



Washington State Energy Needs Final Report

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Economic Development**

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Executive Summary

The Washington Office of Community Trade and Economic Development (CTED) has been interested in developing information on LIHEAP-eligible households in Washington and the challenges that they face in meeting their energy needs to help them improve their LIHEAP program and create support for additional energy assistance in Washington State. Their research strategy has included a survey of LIHEAP recipients in Washington State, participation as a sponsor in APPRISE's National Multi-Sponsor Study of Ratepayer-Funded Programs, and additional research on the energy needs and energy assistance available to utility customers across the state. This report provides information obtained from the last component of the research, and draws on findings from the previous research.

Energy Needs and Energy Assistance

The Federal maximum LIHEAP standard is 150 percent of the poverty level or 60 percent of state median income, whichever is greater. States may choose the maximum of these two levels, or they may set a lower income limit to target available funds to households with lower income, but it cannot be lower than 110 percent of poverty. Most states have chosen to set their maximum standard at 150 percent of poverty. However, there are some states that have chosen higher levels and some that have chosen lower levels. The LIHEAP standard in Washington State is 125 percent of poverty. By setting the standard below the maximum, Washington limits the number of households who are eligible for assistance and targets benefits to those with the highest level of need.

Our analysis shows that 72 percent of households in Washington with income less than or equal to 125 percent of poverty have an energy burden of greater than five percent of income, and 46 percent of these households have an energy burden of greater than ten percent of income. The available energy assistance in Washington (LIHEAP and investor-owned utility bill payment assistance programs) was only enough to cover 23 percent of the difference between household energy bills and a five percent energy burden in 2005. When all households with income up to 150 percent of poverty are included in the analysis, only 19 percent of the gap is covered with the available funding.

Our 2005 survey of Washington LIHEAP recipients provides additional evidence on the need for energy assistance. The survey showed that even among those households that did receive LIHEAP assistance, 38 percent went without food, 81 percent reduced expenses for necessities, 35 percent kept their home at a temperature they felt was unsafe, and 15 percent had their electric service terminated.

Utilities

There are three investor-owned electric utilities and four natural gas utilities in Washington. Puget Sound Energy serves the majority of investor-owned utility electric and gas customers in the state. However, in addition to the investor-owned utilities, there are 21 PUDs, 14 municipal electric utilities, and 17 electric cooperatives that serve residential customers in Washington.

The investor-owned utilities serve 45 percent of electric residential customers, the PUDs serve 34 percent, the municipals serve 15 percent, and the cooperatives serve five percent.

Service Territory Analysis

In this report, we examine the percent of households that are eligible for LIHEAP. For households with income below 125 percent of poverty, we examine the main heating fuel used, the percent that have high energy burdens and high energy use, households with vulnerable members, single parent families, and households who speak foreign languages at home. We find that there are some large differences between the characteristics of the different service territories that have implications for the types of low-income energy assistance programs that are needed.

Low-Income Energy Programs

Many states around the country have low-income energy programs that are provided by individual utilities to supplement the assistance provided by LIHEAP and WAP. Washington does not have a statewide Universal Service Program or a comprehensive package of utility-funded programs. Because there are so many electric utilities in Washington, it is difficult to find one source of information that documents all of the low-income program offerings across the state and analyzes where there is unmet need for assistance. In the report we summarize information about low-income energy assistance programs that are offered by the utilities across the state.

We find that most of the investor-owned utilities offer a lump-sum bill payment assistance program for low-income customers. Many of the PUDs offer bill discount programs for low-income households with elderly or disabled members, but most do not offer general low-income assistance programs. Overall, about 75 percent of Washington's customers live in service territories that offer general low-income bill payment assistance programs.

Energy Prices

The price analysis shows that there are large differences in electric prices between the different utilities, and these differences can affect whether or not the low-income electric bill is affordable. The electric price ranges from 2.29¢ per kWh to 9.10¢ per kWh. While the lowest price electricity is quite affordable, as even most high use customers will be charged less than \$30 per month, the highest price utility may cost a high-use customer as much as \$110 per month.

Recommendations

Washington has a diverse electric supply, with 55 different investor-owned utilities, public utility districts, municipal utilities, and cooperatives supplying electricity to households across the state. Some of the service territories have quite different demographics, and the programs and prices offered by the different utilities further complicates the assessment of energy need. At the same time, there is no statewide affordability program to ensure that all low-income household energy needs are met, and previous research has shown that there is great unmet need for energy assistance. As such, we make the following recommendations for the types of programs that might best meet the need of low-income households in the state.

1. A statewide bill payment assistance program that based payments on net energy burden (after other program assistance was accounted for) would provide assistance to those households who have the greatest need based on the percent of income the household spends on energy, taking into account usage, prices, and other assistance programs. Our national research has shown that programs that provide customers with equal monthly payments are most likely to achieve the goals of increased affordability and improved payment patterns.
2. If it is not possible to achieve a statewide bill payment assistance program, the next best option may be to work with individual utilities that have the greatest need, the higher prices, and limited or no program availability. This strategy could fill in the greatest gaps in assistance.
3. Washington currently supplements the WAP/LIHEAP energy efficiency funding with the Energy Matchmaker program. Many of the utilities work with this program to provide additional energy efficiency assistance to low-income households. WA could improve statewide coverage of energy efficiency by working with utilities that do not currently match to participate in this program. There may also be room for improved targeting by coordinating the bill payment assistance programs and the energy efficiency programs.
4. Because of the variability in electric pricing across the state, households with income below 125 percent of poverty who have the lowest electric prices and use electric heat may have less need for assistance than households served by higher priced utilities with income between 125 and 150 percent of poverty. If Washington targets households with high energy burden for energy assistance, they can increase the state eligibility for LIHEAP to 150 percent of poverty and still serve the highest need households.

Energy prices are reaching historic highs around the county and low-income households are having increased difficulty paying their energy bills. Washington has an opportunity to address this issue in a systematic way by using practices that have proven effective in other jurisdictions and coordinating federal government benefits, state tax dollars, and ratepayer funds.

I. Introduction

The Washington Office of Community Trade and Economic Development (CTED) has been interested in developing information on LIHEAP-eligible households in Washington and the challenges that they face in meeting their energy needs to help them improve their LIHEAP program and create support for additional energy assistance in Washington State. Their research strategy has included a survey of LIHEAP recipients in Washington State, participation as a sponsor in APPRISE's National Multi-Sponsor Study of Ratepayer Funded Programs, and additional research on the energy needs and available energy assistance available to utility customers across the state. This report provides information obtained from the last component of the research, and draws on findings from the previous research.

The current study includes the following research components:

- Washington Population – We provide analysis on the characteristics of Washington's LIHEAP-eligible households through analysis of public use datasets, primarily the American Community Survey. These statistics can help policymakers understand the need for energy assistance in Washington state, and how the need varies across the state.
- Washington Energy Programs – Washington State has more than 60 electric utilities and several gas companies. Some of these utilities have several different low-income energy assistance programs and some do not offer any programs. We provide information on the types of programs that are available and the customers that these programs are offered to. This information helps policymakers understand where there are gaps in program availability and sufficiency.
- Washington Energy Costs – Electric prices vary widely between the different providers across the state. The large differences in prices have great implications for the affordability of energy for low-income households in the area. Information on prices will also help policymakers understand where bill payment assistance programs are needed.
- Updateable Spreadsheets – As a separate deliverable, APPRISE will provide CTED with a spreadsheet containing the information reported here, that can be updated when prices change to understand the impact of price changes on low-income households in the state.
- Recommendations – Based on the previous research and the analyses in this report, we will make recommendations for program characteristics that may best meet the needs of low-income households in Washington.

This report summarizes the analyses that are described above. A PowerPoint presentation that displays results in graphs and charts is also available.

II. Energy Needs and Energy Assistance

The purpose of this report is to examine how energy assistance needs vary across Washington State. However, to set the stage for this analysis, we first examine the aggregate needs and available energy assistance in the state as a whole. The methodology and approach used for the utility-level analysis shown in the following section is the same.

A. Data Sources

The primary data source for the information contained in this report is the 2005 American Community Survey (ACS).¹ The ACS is the Census Bureau's new approach to producing information about the characteristics of local communities. The ACS provides social, housing, and economic characteristics and is the largest household survey in the United States. The annual sample size for the ACS is about 3 million addresses. Each year, the ACS can provide estimates for geographic areas with populations of 65,000 or more. The ACS accumulates sample of 3-year and 5-year intervals to provide estimates for smaller geographic areas. In Washington, the ACS can provide estimates for the larger counties and for groups of smaller counties.

Geographic areas covered by ACS and counties do not exactly match up to the utility service territories. Only PUMAs where at least 50% of the households were in counties served by the utility were included in the utility's geographic area. This resulted in two statistics that help to assess the coverage of the PUMA.

1. The percent of a utility's customers that are in counties that are included in the calculation. That is, a small percentage of a utility's customers (in most cases) were in counties that were not included in the calculation because these counties were grouped with other counties, where the majority of that total population was not served by the utility studied.
2. The percent of customers in the calculation that are in counties that are in the utility's service area. That is, a small percentage of the customers that are included in the calculation are in counties that are not served by the utility studied, because counties that the utility does not serve are grouped with the counties that the utility does serve.

Table II-1 displays this information for the investor-owned utilities in Washington.

¹ 2006 ACS data became available in September 2007.

**Table II-1
Utility Service Area Data Coverage**

| | | Percent of Utility's Customers In Counties that are Included in the calculation | Percent of Customers in the calculation that are in Counties Served by the Utility |
|---------------------------|----------------------------|--|---|
| Electric Utilities | Avista | 92% | 79% |
| | Puget Sound Energy | 98% | 100% |
| | Pacific Power | 90% | 82% |
| Gas Utilities | Avista | 89% | 89% |
| | Cascade Natural Gas | 95% | 90% |
| | Puget Sound Energy | 97% | 100% |

The table shows separate calculations for utilities that serve electric and gas customers, because the utilities sometimes have slightly different geographic areas for the two fuels. While we calculated separate statistics for the two fuels, we found that there were only very small and statistically insignificant differences between the two fuels service territories statistics, so only one statistic is presented for each utility.

The table above does not include the smaller utilities. Calculations for these utilities will be much less precise, especially for the smallest ones. Statistics in later sections of this report are shown for PUDs, municipals, and cooperatives that have 15,000 customers or more.

B. Energy Needs and Energy Assistance in Washington

The Federal maximum LIHEAP standard is 150 percent of the poverty level or 60 percent of state median income. States may choose the maximum of these two levels, or they may set a lower income limit to target available funds to households with lower income, but it cannot be lower than 110 percent of poverty. Most states have chosen to set their maximum standard at 150 percent of poverty. However, there are some states that have chosen higher levels and some that have chosen lower levels. The LIHEAP standard in Washington State is 125 percent of poverty. By setting the standard below the maximum, Washington limits the number of households who are eligible for assistance. A single person households with income of \$11,963 or less was eligible for LIHEAP. For a family of four, the income limit was \$24,188.

Table II-2 shows that 14 percent of the households in Washington have income below 125 percent of the poverty level. An additional four percent of the households in the state, or

approximately 100,000 households have income between 125 and 150 percent of the poverty level.

**Table II-2
Low-Income Households in Washington**

| Poverty Group | Number of Households | Percent of Households |
|-----------------------|----------------------|-----------------------|
| ≤125% | 353,335 | 14% |
| 126% - 150% | 98,927 | 4% |
| >150% | 2,000,283 | 82% |
| All Households | 2,452,545 | 100% |

Analysts usually examine a household’s energy burden, or the percent of income spent on energy, to determine whether the energy expenditure is affordable. Two important indicators of affordability have been developed.

- **Affordable Energy Burden** – Roger Colton of Fisher, Sheehan, and Colton has recommended using an affordability standard of 6% of income. He cites national research that suggests that a household can afford to spend about 30% of income on shelter costs and his own research that shows that about 20% of shelter costs are used for energy bills. Based on those statistics, he suggests that the maximum affordable level of energy expenditures for the average household would be about 6% of income.
- **High Energy Burden** – APPRISE has proposed an approach for defining “high energy burden” using a similar model. APPRISE notes that some researchers (Dolbeare, 2001) have defined a severe shelter burden as shelter costs that are 50% of income or more. APPRISE research shows that about 22% of shelter costs are for energy expenditures. Using that approach, APPRISE has defined a high energy burden as 11% of income.

Table II-3 displays the number and percentage of households with energy burden of greater than five percent of income and greater than ten percent of income. The table shows that 72 percent of households with income less than or equal to 125 percent of poverty have an energy burden of greater than five percent, and 46 percent of these households have an energy burden of greater than ten percent. An additional 52 percent of households with income between 126 and 150 percent of poverty have an energy burden of greater than five percent of income and 15 percent of these households have an energy burden of greater than ten percent of income.

**Table II-3
Low-Income Energy Burden**

| Poverty Group | Energy Burden > 5% | | Energy Burden >10% | |
|---------------|--------------------|-----------------|--------------------|-----------------|
| | # of Households | % of Households | # of Households | % of Households |
| ≤125% | 251,636 | 72% | 158,004 | 46% |
| 126% - 150% | 51,371 | 52% | 14,705 | 15% |

Table II-4 presents information on energy assistance funding in Washington in 2005. The table shows that there was \$41.6 million in LIHEAP funding in Washington in 2005, and \$36.6 million was used for electric and gas assistance. Additionally, there was approximately \$12.9 million in funding for investor-owned utility bill payment assistance programs. Therefore, the total low-income bill payment assistance in Washington in 2005 was just under \$50 million.

**Table II-4
Low-Income Energy Assistance in Washington**

| | 2005 Funding (Millions) |
|---|-------------------------|
| LIHEAP | \$41.6 |
| LIHEAP – Electric and Gas Assistance | \$36.6 |
| IOU Energy Affordability Programs | \$12.9 |
| Total Electric and Gas Assistance | \$49.5 |

Table II-5 examines the total energy bill for low-income households in Washington, the difference between household energy bills and a five or 15 percent bill, defined as the energy gap, and the percent of the gap that was covered by the energy assistance that was available in Washington. The table shows that the available energy assistance was only enough to cover 23 percent of the difference between household energy bills and a five percent energy burden. When all households with income up to 150 percent of poverty are included in the analysis, only 19 percent of the gap is covered with the available funding.

The table shows that the gap is much smaller if the need standard is set at a 15 percent energy burden. At this level, the available funding covers 52 percent of the gap for all households with income up to 125 percent of poverty, and 50 percent of the gap for all households with income up to 150 percent of poverty.

**Table II-5
Low-Income Energy Gap**

| Poverty Group | Aggregate Low-Income Energy Bill | Energy Gap | Energy Assistance | Percent of Gap Met by Assistance |
|--------------------------|----------------------------------|------------|-------------------|----------------------------------|
| | (Millions) | | | |
| 5% Need Standard | | | | |
| ≤125% | \$360 | \$217 | \$49.5 | 23% |
| ≤150% | \$472 | \$257 | \$49.5 | 19% |
| 15% Need Standard | | | | |
| ≤125% | \$360 | \$96 | \$49.5 | 52% |
| ≤150% | \$472 | \$99 | \$49.5 | 50% |

While it is somewhat more difficult to assess the need for energy efficiency programs, we develop a framework for this analysis here. Research on low-income energy efficiency programs has shown that programs that target higher users achieve higher energy savings and are more cost-effective. Table II-6 shows that the thresholds that we use are 8,000 annual kWh for electric baseload usage, 16,000 annual kWh for electric heating usage, and 1,200 therms for gas heating usage.

The ACS does not contain data on the amount of energy used by the household. However, it does contain data on the amount that the household spent on electric and gas bills. Using these data and the average electric and gas prices in Washington in 2005, we calculate estimates of the number of households with energy usage that exceeded these thresholds. Table II-6 shows that we estimate approximately 62,000 households with income less than or equal to 125 percent of poverty had high electric baseload bills, 84,000 had high electric heating bills, and 6,000 had high gas heating bills.

**Table II-6
Low-Income Energy Usage**

| | High Usage Standard (Annual Usage) | Number of Households With High Bills Income ≤125% | Number of Households With High Bills Income ≤150% |
|--------------------------|------------------------------------|---|---|
| Electric Baseload | 8,000 kWh | 62,003 | 82,628 |
| Electric Heating | 16,000 kWh | 84,406 | 111,772 |
| Gas Heating | 1,200 therms | 6,397 | 9,317 |

Table II-7 displays information on low-income energy efficiency funding in Washington in 2005. The table shows a total of over \$22 million in energy efficiency funding through WAP, LIHEAP, and Washington's Energy Matchmaker program where the state matches utility weatherization expenditures. Given this funding, and an average estimated cost of \$2,500, we estimate that approximately 6,320 households received energy efficiency services in 2005.

**Table II-7
Low-Income Energy Efficiency Programs**

| | 2005 Funding (Millions) | Households Served (Estimate) |
|--|-------------------------|------------------------------|
| DOE WAP | \$4.6 | 1,840 |
| LIHEAP | \$5.7 | 2,280 |
| Energy Matchmaker – Utilities & Other | \$4.5 | 1,800 |
| Energy Matchmaker – State Match | \$7.4 | 2,960 |
| Total | \$22.2 | 8,880 |

Statistics in this section on household energy costs and energy burden provide information on the need for energy assistance in the state. However, research has shown that some households restrict their energy usage when they cannot afford to pay their bills, and therefore statistics on energy burden could under estimate the problem of unaffordable energy. APPRISE conducted a survey with LIHEAP recipients in 2005 to understand the need that these households faced. This study showed that there are many other indicators of need that indicate the problem is larger than that presented in the previous tables.

Table II-8 displays some of the findings from the 2005 survey of Washington LIHEAP recipients. This table shows that even among those households that did receive LIHEAP assistance, 38 percent went without food, 81 percent reduced expenses for necessities, 35 percent kept their home at a temperature they felt was unsafe, and 15 percent had their electric service terminated.

**Table II-8
Other Indicators of Need for LIHEAP Recipients**

| | 2005 NEADA Survey |
|--|-------------------------|
| Went without food for at least one day | 38% |
| Went without medical or dental care | 36% |
| Didn't fill a prescription or took less than a full dose | 35% |
| Reported that someone became sick because the home was too cold | 32% |
| Reduced expenses for necessities | 81% |
| Received shutoff notices | 47% |
| Kept home at a temperature they felt was unsafe | 35% |
| Used the kitchen stove for heat | 27% |
| Had electric service shut off | 15% |
| Could not use main source of heat | 37% |
| Could not use air conditioner | 19% |

This section documented the need for energy assistance in Washington state overall. The next sections of the report show how this need varies across the state.

III. Electric and Gas Utilities

This section examines the electric and gas utilities that serve households in Washington state. Washington is unique because of the number of small PUD, municipal, and cooperative electric utilities that server residential customers.

Table III-1 displays the investor-owned electric and natural gas companies that serve residential customers in Washington. There are three electric utilities and four natural gas utilities. Puget Sound Energy serves the majority of electric and gas customers in the state.

**Table III-1
Investor-Owned Utilities in Washington**

| Investor-Owned Utilities - Electric | | Investor-Owned Utilities – Natural Gas | |
|--|--|---|--|
| Utility | Number of Residential Customers | Utility | Number of Residential Customers |
| Avista | 196,000 | Avista | 139,000 |
| Pacific Power | 124,000 | Cascade Natural Gas | 115,000 |
| Puget Sound Energy | 1,040,000 | Northwest Natural | 287,558 |
| | | Puget Sound Energy | 713,000 |

Table III-2 displays the 20 public utility districts that serve residential customers in Washington. Most of these PUDs are small and many serve fewer than 30,000 customers. The largest one, however, Snohomish County PUD servers over 300,000 customers.

**Table III-2
Electric PUD's in Washington**

| PUD | Number of Residential Customers |
|-------------------------------|--|
| Benton County PUD | 45,000 |
| Chelan County PUD #1 | 41,000 |
| Clallam County PUD | 28,444 |
| Clark Public Utilities | 173,000 |
| Cowlitz PUD | 47,400 |
| Douglas County PUD | 16,931 |
| Ferry County PUD | 3,000 |
| Franklin County PUD | 20,000 |
| Grant PUD | 41,722 |
| Grays Harbor PUD #1 | 41,517 |
| Kittitas County PUD | 3,690 |
| Klickitat PUD | 11,250 |

| PUD | Number of Residential Customers |
|-----------------------------|--|
| Lewis County PUD #1 | 30,000 |
| Mason County PUD #1 | 5,249 |
| Mason County PUD #3 | 31,914 |
| Okanogan PUD | 19,382 |
| Pacific PUD #2 | 16,487 |
| Pend Orielle PUD | 8,500 |
| Skamania County PUD | 5,548 |
| Snohomish County PUD | 300,176 |

There are also 15 municipal electric utilities that serve residential customers in Washington. Many of these are smaller than the PUDs, and serve fewer than 10,000 customers. The largest municipal utility, Seattle City Light, however, serves over 375,000 customers.

**Table III-3
Municipal Electric Utilities in Washington**

| Municipal | Number of Residential Customers |
|---------------------|--|
| Blaine | 4,400 |
| Cashmere | 1,177 |
| Centralia | 8,000 |
| Cheney | 4,256 |
| Chewelah | 1,265 |
| Ellensburg | 10,000 |
| McCleary | 1,016 |
| Milton | 3,332 |
| Port Angeles | 10,600 |
| Richland | 21,020 |
| Ruston | 418 |
| Seattle | 375,869 |
| Steilacoom | 2,803 |
| Sumas | 595 |
| Tacoma | 141,587 |

In addition to the 20 PUDs and the 15 municipal electric utilities, there are 17 electric cooperatives that serve residential customers in Washington. Most of the cooperatives serve fewer than 10,000 customers, and the largest one, Inland Power and Light serves only 35,000 customers.

**Table III-4
Electric Cooperatives in Washington**

| Cooperative | Number of Residential Customers |
|--------------------------------------|--|
| Alder Mutual | 271 |
| Benton Rural Electric | 14,183 |
| Big Bend Electric | 8,000 |
| Clearwater Power | 878 |
| Columbia REA | 4,200 |
| Elmhurst Mutual | 13,000 |
| Inland Power & Light | 35,000 |
| Lakeview Light & Power | 9,689 |
| Modern Electric Water Company | 9,940 |
| Nespelem Valley Electric | 1,820 |
| Ohop Mutual | 3,974 |
| Okanogan Co-op | 3,115 |
| Orcas Power & Light | 12,768 |
| Parkland Light & Water | 4,189 |
| Peninsula Light | 29,147 |
| Tanner Electric | 4,251 |
| Vera Water & Power | 9,193 |

Table III-5 provides a summary of the electric utilities that serve residential customers in Washington. The investor-owned utilities serve 45 percent of electric residential customers, the PUDs serve 30 percent, the municipals serve 20 percent, and the cooperatives serve five percent.

**Table III-5
Summary of Electric Utilities in Washington**

| Utility Type | Number of Utilities | Number of Customers | Percent of Customers |
|-----------------------|----------------------------|----------------------------|-----------------------------|
| Investor-Owned | 3 | 1,360,000 | 45% |
| PUD | 20 | 890,210 | 30% |
| Municipal | 15 | 586,338 | 20% |
| Cooperative | 17 | 163,618 | 5% |

Table III-6 summarizes the sizes of the different types of electric utilities. Investor owned utilities range from 124,000 to one million customers, PUDs range from 3,000 to 300,000 customers, municipals range from 418 to 375,000 customers, and cooperatives range from 271 to 35,000 customers.

**Table III-6
Electric Utility Sizes in Washington**

| Utility Type | Number of Customers | | |
|-----------------------|---------------------|-----------|----------|
| | Mean | Largest | Smallest |
| Investor-Owned | 453,333 | 1,040,000 | 124,000 |
| PUD | 44,511 | 300,176 | 3,000 |
| Municipal | 39,089 | 375,869 | 418 |
| Cooperative | 9,625 | 35,000 | 271 |

There are many fewer gas utilities in the state. Table III-7 shows that there are four investor-owned gas utilities that serve 99 percent of the residential customers and 2 municipal utilities that server fewer than one percent of the residential customers.

**Table III-7
Summary of Gas Utilities in Washington**

| Utility Type | Number of Utilities | Number of Customers | Percent of Customers |
|-----------------------|---------------------|---------------------|----------------------|
| Investor-Owned | 4 | 1,264,558 | 99% |
| Municipal | 2 | 10,000 | <1% |

The vast number of electric utilities poses a challenge for understanding the energy needs of households in Washington. The utilities offer different programs and have different prices. Additional, the demographics, as shown in the following section, differ in the various service areas. This means that the needs in the different areas are very different, and that it would be difficult to implement one program that would meet the needs of customers of the many utilities.

IV. Service Territory Analysis

This section examines the energy needs of low-income households in Washington by utility service territory. We examine the percent of households that are eligible for LIHEAP, the main heating fuel used, the percent that have high energy burdens and high energy use, households with vulnerable members, single parent families, and households who speak foreign languages at home.

Table IV-1 displays the percent of households with income below 125 percent of the poverty level. While 14 percent of households in Washington fall into this category, only 10 percent of households in the Puget Sound service territory fall into this category, but 24 percent of households in Pacific Power's service territory fall into this category.

Table IV-1
Percent of Households with Income Below 125% of the Poverty Level
Investor-Owned Utilities

| | Percent with Income Below 125% of Poverty |
|------------------------------|--|
| Washington State | 14% |
| Avista | 17% |
| Cascade Natural Gas | 14% |
| Northwest Natural Gas | 16% |
| Pacific Power | 24% |
| Puget Sound Energy | 10% |

Table IV-2 shows the percentage of households that have income below 125 percent of the poverty level in the PUD service territories. PUDs with 15,000 or more customers are shown. There is variability in the percent eligible for LIHEAP by PUD, ranging from 10 percent for Snohomish to 21 percent in Chelan, Douglas, and Okanogan.

Table IV-2
Percent of Households with Income Below 125% of the Poverty Level
Public Utility Districts

| | Percent with Income Below 125% of Poverty |
|----------------|--|
| Benton | 14% |
| Chelan | 21% |
| Clallam | 13% |
| Clark | 12% |
| Cowlitz | 16% |
| Douglas | 21% |

| | Percent with Income Below 125% of Poverty |
|---------------------|--|
| Franklin | 14% |
| Grant | 17% |
| Grays Harbor | 19% |
| Lewis | 13% |
| Mason #3 | 13% |
| Okanogan | 21% |
| Pacific | 19% |
| Snohomish | 10% |

Table IV-3 shows the percent of households with income below 125 percent of the poverty level for the three municipal utilities and the two cooperatives with more than 15,000 customers. Only nine percent of the households in Peninsula Light's service territory have income below 125 percent of the poverty level, but 17 percent of the households in Inland Power & Light's service territory have income below 12 percent of poverty.

Table IV-3
Percent of Households with Income Below 125% of the Poverty Level
Electric Municipals and Cooperatives

| | Percent with Income Below 125% of Poverty |
|---------------------------------|--|
| City of Richland | 14% |
| Seattle City Light | 11% |
| Tacoma Power | 13% |
| Inland Power & Light | 17% |
| Peninsula Light | 9% |

Table IV-4 displays the percent of households with income below 125 percent of the poverty level for the smallest county group available in the ACS. This table also shows how the demographics vary across Washington. Only nine percent of the households in King County and Thurston County have income below 125 percent of poverty, but 24 percent of the households in Yakima County have income below 125 percent of poverty.

Table IV-4
Percent of Households with Income Below 125% of the Poverty Level
PUMAs and Counties

| Puma/County | Percent with Income Below 125% of Poverty |
|---|--|
| 200 - Island, San Juan, Skagit | 10% |
| 300 - Chelan, Douglas, Kittitas, Okanogan | 21% |
| 400 - Adams, Ferry, Grant, Lincoln, Pend Oreile, Stevens | 17% |

| Puma/County | Percent with Income Below 125% of Poverty |
|--|--|
| 700 - Asotin, Columbia, Garfield, Walla Wall, Whitman | 19% |
| 800 - Benton, Franklin | 14% |
| 1100 - Cowlitz, Klickitat, Skamania, Wahkiakum | 16% |
| 1500 - Grays Harbor, Lewis, Pacific | 19% |
| 1600 - Clallam, Jefferson, Mason | 13% |
| Clark | 12% |
| King | 9% |
| Kitsap | 11% |
| Pierce | 12% |
| Snohomish | 10% |
| Spokane | 16% |
| Thurston | 9% |
| Whatcom | 15% |
| Yakima | 24% |

Table IV-5 displays the percent of households that use electricity and gas for their main heating fuel for the state of Washington and the investor-owned utilities. In all of the utility service territories, the majority of the households use electricity for their main heating fuel. However, only 58 percent of households in Avista's utility territory use electric heat, compared to 70 percent in Pacific Power's territory.

**Table IV-5
Main Heating Fuel
Investor-Owned Utilities**

| | Main Heating Fuel | |
|------------------------------|--------------------------|------------|
| | Electric | Gas |
| Washington State | 72% | 16% |
| Avista | 58% | 25% |
| Cascade Natural Gas | 68% | 14% |
| Northwest Natural Gas | 76% | 16% |
| Pacific Power | 70% | 13% |
| Puget Sound Energy | 67% | 21% |

Table IV-6 displays the main heating fuel in the public utility districts. In Grant and Snohomish PUD service territories, 67 percent of households use electric heat. However, in Benton and Franklin counties, 86 percent of households use electric heat. Only two percent of households in the Clallam PUD service territory use natural gas for heating, compared to 18 percent of the households in the Clark and Snohomish service territories.

**Table IV-6
Main Heating Fuel
Public Utility Districts**

| | Main Heating Fuel | |
|---------------------|-------------------|-------------|
| | Electric | Utility Gas |
| Benton | 86% | 8% |
| Chelan | 78% | 4% |
| Clallam | 70% | 2% |
| Clark | 73% | 18% |
| Cowlitz | 80% | 5% |
| Douglas | 78% | 4% |
| Franklin | 86% | 8% |
| Grant | 67% | 5% |
| Grays Harbor | 71% | 3% |
| Lewis | 72% | 15% |
| Mason #3 | 70% | 2% |
| Okanogan | 78% | 4% |
| Pacific | 71% | 3% |
| Snohomish | 67% | 18% |

Table IV-7 displays the percent of households that use electricity and natural gas for heating in the municipal and cooperative electric utilities that have more than 15,000 customers. In the Inland Power and Light service territory, 58 percent of the households use electric heat and 25 percent use natural gas heat. However, in the City of Richland service territory, 86 percent use electric heat and 8 percent use natural gas heat.

**Table IV-7
Main Heating Fuel
Electric Municipals and Cooperatives**

| | Main Heating Fuel | |
|---------------------------------|-------------------|-------------|
| | Electric | Utility Gas |
| City of Richland | 86% | 8% |
| Seattle City Light | 67% | 22% |
| Tacoma Power | 71% | 20% |
| Inland Power & Light | 58% | 25% |
| Peninsula Light | 73% | 12% |

Table IV-8 displays the percent of low-income households with an energy burden greater than five percent and greater than ten percent in the investor-owned utility service territories.

In Washington as a whole, 71 percent of low-income households have an electric and gas energy burden of more than five percent. In the Northwest Natural Gas service territory, 80 percent of low-income households have an energy burden of greater than five percent. In Washington as a whole, 45 percent of low-income households have an energy burden of greater than ten percent. However, in the Pacific Power service territory, only 35 percent of low-income households have an energy burden of greater than ten percent.

Table IV-8
Percent of Low-Income Households with Energy
Burden Greater than 5% and 10%
Investor-Owned Utilities

| | Percent of Low-Income Households | |
|------------------------------|----------------------------------|---------------------|
| | Energy Burden > 5% | Energy Burden > 10% |
| Washington State | 71% | 45% |
| Avista | 70% | 43% |
| Cascade Natural Gas | 72% | 44% |
| Northwest Natural Gas | 80% | 43% |
| Pacific Power | 65% | 35% |
| Puget Sound Energy | 73% | 49% |

Table IV-9 displays the percent of low-income households with energy burden that exceeds five percent and ten percent by PUD service territory. Households in the Benton, Clark, Franklin, Grays Harbor, Lewis, Pacific, and Snohomish service territories have the greatest percentage of households with high energy burdens.

Table IV-9
Percent of Low-Income Households with Energy
Burden Greater than 5% and 10%
Public Utility Districts

| | Percent of Low-Income Households | |
|---------------------|----------------------------------|---------------------|
| | Energy Burden > 5% | Energy Burden > 10% |
| Benton | 84% | 54% |
| Chelan | 67% | 36% |
| Clallam | 78% | 43% |
| Clark | 83% | 58% |
| Cowlitz | 75% | 46% |
| Douglas | 67% | 36% |
| Franklin | 84% | 54% |
| Grant | 72% | 38% |
| Grays Harbor | 79% | 53% |

| | Percent of Low-Income Households | |
|------------------|----------------------------------|---------------------|
| | Energy Burden > 5% | Energy Burden > 10% |
| Lewis | 79% | 55% |
| Mason #3 | 75% | 51% |
| Okanogan | 67% | 36% |
| Pacific | 79% | 53% |
| Snohomish | 79% | 53% |

Table IV-10 displays the percent of low-income households with high energy burdens for the electric municipal and cooperative service territories with more than 15,000 customers. The table shows that a greater percent of households in the Richland and Peninsula service territories have need for energy assistance than in the Seattle City and Inland Power service territories.

Table IV-10
Percent of Low-Income Households with Energy
Burden Greater than 5% and 10%
Electric Municipals and Cooperatives

| | Percent of Low-Income Households | |
|---------------------------------|----------------------------------|---------------------|
| | Energy Burden > 5% | Energy Burden > 10% |
| City of Richland | 84% | 54% |
| Seattle City Light | 67% | 42% |
| Tacoma Power | 78% | 58% |
| Inland Power & Light | 70% | 43% |
| Peninsula Light | 82% | 55% |

Table IV-11 shows the percent of households in the investor-owned utilities with high energy use. The table shows that between 57 and 68 percent of customers in the different service territories have high electric baseload use, between 31 and 49 percent have high electric heating use, and between five and 16 percent have high gas heating use.

Table IV-11
Percent of Low-Income Households
With High Energy Use
Investor-Owned Utilities

| | Percent of Low-Income Households | | |
|----------------------------|----------------------------------|---------------------------|----------------------|
| | High Electric Baseload Use | High Electric Heating Use | High Gas Heating Use |
| Washington State | 68% | 38% | 13% |
| Avista | 61% | 31% | 10% |
| Cascade Natural Gas | 68% | 38% | 12% |

| | Percent of Low-Income Households | | |
|------------------------------|----------------------------------|---------------------------|----------------------|
| | High Electric Baseload Use | High Electric Heating Use | High Gas Heating Use |
| Northwest Natural Gas | 65% | 49% | 5% |
| Pacific Power | 57% | 38% | 11% |
| Puget Sound Energy | 69% | 34% | 16% |

Table IV-12 displays the percentage of low-income households with elderly members, disabled members, or young children in the household. These individuals are considered to be vulnerable because they are more susceptible to heat and cold-related illnesses. In the state overall, 67 percent of low-income households have a vulnerable member. However, in the Pacific Power service territory, 78 percent of low-income households have a vulnerable member.

Table IV-12
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Investor-Owned Utilities

| | Percent of Low-Income Households with Vulnerable Members |
|------------------------------|--|
| Washington State | 67% |
| Avista | 72% |
| Cascade Natural Gas | 72% |
| Northwest Natural Gas | 72% |
| Pacific Power | 78% |
| Puget Sound Energy | 66% |

Table IV-13 displays the percent of low-income households with vulnerable members by PUD service territory. The percent with vulnerable members ranges from 72 percent in Clallam, Mason, and Snohomish service territories to 80 percent in Grays Harbor and Pacific service territories.

Table IV-13
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Public Utility Districts

| | Percent of Low-Income Households with Vulnerable Members |
|----------------|--|
| Benton | 74% |
| Chelan | 74% |
| Clallam | 72% |

| | Percent of Low-Income Households with Vulnerable Members |
|---------------------|---|
| Clark | 74% |
| Cowlitz | 79% |
| Douglas | 74% |
| Franklin | 74% |
| Grant | 75% |
| Grays Harbor | 80% |
| Lewis | 74% |
| Mason #3 | 72% |
| Okanogan | 74% |
| Pacific | 80% |
| Snohomish | 72% |

Table IV-14 displays the percent of low-income households with vulnerable members in the larger electric municipal and cooperative service territories. While 60 percent of low-income households in Seattle City Light's service territory have vulnerable, over 70 percent in the other service territories have vulnerable members.

Table IV-14
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Electric Municipals and Cooperatives

| | Percent of Low-Income Households with Vulnerable Members |
|---------------------------------|---|
| City of Richland | 74% |
| Seattle City Light | 60% |
| Tacoma Power | 73% |
| Inland Power & Light | 72% |
| Peninsula Light | 75% |

Table IV-15 displays the percent of low-income households that are single parent households in the investor-owned utility service territories. While 18 percent in Avista's service territory are single parent households, 27 percent in Northwest Natural Gas's service territory are single parent families.

Table IV-15
Percent of Low-Income Households
That are Single Parent Households
Investor-Owned Utilities

| | Percent of Low-Income Households That are Single Parent Households |
|------------------------------|---|
| Washington State | 23% |
| Avista | 18% |
| Cascade Natural Gas | 20% |
| Northwest Natural Gas | 27% |
| Pacific Power | 23% |
| Puget Sound Energy | 19% |

Table IV-16 displays the percent of low-income households that are single parent households by PUD service territory. The percentage ranges from 14 percent in Clallam and Mason PUD service territories to 27 percent in Benton and Franklin service territories.

Table IV-16
Percent of Low-Income Households
That are Single Parent Households
Public Utility Districts

| | Percent of Low-Income Households That are Single Parent Households |
|---------------------|---|
| Benton | 27% |
| Chelan | 21% |
| Clallam | 14% |
| Clark | 22% |
| Cowlitz | 17% |
| Douglas | 21% |
| Franklin | 27% |
| Grant | 18% |
| Grays Harbor | 20% |
| Lewis | 22% |
| Mason #3 | 14% |
| Okanogan | 21% |
| Pacific | 20% |
| Snohomish | 23% |

Table IV-17 displays the percent of low-income households that are single parent households in the four largest electric municipal and cooperative service territories. While

27 percent in the Richland service territory are single parent families and 24 percent in the Tacoma Power service territory are single parent families, fewer than 20 percent in the other service territories are single parent families.

Table IV-17
Percent of Low-Income Households
That are Single Parent Households
Electric Municipals and Cooperatives

| | Percent of Low-Income Households That are Single Parent Households |
|---------------------------------|---|
| City of Richland | 27% |
| Seattle City Light | 15% |
| Tacoma Power | 24% |
| Inland Power & Light | 18% |
| Peninsula Light | 14% |

Table IV-18 displays the language spoken at home by low-income households. In Washington overall, 24 percent of households speak a language other than English in the home. About half of these are Spanish speaking and the other half are other foreign languages. In Pacific Power's service territory 42 percent speak a language other than English at home, and almost all of these households speak Spanish. However, in Avista's service territory, only 12 percent speak a language other than English at home.

Table IV-18
Language Spoken at Home
By Low-Income Households
Investor-Owned Utilities

| | Percent of Low-Income Households | | |
|------------------------------|---|----------------|--|
| | Non-English | Spanish | Foreign Language Other than Spanish |
| Washington State | 24% | 13% | 11% |
| Avista | 12% | 8% | 4% |
| Cascade Natural Gas | 23% | 17% | 6% |
| Northwest Natural Gas | 22% | 9% | 13% |
| Pacific Power | 42% | 40% | 2% |
| Puget Sound Energy | 24% | 8% | 16% |

Table IV-19 displays the percent of low-income households who speak a language other than English at home by PUD service territory. In Clallam and Mason PUD service territories only seven percent of the households speak a language other than English at home, and most of these speak Spanish. However, in Benton and Franklin PUD service

territories, 34 percent speak a language other than English at home. Most of these households speak Spanish.

Table IV-19
Language Spoken at Home
By Low-Income Households
Public Utility Districts

| | Percent of Low-Income Households | | |
|---------------------|----------------------------------|---------|--|
| | Non-English | Spanish | Foreign Language Other than Spanish |
| Benton | 34% | 29% | 5% |
| Chelan | 23% | 21% | 2% |
| Clallam | 7% | 5% | 2% |
| Clark | 21% | 7% | 14% |
| Cowlitz | 10% | 8% | 2% |
| Douglas | 23% | 21% | 2% |
| Franklin | 34% | 29% | 5% |
| Grant | 21% | 19% | 2% |
| Grays Harbor | 9% | 7% | 2% |
| Lewis | 15% | 8% | 7% |
| Mason #3 | 7% | 5% | 2% |
| Okanogan | 23% | 21% | 2% |
| Pacific | 9% | 7% | 2% |
| Snohomish | 23% | 8% | 15% |

Table IV-20 displays the percent of low-income households with energy burdens greater than five percent and ten percent in the four largest electric municipals and cooperative service territories. While only four percent of the households in Peninsula Light's service territory speak a language other than English, and all of these households speak something other than Spanish, 34 percent of households in Richland's service territory speak a language other than English, and most of these households speak Spanish.

Table IV-20
Percent of Low-Income Households with Energy
Burden Greater than 5% and 10%
Electric Municipals and Cooperatives

| | Percent of Low-Income Households | | |
|---------------------------|----------------------------------|---------|--|
| | Non-English | Spanish | Foreign Language Other than Spanish |
| City of Richland | 34% | 29% | 5% |
| Seattle City Light | 30% | 9% | 21% |

| | Percent of Low-Income Households | | |
|---------------------------------|---|----------------|--|
| | Non-English | Spanish | Foreign Language Other than Spanish |
| Tacoma Power | 22% | 10% | 12% |
| Inland Power & Light | 12% | 8% | 4% |
| Peninsula Light | 4% | 0% | 4% |

V. Low-Income Energy Programs

Many states around the country have low-income energy programs that are provided by individual utilities to supplement the assistance provided by LIHEAP. Washington does not have a statewide Universal Service Program or a comprehensive package of utility-funded programs. Because there are so many electric utilities in Washington, it is difficult to find one source of information that documents all of the low-income program offerings across the state and analyzes where there is unmet need for assistance. In this section of the report we summarize information about low-income energy assistance programs that are offered by the utilities across the state.

Table V-1 provides information on the low-income payment assistance programs that are offered by the electric and gas investor-owned utilities. All of the utilities except Northwest Natural Gas offer some form of bill payment assistance for low-income customers. Avista, Cascade Natural Gas, and Puget Sound Energy offer a low-income annual credit, and Pacific Power offers a low-income discount. The average total funding through investor-owned utilities for bill payment assistance is about \$37 per low-income customer. However, the average for low-income customers in investor-owned utility service areas is \$53.56.

Table V-1
Bill Payment Assistance Programs
Investor-Owned Utilities

| | Low-Income Annual Credit | Low-Income Discount | Annual Funding |
|--|--------------------------|---------------------|----------------|
| Avista | Yes | No | \$3,200,000 |
| Cascade Natural Gas | Yes | No | \$900,000 |
| Northwest Natural Gas | No | No | \$0 |
| Pacific Power | No | Yes | \$300,000 |
| Puget Sound Energy | Yes | No | \$8,500,000 |
| TOTAL | | | \$12,900,000 |
| \$ Per WA Low-Income HH | | | \$36.51 |
| \$ Per WA Low-Income HH in Investor-Owned Utility Service Areas | | | \$53.56 |

Table V-2 provides additional information about the bill payment assistance programs offered by the investor-owned utilities.

Table V-2
Bill Payment Assistance Program Statistics
Investor-Owned Utilities

| | Program | Year Initiated | # Served in 2006 | 2006 Funding | Eligibility |
|----------------------------|----------------|-----------------------|-------------------------|---------------------|--------------------|
| Avista | LIRAP | 2001 | 7,000 | \$3.2 million | 125% |
| Cascade Natural Gas | | 2006 | Unknown | \$900,000 | 150% |
| Pacific Power | LIBA | 2001 | 2,618 | \$300,000 | 125% |
| Puget Sound Energy | HELP | 2001 | 18,000 | \$8.5 million | 150% |

Table V-3 compares the bill payment assistance offered by the investor-owned utilities to other states around the country. The table shows that NJ provides the greatest amount of funding for low-income bill payment assistance, as it averages \$181 per low-income household. Washington ranks twelfth, tied with Maine and Rhode Island. In one sense the assistance provided by Washington is overstated, as they only include customers with income up to 125 percent of poverty as low-income, compared to many states that include customers with income up to 150 percent of poverty, and NJ that includes customers with income up to 175 percent of poverty.

In another sense, the assistance provided by Washington is understated, as the investor-owned electric utilities only serve about 68 percent of low-income residential customers in the state. If spending is divided among these customers, WA's spending per household is \$53.56 and ranks ninth. Therefore, Washington's coverage of low-income customers in the investor-owned utility areas is fairly good. However, customers served by electric utilities that are not investor owned and that have the higher electric prices may need additional assistance.

Table V-3
Comparison of Investor-Owned Utility
Bill Payment Assistance Program Funding in Washington
To Other States

| Rank | State | Funds per Low-Income Household |
|-------------|--------------|---------------------------------------|
| 1 | NJ | \$181 |
| 2 | PA | \$155 |
| 3 | OH | \$154 |
| 4 | CA | \$141 |
| 5 | NH | \$102 |
| 6 | DC | \$69 |
| 7 | MI | \$57 |
| 8 | NV | \$56 |
| 9 | IL | \$53 |
| 10 | MD | \$50 |

| Rank | State | Funds per Low-Income Household |
|------|-------|--------------------------------|
| 11 | MA | \$48 |
| 12 | ME | \$37 |
| 12 | RI | \$37 |
| 12 | WA | \$37 |

Table V-4 displays the bill payment assistance programs offered by the PUDs. The PUDs are much more likely to offer discounts to low-income households with senior and disabled members than to general low-income households. This leaves a gap for low-income bill payment assistance. However, the two largest PUDs, Clark Public Utilities and Snohomish County PUD both have low-income discounts.

Table V-4
Bill Payment Assistance Programs
Public Utility Districts

| PUD | Customers | Discounts | | |
|------------------------|-----------|------------|--------|----------|
| | | Low-Income | Senior | Disabled |
| Benton County PUD | 45,000 | No | Yes | Yes |
| Chelan County PUD #1 | 41,000 | No | Yes | Yes |
| Clallam County PUD | 28,444 | No | Yes | Yes |
| Clark Public Utilities | 173,000 | Yes | Yes | No |
| Cowlitz PUD | 47,400 | No | Yes | No |
| Douglas County PUD | 16,931 | No | No | No |
| Ferry County PUD | 3,000 | No | Yes | No |
| Franklin County PUD | 20,000 | No | Yes | Yes |
| Grant PUD | 41,722 | No | No | No |
| Grays Harbor PUD #1 | 41,517 | No | Yes | Yes |
| Kittitas County PUD | 3,690 | No | No | No |
| Klickitat PUD | 11,250 | Yes | Yes | No |
| Lewis County PUD #1 | 30,000 | No | No | No |
| Mason County PUD #1 | 5,249 | No | No | No |
| Mason County PUD #3 | 31,914 | No | Yes | Yes |
| Okanogan PUD | 19,382 | No | No | No |
| Pacific PUD #2 | 16,487 | No | Yes | Yes |
| Pend Orielle PUD | 8,500 | No | No | No |
| Skamania County PUD | 5,548 | No | Yes | Yes |
| Snohomish County PUD | 300,176 | Yes | Yes | No |

Table V-5 displays the bill payment assistance programs that are offered by the largest electric municipals and cooperatives. The table shows that Seattle City Light offers a general low-income discount, Richland, Tacoma, and Peninsula only offer senior and disabled low-income customer discounts, and Inland does not offer any discounts.

**Table V-5
Bill Payment Assistance Programs
Electric Municipals and Cooperatives**

| | Customers | Discounts | | |
|---------------------------------|-----------|------------|--------|----------|
| | | Low-Income | Senior | Disabled |
| City of Richland | 21,020 | No | Yes | Yes |
| Seattle City Light | 375,869 | Yes | Yes | Yes |
| Tacoma Public Utilities | 141,587 | No | Yes | Yes |
| Inland Power & Light | 35,000 | No | No | No |
| Peninsula Light | 29,147 | No | Yes | Yes |

Table V-6 shows that 74 percent of low-income customers are in service territories where low-income bill payment assistance programs are offered to electric customers and 76 percent are in territories where low-income bill payment assistance programs are offered to gas customers.

**Table V-6
Percent of Low-Income Customers
In Service Area with Bill Assistance Program**

| | Percent of Low-Income Customers in Service Area With Bill Assistance Programs |
|-----------------|---|
| Electric | 74% |
| Gas | 76% |

Table V-7 compares energy efficiency program funding in Washington to that in other states around the country. Washington ranks sixth on the list, with programs spending about \$21 per low-income household, compared to \$105 in Wisconsin. Only the utility spending on Matchmaker is included in this amount, not the state annual match of \$4.5 million, as other states also have state funding that is not included in this table.

**Table V-7
Comparison of Investor-Owned Utility
Energy Efficiency Program Funding in Washington
To Other States**

| Rank | State | Funds per Low-Income Household |
|----------|-----------|--------------------------------|
| 1 | Wisconsin | \$105 |

| Rank | State | Funds per Low-Income Household |
|-------------|---------------|---|
| 2 | Massachusetts | \$32 |
| 3 | California | \$25 |
| 4 | Pennsylvania | \$25 |
| 5 | New Jersey | \$24 |
| 6 | Oregon | \$21 |
| 6 | Washington | \$21 |
| 8 | New York | \$11 |
| 9 | Michigan | \$10 |
| 10 | Ohio | \$9 |

VI. Energy Prices

This section examines how electric and gas prices vary across Washington. The analysis shows that there are large differences between the different utilities, and these differences can affect whether or not the low-income electric bill is affordable.

Table VI-1 shows that there is a large range in the electric prices across the state. While the lowest price PUDs, Chelan and Douglas, charge less than three cents per kWh, the most expensive, Franklin PUD, charges over nine cents per kWh. There are also differences in the monthly base charges imposed by the utilities.

Table VI-1
Electric Prices by Utility

| Utility | Type | Price per kWh |
|----------------------|-------------|---------------|
| Avista | IOU | 4.91 |
| Pacific Power | IOU | 4.57 |
| Puget Sound Energy | IOU | 7.43 |
| Benton | PUD | 7.46 |
| Chelan | PUD | 2.97 |
| Clallam | PUD | 6.90 |
| Clark | PUD | 7.86 |
| Cowlitz | PUD | 5.14 |
| Douglas | PUD | 2.29 |
| Franklin | PUD | 9.10 |
| Grant | PUD | 4.21 |
| Grays Harbor | PUD | 7.66 |
| Lewis | PUD | 5.51 |
| Mason #3 | PUD | 6.50 |
| Okanogan | PUD | 5.13 |
| Pacific | PUD | 6.91 |
| Snohomish | PUD | 7.80 |
| City of Richland | Municipal | 5.70 |
| Seattle City Light | Municipal | 5.22 |
| Tacoma Power | Municipal | 6.59 |
| Inland Power & Light | Cooperative | 5.21 |
| Peninsula Light | Cooperative | 5.97 |

Table VI-2 analyses the impact of the difference in price for households that use 400 kWh per month, 800 kWh per month, and 1,200 kWh per month. The lowest price electricity is quite affordable, as even the high use customer will be charged less than \$30 per month. However, the highest price utility will cost a high-use customer almost \$110 per month.

**Table VI-2
Electric Price Variability in Washington**

| | | 400 kWh | 800 kWh | 1200 kWh |
|----------------------|-------|---------|---------|----------|
| Lowest Price | 2.29¢ | \$9.16 | \$18.32 | \$27.48 |
| Highest Price | 9.10¢ | \$36.40 | \$72.80 | \$109.20 |
| Average Price | 5.96¢ | \$23.84 | \$47.68 | \$71.52 |

Table VI-3 shows that gas prices are relatively constant across the state, ranging from \$1.18 to \$1.26 per therm.

**Table VI-3
Gas Prices in Washington**

| | Price per Therm |
|----------------------------|-----------------|
| Avista | \$1.19 |
| Cascade Natural Gas | \$1.18 |
| Northwest Natural | \$1.26 |
| Puget Sound Energy | \$1.25 |

VII. Summary of Findings and Recommendations

This section summarizes the data that was presented in this report and makes recommendations based on this analysis and the previous studies that were conducted.

Table VII-1 summarizes the information that was provided about the utility service territories in the last three sections of the report for the state of Washington, Chelan County PUD, and Clark County PUD.

The table shows that there are great differences between the characteristics of some of the different service territories that have implications for the types of low-income energy assistance programs that are needed. Some of the key differences between these two areas are:

- Chelan county has a much larger percent of the population that would be income-eligible for the program, under current LIHEAP standards in Washington.
- However, a greater percentage of Clark’s low-income households show need for assistance, as shown by the percent of these households with an energy burden greater than five percent.
- Households in the Chelan PUD service territory have higher electric use, and greater need for energy efficiency programs.
- Households in the Chelan PUD service territory are more likely to speak Spanish at home. A full 21 percent speak Spanish at home, indicating that service delivery should include Spanish-speaking providers.
- Households in Clark PUD are more likely to speak other foreign languages at home. These households may be more difficult to serve.
- Clark PUD does offer a general low-income bill assistance program, but Chelan PUD does not.
- Chelan PUD electric rates are less than three cents per kWh, as compared to nearly eight cents for Clark. For this reason, these customers may not need a bill payment assistance program. These customers have rates that are essentially discounted about sixty percent, the equivalent of a generous bill discount program.

**Table VII-1
Data Summary**

| | <125% | Electric Heat | Burden >5% | High Baseload Use | High Electric Heat Use |
|-------------------|-------|---------------|------------|-------------------|------------------------|
| WA State | 14% | 72% | 71% | 68% | 38% |
| Chelan PUD | 21% | 78% | 67% | 100% | 88% |
| Clark PUD | 12% | 73% | 83% | 62% | 21% |

| | Vulnerable | Single Family | Non-English | Spanish | Low-Income Program | Electric Price |
|-------------------|------------|---------------|-------------|---------|--------------------|----------------|
| WA State | 67% | 23% | 24% | 13% | Yes | 6.50¢ |
| Chelan PUD | 74% | 21% | 23% | 21% | No | 2.97¢ |
| Clark PUD | 74% | 22% | 21% | 7% | Yes | 7.86¢ |

Washington has a diverse electric supply, with 55 different investor-owned utilities, public utility districts, municipal utilities, and cooperatives supplying energy to households across the state. Some of the service territories have quite different demographics, and the programs and prices offered by the different utilities further complicates the assessment of energy need. At the same time, there is no statewide affordability program to ensure that all low-income household energy needs are met, and previous research has shown that there is great unmet need for energy assistance. As such, we make the following recommendations for the types of programs that might best meet the need of low-income households in the state.

1. A statewide bill payment assistance program that based payments on net energy burden (after other program assistance was accounted for) would provide assistance to those households who have the greatest need based on the percent of income the household spends on energy, taking into account usage, prices, and other assistance programs. Our national research has shown that programs that provide customers with equal monthly payments are most likely to achieve the goals of increased affordability and improved payment patterns.
2. If it is not possible to achieve a statewide bill payment assistance program, the next best option may be to work with individual utilities that have the greatest need, the higher prices, and limited or no program availability. This strategy could fill in the greatest gaps in assistance.
3. Washington currently supplements the WAP/LIHEAP energy efficiency funding with the Energy Matchmaker program. Many of the utilities work with this program to provide additional energy efficiency assistance to low-income households. WA could improve statewide coverage of energy efficiency by working with utilities that do not currently match to participate in this program. There may also be room for improved targeting by coordinating the bill payment assistance programs and the energy efficiency programs.
4. Because of the variability in electric pricing across the state, households with income below 125 percent of poverty who have the lowest electric prices and use electric heat may have less need for assistance than households served by higher priced utilities with income between 125 and 150 percent of poverty. If Washington targets households with high energy burden for energy assistance, they can increase the state eligibility for LIHEAP to 150 percent of poverty and still serve the highest need households.

Energy prices are reaching historic highs around the county and low-income households are having increased difficulty paying their energy bills. Washington has an opportunity to address

this issue in a systematic way by using practices that have proven effective in other jurisdictions and coordinating federal government benefits, state tax dollars, and ratepayer funds.