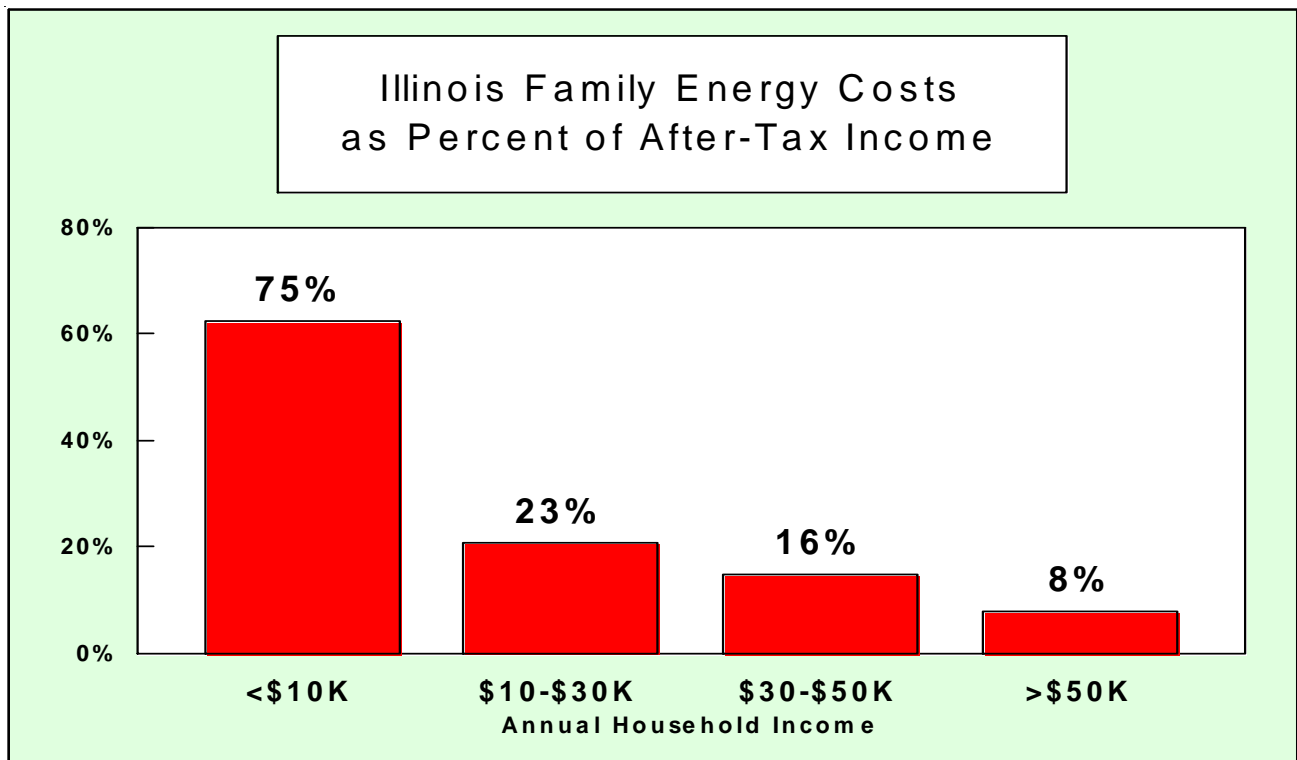


Energy Cost Impacts on Illinois Families, 2010

Energy prices and high unemployment are straining the budgets of Illinois's lower- and middle-class families. In 2010, Illinois households with annual incomes below \$50,000, representing 47% of Illinois's population, spent an estimated average of 20% of their after-tax income on energy. Energy costs for the poorest households earning less than \$10,000 represented 75% of their family incomes, before accounting for any state energy assistance.



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This paper assesses the impact of energy costs on Illinois households in 2010, using energy consumption survey data and current energy price data from the U.S. Department of Energy's Energy Information Administration (DOE/EIA).¹ Energy costs are summarized by household income group using Illinois data from the U.S. Bureau of the Census.² Energy expenditures as a percentage of after-tax income are estimated for the effects of federal and state income taxes and federal social insurance payments.

Key findings include:

- Measured in constant 1990 prices, residential electric rates in Illinois have declined by 30% while the price of residential natural gas has increased in real terms by 16%. The relatively low cost of electric power is due in part to Illinois's historic reliance on domestic coal and nuclear power for most of its electric generation.
- Compared with the rest of the United States, Illinois has higher average household incomes and higher unemployment rates. The average household income in Illinois, \$73,373, is 6% above the U.S. average income of \$68,914. Unemployment in Illinois in 2009 averaged 10.6% compared with the 9.9% national rate.
- Energy costs are consuming the after-tax household incomes of Illinois's low- and middle-income families at levels usually spent on other necessities such as food, housing, or health care. In 2010, Illinois families spent an average of 10% of their after-tax incomes on energy. The 2.2 million Illinois households earning less than \$50,000, representing 47% of households, allocated an estimated 20% of their after-tax incomes to energy.
- The 983,000 Illinois households with annual incomes of \$10,000 to \$30,000 – one-fifth of the state's population – spent an estimated 23% of their after-tax family budgets on energy.
- The 349,000 poorest families in Illinois, below the federal poverty line and earning less than \$10,000 per year, are being squeezed hardest by energy cost increases. Many of these families receive state energy assistance to help reduce the burden of higher energy costs. Yet for most lower-income families and for 1.2 million Illinois households receiving Social Security – representing 26% of Illinois households – energy costs are posing difficult budget choices among energy and other basic necessities such as food and rent.

Illinois Household Incomes

U.S. Census Bureau data on Illinois household incomes in 2009 provide the basis for estimating the effects of energy prices on consumer budgets in 2010.³ The table below shows estimated 2009 after-tax incomes for Illinois families in different income brackets. The Congressional Budget Office has calculated effective total federal tax rates, including individual income taxes and payments for Social Security and other social welfare programs.⁴ State income taxes are estimated from 2009 Illinois income tax rates, and do not reflect the impact of recent tax increases.⁵

Illinois households by pre-tax and after-tax income, 2009

Pre-tax annual income:	<\$10K	\$10-\$30K	\$30-\$50K	>\$50K	Total/avg.
Households (Mil.)	0.349	0.983	0.881	2.544	4.757
Pct. of total households	7.3%	20.7%	18.5%	53.5%	100.0%
Avg. pre-tax income	\$4,758	\$19,965	\$39,805	\$115,066	\$73,373
Effec. fed tax rate %	2.0%	9.1%	14.1%	23.2%	17.0%
Est. state tax rate %	1.0%	2.5%	2.8%	2.8%	2.6%
Est. after-tax income	\$4,615	\$17,649	\$33,098	\$85,206	\$58,981

Some 47% of Illinois families had estimated pre-tax incomes below \$50,000 in 2009, compared with 50% nationally. After federal and state taxes, these families had average incomes of \$22,321. In 2009, the median household income of Illinois families was \$53,966, 7% above the U.S. median household income of \$50,221. Average Illinois household incomes in 2009 were \$73,373, 6% above the U.S. average income of \$68,914.

Compared with the rest of the nation, Illinois has higher average family incomes and higher unemployment.⁶ In 2009, the unemployment rate in Illinois was 10.6%, while the national rate was 9.9%.

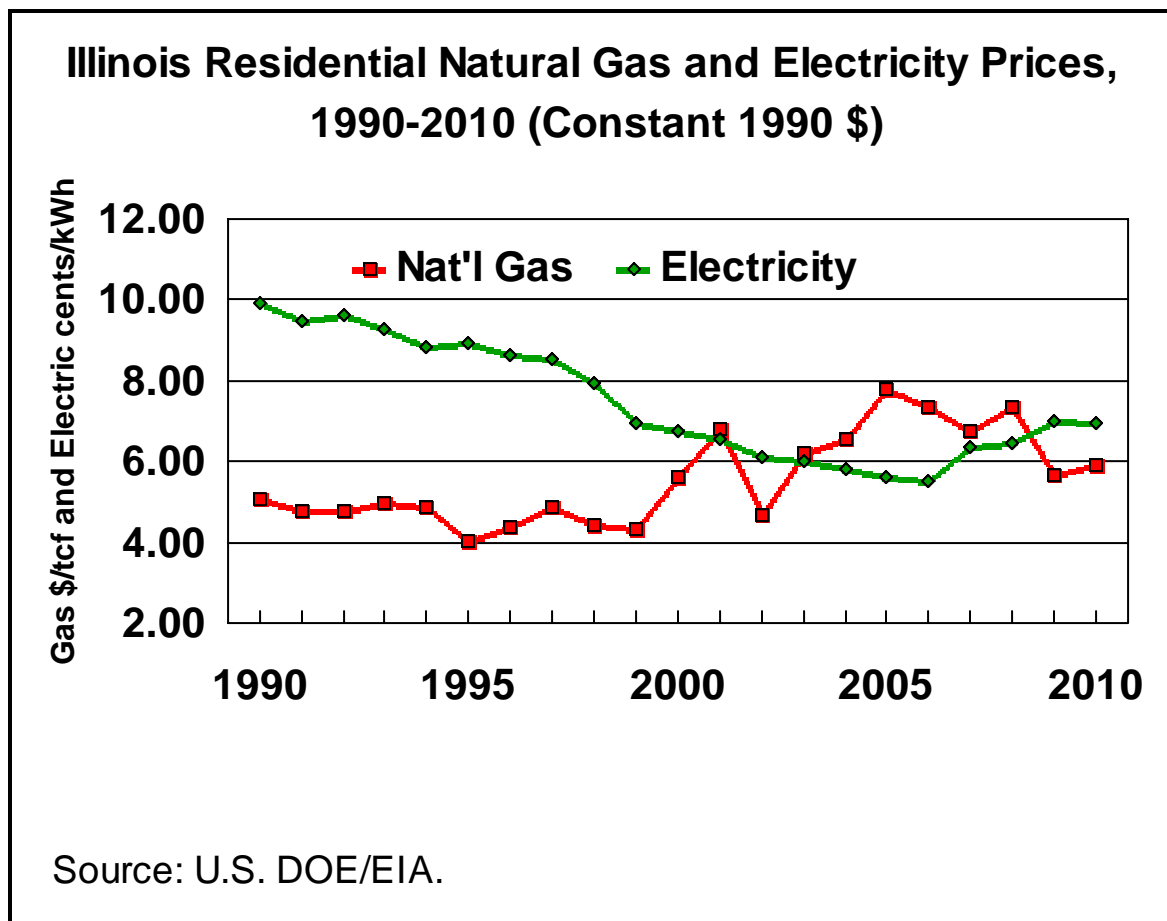
Residential and Transportation Energy Expenses

The principal residential energy expenses are for electricity and natural gas for home heating, cooling, and household appliances. Some Illinois homes also use propane fuel and other heating sources such as wood.

As shown in Chart 1, the price of residential electricity in Illinois has declined by 30% in real, inflation-adjusted terms since 1990, while the price of residential natural gas has increased by 16%. Recent electric rate increases have raised consumer electric bills somewhat, but the residential price of electricity in Illinois has not kept pace with

inflation. Residential natural gas prices have decreased in real terms over the past several years due to increased gas supplies.

Chart 1



The inflation-adjusted 30% decrease in residential electricity prices since 1990 reflects, in part, Illinois's historic reliance on low-cost coal and nuclear power for the majority of its energy supplies. In 2010, coal-based generation provided 46% of the state's electricity.⁷

Estimated 2010 household energy expenses for Illinois are based upon DOE/EIA residential electric and natural gas sales data for Illinois.⁸ Total household energy costs are distributed by income category using DOE/EIA residential energy survey data.

Gasoline prices have declined from their 2008 peaks, but are above \$3 per gallon in most areas. Gasoline accounts for the largest single increase in consumer energy costs since 2001. EIA's January 2011 Energy Outlook reports 2010 average retail gasoline costs at \$2.84 per gallon, compared with \$1.47 per gallon in 2001.

The increase in gas prices follows a decade-long trend of increased use of motor vehicles, measured in millions of vehicle miles driven annually, increased market shares of pickup trucks and SUVs, and an increase in the average number of vehicles owned per household.⁹ Many families continue to own low-efficiency vehicles with low trade-in values.

DOE/EIA's 2001 Survey of Household Vehicles Energy Use (2005) provides information for estimating regional gasoline costs by household income category. These regional gasoline usage data are updated using EIA's 2010 national average retail gasoline price estimate of \$2.84 per gallon. To be conservative, household gasoline consumption in 2010 is assumed to remain at 2001 levels, reflecting the impact of the recession.

The table below summarizes estimated Illinois household energy expenses by income group for 2010, with the percentage of after-tax income represented by energy costs:

Estimated Illinois household energy costs by income category, 2010

Pre-Tax Annual Income:	<\$10K	\$10-\$30K	\$30-\$50K	>\$50K	Average
Residential energy \$	\$1,572	\$1,731	\$1,986	\$2,492	\$2,173
Electric \$	\$810	\$943	\$1,134	\$1,405	\$1,203
Natural Gas \$	\$634	\$655	\$710	\$905	\$790
Other* \$	\$128	\$132	\$143	\$182	\$159
Gasoline \$	\$1,872	\$2,279	\$3,276	\$4,429	\$3,583
Total energy \$	\$3,444	\$4,010	\$5,262	\$6,921	\$5,757
Energy % of after-tax income	75%	23%	16%	8%	10%

*Other includes propane gas and wood.

The share of household income spent for energy falls disproportionately on lower- and middle-income and working families earning less than \$50,000 per year. The 21% of Illinois households earning between \$10,000 and \$30,000 annually spent 23% of their after-tax income on energy. While many low-income consumers qualify for energy assistance, these government programs are hard pressed to keep pace with the escalation of energy prices.

In 2010, the average Illinois family with an after-tax income of \$58,981 spent \$5,757 on energy, or 10% of the family budget. The 2.2 million Illinois households earning less than \$50,000 - representing 47% of households - allocated an average of 20% of their after-tax incomes to energy.

Disproportionate Impacts on Senior Citizens

The impacts of increased energy costs are falling disproportionately on Illinois's 1.2 million households of elderly Social Security recipients, representing 26% of the state's households. In 2009, Social Security recipients in Illinois had an average household Social Security income of \$15,787.¹⁰ Some 62% of these households (764,000) had additional retirement income averaging \$22,931.

DOE/EIA's 2005 Residential Energy Consumption Survey finds that elderly households aged 65 or older spend approximately the same amount on residential energy as households in the 25-34 age bracket, and have the highest per capita residential energy expenditures among all age groups.¹¹

Unlike young working families with the potential to increase incomes by taking on part-time work or increasing overtime, many fixed income seniors are limited to cost-of-living increases that may not keep pace with energy prices. Maintaining the relative affordability of electric and gas rates, and increasing low-income energy assistance, are essential to the wellbeing of hundreds of thousands of Illinois's elderly citizens.

Conclusion

The prices of petroleum-based fuels have increased significantly in the past decade, while the residential price of electricity has not kept pace with inflation. The escalation of Illinois consumer energy prices - together with declining income among middle-income households and high unemployment rates - underscore the need to find ways to reduce energy cost impacts on Illinois families.

Acknowledgment: This paper was prepared for ACCCE by Eugene M. Trisko, an energy economist and attorney in private practice. Mr. Trisko has served as an attorney in the Bureau of Consumer Protection at the Federal Trade Commission and as an expert economic witness before state public utility commissions. He represents labor and industry clients in environmental and energy matters. Mr. Trisko can be contacted at emtrisko@earthlink.net.

End Notes

¹ Data on residential energy consumption patterns by income category are from U.S. Department of Energy, Energy Information Administration, 2005 Survey of Residential Energy Consumption (RECS), available at <http://www.eia.doe.gov/emeu/recs/contents.html>. Illinois electricity and natural gas costs are based on 2010 state data from U.S. DOE/EIA Electric Power Monthly (December 2010), Natural Gas Monthly (January 2011) and Short Term Energy Outlook (December 2010).

² Household incomes in Illinois by income category are derived from the distribution of household income in U.S. Census Bureau, American Fact Finder, Illinois Selected Economic Characteristics: 2009 (2010).

³ Ibid.

⁴ Congressional Budget Office, "Effective Federal Tax Rates Under Current Law, 2001 to 2014," (August 2004). Effective federal tax rates for the income categories employed in this paper were interpolated from CBO's tax rates by income quintile.

⁵ State tax data are estimated from marginal tax rates compiled by the Tax Foundation (2009).

⁶ U.S. Census Bureau, American Fact Finder, Illinois Selected Economic Characteristics: 2009 (2010).

⁷ U.S. DOE/EIA, Electric Power Monthly (December 2010), Tables 1.6.B, 1.7B (2010 electricity estimate annualized based on October 2010 YTD generation.)

⁸ U.S. DOE/EIA, Electric Power Monthly (December 2010), annualized based on October 2010 YTD electric sales) and Natural Gas Monthly (January 2011), annualized based on November 2010 YTD natural gas revenues and sales.

⁹ U.S. DOT, 2001 National Household Travel Survey, "Summary of Travel Trends," (December 2004).

¹⁰ U.S. Bureau of the Census, Illinois Selected Economic Characteristics: 2009 (2010).

¹¹ U.S. DOE/EIA, "Residential Energy Consumption Survey, 2005," Table US1, Part 2.