

ACTION BY: State Agencies
FNS Regional Offices

Food Stamp Program
Standard Utility Allowances
Requirements and Methodologies

I PURPOSE

This Notice reminds State agencies of the requirements of the Food Stamp Program Regulations and suggests guidelines for development of standard utility and/or telephone allowances by presenting examples of some of the methodologies used by States to develop these allowances. While the regulations are quite specific on the elements that must be included in the standard utility allowance, State agencies are allowed considerable latitude in establishing the methodology for determining the standard. In this context, there is no "right way" or "wrong way" to establish a standard. The standard utility allowance is designed to make the Program more accessible to households, ease the burden on the eligibility worker in computing the shelter costs deduction, and reduce the quality control (QC) error rate for the utility cost component. In setting the amount of the standard, the State agency should try to strike a balance between administrative simplicity and allowing households to claim a standard that is significantly higher than the utility costs they actually incur. Our intent here is to present methods which are simple to apply and are reasonably accurate. Regardless of the method chosen, State agencies must still demonstrate to FNS that any standard utility allowance accurately reflects the actual costs to food stamp households and is set at a level that will actually lead to a reduction in the QC error rate.

II POLICY

State agencies are required to develop and implement an FNS approved standard utility allowance by October 1, 1979. All standards currently in use which were approved under former section 271.3(c)(1)(iii)(h) are subject to review for compliance with the new regulations. The policy restated in the following paragraphs is found in section 273.9(d)(4)(iii) and (5) of the regulations. We have identified below those elements that State agencies must include in developing the standard utility allowance and those which they may implement at their discretion:

A Mandatory elements. State agencies are required to consider the following elements in developing the standard utility allowance:

DISTRIBUTION:
AD, F3, F4, W

EXPIRATION:
October 1, 1979

RESPONSIBLE FOR
PREPARATION AND
MAINTENANCE:
PD-100

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(II A)

1 Types of Utilities. The State agency may develop either individual standards for each expense or one standard covering all expenses. If a single standard is used, the telephone allowance may be broken out as a separate item for use by households incurring telephone costs, but which are not entitled to claim the single standard. All utility standards shall include the following types of expenses:

- a Heating and cooking fuel, e.g., natural or bottled gas, coal, fuel oil, or electricity;
- b Cooling and electricity;
- c Water and sewage;
- d Garbage and trash collection; and
- e Basic service fee for one telephone, including tax on the basic fee.

2 Annual Update. The State agency shall review the standard utility allowance and the telephone allowance, if any, at least annually and adjust these allowances as necessary to reflect changes in the cost of the utilities. The amount of each update, as well as the review schedule and the method used to update the standard, is subject to FNS approval. State agencies may wish to time the annual update of the utility standard to coincide with the annual Federal adjustment of the maximum limit on the dependent care/shelter deduction.

3 Seasonal Variation. The standard utility allowance shall vary seasonally, unless the State agency can demonstrate to FNS that such variations are not warranted. If the State agency can show that the temperature range and other climatic factors do not cause the cost of utilities to vary significantly from season to season, then a year-round standard may be used. The seasonal variation should be established for the heating and nonheating seasons, at a minimum. Additional variations are at the discretion of the State agency. The telephone standard is not subject to this provision.

B Optional Elements. State agencies may wish to consider, but are not required to use, the following elements in developing the standard utility allowance:

1 Optional Variations. In addition to the required seasonal variation, the State agency may wish to vary the standard utility allowance or the telephone standard, or both to take into consideration such factors as:

(II B 1)

- a Geographical differences, e.g., separate standards for northern or southern parts of a State or for inland or coastal areas;
- b Types of utilities predominantly used in different areas within a State, e.g., natural gas for heat in one area, but fuel oil or electricity in others;
- c Type of dwelling used by the household, e.g., one standard for apartments, another for single family dwellings;
- d Household size, e.g., a different standard for each household size or range of household sizes; or
- e The month of application and number of months the household is certified for.

2 Interim Updates. Even though State agencies are required to update the standard utility allowance only once a year, State agencies may wish to provide a mechanism for an interim update of the standard if an unexpected increase in utility rates or some other factor causes increasing numbers of households to abandon use of the standard and begin to claim actual, higher costs. In addition, the State agency may elect to change the methodology used to compute the standard utility allowance. This change can be done at any time during the year, although the State agency may wish to time any change in methodology to occur at the required annual update.

3 Optional Telephone Standard. The State agency may develop a method, subject to FNS approval, for calculating a mandatory telephone allowance for use in conjunction with a single utility allowance or as the standard allowance for the telephone if the State has separate standards by utility. In States with a single utility allowance, the telephone allowance would apply to households which are not entitled to claim the single standard, but which, nonetheless, incur separate telephone expenses. The State agency may mandate use of the standard telephone allowance even if actual costs are higher.

The State agency may develop the standard telephone allowance through the use of quality control data or by simply determining a State-wide (project area-wide) average of basic service fees for one telephone, plus any tax on the basic fee. The State agency may wish to weight the average in favor of the largest number of households paying a particular rate, if this information is available from telephone companies or public utility commissions.

(II B)

4 Monitoring Use of the Standard. Use of the standard utility allowance is designed to reduce the QC error rate and to reduce administrative complexity. State agencies (especially those which have never used a standard utility allowance) should monitor the use of the standard versus use of actual higher costs claimed by households. If a large number of households are claiming actual expenses and the QC error rate persists, the standard is not adequate and its value is lost. Use of the actual costs will be picked up through QC reviews and should be reported to the unit within the State agency responsible for developing and updating the standard utility allowance.

III EXAMPLES OF METHODOLOGIES

Attachments 1 through 3 to this Notice are examples of methodologies developed and used in Colorado, New Hampshire, and Texas. FNS reviewed the methodologies used by all States with approved standard utility allowances and found these to be fairly representative of the approaches followed by the majority of States. The Attachments give information on data gathering techniques and data sources, and illustrate how various options as well as mandatory seasonal variations are incorporated.

The Colorado method (Attachment 1) uses averages from utility providers and incorporates regional usage and taxation variations, as well as inflation rate factors. In some instances, averages are weighted according to utility providers, regions, and population served. No method for updating the standard is specified; however, it is clear that the data base developed by the State could be recomputed to factor in either inflation or rate increases.

The New Hampshire method (Attachment 2) uses a model constructed using degree days and average heating costs, adjusted for inflation. For non-heating electric costs, the average usage per household and the cost per kilowatt hour was determined and adjusted for inflation. The remaining expenses were determined from QC data. The method includes a statement that standard amounts will be updated annually using the Heat and Utilities Index. The household's standard is based on the month of application and number of months in its certification period.

The Texas method (Attachment 3) uses QC data adjusted for inflation. The State has set out to establish by analysis of data the optimum percentage of households that should be able to use the standard allowance. The method includes a formula for updating the standard using the Utilities Price Index. States are warned that the Texas method requires some fairly complex calculations and probably should not be attempted unless sophisticated automatic data processing equipment is available.

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It is possible that State agencies may wish to adopt other methods to address unique conditions found in their States; however, we thought the examples cited were particularly well-stated and easy for other States to adopt. In addition to the guidance in the Attachments, State agencies should consider the following:

A Deciding on Methodology. The three examples cited in the Attachments represent a cross section of techniques used by a majority of State agencies. Without attempting to favor one method over another, we want to make some observations concerning the use of the methods.

The somewhat limited data we have available suggest that patterns of utility use among the food stamp population do not differ significantly from that of the general population; therefore, average residential user costs supplied by utility companies (and models constructed from rate and temperature data) may be used to develop standard utility allowances. However, States are cautioned that the use of raw unadjusted averages and usage models might not result in the goal of administrative ease or reduction in error rates if too few households claim the standard. We suggest that State agencies use weighted (by region and population) averages or explore the use of modal, rather than mean, figures, if such information is available from utility companies and will result in a standard that can be used by more households.

If, on the other hand, the State agency uses QC data, it may be possible to estimate with greater precision the number of households which will be able to use the standard. In setting the amount of the standard, the State agency should attempt to strike a balance between administrative simplicity and allowing households to claim a standard that is significantly higher than the utility costs they actually incur.

B Update Methodology. Ideally, the State agency will submit the methodology to be used to make the required annual update at the same time it submits the standard utility allowance for approval. To update the standard, the State agency may recompute the standard by factoring in the latest rate increases or State-level utility price indices based on the rate of inflation, or by simply adjusting the single standard amount by the latest possible composite utility price indices.

C Individual Standards. Before deciding to develop individual standards for each utility, the State agency should determine if a significant number of households incur some, but not all, of the utility expenses that would entitle them to claim a single standard. If the State agency finds that a majority of households do incur most of the expenses that would be included in a single standard utility allowance, then it may prefer, for simplicity's sake, to adopt a single standard.

(III C)

If the State agency does adopt separate standards for each utility, the household may claim the standard for some utilities, but claim higher verified costs on others that exceed the standard.

D Rounding. We recommend that State agencies establish standard utility allowances in whole dollar amounts to decrease the possibility of errors in calculations, especially if individual standards for each utility are used. To get whole dollar amounts, the State agency may round by dropping cents or by rounding up or down to the nearest whole dollar.

IV IMPLEMENTATION SCHEDULE

The following actions need to be taken to implement the standard utility allowance regulation on schedule:

A State Agency Action. State agencies shall either update utility standards approved under the former regulatory requirements or develop entirely new standard utility allowances by October 1, 1979. To meet this deadline, State agencies should submit for approval proposed standard utility allowances, including appropriate supporting data and justification for use of a year-round standard (if necessary) to FNS Regional Offices by mid-August 1979. This will allow sufficient lead time for FNS approval, any necessary computer programming changes, and distribution of instructional material to local offices. State agencies that fail to implement the provision as required by October 1, 1979, may be subject to warnings and sanctions under section 277 of the regulations.

B FNS Regional Office Action. FNS Regional Offices shall provide State agencies with the technical assistance mentioned in Section V, below. Any requests for assistance from Washington, D.C. staff shall be directed to the appropriate regional branch in the Performance Reporting Division. No later than August 31, 1979, each Regional Office shall provide an implementation status report to the Director, Performance Reporting Division. The report shall include a list of the States with standard utility allowances approved under the current regulations, the status of States that do not have an approved utility standard, and recommendations for further technical assistance or other appropriate action regarding such States.

V REQUESTS FOR TECHNICAL ASSISTANCE

FNS is prepared to offer State agencies technical assistance in developing standard utility allowances or in updating existing standards. Technical assistance includes help with developing statistical techniques and a sampling plan prior to data gathering; review of statistical methods and

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resulting figures for accuracy and validity; and informal review of standards prior to formal submission for approval. FNS Regional Offices will evaluate the requests for assistance and assign staff as appropriate to work with the requesting State. State agencies should make their needs known to the Regional Offices as soon as possible.



Alberta C. Frost
Acting Deputy Administrator
for Family Nutrition Programs

Attachments

STANDARD UTILITY ALLOWANCE

Colorado Methodology

I GAS

Public Service Company of Colorado (PSCC) provides gas service to some 80 percent of Colorado residents. Average monthly charges for gas for Denver metropolitan area residential customers, adjusted for rate increases through June 1978, are shown below. These figures do not include franchise or sales taxes.

January	\$33.90
February	36.70
March	32.90
April	21.70
May	18.90
June	13.50
July	7.20
August	6.80
September	7.20
October	9.90
November	17.60
December	29.10

The average charge for April through October was \$12.17 and for November through March \$30.04.

The PSCC estimates that:

67 percent of their customers paid the average rates shown above (Denver metropolitan area)

8 percent paid 2 percent higher rates (Pueblo area)

17 percent paid 4-5 percent higher rates (area north of Denver, including Boulder and Fort Collins)

4 percent paid 4-5 percent higher rates (San Luis Valley)

4 percent paid 22 percent higher rates (Mountain areas/Western Slope)

The above breakdown of the rates paid gives us the average rates shown in the table which follows. The rates are the basic rates as of June 30, 1978.

MONTHS	Percentage of residential customers who pay average charge indicated.				Average for State
	67%	8%	21%	4%	
April-October	\$12.17	\$12.41	\$12.72	\$14.85	\$12.41
Nov.-March	30.04	30.64	31.39	36.65	30.64

The base rate for gas was increased by 3.4 percent on August 23, 1978 and PSCC's major wholesale supplier increased its rates by approximately 17 percent ¹ on October 2, 1978. Cities and towns impose franchise taxes of 1 to 3 percent. Incorporating these increases and using 2.5 percent and 6 percent as representative values for franchise and sales taxes, respectively, we get:

April - October
 $\$12.41 \times 103.4\% \times 117\% \times 102.5\% \times 106\% = \16.31

November - March:
 $\$30.64 \times 103.4\% \times 117\% \times 102.5\% \times 106\% = \40.27

II ELECTRICITY

Public Service Company of Colorado (PSCC) supplies electricity to 585,000 residential customers in the Denver metropolitan area, Brighton, Broomfield, Boulder, and the Western Slope.

The average monthly basic charges for their 497,000 customers in the Denver metropolitan area, Brighton, Broomfield and Boulder, adjusted to reflect rate increases through June 1978, were as follows:

¹/ The increases for the Western Slope and the San Luis Valley were considerably smaller but this fact was not taken into account because of the small proportion of customers residing in those areas.

<u>Month or Months</u>	<u>Average Amount</u>
January	\$17.30
February	16.40
March	16.40
April	14.70
May	14.00
June	14.10
July	14.50
August	15.20
September	15.20
October	14.00
November	14.30
December	16.70

April - October	\$14.53
November - March	16.22

PSCC's basic rates for their 88,000 residential customers who live on the Western Slope average 9 percent higher than the rates given above, as follows:

<u>Months</u>	<u>Average Amount</u>
April - October	\$15.84
November - March	17.68

PSCC's base rate for electricity (other than for heating) was increased by 3.2 percent on August 23, 1978. Franchise and sales taxes applicable to Denver metropolitan and nearby area customers are 2.5 percent and 6.0 percent, respectively, while the corresponding taxes applicable to Western Slope customers are 1.5 percent and 5.0 percent, respectively. The base rate increase and franchise and sales taxes raise the average charges as follows:

For the 497,000 customers in Denver metropolitan and nearby areas:

April - October
 $\$14.53 \times 103.2\% \times 102.5\% \times 106.0\% = \16.29

November - March
 $\$16.22 \times 103.2\% \times 102.5\% \times 106.0\% = \18.19

For the 88,000 customers residing on the Western Slope:

April - October

$$\$15.84 \times 103.2\% \times 101.5\% \times 105.0\% = \$17.42$$

November - March

$$\$17.68 \times 103.2\% \times 101.5\% \times 105.0\% = \$19.45$$

The Southern Colorado Power Company provides electricity to 57,000 residential customers in Pueblo, Rocky Ford, Ordway, Westcliffe, Penrose, Florence, Canon City, Cripple Creek, and Victor. The average monthly charges (including all taxes) are as follows:

<u>Month or</u> <u>Months</u>	<u>Average</u> <u>Amount</u>
January	\$20.32
February	19.56
March	18.48
April	17.04
May	15.88
June	15.76
July	18.52
August	18.84
September	17.28
October	15.84
November	15.56
December	19.20
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April - October	\$17.02
November - March	18.62

The Intermountain Rural Electric Association (IREA) services 23,000 households in 9 counties east, south, and west of Littleton. The average monthly basic rates they were able to provide are limited to charges for the months January through August 1978, as follows:

January	\$11.44
February	11.30
March	10.85
April	9.44
May	8.48

June	7.60
July	7.26
August	<u>7.16</u>

Total - January - August \$73.53

The January through August total represents 59.98 percent of the total of the corresponding PSCC basis figures shown on page 3. Assuming the same relationship between the two series throughout the year, the average IREA basic rates become:

April - October	\$ 8.72
November - March	9.73

Increased by 4.0 percent for estimated franchise and sales taxes, the rates for IREA's 23,000 customers become:

April - October	\$ 9.07
November - March	10.12

To obtain composite statewide averages, average charges for the four groups of customers were weighted by the number of customers served to arrive at the following figures:

April - October	\$16.25
November - March	18.11

III WATER

Average annual charges for water service for residential customers were obtained from the Denver Water Department, the Thornton Utilities Department, and the Boulder Water Utility.

<u>LOCATION</u>	<u>AVERAGE ANNUAL CHARGE</u>	<u>ESTIMATED 1975 POPULATION (in thousands)</u> ^{2/}
Denver	\$110	488
Littleton	126	28
Aurora	139	118
Westminster	149	24
Lakewood	185	120
Colorado Springs	156	180
Arvada	126	74
Pueblo	137	105

<u>LOCATION</u>	<u>AVERAGE ANNUAL CHARGE</u>	<u>ESTIMATED 1975 POPULATION (in thousands)</u> ^{2/}
Grand Junction	121	28
Longmont	114	32
Englewood	95	36
Thornton	156	25
Northglenn	156	35
Boulder	76	79

The weighted average charge for water services is \$129.01 per year or \$10.75 per month.

<u>LOCATION</u>	<u>AVERAGE ANNUAL SEWAGE CHARGE</u>	<u>ESTIMATED 1975 POPULATION (in thousands)</u> ^{2/}
Denver	\$50	1233
Littleton		
Aurora		
Westminster		
Lakewood		
Colorado Springs		
Arvada		
Pueblo		
Grand Junction	\$54	60
Longmont		
Englewood	\$31	79
Thornton		
Northglenn		
Boulder		

The weighted average charge for sewage service is \$49.08 per year, or \$4.09 per month.

^{2/} U.S. Bureau of the Census, Series P-25, No. 654, issued May 1977.

IV TELEPHONE

Mountain Bell's monthly rates for urban flat individual line residential services are as follows:

<u>Exchange Rate Group</u>	<u>Monthly Charge (including sales taxes)</u>
I	\$6.61
II	7.28
III	7.95
IV	8.62
V	9.29

Rate groups are keyed to the size of the area served by the exchange. Inasmuch as the bulk of the State's population is concentrated in areas charged the highest two rates and particularly in areas charged the highest rate (\$9.29), the standard for telephone service is set at \$10.00.

V TRASH/GARBAGE COLLECTION

Charges for residential trash/garbage collection were found to average \$3.75 per month. The standard for this service will be established at \$4.00.

STANDARD UTILITY ALLOWANCE

New Hampshire Methodology

I HEATING COSTS

A The number of heating degree-days per month was determined from the 30-year average of heating degree-days in New Hampshire - as supplied by U.S. Weather Service. A degree-day represents the degree difference between the mean daily outdoor temperature and the standard temperature of 65°. (If the mean daily outdoor temperature for January 1 equaled 18°, then $65^\circ - 18^\circ = 47$ degree-days)

B The average cost of heating per degree-day is \$.203442. This was determined from the heating cost for a 6-month period of a sample group of households. The average cost per household was then divided by the number of degree-days occurring in the same 6-month period. The result was then updated to allow for inflation.

II ELECTRICITY

A The average residential usage of electricity (not including space or water heating, which is already included in the heating costs above) was obtained from the Public Service Company of New Hampshire.

B The cost per kilowatt was then updated to reflect the 17 percent rate increase effective in December 1977.

C The average monthly cost was then determined:

$$\begin{array}{r} 4700 \text{ Kilowatts (average yearly usage)} \\ \times \$.0622 \text{ (Current residential rate)} \\ \hline \$292.34 + 12 \text{ months} = \$24.36 \text{ per month} \end{array}$$

III TELEPHONE

The average cost for basic telephone service and tax was calculated from figures available in the quality control reviews of January 1977 through June 1977.

IV WATER, SEWER AND TRASH

The figures are a composite average of all homes paying a separate cost for water, sewer or trash according to available data in quality control reviews of January 1977 through June 1977.

V MONTHLY UTILITY COSTS

Monthly utility costs for the average household were then calculated.

MONTH	DEGREE-DAYS	x	HEAT COST PER DEGREE-DAY	=	HEAT	+	ELECTRICITY	+	TELEPHONE	+	WATER, SEWER + TRASH	=	UTILITY COST
JANUARY	1376	x	\$.203442	=	\$279.93	+	\$24.36	+	\$9.78	+	\$9.37	=	\$323.44
FEBRUARY	1187	x	.203442	=	241.48	+	24.36	+	9.78	+	9.37	=	284.99
MARCH	1014	x	.203442	=	206.30	+	24.36	+	9.78	+	9.37	=	249.81
APRIL	624	x	.203442	=	126.94	+	24.36	+	9.78	+	9.37	=	170.45
MAY	315	x	.203442	=	64.08	+	24.36	+	9.78	+	9.37	=	107.59
JUNE	58	x	.203442	=	11.79	+	24.36	+	9.78	+	9.37	=	55.30
JULY	16	x	.203442	=	3.25	+	24.36	+	9.78	+	9.37	=	46.76
AUGUST	45	x	.203442	=	9.15	+	24.36	+	9.78	+	9.37	=	52.66
SEPTEMBER	181	x	.203442	=	36.82	+	24.36	+	9.78	+	9.37	=	80.33
OCTOBER	487	x	.203442	=	99.07	+	24.36	+	9.78	+	9.37	=	142.58
NOVEMBER	805	x	.203442	=	163.77	+	24.36	+	9.78	+	9.37	=	207.28
DECEMBER	1246	x	.203442	=	253.48	+	24.36	+	9.78	+	9.37	=	296.99

VI STANDARD UTILITIES ALLOWANCE TABLE

A The utility cost was then rounded off to obtain the standard utility cost for each month.

B To determine the standard utility allowance, the monthly utility costs would be averaged to establish a Table that would take into account, at a minimum, heating and nonheating seasons.

NOTE: The Table developed above is for use only for those households incurring heating costs separately from rent or mortgage expenses.

VII MODIFIED STANDARD UTILITIES ALLOWANCE

A For those households incurring utility expenses, but not heating costs, separately from shelter expenses, a modified standard was calculated as follows:

\$24.36	(electricity)
9.78	(telephone)
<u>9.37</u>	(water, sewer, trash)
\$43.51	average monthly utility cost

B The average monthly utility cost is constant for each month of the year.

VIII ANNUAL REVIEW

A The Standard Utility Allowance Table and modified allowance will be reviewed annually.

B The U.S. Bureau of Labor Statistics' "Heat and Utilities Index," published in January of each year, will be used to update the figures.

STANDARD UTILITY ALLOWANCE

Texas Methodology

The utility standard will be selected so that utility expenses for 95 percent of families receiving food stamps would be less than or equal to the standard. Determination of the standard will be accomplished in four steps:

- (1) Collect data;
- (2) Select a base period;
- (3) Determine the standard for the base period; and
- (4) Adjust the standard for inflation.

I DATA COLLECTION

Data will be gathered from approximately 3,000 quality control food stamp case folders representing the active case samples for three periods.

(1) July - December 1977, (2) January - June 1978, and (3) July - September 1978. Data will be coded on to forms.

Cases in the sample will fall into two groups: (1) those which claim utilities as part of their excess shelter expense and therefore have utility costs recorded in their case record; and (2) those which do not have utility costs recorded because they either do not claim excess shelter expense or do not claim utilities as part of their shelter expense.

For cases in the first group (utility data available), the utility payment for the most recent month will be recorded and will become the data point used in computing the standard. Utility data for the next two most recent months will also be recorded if available, but this data will be used only for analysis of the impact the standard has on recipients' bonus values.

Cases in the second group will be assigned a utility payment (data point) of zero. This does not mean that they do not have utility costs but instead indicates that they are not expected to itemize regardless of the standard selected. This group does not itemize now and should not under the more restrictive requirements of the new Food Stamp Act. Selection of a standard is aimed at adding to the group enough of those who do presently itemize so that a total of 95 percent do not itemize.

II BASE PERIOD SELECTION

Data points for cases with utilities data will be sorted and tabulated according to the month of the payment. This will provide a distribution of payments probably covering a 27-month interval, with the end months containing only a few entries. A period of 12 consecutive months will be selected which provides the most uniform distribution, and utility payments for this period will provide the basis for the standard.

The number of cases with utility data will probably be reduced 40-50 percent through this selection. Cases without utility data must then be reduced by the same percentage through random selection of cases to be eliminated. The base period sample (S_{bp}) will then consist of all cases in the base period with utility data plus a percentage of cases without utility data with the ratio of "with" : "without" remaining the same as the original sample.

III DETERMINING THE BASE PERIOD STANDARD

Cases in the base period sample will be ordered from lowest to highest payment, including the cases with zero utility payment. The base period standard (U_{bp}) will then be that amount which divides the distribution so that 95 percent of the cases are less than the amount and 5 percent are greater, i.e., the 95th percentile.

IV ADJUSTING FOR INFLATION

The base period utility standard would have been appropriate for the base period but, because of changes in the cost of utilities over time, the standard must be increased for later periods. The Utilities Price Index (UPI) published monthly by the Bureau of Labor Statistics will provide the basis for these adjustments.

For the base period, the index (UPI_{bp}) will be an average of the monthly UPIs for that period. For the year^{bp} in which the standard is to be used, August 1979 to July 1980, the index (UPI_{80}) must be estimated. This will be accomplished by applying a straight-line trend (least-squares method) to the most recent 12 months' UPIs available at the time the calculation is performed. This trend will be extended into the August 1979 - July 1980 period and UPI_{80} will then be the average of these monthly values.

The base period utility standard can then be adjusted for inflation using the following formula:

$$U_{80} = U_{bp} \times \frac{UPI_{80}}{UPI_{bp}}$$

V ANALYSIS OF RESULTS

For all cases in S_{bp} , the actual utility payments will be replaced by U_{bp} if they are lower. Bonus values will be recomputed using these values and claiming excess shelter if appropriate. The bonus value can then be compared to original bonus values for these cases to measure the impact of the standard.

Standards based on other percentiles, i.e., 75, 80, 90, etc., could also be developed. Bonus values for these different standards could be calculated and compared to the proposed standard to estimate the effect of selecting various other options.

VI UPDATING THE STANDARD

The base period standard will be updated annually to take into account the effects of inflation. The process will be exactly as described earlier for U_{80} , with the trend recomputed based on the most recent 12 monthly UPIs.

NOTE: While this method does not specifically address seasonal variations, the monthly averages could be compared to determine if seasonal variations are warranted.