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AZ CORP COMMISSION
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IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	)DOCKET NO. G-01551A-04-0876

DIRECT TESTIMONY OF ARIZONA COMMUNITY ACTION ASSOCIATION BY BRIAN BABIARS

Q. 1. Please state your name and business address.

A. 1. My name is Brian Babiars, and my address is 224 S. 3rd Avenue, Yuma, Arizona 85364.

Q. 2. What is your position with Arizona Community Action Association (ACAA), and what has been your experience with low-income issues?

A. 2. I am on the Board of Directors for ACAA, a position I have held since 1985. I also served on the Yuma City Council. I have also served for many years as the ACAA Energy Committee Chair. In my hometown of Yuma, Arizona, I am the Executive Director of the Western Arizona Council of Governments (WACOG), a

Community Action Program that serves Yuma, La Paz and Mohave counties. I have worked for WACOG for thirty years and have been the Executive Director since 1985. I have been an integral part of the Yuma community for more than forty years, where I have performed a number of community services, including the Yuma Elementary District as well as Western Arizona College of Board of Governors.

Q. 3. Please describe ACAA.

A. 3. ACAA is a statewide organization of people and organizations working together to find avenues of economic self-sufficiency for low-income Arizonans. There are 37 Community Action Programs (CAPs) across the state. These agencies address self-sufficiency and crisis needs of low-income individuals and families on a day-to-day basis in several ways: job counseling and training; homeless services; housing counseling; energy assistance, home repair; food assistance, senior centers, child care and in some cases Head Start programs. Community Action Agencies stand for the voiceless, the poor, the elderly and the disabled in our state and we have done so for over 40 years.

The Arizona Community Action Association serves as the statewide association for all of the above-mentioned programs. ACAA is a membership, non-partisan, private non-profit, 501 (c)(3) organization, governed by a 23 member Board of Directors. ACAA has developed a reputation throughout our history of providing credibility to and factual data on the subject of poverty in Arizona. For example, ACAA conducted and completed the 2003 ACAA Poverty Report, a study of poverty in Arizona, the third such study we have been responsible for since 1985.[1] These studies have been a result of quantitative and qualitative research, including community meetings held throughout the state, soliciting the views of people from many walks of life.

[1] Poverty in Arizona: Working Towards Solutions, ACAA, 2003

Q. 3. What is the purpose of your testimony?

A. 3. I am testifying on behalf of the Arizona Community Action Association and low-income residential customers in the Southwest Gas service territory. I am testifying for several purposes: 1) to urge the Commission to hold the low-income residential customers harmless in this rate case; 2) to urge the Commission to maintain the G-10 low-income rate; and 3) to urge the Commission to increase the marketing related to the availability of the low-income discount.

Q. 4. What has been ACAA's involvement in utility issues?

A. 4. Over the past 17 years, ACAA has worked cooperatively with Arizona's utility companies to develop public policies and programs that decrease the energy affordability gaps of low-income customers. An example of these cooperative efforts is the establishment of the Utility Repair Replacement and Deposit program by the Arizona State Legislature. This very successful program, which was modified this year to allow more of the revenue collected to flow to the community it is intended to serve, was the first of its kind in the nation and has been modeled by several other states since its inception in 1989. This is but one example of where Community Action Programs and utility companies, in this case Southwest Gas specifically, combined our respective knowledge to find solutions targeted for low-income customers.

Just as importantly, ACAA has actively engaged every energy utility company in Arizona over the past 17 years, in full cooperation with the Arizona Corporation Commission, as those companies have proposed rate changes for their residential customers. As a result of ACAA's leadership and communications, every utility company in Arizona has a low-income energy program of some type.

Q. 5. When you refer to low-income Arizonans, how many people are you talking about?

A. 5. Poverty is a problem of increasing severity in Arizona and nationally. According to the 2002 US Census figures, there are 746,145 individuals or 13.6% of our population living in poverty. Of that number, 302,013, or 20.1% are children.

Q. 6. How do these figures equate to salary or household income?

A. 6. Officially, it means that a family of three with an income of $1,306 a month, or $15,672 a year or less is living in poverty.[2]

Q. 7. What is the extent of poverty in the Southwest Gas service territory?

A. 7. According to the US Department of Agriculture, 746,145, or 13.6% of Arizonans are living in poverty. By Southwest Gas service territory by county, these numbers break down as follows:

County	**No. of People in Poverty**		**% In Poverty**	
	People	**Children**	**People**	**Children**
Cochise	19,483	8,115	16.7	25.2
Gila	8,764	3,513	17.4	27.7
Graham	6,703	2,376	22.5	25.1
Greenlee	764	296	10.2	13.0
La Paz	3,984	1,043	20.7	26.4
Maricopa	400,631	163,781	11.9	17.5
Mohave	26,754	10,152	15.7	25.8

[2] Source: US Department of Health and Human Services, 2004.

Pima	122,981	46,956	14.1	21.3
Pinal	30,808	11,332	16.3	22.0
Yuma	32,564	15,934	19.7	30.9

Q. 8. You have made it clear that your organization works to serve the needs of low-income people in Arizona. However, how can ACAA legitimately say that they represent the voice of those same people?

A. 8. It is not simply our opinion. In a series of 29 community meetings held throughout the State two years ago, in the development of the Poverty Report, 1100 people participated in community meetings across Arizona. Those participants stated they believe that conditions have gotten worse in the following areas over the past ten years: homelessness; emergency food and utility assistance; and affordable health care. Additionally, our Boards include as members, representatives of the low-income communities throughout the State. Their participation is essential to the work that we do, and their voice is heard through us throughout the State.

Q. 9. What effects do rising utility rates have on Arizona's low-income population?

A. 9. The issue of affordability has significant consequences for both the low-income ratepayer and the utility company. Although low-income households tend to consume less total energy than the average household, the burden of the energy bills, expressed as a percentage of income, is considerably greater for those who have lower incomes. In 2003, the median residential energy burden nationally was 3 percent for all households, and 10 percent for all low-income households.[3] High expenditures for energy leave less income available for other

[3] US Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance.

items including necessities such as food, clothing, medication and rent. In fact, many households must cut back on essentials in order to pay their energy bills. Any savings that a low-income family might save could be spent on necessities, and, where appropriate, reducing past arrearages in their gas bills.

Throughout Arizona, through a human and social service network that includes 37 community action programs, workers assist over 40,000 low-income families each year in paying their past due utility bills and their utility deposits. Federal Low Income Energy Assistance (LIHEAP) funds are used throughout the State, but are only serving 4% of the need in Arizona.[4] Of 436,000 eligible households, 18,600 received LIHEAP support in 2004. The total LIHEAP allocation for Arizona in 2004 was $5.7 million, however $16.4 million of additional resources were leveraged to serve families. 73% of the LIHEAP eligible households have one vulnerable individual resident, which is defined as a young child, an individual with disabilities, or a frail older individual.

Q. 10. What is the Community Action philosophy in working with families with utility problems and what works best in assisting households with continual problems of utility bill arrearages and shutoffs?

A. 10. Community Action Programs have paid over $70 million to Arizona utility companies over the last ten years. Through day to day contact with low-income utility consumers, Community Action Programs have learned that just paying past due utility bills for families **is not** the solution to the ongoing problem of unaffordable gas, electricity, water and basic housing needs.

Q. 11. What experience do Community Action Agencies have in energy efficiency and weatherization?

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[4] Apprise Study for Arizona, May 2005 (attached).

A. 11. Arizona Community Action Programs have extensive experience in operating and administering weatherization programs. Community Action Agencies have been operating the federal weatherization program since 1977 and are considered the "presumptive sponsors" of weatherization assistance programs at the local level. All sub-grantees are either non-profit organizations or units of general purpose government such as a city or county. The Community Action weatherization program mission is to reduce utility costs for low-income families, particularly for the elderly, people with disabilities, and children by improving the energy efficiency of their homes and ensuring their health and safety.

With over 40 years of experience at Community Action programs across the nation and in Arizona, we have learned that combining our philosophy of promoting family self-sufficiency with our belief in the integration of services we can make the biggest inroads to long-term problem solving. Through the comprehensive delivery of resources to troubled households we have found we can have the biggest successes in terms of self-sufficiency. Community Action Programs have learned that by targeting the resources of the low-income home weatherization program to LIHEAP recipients with the highest utility bills, a real difference can be made on a more permanent basis, thereby reducing continuing arrearage and shutoff problems. In addition, when weatherization activities are leveraged with other private and public resources, an entire energy conservation package can be applied to a home, resulting in more cost effective, long term savings. Several Community Action Agencies in Arizona have been very effective in this type of leveraging activity.

Q. 12. Why are you so concerned with the Southwest Gas rate increase?

A. 12. ACAA is concerned about the rate increase for two reasons. First, the elimination of the G-10 low-income residential rate will eliminate any structured low-income rate. It is our concern that the issues faced by the low-income will be ignored, and the discount currently available will become obsolete and eventually unavailable to eligible households. If this happens outreach, which is already an issue, will become a much greater issue.

Second, as I have articulated in this testimony, the problem of poverty in Arizona is overwhelming. What seems like an insignificant increase in rates for Southwest Gas, is significant for a low-income family in Arizona. On average, a low-income customer's bill will increase $3.60 per month. For those customers already unable to pay their bills, this adds an additional burden. For those customers who are at present just getting by, this increase has the potential to render them incapable of paying their bill.

Q. 13. What would ACAA like to see result from these proceedings?

A. 13. ACAA would like to see several actions from these proceedings:

That the Commission impose no harm to eligible low-income residential customers;

That the G-10 rate be retained; and

That the Company increase its marketing of the availability of a low-income discount rate commensurate with the need.

Q. 14. Does that conclude your testimony?

A. 14. Yes, it does.

Attachments:

1. Applied Public Policy Research Paper: Energy Needs: Profile of Low Income Households – Phoenix and Arizona.

2. Brian Babiars Vitae

RESPECTFULLY SUBMITTED this July 20, 2005.

By _____ _____

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Applied Public Policy Research

APPRISE

Institute for Study and Evaluation

DATE: May 25, 2005 (Updated June 12, 2005)

TO: Sue Present

FROM: APPRISE Incorporated

SUBJECT: Energy Needs: Profile of Low Income Households – Phoenix and Arizona

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Introduction

Policymakers and program managers need information about the energy needs of low-income households to make effective decisions related to program design, operations, and evaluation. Decisions need to be made at the national, state, and local levels; therefore, information needs to be developed for each of those levels as well. In this report, APPRISE uses existing data sources to develop information on the energy needs of low-income households for decision makers in Arizona. The statistics and figures presented in this report represent examples of the broad array of information that can be obtained from existing data sources. Moreover, the findings in this report provide valuable information about the needs and characteristics of low-income households in the United States, Arizona, and the Phoenix metropolitan area. The information presented in this report includes:

- National-level Data: Decision makers in Arizona can use this information to understand the similarities and differences between energy needs of Arizona households and households throughout the United States.

- State-level Data: Arizona LIHEAP managers can use this information to make decisions regarding the design of their statewide program.

- Local-level Data: Local organizations in Phoenix can use this information to improve integration of energy assistance programs with other programs designed to assist low-income households.

Methodology

Each state selects its own LIHEAP income eligibility standard.[1] For this profile, low-income households have been identified using the current Arizona LIHEAP income eligibility standard of 150 percent of the Federal Poverty Guidelines, which was $27,600 for a four-person household in 2003. APPRISE used the year-appropriate federal poverty guideline threshold values when analyzing data for this report. Throughout the document, the terms low-income, LIHEAP eligible, and LIHEAP income-eligible are used interchangeably.

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[1] LIHEAP grantees can set the household income cutoff at any figure no less than 110 percent of the Federal Poverty Guidelines and no more than the greater of 150 percent of the Federal Poverty Guidelines or 60 percent of state median income (http://www.acf.dhhs.gov/programs/liheap/eligible.htm).

APPRISE used data from various sources to generate the information provided in this report:

- National-level Data: APPRISE used data from the United States Division of Energy Assistance and the United States Energy Information Administration.
- State-level Data: APPRISE developed statistics for the state of Arizona using the Census 2000 Public Use Microdata (PUMS) Five Percent Sample and the 2002-2004 Current Population Survey Annual Social and Economic Supplement (ASEC).
- Local-level Data: APPRISE developed statistics for the Phoenix metropolitan area using the 2002 American Housing Survey (AHS) Phoenix Metropolitan Area Sample.

Impact of Poverty and Energy Prices on Low-Income Households in the United States

In the United States, the poverty rate and energy prices are increasing.

- The poverty rate has increased from 11.3% in 2000 to 12.5% in 2003.[2]
- Electricity prices have risen from 8.24 cents per kWh in 2000 to 8.94 cents in 2004.
- Natural Gas prices have risen from $7.76 per Thousand Cubic Feet in 2000 to $10.74 in 2004.[3]
- The total residential energy bill for all low-income households has increased from $25.1 billion in 2001 to $28.3 billion in 2003.[4] The total residential energy bill increase results from both the growth in the number of low-income households and the rise in average home energy bills.

Energy burden is a statistic that is often used to assess the difficulties that households have in paying their energy bills. Energy burden is defined as the percent of income spent on energy. In 2003, the median residential energy burden was 3 percent for all households and 10 percent for all low-income households.[5]

Energy gap is defined as the dollar amount needed to reduce a customer's energy burden to an amount equal to a specified energy burden percentage. In 2003, the total dollar amount needed to ensure that no American low-income household spends more than 15 percent of income on

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[2] 2000 Report: Dalaker, Joseph, U.S. Census Bureau, Current Population Reports, Series P60-214, Poverty in the United States: 2000, U.S. Government Printing Office, Washington, DC, 2001. 20-03 Report: DeNavas-Walt, Carmen, Bernadette D. Proctor, and Robert J. Mills, U.S. Census Bureau, Current Population Reports, P60-226, Income, Poverty, and Health Insurance Coverage in the United States: 2003, U.S. Government Printing Office, Washington, DC, 2004.

[3] Energy Information Administration, U.S. Department of Energy. "Monthly Energy Review, April 2005", Table 9.9 (Average Retail Prices of Electricity) and Table 9.11 (Natural Gas Prices).

[4] U.S. Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2003: Page 22, Figure 3-13.

[5] U.S. Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2003. All U.S. Households: Page 54, Figure A-2c. All Low-Income Households (150 percent of the federal poverty guidelines): Page 17, Figure 3-6.

residential energy was $4.9 billion. The total dollar amount required to reduce residential energy bills for low-income households to 25 percent of income was $2.7 billion.[6]

Impact of Poverty and Energy Prices on Low-Income Households in Arizona

Arizona policymakers and program managers can use state-level information to understand the energy needs of Arizona households. Arizona is a microcosm of the national trends in poverty and energy prices. Arizona is a growing state with an increasing population of low-income households. As shown in Table 1, the number of households in Arizona that are income-eligible for LIHEAP increased by 73,000 households in just three years, from 362,800 in 2000 to 436,000 in 2003.

Table 1
Arizona LIHEAP Eligible Households (2000 and 2003)

	Number of Households	Percent of all Arizona Households
LIHEAP Eligible Households, 2000	362,800[1]	19.1%
LIHEAP Eligible Households, 2003	436,000[2]	21.4%

[1] Source: 2000 Decennial Census PUMS 5 Percent Sample.
[2] Source: Three-year Average of the CPS ASEC 2002-2004.

Table 2 displays the changes in natural gas and electricity prices in Arizona from 1999 to 2001. Natural gas prices rose 16 percent from $8.99 per Million BTU in 1999 to $10.45 in 2001. Electricity prices remained stable between 1999 and 2001.[7] Based on the rise in national energy prices since 2000 described on page two, energy prices in the state of Arizona have probably also increased since 2001.

Table 2
Arizona Historical Energy Prices (1999-2001)

Year	Natural Gas	Electricity
1999	8.99	25.01
2000	9.33	24.73
2001	10.45	24.32

Source: Table 2. EIA Arizona State Energy Data 2001. Prices in Nominal Dollars per Million BTU.

[6] U.S. Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2003: Page 21, Figure 3-12.
[7] State data beyond 2001 has not been published by EIA. APPRISE will seek out additional information sources to update the energy price table data closer to 2005 for the next draft of these findings. APPRISE would appreciate assistance from any of the Arizona utility companies or NLIEC board members in obtaining state-level energy price data.

In Arizona, energy expenditures, particularly related to cooling for the elderly, disabled, and young children, are not a luxury, but a necessity due to extreme summer high temperatures that average over 100 degrees during the months of June, July, and August. High-energy prices and the need for energy have a direct impact on the amount of money that low-income households spend on energy. Table 3 shows that 26 percent of LIHEAP eligible households reported that they spent more than $1,500 per year on residential energy expenditures.

Table 3
Energy Expenditures for Arizona LIHEAP Eligible Households (1999)

	Percent of Households
No Separate Energy Bill	10%
Less than $500	12%
$500 - $999	27%
$1,000 - $1,499	25%
$1,500 - $1,999	13%
Over $2,000	13%
All LIHEAP Eligible Households	100%

Source: 2000 Decennial Census PUMS 5 Percent Sample.

Table 4 shows that 44 percent of LIHEAP eligible households in Arizona had an energy burden of 10 percent or greater (i.e., spent 10 percent or more of their income on total residential energy). Moreover, 17 percent of LIHEAP eligible households had an energy burden of 25 percent or greater. By comparison, the median residential energy burden for all US households was 3 percent.

Table 4
Energy Burden for Arizona LIHEAP Eligible Households (1999)

	Percent of Households
No Separate Energy Bill	10%
Less than 5%	17%
5 - <10%	28%
10 - <15%	16%
15 - <20%	7%
20 - <25%	4%
25% or greater	17%
All LIHEAP Eligible Households	100%

Source: 2000 Decennial Census PUMS 5 Percent Sample.

The needs of low-income Arizona households are growing faster than the State's capacity to provide energy assistance. In FY 2004, LIHEAP provided $5.7 million in home energy assistance to nearly 18,600 low-income households in Arizona.[8] However, as shown in Table 5, the LIHEAP recipient households represent only 4 percent of the LIHEAP income-eligible households in Arizona.

Table 5
Arizona LIHEAP Eligible and Recipient Households (2003)

	Number of Households
LIHEAP Eligible	436,000[1]
LIHEAP Recipient	18,600[2]

[1] Source: Three-year Average of the CPS ASEC 2002-2004.
[2] Source: LIHEAP Household Reports FY 2004.

Decision makers can estimate the severity of the energy needs for low-income Arizona households by considering the funding level needed to ensure that no low-income household spent more than a certain percentage of income on energy expenses. Although there is no standard measure of energy affordability, Table 6 displays the funding needed to reduce the energy burden of low-income Arizona households in 1999 to 5 percent, 10 percent, and 25 percent.

- 5 Percent Energy Burden: There were approximately 266,700 LIHEAP eligible households with energy burdens greater than 5 percent. It would require over $222 million of assistance to reduce their energy bills to 5 percent of household income.

- 10 Percent Energy Burden: There were approximately 166,000 LIHEAP eligible households with energy burdens greater than 10 percent. It would require over $128 million of assistance to reduce their energy bills to 10 percent of household income.

- 25 Percent Energy Burden: There were approximately 68,500 LIHEAP eligible households with energy burdens greater than 25 percent. It would require $57 million of assistance to reduce their energy bills to 25 percent of household income.

In FY 2004, LIHEAP provided $5.7 million of benefits to 18,600 households. Arizona expended $16.4 million of additional resources to supplement LIHEAP and low-income energy efficiency programs.[9] In total, Arizona households received over $22 million in energy assistance benefits. However, the dollars needed to ensure that no LIHEAP eligible Arizona household spends more than 5 percent of household income on residential energy is over $222 million.

[8] The number of FY 2004 LIHEAP recipients was obtained from Arizona's FY 2004 LIHEAP household reports. The amount of FY 2004 benefits provided was obtained from Arizona's FY 2004 LIHEAP Grantee Survey for FY 2004.
[9] http://www.liheap.ncat.org/Supplements/2004/supplement04.htm (Source Date: May 17, 2005; Download Date: June 9, 2005)

Table 6
Energy Gap for Arizona LIHEAP Eligible Households (1999)

	Number of Households	Energy Gap
Households with Energy Burdens Greater Than 5%	266,700	$222,100,000
Households with Energy Burdens Greater Than 10%	166,000	$128,400,000
Households with Energy Burdens Greater Than 25%	68,500	$57,000,000

Source: 2000 Decennial Census PUMS 5 Percent Sample.

Demographic Characteristics of Low-Income Households in Arizona

Arizona policymakers and program managers could use additional state-level information to make decisions that are more directly appropriate to the particular financial and demographic needs of low-income households in Arizona. For example, decision makers need information on demographic characteristics, which could be used to target limited State funding to the most vulnerable populations where assistance might have the greatest impact.

The LIHEAP statute identifies vulnerable and high energy-burden households as having the highest home energy needs. The statute defines a vulnerable household as those with at least one member that is a young child, an individual with disabilities, or a frail older individual. LIHEAP has explicit national performance goals for FY 2003 that include increasing the percentage of LIHEAP recipient households having at least one member age 60 years or older or age 5 years or younger.[10]

The following tables describe the characteristics of these LIHEAP eligible households. The majority of LIHEAP eligible households in Arizona have at least one vulnerable member. These households are vulnerable with respect to poverty, rising energy prices, and high energy burdens. These vulnerable individuals, in particular the elderly population, are also at great health risk due the extreme summer heat in Arizona. Table 7 shows that 73 percent of all LIHEAP eligible households reported having at least one household member who is an elderly (i.e., age 60 years or older) individual, a disabled individual, or a young (i.e., age five years or younger) child. The information reveals that targeting assistance benefits will be a challenge for Arizona decision makers, because most low-income Arizona households have vulnerable individuals.

Table 7
Arizona LIHEAP Eligible Households with Any Vulnerable Group Members (2003)

	Number of Households	Percent of Households
Household With Vulnerable Member(s)	316,500	73%

[10] U.S. Department of Health and Human Services, Administration for Children and Families, Office of Community Services, Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2003: Page ix.

	Number of Households	Percent of Households
Household with No Vulnerable Members	119,500	27%
All LIHEAP Eligible Households	436,000	100%

Source: Three-year Average of the CPS ASEC 2002-2004.

Table 8 describes the number of LIHEAP eligible households that reported having one or more household members particularly vulnerable to unaffordable energy bills. Thirty-five percent of households reported having at least one household member who was elderly, 15 percent reported having at least one household member who was nonelderly and disabled, and 27 percent reported having at least one household member who was a young child.

Table 8
Arizona LIHEAP Eligible Households with Vulnerable Group Members (2003)

	Number of Households	Percent of Households
Household With Elderly (Age 60 or older)	154,100	35%
Household With Nonelderly Disabled	64,375	15%
Household With Young Child (Age 5 or under)	117,200	27%

Source: Three-year Average of the CPS ASEC 2002-2004.

Table 9 presents the number of LIHEAP eligible households that reported receiving income from public assistance (e.g., TANF), Supplemental Security Income, or Social Security. Six percent reported receiving public assistance benefits, another 6 percent received supplemental security income, 30 percent received social security, and 58 percent reported not having received benefits from any income program.

Table 9
Income Program Participation of Arizona LIHEAP Eligible Households (2003)

	Number of Households	Percent of Households
Public Assistance	24,600	6%
Supplemental Security Income	26,400	6%
Social Security	132,400	30%
No Income Program Participation	252,600	58%
All LIHEAP Eligible Households	436,000	100%

Source: Three-year Average of the CPS ASEC 2002-2004.

As shown in Table 10, 21 percent of all LIHEAP eligible households reported that the household was a single parent household.

Table 10
Single-Parent Arizona LIHEAP Eligible Households (2003)

	Number of Households	Percent of Households
Single-Parent Household	90,300	21%
Not Single Parent Household	345,700	79%
All LIHEAP Eligible Households	436,000	100%

Source: Three-year Average of the CPS ASEC 2002-2004.

Table 11 shows that 15 percent of all LIHEAP eligible households reported that the primary language spoken in their household is Spanish and none of the household members speak English "very well". Given this data, it is incumbent on program managers to design programs to accommodate the language needs of their population.

Table 11
Linguistically Isolated Arizona LIHEAP Eligible Households (2000)

	Number of Households	Percent of Households
Spanish Isolation	54,800	15%
Not Isolated	308,000	85%
All LIHEAP Eligible Households	362,800	100%

Source: 2000 Decennial Census PUMS 5 Percent Sample.

In Arizona, cooling needs are not a luxury for these low-income households. Households with elderly, disabled, or children are at great risk for heat-related illnesses during the extreme Arizona summer. Table 12 displays the average high temperature during the warm weather months in Arizona. The average high temperature during the months between April and October is above 90 degrees with temperatures above 100 for most of June, July, and August.

Table 12
Historical Weather Data (April – Oct)

Month	Average High Temperature
Apr	84.8
May	93.3
Jun	102.9
Jul	105.2
Aug	103.6
Sep	99.3
Oct	89.3

Source: Western Regional Climate Center.[11]

The Energy Needs of Low-Income Households in Phoenix

In addition to information related to energy needs and demographic characteristics of low-income households, policymakers and program managers at the local level might also consider information related to other factors that are associated with energy (e.g., housing) for the purposes of devising complementary direct assistance programs. These decision makers can use statistical information on the relationship between energy needs and housing adequacy to develop policies and procedures to more effectively operate energy assistance programs that complement housing programs.

As shown in Table 13, approximately 203,800 households in Phoenix, or 17.5% of all Phoenix households, are LIHEAP eligible.

Table 13
Phoenix LIHEAP Eligible Households (2002)

	Number of Households	Percent of all Phoenix Households
LIHEAP Eligible Households, 2002	203,800	17.5%

In Phoenix, the extreme summer temperature creates a substantial need for cooling energy, particularly in households with an elderly person, disabled person, or young child. These households come to rely on air conditioners not as a luxury, but as an essential appliance for health-related use. Table 14 displays the number of LIHEAP eligible households in Phoenix with and without air conditioning units[12]. With steady summer high temperatures above 100 degrees, 23,400 (or 12 percent of 203,800) LIHEAP eligible households in Phoenix do not have air conditioning units.

Table 14
Phoenix LIHEAP Eligible Households with Air Conditioning Units (2002)

	Number of Households	Percent of Households
Household With Air Conditioning Unit(s)	180,400	88%
Household with no Air Conditioning Unit	23,400	12%
All LIHEAP Eligible Households	203,800	100%

Source: 2002 American Housing Survey, Phoenix Metropolitan Area Sample.

The significant need for air conditioning comes at a price. In a table not shown here, we find that those LIHEAP eligible households with air conditioners are paying heavily for that necessity.

[11] Period of Record Monthly Climate Summary; Phoenix, Arizona. Period of Record 7/1/1948 – 12/31/1998.

[12] Evaporative coolers are not included in the American Housing Survey definition of air conditioning units and the survey does not provide data about the use of evaporative coolers.

Among the 180,400 low-income households that have an air conditioning unit, 37 percent have energy burdens at or greater than 10% and 18 percent have energy burdens at or greater than 25%.

Table 15 reports the energy burden statistics for the Phoenix Metropolitan area. In Phoenix, 37 percent of LIHEAP eligible households had an energy burden of 10 percent or greater. Moreover, 18 percent of LIHEAP eligible households had an energy burden of 25 percent or greater. As evidenced by table 4, the energy burden distribution for LIHEAP eligible households in Phoenix is very similar to the distribution for LIHEAP eligible households throughout Arizona.

Table 15
Energy Burden for Phoenix LIHEAP Eligible Households (2002)

	Number of Households	Percent of Households
No Separate Energy Bill	21,400	11%
Less than 5%	50,700	25%
5 - <10%	54,300	27%
10 - <15%	18,900	9%
15 - <20%	12,600	6%
20 - <25%	8,600	4%
25% or greater	37,300	18%
All LIHEAP Eligible Households	203,800	100%

Source: 2002 American Housing Survey, Phoenix Metropolitan Area Sample.

Policymakers and researchers often focus on shelter burden when considering the plight of low-income households. Shelter burden is defined as the percent of income spent on housing costs (including residential energy costs). According to the United States Department of Housing and Urban Development (HUD), the generally accepted definition of affordable housing is "housing for which the occupant is paying no more than 30 percent of his or her income for gross housing costs, including utilities;[13] families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care."[14]

Some researchers have defined severe shelter burden more conservatively as a household that spends 50 percent or more of their income on shelter costs.[15] Table 16 presents shelter burden and energy burden for LIHEAP eligible households in Phoenix. Nearly all LIHEAP eligible households with an energy burden of 25 percent or greater have a severe shelter burden (i.e., spend 50 percent or more of their income on housing costs). Table 16 shows that as energy

[13] http://www.hud.gov/offices/cpd/library/glossary/a/index.cfm (Source Date: December 6, 2002; Download Date: June 1, 2005)
[14] http://www.hud.gov/offices/cpd/affordablehousing/index.cfm (Source Date: May 27, 2005; Download Date: June 1, 2005)
[15] See Cushing N. Dolbeare. 2001. "Housing Affordability: Challenge and Context." Cityscape: A Journal of Policy Development and Research, (5)2:111-130. A Publication of the U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

burden increases so does the likelihood of having a severe shelter burden. These findings suggest that energy burden has a substantial impact on housing costs.

Table 16
Shelter Burden and Energy Burden for Phoenix LIHEAP Eligible Households (2002)

	Shelter Burden					
	Less than 50%		50% or greater		All LIHEAP Eligible Households	
Energy Burden	Number	Percent	Number	Percent	Number	Percent
Less than 10%	84,700	67%	41,700	33%	126,400	100%
10 - <25%	13,600	34%	26,600	67%	40,200	100%
25% or greater	200	1%	37,100	99%	37,300	100%

Source: 2002 American Housing Survey, Phoenix Metropolitan Area Sample.

Conclusion

This report presented some examples of the broad array of information that can be developed related to the energy needs of low-income households using existing data sources. Moreover, the analyses presented here provide constructive information about the needs and characteristics of low-income households in the United States, Arizona, and the Phoenix metropolitan area.

The general findings demonstrate that low-income households in Arizona spend a significant amount of their income on residential energy. Moreover, the energy burdens of most LIHEAP eligible Arizona households are significantly higher than the energy burden of the average American household. In addition, the financial commitment to reduce energy bills to 5 percent of income for low-income Arizona households would require over $222 million more in energy assistance funding each year.

Policymakers and program managers can use information developed from existing data sources for program design, operations and evaluation at the national, state, city and neighborhood levels. However, there are limitations to what can be learned from these data. For example, the sources presented in this report do not provide information regarding how individual households manage their unaffordable energy needs. Further questions like these can be investigated by talking directly to customers via in-depth interviews and surveys, as seen in the work conducted by Roger Colton on energy insecurity.

BRIAN BABIARS

Mr. Brian Babiars is the Executive Director of Western Arizona Council of Governments (WACOG), a position he has held for the last nineteen years. Mr. Babiars began his career with WACOG in 1973 as the Physical and Natural Resources Director and became Deputy Director in 1978 prior to his appointment as Executive Director in 1985.

Mr. Babiars has an extensive history of service on numerous civic and non-profit boards. In addition, his public service includes serving on the Yuma City Council in 1971, being on the Yuma Elementary School District #1 Board from 1977 to 1979, and serving on the Arizona Western College District Governing Board from 1982 to 1992, including two terms as Chairman. Mr. Babiars currently serves on AEA Federal Credit Union Board of Directors. Mr. Babiars has served on the ACAA Board of Directors for nineteen years, serving on numerous committees, including Vice-Chairman of the Board and Chairman of the Energy Committee.

WACOG is a community action agency serving Yuma, La Paz, and Mohave Counties. Its programs include community and emergency services and community development. WACOG is the Area Agency on Aging and is the Head Start grantee for western Arizona, serving 1,060 children and their families at twenty-two sites.