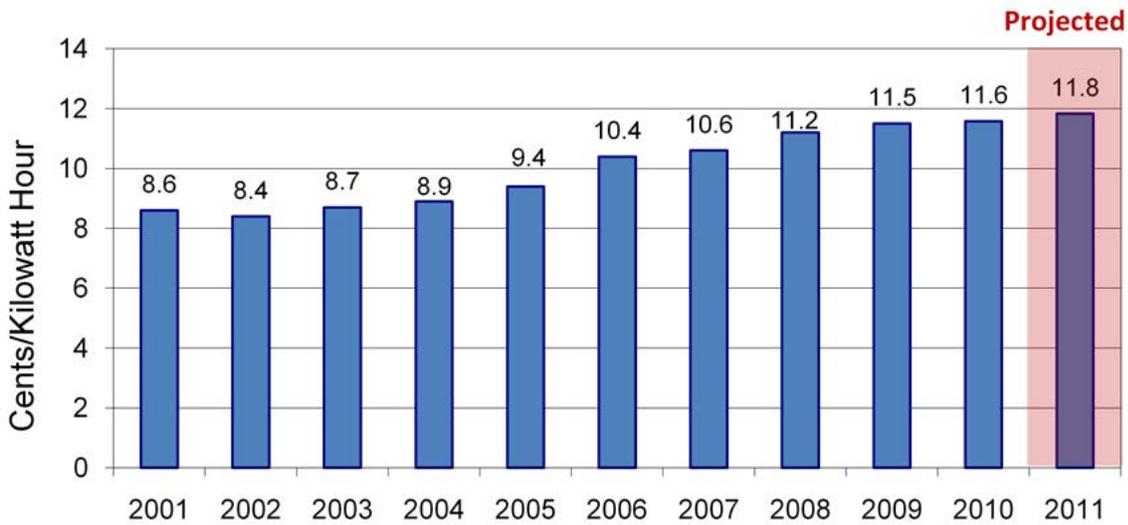


## Summer Cooling Costs and Older Households – August 2011

Prepared by AARP Public Policy Institute

The rising cost of electricity and unusually hot weather will result in many older consumers receiving higher electric bills during the summer cooling season.

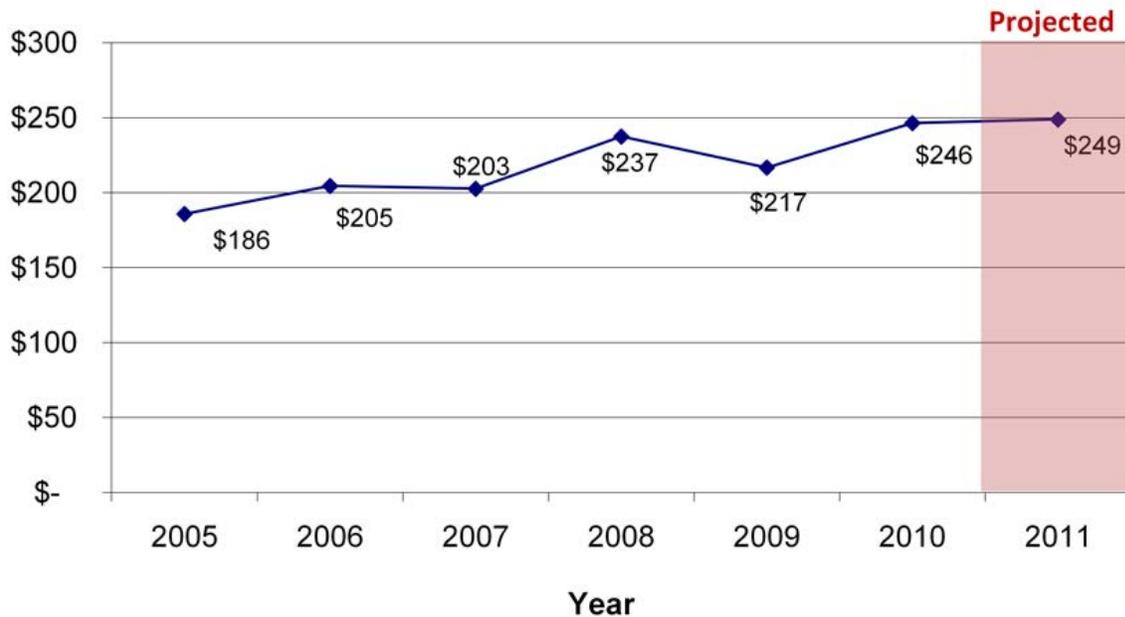
### Average Price of Electricity to Residential Sector by Year, United States Average



Source: August 2011 Short Term Energy Outlook.  
Prepared by AARP Public Policy Institute

Electricity prices have increased since 2001 as the costs of fuels used to generate electricity has risen substantially. Average residential electricity costs have increased by more than 35 percent between 2001 and 2011, rising from 8.6 cents to 11.8 cents per kilowatt hour.

## Cost of Residential Cooling for Householders Age 65 and Older, All Incomes, 2001 - 2011



Source: 2005 Residential Energy Consumption Survey and August 2011 Short Term Energy Outlook (STEO), Energy Information Administration (EIA).  
Prepared by AARP Public Policy Institute

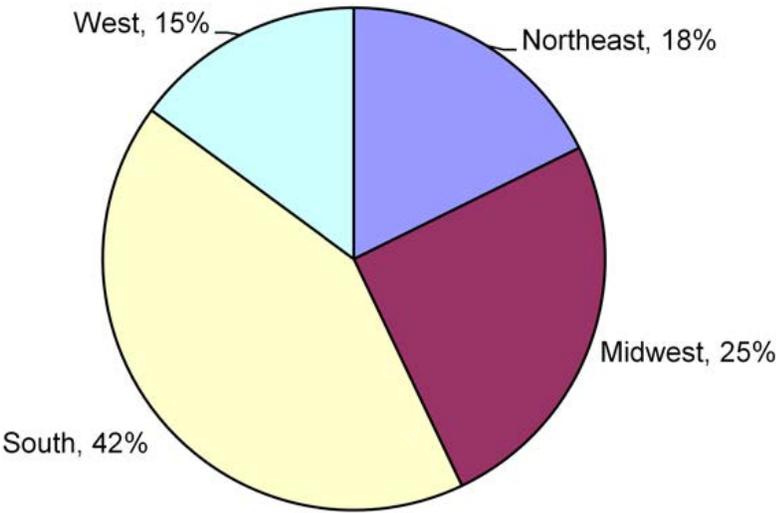
Based on projected expenditures for older consumers during summer 2011, average cooling costs for older consumers will rise to \$249, up from \$186 in 2005.

Projected expenditures are based on the average residential price of electricity and projected consumption data from the Energy Information Administration (EIA). The consumption projections<sup>1</sup> are based on a variety of factors including historical usage data and anticipated weather conditions. Deviations in weather conditions from those forecast will impact the accuracy of projections<sup>2</sup>.

<sup>1</sup> EIA's residential consumption and expenditure predictions are derived from the National Energy Modeling System (NEM) Residential Sector Demand Module, available at <http://www.eia.gov/FTP/ROOT/modeldoc/m067%282010%29.pdf>

<sup>2</sup> Degree days, including cooling degree days, are a simplified form of historical weather data used to help model the relationship between the energy needed to heat or cool a building and outside air temperature. According to the National Oceanic and Atmospheric Administration (NOAA), cooling degree-days during June, July, and August of 2011 were forecasted to be about 8 percent higher than the same period in 2010 and the highest recorded monthly value since at least the 1930s. Similarly, EIA estimates that "retail sales of electricity to the residential sector during July were slightly higher than the record-setting 5.02 billion kilowatt-hours per day (kwh/d) consumed during July of 2010." [http://www.eia.gov/steo/steo\\_full.pdf](http://www.eia.gov/steo/steo_full.pdf)

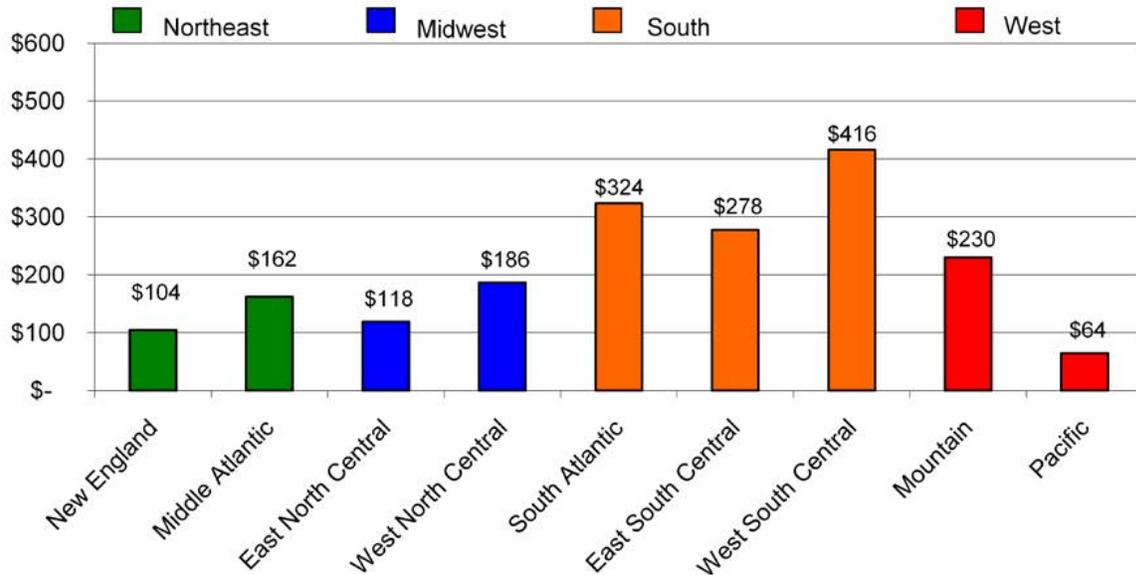
**Distribution of Residences Using Cooling Equipment  
by Census Region, 2005**



Source: 2005 Residential Energy Consumption Survey, Energy Information Administration. Prepared by AARP Public Policy Institute.

Cooling costs throughout the United States are influenced by rising electricity costs as well as by the differential need for cooling based on the geographic location of the household. Based on AARP analysis, more than forty percent of residences using cooling equipment during the summer are in the south census region.

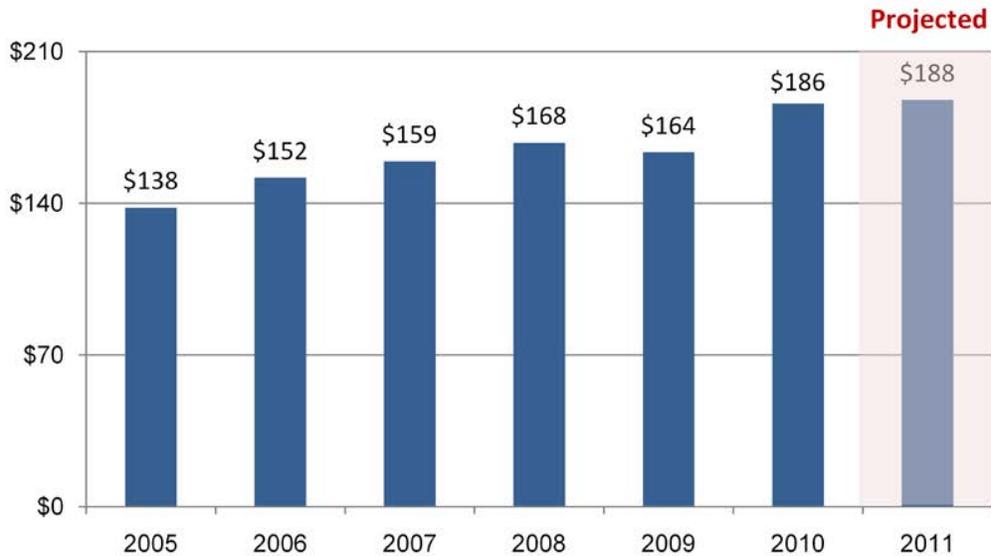
### Projected Cost of Cooling for Householders Age 65 and Older by Census Division, 2011



Sources: 2005 Residential Energy Consumption Survey, August 2011 Short Term Energy Outlook.  
Prepared by AARP Public Policy Institute.

Consequently, older consumers living in the south region are projected to spend substantially more on cooling costs during the summer of 2011 than other older consumers living in different areas.

### Cooling Costs for Age 65+ Households with Incomes below \$15,000, 2005 to 2011



2005 Residential Energy Consumption Survey, August 2011 Short Term Energy Outlook.  
Prepared by AARP Public Policy Institute

AARP analysis of EIA data indicates that older consumers with household incomes less than \$15,000 have experienced a 32 percent rise in cooling costs since 2005. Data on electricity consumption show that in general low-income older consumers tend to use less electricity than higher-income older groups. However, higher cooling costs are expected to have a greater impact on this group than on higher-income older consumers who have greater financial resources available to meet the increased costs.

According to the LIHEAP Clearinghouse, only 29 states and the District of Columbia had cooling assistance programs in 2010. Average grants for cooling tend to be less than half the amount of those for heating, and in several states depend on the availability of funds which may be exhausted during the state's heating season.

## Cooling Cost Analysis Methodology

This report analyzes data from both the 2005 Residential Energy Consumption Survey (RECS)<sup>3</sup> and the August 2011 Short Term Energy Outlook (STEO)<sup>4</sup> to examine cooling-related energy consumption and expenditures among consumers age 65 and older based on income, electricity costs, and geographic location. These data are also used to project older consumers' cooling-related energy consumption and expenditures for summer 2011.

Consumption patterns for cooling among consumers age 65 and older are based on 2005 RECS data.<sup>5</sup>

To account for annual differences in electricity consumption for cooling since 2005, the 2011 consumption pattern is adjusted based on changes in annual electricity consumption as documented by the Energy Information Administration (EIA) in their STEO reports. Cooling costs are estimated by multiplying the projected consumption of electricity for cooling by the unit cost of electricity, as indicated by the August 2011 STEO.

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<sup>3</sup>The Residential Energy Consumption Survey (RECS) is a national statistical survey that collects energy-related data for occupied primary housing units. RECS provides demographic characteristics of the household (including age, income and location), heating fuel type, energy consumption, and expenditures as well as other information that relates to energy use. See "Residential Energy Consumption Survey: home energy uses and costs." Energy Information Administration, < <http://www.eia.doe.gov/emeu/recs/>>.

<sup>4</sup>The Energy Information Administration (EIA), the statistical agency of the U.S. Department of Energy, produces energy data, analysis, and forecasting. *Short Term Energy Outlook* (STEO) is an EIA monthly publication that contains current and projected prices of various fuel types (including natural gas, fuel oil, electricity, and petroleum). < <http://www.eia.doe.gov/steo/>>.

<sup>5</sup>The RECS survey was updated in 2009; however, as of the writing of this report, only preliminary data have been released.