced among poor and nonpoor elderly households. As shown in Figure 2, poor elderly households consume about 37 percent less household energy than nonpoor elderly households.

Sharply reduced household energy consumption among poor elderly households suggests that these households must make do with less and forgo the indoor temperature and appliance benefits that are available to other U.S. households. Further, as demonstrated below, reduced consumption among poor elderly households is not attributable to the use of high-efficiency appliances and heating equipment. In fact, poor elderly households tend to own older, less efficient heating equipment and appliances than those owned by nonpoor households. Thus reduced consumption in poor elderly households is a strong indication that these households do not

enjoy or have access to the basic energy service benefits that are available to other households. Such energy service benefits are vital to the energy security needs associated with the movement toward elder independent living.

Age of Appliances and Heating Equipment. To illustrate the dynamic of elderly, and particularly poor elderly households, being more likely to own old, inefficient appliances and heating equipment, the analysis below compares the ages of the primary refrigerator in elder and nonelder households, as well as in poor elder and nonpoor elder households.¹⁶

Figure 3 illustrates the age of the primary refrigerator and elder and nonelder households. The figure clearly shows that nonelder households are more likely than elder households to use a refrigerator that is less than 10 years old. Elder households are more likely than nonelder households to use a refrigerator that is more than 20 years old or between 10 years old and 20 years old. Other data from the Energy Information

¹⁶In 2001 refrigerators accounted for 13.7 percent of all residential electricity consumption. Only combined central and room air conditioning accounted for a greater proportion (16 percent) of total residential electricity usage. *Id.*

Figure 3.—Age of Primary Refrigerator: Elder and Nonelder Households



Source: U.S. Energy Information Administration, 2001 Residential Energy Consumption Survey (Figure 9).

Administration illustrate that poor, elder households are nearly twice as likely as nonpoor elder households to use a refrigerator that is more than 20 years old. Similar trends are found in heating equipment.

This analysis of appliance ownership and usage indicates that increased attention must be devoted to the design and funding of energy efficiency programs that replace old, inefficient appliances owned or operated by low-income elders living at home. Enhanced appliance efficiencies tend to lower energy expenditures while increasing comfort levels and other benefits of appliance usage. Appliance replacement programs in many regions of the country have been shown to be cost-effective in that they can generate benefits even to utility ratepayers who do not participate directly in the replacement program.¹⁷

Household Energy Intensity. While total energy consumption per household is consistently lower among elder, and particularly low-income elder households, there is wider variability among U.S. census regions in levels of home energy intensity. As used here, “energy intensity” is a measure of end-use energy consumption per square foot of living space.

In the United States as a whole, nonelder and elder households both use on average between 43,000 British thermal units (BTU) and 45,000 BTU of energy per square foot of living space. Energy intensity is relatively high among elder households in the colder Midwest and Northeast census regions. Elder household energy intensity is relatively low in the warmer South and West census regions. Energy intensity in the United States as a whole, and in each of the census regions other than the West, is considerably higher in poor elderly households than in nonpoor elderly households. Energy intensity is 12 percent higher in poor, elderly households than in nonpoor elderly households. This inequity is likely attributable to poor thermal characteristics of dwelling units and the use of old, inefficient heating equipment and appliances. Thus, while poor elders consume more energy per square foot of living space than do their nonpoor counterparts, they spend more per square foot of living space.

Relatively high energy intensities in poor elder households have policy implications that bear on the prospects for independent living. If the benefits of independent living are to be shared by elders

¹⁷See, e.g., Nysarda, New York Energy Smart Program Evaluation and Status Report (2003), www.nysarda.org/Energy_Information/SBC/sbcadvisorymay2003.pdf.

across the income spectrum, attention must be devoted to raising end-use efficiencies and lowering energy intensity levels in poor elderly households without compromising indoor temperature quality or other benefits of household energy usage.

B. Household Energy Prices

Energy prices have risen steeply over the past several years. Over the past ten years, home energy prices in the United States have driven substantial increases in expenditures for necessary energy and utility service and posed a new financial threat to low- and moderate-income elders wishing to remain in their homes. The relative cost of home energy and general economic circumstances have weakened the ability of many of the regulatory consumer protections, energy payment assistance, and energy efficiency programs to shield vulnerable customers from loss of service. Growing evidence demonstrates that increased home energy prices force many vulnerable customers to cut back on expenditures for other necessities, such as food or medicine, in order to retain access to a basic level of utility services. In a 2005 national survey of recipients of Low-Income Home Energy Assistance Program (Liheap) benefits, 73 percent reported that they reduced expenses for household necessities because they did not have enough money to pay their energy bills, 19 percent kept their home at a temperature they felt was unsafe or unhealthy, 18 percent left their home for at least part of the day because it was too cold or too hot, 24 percent used their stove or oven to provide heat, and 20 percent reported that they went without food for at least one day in the past five years.¹⁸

Average residential electric rates in the United States have risen 24.4 percent, from 8.4 cents per kilowatt-hour (KWh) in 1996 to 10.4 cents per KWh in 2006.¹⁹ Note that electricity price levels and fluctuations vary widely from state to state. For example, while the average U.S. average residential electricity price was 10.1 cents per KWh in January 2007, the price was 6.2 cents per KWh in West Virginia and 18.2 cents per KWh in Connecticut.²⁰

The prices of the heating fuels used by most U.S. households have risen even more drastically than those of electricity. Over the past ten years U.S. average natural gas prices more than doubled, rising from \$6.30 per thousand cubic feet (MCF) in 1996 to \$13.80 per MCF in 2006.²¹

Households that heat their homes using one of the delivered fuels—home heating oil or propane—have had to endure price increases over the past ten years that exceed those of electricity and are comparable to or exceed those of natural gas. For example, home heating oil prices in the Northeast Census District have increased by 148 percent, from \$1.01 per gallon in January 1996 to \$2.50 per gallon in February 2007.²² Propane prices in the South and Midwest Census Districts similarly have each more than doubled over the past ten years.²³

Except for U.S. residential electricity prices, home energy price increases have far outpaced the general inflation rate. The U.S. Bureau of Labor Statistics reported that the Consumer Price Index for All Urban Consumers (CPI-U) increased by 31.1 percent between January 2006 and January 2007. Home energy price projections from the Energy Information

¹⁸National Energy Assistance Directors' Association, 2005 National Energy Assistance Survey: Final Report (2005).

¹⁹U.S. Energy Information Administration, STEO Query System, http://tonto.eia.doe.gov/STEO_Query/app/. Energy price figures contained in this article are stated in current dollars.

²⁰U.S. Energy Information Administration, Electric Power Monthly tbl. 5.6.A (April 2007), <http://tonto.eia.doe.gov/ftproot/electricity/epm/02260704.pdf>.

²¹U.S. Energy Information Administration, *supra* note 19. The STEO Query System provides the Energy Information Administration's monthly estimate of energy prices in the eighteen-month period immediately ahead.

²²*Id.*

²³*Id.*

Table 1.—Average Annual Home Energy Expenditures: Elder Households

Census Region	Heating Fuel	Actual				Projected	
		2001	2004	2005	2006	2007	2008
Northeast	Natural Gas	\$1,704	\$1,928	\$2,199	\$2,305	\$2,312	\$2,323
	Heating Oil	\$1,779	\$2,147	\$2,660	\$2,883	\$2,955	\$3,043
	Electricity	\$1,246	\$1,345	\$1,472	\$1,484	\$1,597	\$1,650
Midwest	Natural Gas	\$1,482	\$1,628	\$1,873	\$1,911	\$1,939	\$2,009
	Propane	\$1,750	\$2,015	\$2,254	\$2,385	\$2,559	\$2,579
	Electricity	\$935	\$987	\$1,029	\$1,068	\$1,144	\$1,174
South	Natural Gas	\$1,499	\$1,640	\$1,870	\$2,046	\$2,003	\$2,125
	Propane	\$1,628	\$2,078	\$2,275	\$2,525	\$2,626	\$2,683
	Electricity	\$1,232	\$1,319	\$1,427	\$1,597	\$1,638	\$1,701
West	Natural Gas	\$1,274	\$1,267	\$1,443	\$1,537	\$1,537	\$1,600
	Electricity	\$768	\$767	\$832	\$913	\$935	\$975

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, and climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration.

Administration, the statistical agency of the U.S. Department of Energy, suggest that there will be no return to pre-2001 price levels. In the short term, prices of all home energy fuels across all regions are projected to be considerably higher than 2005 levels and to hover close to or above peak 2006 levels.²⁴ Afterward home energy prices are projected to fluctuate only slightly over the next thirty years.²⁵

As discussed below, sustained high energy prices generate home energy burdens that pose a threat to elder home energy security. Unlike many other purchased products, temperature-sensitive elders generally do not have the option of responding to energy price increases by simply reducing consumption without increasing the efficiency of use. Thus, for the movement to elder independent, community living to succeed, consumer protections, payment assistance, and energy efficiency programs that adequately reflect the reality of high energy prices must be implemented.

C. Household Energy Expenditures and Burdens

Home energy expenditures are a function of consumption and price. As demonstrated above, consumption varies considerably among regions and among elder, nonelder, and elder poor and non-poor households. The analysis below examines actual and projected home energy expenditures by region, age of household, and poverty status among elder households. Table 1 reflects actual home energy expenditures in 2001 and 2004 through 2006 in households with at least one member over 65 years of age. It also shows projected energy expenditures for 2007 and 2008 in these households.

Table 1 shows that since 2001 actual average energy expenditures have increased sharply in elder households, particularly in households using natural gas or a delivered fuel for home heating purposes. Assuming normal weather conditions and the fuel price changes predicted by the Energy Information Administration, average energy expenditures in elderly

²⁴U.S. Energy Information Administration, Short-Term Energy Outlook (March 2007), www.eia.doe.gov/pub/forecasting/steo/oldsteos/mar07.pdf.

²⁵U.S. Energy Information Administration, Annual Energy Outlook (Feb. 2007), www.eia.doe.gov/pub/forecasting/steo/oldsteos/feb07.pdf.

Table 2.—Average Annual Home Energy Expenditures: Elder Nonpoor Households

Census Region	Heating Fuel	Actual				Projected	
		2001	2004	2005	2006	2007	2008
Northeast	Natural Gas	\$1,816	\$2,053	\$2,342	\$2,453	\$2,461	\$2,474
	Heating Oil	\$1,851	\$2,236	\$2,769	\$2,989	\$3,065	\$3,156
	Electricity	\$1,367	\$1,478	\$1,620	\$1,628	\$1,747	\$1,804
Midwest	Natural Gas	\$1,534	\$1,683	\$1,935	\$1,974	\$2,004	\$2,075
	Propane	\$1,995	\$2,305	\$2,587	\$2,740	\$2,936	\$2,958
	Electricity	\$1,067	\$1,129	\$1,189	\$1,232	\$1,309	\$1,343
South	Natural Gas	\$1,625	\$1,781	\$2,026	\$2,222	\$2,167	\$2,293
	Propane	\$1,917	\$2,449	\$2,683	\$2,976	\$3,102	\$3,169
	Electricity	\$1,401	\$1,496	\$1,623	\$1,819	\$1,862	\$1,935
West	Natural Gas	\$1,354	\$1,344	\$1,529	\$1,632	\$1,631	\$1,696
	Electricity	\$971	\$972	\$1,054	\$1,155	\$1,182	\$1,232

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, and climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration.

Table 3.—Average Annual Home Energy Expenditures: Elder Poor Households

Census Region	Heating Fuel	Actual				Projected	
		2001	2004	2005	2006	2007	2008
Northeast	Natural Gas	\$1,430	\$1,622	\$1,849	\$1,943	\$1,947	\$1,955
	Heating Oil	\$1,594	\$1,915	\$2,376	\$2,606	\$2,667	\$2,748
	Electricity	\$982	\$1,056	\$1,150	\$1,169	\$1,270	\$1,313
Midwest	Natural Gas	\$1,305	\$1,442	\$1,662	\$1,693	\$1,716	\$1,784
	Propane	\$1,454	\$1,666	\$1,854	\$1,957	\$2,106	\$2,123
	Electricity	\$734	\$771	\$788	\$820	\$895	\$918
South	Natural Gas	\$1,300	\$1,418	\$1,625	\$1,770	\$1,747	\$1,860
	Propane	\$1,248	\$1,592	\$1,741	\$1,934	\$2,003	\$2,046
	Electricity	\$916	\$987	\$1,058	\$1,180	\$1,216	\$1,260
West	Natural Gas	\$1,001	\$1,003	\$1,152	\$1,214	\$1,220	\$1,272
	Electricity	\$540	\$538	\$584	\$643	\$658	\$687

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, and climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration.

households across census regions and for heating fuels will increase moderately in 2007 and 2008.

Tables 2 and 3 show actual and projected average energy expenditures among elder households living above 150 percent of the federal poverty guidelines and those living below those guidelines. Consistent with variations by household income in energy consumption, expenditures in lower-income elder households can be

seen to be considerably lower than those by their higher-income counterparts.

Even though actual and projected energy expenditures are lower in elder households with lower incomes, energy burden—that proportion of total household income that is devoted to home energy expenditures—is considerably higher. Average elder energy burdens are reflected in Tables 4, 5, and 6.

Table 4.—Average Annual Home Energy Burden: Two-Person Elder Households

Census Region	Heating Fuel	2001		2006	
		Expenditure	Burden	Expenditure	Burden
Northeast	Natural Gas	\$1,704	4.8%	\$2,305	5.5%
	Heating Oil	\$1,779	5.1%	\$2,883	6.9%
	Electricity	\$1,246	3.5%	\$1,484	3.6%
Midwest	Natural Gas	\$1,482	4.2%	\$1,911	4.6%
	Propane	\$1,750	5.0%	\$2,385	5.7%
	Electricity	\$935	2.7%	\$1,068	2.6%
South	Natural Gas	\$1,499	4.3%	\$2,046	4.9%
	Propane	\$1,628	4.6%	\$2,525	6.0%
	Electricity	\$1,232	3.5%	\$1,597	3.8%
West	Natural Gas	[]	3.6%	\$1,537	3.7%
	Electricity	\$768	2.2%	\$913	2.2%

Note: Based on Mean Elder Household Income.

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration, and household income data from the U.S. Census Bureau.

Table 5.—Average Annual Home Energy Burden: Two-Person Elder Nonpoor Households

Census Region	Heating Fuel	2001		2006	
		Expenditure	Burden	Expenditure	Burden
Northeast	Natural Gas	\$1,816	5.2%	\$2,453	5.9%
	Heating Oil	\$1,851	5.3%	\$2,989	7.2%
	Electricity	\$1,367	3.9%	\$1,628	3.9%
Midwest	Natural Gas	\$1,534	4.4%	\$1,974	4.7%
	Propane	\$1,995	5.7%	\$2,740	6.6%
	Electricity	\$1,067	3.0%	\$1,232	3.0%
South	Natural Gas	\$1,625	4.6%	\$2,222	5.3%
	Propane	\$1,917	5.5%	\$2,976	7.1%
	Electricity	\$1,401	4.0%	\$1,819	4.4%
West	Natural Gas	\$1,354	3.9%	\$1,632	3.9%
	Electricity	\$971	2.8%	\$1,155	2.8%

Note: Based on Mean Elder Household Income.

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration, and household income data from the U.S. Census Bureau.

These dynamics are identified in the tables above: In all but the West census region, average energy expenditures rose faster than income in elderly households between 2001 and 2006. Thus average elder energy burdens in the Northeast, Midwest, and South census regions in-

creased during that period. In the Northeast, for example, the average home energy burden among elder heating oil consumers rose by 36 percent, from 5.1 percent in 2001 to 6.9 percent in 2006. Similarly, in the South census region, the average home energy burden among

Table 6.—Average Annual Home Energy Burden: Two-Person Elder Low-Income Households

Census Region	Heating Fuel	2001			2006		
		Expenditure	Burden Poor 100%	Burden Poor 150%	Expenditure	Burden Poor 100%	Burden Poor 150%
Northeast	Natural Gas	\$1,430	12.3%	8.2%	\$1,943	14.7%	9.8%
	Heating Oil	\$1,594	13.7%	9.2%	\$2,606	19.7%	13.2%
	Electricity	\$982	8.5%	5.6%	\$1,169	8.9%	5.9%
Midwest	Natural Gas	\$1,305	11.2%	7.5%	\$1,693	12.8%	8.6%
	Propane	\$1,454	12.5%	8.4%	\$1,957	14.8%	9.9%
	Electricity	\$734	6.3%	4.2%	\$820	6.2%	4.1%
South	Natural Gas	\$1,300	11.2%	7.5%	\$1,770	13.4%	8.9%
	Propane	\$1,248	10.8%	7.2%	\$1,934	14.6%	9.8%
	Electricity	\$916	7.9%	5.3%	\$1,180	8.9%	6.0%
West	Natural Gas	\$1,001	8.6%	5.7%	\$1,214	9.2%	6.1%
	Electricity	\$540	4.7%	3.1%	\$643	4.9%	3.2%

Source: National Consumer Law Center Analysis based on U.S. Energy Information Administration's 2001 Residential Energy Consumption Survey, the Energy Information Administration's Short-Term Energy Outlook from February 2007, climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration, and U.S. Department of Health and Human Services' poverty guidelines for two-person households in the forty-eight contiguous states and Washington, D.C.

elder propane users rose by 31 percent, from 4.6 percent in 2001 to 6 percent in 2006.

The consequences of high energy prices and expenditures are particularly serious for low-income elder households across the United States. Despite reduced consumption levels, average home energy burdens in the Northeast among elder households living at or below 100 percent of the federal poverty guidelines in 2006 ranged between 8.9 percent for electric heat consumers and nearly 20 percent for heating oil users. In the Midwest average home energy burdens among the elder households below 100

percent of the poverty guidelines ranged between 6.2 percent and 14.8 percent. In the South the range was between 8.9 percent and 14.6 percent. Even in the West census region, where home energy expenditures are lower due to relatively moderate temperatures and lower fuel prices, average home energy burdens among elders living below the poverty guidelines ranged between 4.9 percent and 9.2 percent in 2006. As indicated previously, home energy prices are expected to remain high through 2008 and beyond, bringing no relief to vulnerable elder energy consumers wishing to remain in their homes.²⁶

²⁶Calculations of actual elder home energy expenditures for previous years and projected expenditures for 2007 and 2008 are based on a methodology developed by Joel Eisenberg of Oak Ridge National Laboratory and Meg Power of Economic Opportunity Studies. Calculations are based on an integration of U.S. Energy Information Administration RECS and February 2007 Short-Term Energy Outlook data and climate data from the National Climate Data Center of the National Oceanic and Atmospheric Administration. Heating and cooling degree days for each of the census divisions in 2004, 2005, and 2006 were calculated by using statistics from the National Climate Data Center of the National Oceanic and Atmospheric Administration, National Environmental Satellite, Data and Information Service. These data were employed to calculate an adjustment factor for each division so that RECS data on heating and cooling expenditures for 2001 could be adjusted to reflect actual weather during those years. Normal weather heating and cooling degree day statistics were used in calculating expenditure projections for 2007 and 2008. Price adjustment factors for 2006, 2007, and 2008 were calculated by using the February 2007 Short-Term Energy Outlook Tables 8c and 5c historical and projected prices by census division natural gas and electricity and by census region for propane and heating oil. Price adjustment factors used to calculate 2004 and 2005 expenditures were developed from previous issues of the Short-Term Energy Outlook. Regional estimates were made by using the sort functions of Microsoft Access to select households by primary home heating fuel, region, qualification of income at or below 150 percent of the federal poverty level, and age of householder. RECS data were used in developing comparative analyses of household energy consumption, energy intensity, and appliance ownership.

II. Utility Consumer Protections, Payment Assistance, and Energy Efficiency Programs

In the late 1970s, after steep price increases associated with the oil shocks of that era, many states across the country adopted regulatory provisions or enhanced existing ones to protect vulnerable households, including the elderly, from loss of utility service. Some states adopted low-income energy payment assistance and efficiency programs to supplement federal programs and to help ensure continued access to vital energy and utility services.

As demonstrated above, household energy prices and expenditures have registered stiff increases once again. Not surprisingly, electric and natural gas utility arrearages and disconnections have increased as well. For example, utility service disconnections in Rhode Island increased by over 92 percent between 2000 and 2006. Similarly the gap between service disconnections and reconnections increased, suggesting increased durations of service loss and greater numbers of households that do not regain access to service under their own accounts.²⁷ In Pennsylvania utility service terminations doubled between 2002 and 2005.²⁸

What is needed now to ensure that high home energy prices do not impede the movement toward elderly independent living is a thorough reexamination and enhancement of state and federal consumer protections and low-income energy programs to ensure that they protect vulnerable, elderly customers from life-threatening loss of service.

A. Regulatory Consumer Protections

Utility consumer protections dealing with the terms of obtaining and retaining service may be found in state regulations and statutes and in some cases in regulatory commission orders and utility company tariffs. The protections and rules of service include requirements to give con-

sumers information regarding their utility service, provisions on security deposits and advance payment for service, late payment fees, termination and restoration of service, establishment of payment plans, and resolution of disputes between customers and utility companies. Each state has adopted its own structure, with considerable variability between provisions from state to state.

While considerable public attention is focused on the need for adequate funding of energy payment assistance and energy efficiency programs, such as the federal Liheap and the Weatherization Assistance Program (WAP), little attention is given to state customer service rules. If these rules are weak or burdensome for consumers, they may actually interfere with the low-income programs' policy objectives, which are to protect health and safety by preventing loss of essential utility service. Regulatory consumer protections must be designed and implemented in a manner consistent with the goals of existing payment assistance and low-income energy efficiency programs.

Termination rules that do not explicitly protect temperature-sensitive elders—particularly those with low incomes or a serious illness—can threaten health and safety and undermine the movement toward community living. Inadequate harsh weather shutoff protections similarly pose a danger to low-income elders living in their homes. Burdensome late payment fee and security deposit requirements add to the energy service costs of elderly, low-income customers, thus limiting the ability of some to obtain or retain access to necessary home energy service. Unworkable termination time frames and payment plan provisions increase the likelihood that low-income, elderly customers will lose access to vital service even if payment assistance funding is available.

Having recognized the health and safety dangers from the loss of necessary util-

²⁷Calculated from data from the Rhode Island Public Utilities Commission.

²⁸Pennsylvania Public Utility Commission, Bureau of Consumer Services, www.puc.state.pa.us/General/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2002.pdf; www.puc.state.pa.us/General/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2005.pdf. While relatively few states systematically report electric and natural gas service terminations and reconnections, the pattern reflected in the Rhode Island and Pennsylvania charts above is typical of experiences in other states.

ity service, some states have adopted legislation and regulations that provide relatively strong protection for elderly customers. Other states lag far behind. The summary below identifies key protections that, if adopted by states, would reduce threats that high and volatile energy prices pose to elder independent living. Adoption of the identified provisions would concurrently increase the effectiveness of payment assistance and energy efficiency programs to provide home energy security to vulnerable, low-income households.

Utility consumer protection of particular interest to elders wishing to live independently include age-based service termination limitations, termination protections for those with a serious illness, harsh weather service termination limitations or prohibitions, provisions regarding security deposits and late payment fees, service termination time frames and notification requirements, and payment plan or deferred payment agreement provisions.

Age-Based Termination. States have adopted widely varying provisions regarding the termination of electric and natural gas utility service. Termination protections are a key element in the promotion of even minimal levels of low-income energy security. Special protections for vulnerable customers of certain ages are provided in numerous states. Some states' provisions are far more protective than others. For example, in Arkansas, when informed that an elderly customer cannot pay a bill on time, utilities are required to offer a deferred payment agreement or arrange for a levelized billing plan.²⁹ Hawaii utilities may not terminate service to an elderly customer without first submitting a written report to the Public Utilities Commission.³⁰

Without having obtained permission from the Department of Telecommunications and Energy, Massachusetts utilities

are prohibited from terminating service to households where all occupants are over 65.³¹ However, many states have not adopted any provisions specifically intended to protect elderly customers from termination of service.

Serious Illness. Many states have adopted termination protections that apply to those who suffer from a serious illness. In most states with such provisions, disconnection for nonpayment must be postponed for a specific period when the customer or the customer's representative presents a certification from a physician that the customer is ill and that loss of utility service would pose a threat to the customer's health or safety. Many states have included certification procedures as part of their "serious illness" protections. In some cases, illness certification must come in a prescribed form by mail or other hard copy and is valid for a specified period. Other states provide greater flexibility in the form and delivery means of the certification. Because of increased likelihood of illness or disability in individuals over 65, such provisions are essential to the movement toward independent living. Some states' rules provide for protracted protection with relatively simple recertification procedures, while others provide protection for only a very short period with little or no opportunity for recertification.

In Michigan, for example, termination may not occur for twenty-one days beyond the normal allowable date if it would aggravate a certified medical emergency or condition. Certification may be renewed for an additional forty-two days. The customer may notify the utility of an existing medical emergency by telephone and has seven days to submit certification.³²

Weather-Related Termination. Given their vulnerability to health conditions associated with exposure to extreme temperatures, elders living independently have a particular interest in pro-

²⁹126-03-003 ARK. CODE R. § 6.18.

³⁰HAW. CODE R. § 60-8.

³¹220 MASS. CODE REGS. § 25.05; MASS. GEN. LAWS ch. 164 § 124E.

³²MICH. ADMIN. CODE r.460.2153.

tections that allow them to retain access to heating and cooling equipment when the weather becomes very hot or cold. Numerous states have adopted protection against service disconnections or enhanced termination notification provisions that apply either during specific date ranges or when outdoor temperatures reach certain levels. For example, Connecticut electric and gas utilities are prohibited between November 1 and April 15 from terminating or refusing to reinstate service to financial-hardship customers.³³ In Arkansas electric and gas utilities may not suspend service to an elderly or handicapped customer when the National Weather Service forecasts a temperature of 95 degrees Fahrenheit or above at any time during the following twenty-four hours.³⁴

Security Deposits. As utility debt and the write-off of uncollectible accounts increase in response to rapidly rising energy prices, many companies are looking to security deposits as a means of minimizing risk. However, from the consumer's perspective, onerous security deposit provisions merely increase the overall cost of utility service and in some cases make obtaining service nearly impossible. Customer service rules regarding security deposits vary widely from state to state. While some states allow utility companies to obtain the value of four or more months of service up front, others allow either no, or minimal, security deposits from new residential customers.

Late Payment Fees. The rules of some states restrict utility companies from charging residential customers late payment fees. However, in many states companies are allowed to charge a percentage of the most recent bill or a percentage of any outstanding amounts in addition to the actual amount owed. Like security deposits, assessment of late payment charges and fees can increase the cost of service to consumers. Late payment charges typically exceed util-

ity companies' costs of carrying arrearages and sending late payment notices to customers. Low-income households are far more likely than their higher-income counterparts to be late in paying utility bills. Late payment charges clearly represent a disproportionate burden on low-income households.

Deferred Payment Agreements. Some states' rules require utility companies to offer customers special payment agreements as an alternative to termination of service or as a means of restoring service. Payment plan terms and requirements vary widely from state to state. Access to reasonable payment plans is a central aspect of the utility consumer protection structure.

Some states have adopted a highly punitive approach to payment plan terms. In such cases a missed payment—for whatever reason—may result in a requirement for a higher monthly payment toward back bills. A more sensible approach has been adopted in Iowa: customers who receive a disconnection notice are offered a payment plan of at least twelve months' duration. In the event that the initial payment plan fails after the customer demonstrates a good-faith effort to make timely payments, a subsequent payment plan of equal or greater duration must be offered.³⁵ This rule is based on the assumption that most customers are interested in remaining current on their utility bills but that difficult financial circumstances often lead to payment troubles.

Besides the duration-of-payment agreements, the percentage of an arrearage that must be paid up front determines the viability of a payment plan. Many states require a "down payment" of at least 25 percent and as much as 50 percent. Given the high cost of household energy service, low-income customers with arrearages well in excess of \$1,000 are commonplace. High-percentage down payments in these cases make it virtually

³³A "financial hardship customer" means a customer who lacks the financial resources to pay one's entire electric or natural gas bill. CONN. AGENCIES REGS. § 16-3-100 (b)(3).

³⁴Ark. Reg. 126 03 003 6.18.F

³⁵Iowa Utilities Board, Order Adopting Amendments, Docket No. RMU-04-2, 2004.

impossible for many low-income customers to retain or restore service.

B. Model Elder Consumer Provisions

While there is no “one size fits all” model of consumer protections, the following key protections, if adopted by the states, would strengthen elder home energy security and reduce the threat of high energy prices and expenditures to independent community living. By reducing the rate of arrearage and shutoff, these protections would enhance the effectiveness of the Liheap and other low-income energy programs:

- *Denial of Service:* Service should not be denied to a low-income elderly applicant based on delinquency of a previous customer of record, for a delinquency that accrued as a result of fraudulent actions of an individual other than the applicant, or for failure to pay for merchandise or other peripheral service purchased from the utility company.
- *Deposit:* In the case of low-income elderly consumers, companies should be prohibited from conditioning delivery of service on receiving security deposits.
- *Payment, Due Date and Late Payment Fees:* Bills should not be considered due for at least thirty days after delivery to a customer. Service should not be disconnected before fourteen days after the customer receives a notice of termination. Under no circumstances should late payment fees exceed a company's cost of working capital, and they should be waived for low-income customers.
- *Termination and Disconnection of Service:* In households where one or more individuals are under 12 months of age or over 65 years of age or have a serious illness or disability as certified by a health care practitioner, service should not be disconnected. At least two termination notices should be sent to households facing disconnection before actual service disconnection.

- *Restoration of Service:* Before service disconnection for nonpayment, or as a condition of service restoration after disconnection for nonpayment, customers should be offered an initial payment plan with a term of at least one year. Terms should be reasonable and take into account household income and expenses. If, after demonstrating a good-faith effort to complete an initial agreement, a customer is not able to make payments, a subsequent agreement with terms at least as favorable as the initial agreement should be offered. Customers documenting a serious illness should be granted immediate restoration of vital utility service.

C. Payment Assistance and Energy Efficiency: The Affordable Energy Bargain Model

One of the lessons learned from recent experience was that the costs of high and volatile energy prices can quickly overwhelm the value of the benefits associated with energy payment assistance and efficiency programs. In light of current price levels and the sweeping changes in energy and utility industries, new and equally sweeping program changes are needed for low-income elderly households to retain long-term access to basic energy and utility services. What is needed nationwide is an “affordable energy bargain” where low-income households that make regular, affordable utility payments and participate in energy efficiency and education programs receive a basic block of service, reduce and eliminate arrearages, and are free from the threat of service termination.³⁶ The goal of the affordable energy bargain model is long-term low-income energy security.

Numerous program features are required to achieve the affordable energy bargain goal of long-term low-income energy security. The key program features would include affordable payments, efficient and informed energy usage, secure funding, and direct links between regulatory protection and payment assistance.

³⁶The “affordable energy bargain” is a program design construct proposed in various states by the National Consumer Law Center, the National Community Action Foundation, and other advocacy groups. See, e.g., John Howat, Rhode Island State Energy Office, *Low-Income Energy Security in Rhode Island: Long-term Affordability and Arrearage Management Solutions* (2002).

Affordable Payments. A payment structure that makes sense for the individual customer is key. In this context “affordability” refers to regular monthly payments that result in an energy burden—the proportion of disposable income devoted to household energy costs—equal to that of a median-income household. In other words, if the median-income electricity burden in a particular geographic area is 2.5 percent, the low-income household participating in the affordable energy bargain should receive a payment subsidy such that the household’s payment results in an identical energy burden. The bargain guarantees a basic level of service only for those households that responsibly make regular but affordable payments.

Efficient, Informed Energy Usage. Long-term low-income energy security requires a comprehensive approach to affordability. Energy efficiency and education are cornerstones of long-term energy security and should go hand-in-hand with payment assistance. Payment assistance should coincide with availability of, and encouragement to participate in, education and effective appliance and building efficiency programs.

Secure Funding. Assuredly there is cost associated with implementation of the affordable energy bargain. In 2001 at least \$3.1 billion federal and nonfederal funds were devoted to low-income payment assistance and energy efficiency. Yet this expenditure did not result in the realization of the universal service ideal. Most low-income households carried excessive energy burdens, and many suffered loss of service. The inability to deliver universal service despite the resources devoted to programs was due in part to insufficient funding and in part to effectiveness gaps in program designs and regulatory structures.

Funding the investment in universal service should continue to come from both federal and nonfederal sources. Funding needs to be sufficient and dependable. Sufficiency in this context refers to the number of program dollars needed to fund the affordable energy bargain fully. Dependability requires that pro-

gram funding come from secure, reliable sources. A “universal service” charge added to the bills of all residential, commercial, and industrial customers would constitute a secure, dependable funding source. Such a charge should be “volumetric” in that it would be added to each unit of energy sold (kilowatt-hours of electricity or cubic feet of natural gas) rather than as a fixed charge across all customers’ bills. Voluntary contributions, vital as they are in reducing low-income energy burdens and supplementing volumetric utility bill assessments, do not represent a dependable, long-term funding source.

Direct Link Between Regulatory Protection and Payment Assistance. As indicated above, all states have promulgated regulations specifying conditions that must be met before utilities may terminate a customer’s service. However, current regulations fail to recognize the extent to which nonpayment occurs as a result of inability to pay. No state regulations link termination prohibitions to a truly affordable payment program. A clear link between regulations and effective programs must be established to ensure long-term access to affordable utility service.

III. Recommendations and Conclusion

As the growth of the elder population in the United States is set to skyrocket, the independent living groundwork has been laid. An overwhelming majority of Americans would prefer to age living independently in their communities rather than move into an institutional setting. An increasing proportion of the nation’s Medicaid expenditures each year is devoted to home care and related independent living support. However, as we have seen, the movement toward independent living faces a threat posed by high home energy prices and expenditures and burdens borne by elders wishing to remain in their homes. These increasing elder home energy burdens undermine basic home energy security and thus the ability of some to remain safely in their homes. Clearly the movement toward independent, community living needs to be sup-

ported not only through continued and increasing commitments to the provision of health care but also through the assurance of secure access to vital energy and utility services.

The energy security needs of lower-income elders require particular attention since these households must devote a greater proportion of total income to basic energy and utility service than their higher-income counterparts do. Based on the findings of our research, we offer the following program and policy recommendations in support of elder independent living and enhanced elder energy security:

- *Full Liheap Funding.* Needed Liheap home energy payment assistance goes to millions of low-income elders annually. Yet funding for this program has lagged far behind increases in home energy prices. While Congress' authorized spending for this program is at the \$5.1 billion level, actual appropriations and allocations lag billions behind the authorized level. Congress and the president should appropriate and allocate the full authorization amount. Full funding of Liheap should be established each year well in advance of the onset of the heating season so that benefit levels and program administration may be set on the basis of the total value of the funds available for the program year.
- *Effective Utility Payment Assistance Programs to Supplement Liheap.* Liheap funds must be supplemented at the state and utility service territory levels so that low-income elder home energy burdens do not exceed those borne by median-income households. Tiered discount rates and percentage-of-income payment plan programs may be designed to accomplish this goal.
- *Effective Utility Arrearage Management Programs.* Affordable payments for "current" bills must be coupled with a structure that allows low-income elders with large arrearages to retain access to necessary utility service. Effective arrearage management should allow a customer to pay off back bills at a realistic rate that takes into account the household's actual income-and-expense circumstances as well as the cost of current bills.
- *Responsible Customer Payments in Exchange for Guaranteed Energy Security.* Utility payment assistance and arrearage management programs should be structured as an "affordable energy bargain," where participants are required to maintain truly affordable payments in exchange for guaranteed access to secure home energy service.
- *Secure and Predictable Program Funding Base.* Elder home energy security should be supported through volumetric or meter charges to all classes of ratepayers. Charges should be set to ensure that pooled funding is sufficient to meet the policy objectives of low-income payment assistance programs.
- *Full WAP Funding.* Congress should maintain funding for the U.S. Department of Energy Weatherization Assistance Program at a minimum of \$255 million. The program should continue to operate through the Department of Energy, where the federal government's expertise in low-income energy efficiency issues resides.
- *Utility Energy Efficiency Programs.* WAP needs to be supplemented at the state and utility service territory levels by programs that allow for full energy efficiency treatment of low-income households. As indicated above, low-income elder energy intensities are very high, particularly in the Northeast, Midwest, and South census regions. Carefully designed utility energy efficiency programs that are geared toward replacing old, inefficient appliances and heating systems are essential to long-term elder energy security and the movement toward independent, community living.
- *Regulatory Consumer Protections and Customer Service Rules Consistent with Policy Objectives of Payment Assistance Programs.* State-level regulatory consumer protections regarding provision and denial of utility service need to be reexamined and enhanced to

protect vulnerable elders from involuntary loss of utility service. Of vital importance are protections from loss of service during harsh weather conditions and in cases of serious illness. Enhanced shutoff protections for particularly vulnerable low-income elders are warranted and necessary to protect energy security. Customer service rules regarding payment of security deposits and late payment fees should be revised to exempt low-income elders from costs that diminish energy security without assuring increased or more timely payment of current bills.

- *Enhanced Utility Company Outreach and Identification of Residential Customers over 65.* Utility companies, in conjunction with appropriate community-based organizations, should identify all residential customers over 65 in order to provide the regulatory and program protections as outlined above.
- *Deliverable Fuels Payment Assistance.* Elder energy burdens are particu-

larly high in cold weather regions in households that rely on heating oil or propane for heat. While some states have implemented effective utility payment assistance and energy efficiency programs to supplement the federal Liheap and WAP, there has only been limited success in states that would implement similar programs for low-income deliverable fuels customers. The consumer protections that apply to regulated utility customers generally do not apply to customers of fuel oil and propane companies. Thus new programs geared toward enhancing the energy security of low-income elders who use deliverable fuels is required. Legislative appropriations and use of state excise tax revenues are appropriate sources of funding for such programs.

Philene Taormina's Note

The views expressed in this article are solely my own views and not necessarily the policy positions of AARP.