

## ALLOCATING UNDESIGNATED UTILITY ALLOWANCES TO HEAT IN WASHINGTON STATE SUBSIDIZED HOUSING UNITS

By:

**Roger D. Colton**  
**Fisher, Sheehan and Colton**  
**Public Finance and General Economics**  
**34 Warwick Road**  
**Belmont, MA 02478**  
**617-484-0597 \*\*\* 617-484-0594 (fax)**

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The issue addressed in this analysis is how to determine the appropriate level of utility allowance assumed to be available for heating.<sup>11</sup> Under the proposal advanced by CTED, households who live in units that are provided utility allowances disaggregated by end use will be allocated their full heating allowance. In contrast, households who are provided with a lump sum utility allowance will be assumed to have a heating allowance that is 20 percent of the total unallocated allowance. The issue is whether this 20 percent allocation is appropriate.

### WASHINGTON STATE UTILITY ALLOWANCE DATA

Data from a variety of public housing authorities (PHAs) cooperating in FSC's *Assessment of Low-Income Energy Needs in Washington State* indicates that an assumption that 20 percent of a household's utility allowance is devoted to heating actually *benefits* public housing clients. Actual utility allowances were examined for all unit sizes for single family, four-plex and high rise units. Two sets of utility allowances were assumed: (1) units with natural gas hot water and space heating, along with electric appliances; and (2) all electric units, defined as units with electric hot water and space heating, along with electric appliances. Nine PHAs who disaggregate utility allowances by end use provided data for FY 1990.<sup>12</sup> The average proportion which heating represented of the total was calculated and is presented in Table 1 below:

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<sup>11</sup> This analysis applies to any public or subsidized housing in Washington State receiving a utility allowance to pay for tenant-billed home heating.

<sup>12</sup> Several more PHAs who did *not* disaggregate allowances by end use provided data as well. These PHAs are not included in this analysis.

Table 1: Proportion of Total Utility Allowance Designated for Heating Costs (Washington PHAs) (Piped Natural Gas Heat and Electric Heat)						
Unit Size (BRms)	Gas Heating			Electric Heating		
	1-Fam	4-Plex	High Rise	1-Fam	4-Plex	High Rise
0	50.8%	44.0%	41.0%	52.0%	40.6%	35.3%
1	52.3%	44.9%	44.0%	54.1%	42.5%	32.8%
2	54.9%	47.3%	45.8%	56.9%	45.5%	34.3%
3	55.3%	47.4%	44.5%	57.0%	49.3%	34.0%
4	56.9%	49.2%	xx	57.9%	50.5%	xx
5+	57.2%	48.4%	xx	58.8%	50.6%	xx

As can be seen, while CTED asserts that its calculations yield an average heating proportion of 20 percent, the data provided to FSC does not support this conclusion. Instead, the PHA utility allowances yield an average heating proportion in the 40 to 60 percent range.

Two significant observations need to be made about the PHA data presented above. First, the heating proportions found by FSC were universal in the limited sample which we have. *No-one*, in other words, had a heating utility allowance of 20 percent (or thereabouts). Second, the heating proportions found by FSC were all *substantially* above 20 percent. None of them were even close to 20 percent. While it may be true that the remainder of the PHAs in Washington State would have utility allowances that come closer to the CTED figure, it would seem unreasonable to expect that of a sample of more than one-quarter of the state's PHAs, *none* had heating utility allowances of the magnitudes posited by CTED.

## WASHINGTON LOW-INCOME HEATING USE GENERALLY

Given the divergence between CTED's 20 percent figure and the actual Washington utility allowances studied by FSC, the question becomes whether heating proportions could be established through other means. Again, data can be taken from FSC's *Assessment of Low-Income Energy Needs in Washington State*. That study calculated total home energy bills for low-income households along with total low-income heating bills. The proportion of heating bills to total bills for the low-income population is set out in Table 2.

As can be seen, again the heating bills range from roughly 40 to 60 percent of total home energy bills. Moreover, again the two observations are true: (1) that the heating proportion *universally* exceeds 20 percent; and (2) that the heating proportion *substantially* exceeds 20 percent. In no county does the heating proportion come even close to 20 percent.

The argument can be raised, of course, that the FSC county-by-county data, while specific to each county, nevertheless represents an average calculated over household size, unit size, and unit type. Moreover, the FSC data is for low-income households generally and not for public (or subsidized) housing tenants in particular. We try next to address those concerns.

## PUBLIC HOUSING HEATING USE

Washington-specific data on home heating bills for PHA tenants is not available on any basis that allows for detailed study. Accordingly, data was obtained from the American Housing Survey (AHS) micro-use files through the U.S. Census Bureau. The entire sample of public housing units for the country was obtained, along with the ability to break down the sample by the four Census Regions. In addition, the three most recent Surveys (1985, 1987 and 1989) were examined to see if relationships held up over time. Customers heating with natural gas were examined. Households who reported no electric bills (including those whose electric bills were paid as part of their rent) were excluded. Combined gas and electric bills were annualized and the proportion which the gas bill represented of the total was calculated.<sup>3)</sup>

As Table 3 below shows, natural gas bills simply do not represent as little as 20 percent of total home energy bills<sup>4)</sup> for public housing residents

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<sup>3)</sup> Electric bills were not broken down into electric space heating and other electric use.

<sup>4)</sup> Again, "total" home energy bills are defined to be natural gas plus electric bills where natural gas is the primary heating fuel.

throughout the country. In virtually every instance, the data from the American Housing Survey supports the finding that heating costs represent from 40 to 60 percent of a household's total energy bill.

## **DISCUSSION**

Based on the data above, the conclusion follows that allocating 20 percent of an undesignated utility allowance to home heating costs would be unfair to remaining subsidized tenants as well as to LIHEAP clients as a whole. An "undesignated utility allowance" is an allowance for which specific increments are not assigned to specific end-uses. Given the fact that heating costs, in fact, represent more than twice the 20 percent figure, CTED's 20 percent formula *underestimates* the utility allowance provided for heating purposes and would result in *greater* LIHEAP benefits than are warranted by the circumstances.

While this practice certainly does not redound to the detriment of PHA tenants whose lump sum utility allowance is allocated to heating in this fashion, its fairness *vis a vis* public housing tenants who receive a designated heating allowance might be questioned. Moreover, since the amount of LIHEAP within a state is finite, the overpayment to PHA tenants with undesignated utility allowances leaves less for other households who are also LIHEAP recipients.

## **AN ALTERNATIVE APPROACH**

There is no easy way to determine actual heating costs for subsidized housing units (or anyone else for that matter). To develop a proportion of an undesignated utility allowance to impute to heating, you need to use a method that is administratively simple. That means that the method involves few calculations and each calculation involves few numbers. There will, in each case, be some unavoidable imprecision accepted for administrative simplicity.

The only geographically disaggregated data on heating bills and total bills for low-income households in Washington State are the county-by-county figures developed by FSC for the *Assessment of Low-Income Energy Needs in Washington State*. It would be appropriate to use the proportion of heating costs to total costs set forth in that report as the starting point for analysis for each county.

Should price changes in heating fuels or in electricity significantly diverge over the years, as evidenced by changes in the CPI-U for each type of fuel, new base line county-by-county low-income energy bills should be recalculated at that time.

Hence, an undesignated utility allowance would be allocated to heating and non-heating costs using the following formula:

$$\begin{array}{r} \text{Utility allowance (in dollars)} \\ \times \quad \text{County-specific heating proportion (in percent)} \\ = \quad \text{Utility allowance designated to heating (in dollars).} \end{array}$$



Table 2:  
Low-Income Heating Costs as Proportion of Total Low-Income Energy Bill: By County (Washington State) (1990\$)

County	Total Energy Cost	Heating Cost	Heating Proportion
Adams	\$921	\$470	51%
Asotin	\$725	\$384	53%
Benton	\$918	\$454	49%
Chelan	\$655	\$358	55%
Clallam	\$846	\$461	54%
Clark	\$862	\$441	51%
Columbia	\$735	\$387	53%
Cowlitz	\$644	\$347	54%
Douglas	\$678	\$367	54%
Ferry	\$740	\$454	61%
Franklin	\$960	\$432	45%
Garfield	\$776	\$429	55%
Grant	\$675	\$354	52%
Grays Harbor	\$748	\$398	53%
Island	\$951	\$500	53%
Jefferson	\$795	\$427	54%
King	\$935	\$519	56%
Kitsap	\$874	\$467	53%
Kittitas	\$87-	\$511	59%
Klickitat	\$839	\$455	54%

Table 2:  
Low-Income Heating Costs as Proportion of Total Low-Income Energy Bill: By County (Washington State) (1990\$)

County	Total Energy Cost	Heating Cost	Heating Proportion
Lewis	\$716	\$381	53%
Lincoln	\$809	\$470	58%
Mason	\$863	\$445	52%
Okanogan	\$661	\$368	56%
Pacific	\$767	\$401	52%
Pend Orielle	\$655	\$388	59%
Pierce	\$939	\$479	51%
San Juan	\$722	\$415	57%
Skagit	\$832	\$459	55%
Skamania	\$811	\$445	55%
Snohomish	\$885	\$482	54%
Spokane	\$797	\$472	59%
Stevens	\$739	\$439	59%
Thurston	\$907	\$504	56%
Wahkiakum	\$775	\$439	57%
Walla Walla	\$810	\$401	50%
Whatcom	\$849	\$479	56%
Whitman	\$912	\$504	55%
Yakima	\$862	\$435	50%



Table 3  
Heat as Proportion of Total Energy Bills  
for Public Housing Units Heating with Natural Gas  
By Census Region and Number of Bedrooms (1985/1987/1989 American Housing Survey)

Region	Unit Size (Number of Bedrooms)				
	1	2	3	4	5+
1989 American Housing Survey					
NE	44%	50%	41%	24%	52%
South	54%	47%	51%	45%	54%
Midwest	45%	43%	41%	46%	54%
West	46%	43%	40%	36%	N/A
1987 American Housing Survey					
NE	50%	45%	56%	44%	N/A
South	45%	53%	52%	49%	50%
Midwest	41%	43%	40%	45%	26%
West	39%	42%	39%	N/A	N/A
1985 American Housing Survey					
NE	40%	43%	53%	43%	66%
South	54%	54%	56%	58%	53%
Midwest	45%	41%	48%	36%	17%
West	35%	47%	46%	47%	N/A