

IN THIS ISSUE

**Jack Hall Housing Corporation Uses
"Engineering" Analysis to Set Utility
Allowance Yet Still Falls Short of
Reasonableness**

NOTE TO READERS

ON-LINE DELIVERY

This document presents the bi-monthly electronic newsletter of Fisher, Sheehan & Colton: *FSC's Law and Economics Insights*. Previous issues of the newsletter can be obtained at FSC's World Wide Web site:

<http://www.fsconline.com> (click on "News")

Fisher, Sheehan & Colton
Public Finance and General Economics
34 Warwick Road, Belmont, MA 02478
(voice) 617-484-0597 *** (fax) 617-484-0594
(e-mail) roger@fsconline.com

**Energy Consumption and Electric Utility
Allowances In Hawaii Fall Short of Statutory
Requirements**

Fisher, Sheehan and Colton (FSC) was recently asked to review a set of utility allowances prepared for certain Section 8 units in the Jack Hall Memorial Housing Corporation (JHMHC) development in Hawaii. The discussion below outlines some of the problems that FSC identified with the allowances that had been promulgated using an "engineering" analysis. The issues found for the Jack Hall development are common to many engineering-based utility allowance calculations throughout the nation.

Basic Utility Allowance Principles

The review FSC presented was not undertaken in a legal vacuum. According to FSC, JHMHC had legal obligations with which it must comply in setting utility allowances.¹ Other principles also apply to setting a utility allowance as a matter of sound methodology irrespective of whether or not they have been incorporated into legal requirements. The discussion below briefly identifies some of the primary principles used in reviewing the Jack Hall allowances.

Pursuant to the United States Housing Act,² rent, including utilities, for tenants residing in project-based Section 8 new construction developments cannot exceed a certain percentage of tenant income.³ The owner of a project-based Section 8 development receives a certain amount of rent to operate each unit (called the "contract rent"), which is set by a "Housing Assistance Payment

¹ Dorsey v. Housing Authority of Baltimore City, 984 F.2d 622, 624 (1993) (hereafter, Dorsey).

² 42 U.S.C. §1437a(a)(1) (known as the "Brooke Amendment"),

³ 42 U.S.C. §1437a(a)(1); see also, 24 C.F.R. §5.603(b) (2012).

Contract” between the owner and the U.S. Department of Housing and Urban Development (“HUD”).⁴ To ensure that the owner receives the full contract rent for operation of a subsidized unit, HUD pays the owner the difference between the tenant’s portion of the rent and the contract rent.⁵

To ensure that tenants' rents plus utilities do not exceed the Brooke Amendment’s rent ceiling when tenants are directly responsible for the payment of utility service (i.e., where tenants must pay a utility provider directly), HUD regulations require that tenants be provided with a “utility allowance.”⁶ The utility allowance provided to tenants takes the form of a rent credit that must be equal to an amount that tenants are estimated to pay for a reasonable consumption of utilities.

Each time the contract rents for a project-based Section 8 development are to be adjusted, the owner must complete and submit an analysis of the adequacy of utility allowances in light of the relevant changes since the allowances were last adjusted (e.g., changes in utility rates).⁷

Utility allowances are also to be periodically adjusted to ensure that they reflect current utility rates. HUD regulations provide that there are two circumstances under which utility allowances are to be adjusted:⁸

1. “In connection with annual. . . adjustments of contract rents, the owner *must* submit an analysis of the project’s Utility Allowances. Such data as changes in utility rates and other facts affecting utility consumption should be provided as part of this analysis to permit appropriate adjustments in the Utility Allowances.”

2. “*In addition*, when approval of a utility rate change would result in a cumulative increase of 10 percent or more in the most recently approved Utility Allowances, the project owner *must* advise the contract administrator and request approval of new Utility Allowances.”

(emphasis added). Use of the word “must” indicates that these two times of adjustment are mandatory, not optional. Moreover, the use of the phrase “in addition” indicates that the mandatory adjustment upon a 10% change is above and beyond the annual review and adjustment, not simply a part of the annual adjustment.⁹ Both adjustments are necessary to meet the rent limitation standard of the Brooke Amendment.

In addition, two additional factors have judicially been read into the HUD regulations based upon HUD's explanation of its regulations at the time of their promulgation:

1. Utility allowances shall cover energy consumption that is attributable to factors not within the ability of the tenant to control;¹⁰ and
2. The distinction "between consumption generated by necessary and luxury appliances [is] expect[ed] [to] reflect local usage and custom patterns."¹¹

These two factors are additional relevant factors that must be taken into account in setting utility allowances: (1) the extent to which consumption is within the ability of the tenant to control; and (2) the extent to which the energy consumption covered by the utility allowance "reflects local usage and custom patterns."

Finally, in addition to the factors that shall be taken into account in setting utility allowances, an additional legal inference must be accounted for in the determination of a utility allowance. The

⁴ 24 C.F.R. §880.201 (2012)

⁵ 24 C.F.R. §880.501(d) (2012).

⁶ 24 C.F.R. §5.603(b) (2012).

⁷ 24 C.F.R. §880.610 (2012).

⁸ 24 C.F.R. §880.610 (2012).

⁹ 24 C.F.R. §880.610 (2012).

¹⁰ Dorsey, at 629, citing 49 Fed. Reg. 31406.

¹¹ Dorsey, at 629, citing 49 Fed. Reg. 31404.

courts have explicitly stated that evidence that tenant consumption is routinely in excess of a proposed utility allowance "gives rise to an inference that the allowances were inadequate to provide for reasonable consumption by an energy-conservative household of modest means."¹²

The courts have explained that the process for setting a utility allowance must take into account the extent to which tenant consumption exceeds the proffered utility allowance, since excessive consumption is "material evidence that the PHA standard is out-of-line with [the standard set forth in HUD regulations], or that excess consumption may be due to factors not within the control of the tenants."¹³

Application of this principle is not merely a result of reading the language of a federal court case. HUD has specifically incorporated this principle into the discussion of developing utility allowances presented in its Public Housing Occupancy Guidebook. According to HUD:

When the actual energy consumption by tenants routinely exceeds a utility allowance, the PHA shall increase the allowance unless the PHA can provide evidence that the energy consumption can be attributed to a lack of non-energy conservative consumption. The fact that tenant consumption is routinely in excess of the PHA's utility allowance is material evidence that the PHA allowance is insufficient or that excess consumption may be due to factors not within the control of the tenants.

Public Housing Occupancy Guidebook, at 170. For a Section 8 development, not directly covered by the Guidebook, this principle is not one imposed by regulatory fiat, but rather one recognized as needed to comply with the federal payment standards for tenants of low-income subsidized housing, whether those tenants live in public housing or in Section 8 housing.

¹² Dorsey, at 631.

¹³ Dorsey, at 629 - 630 citing 49 Fed. Reg. 31404.

Setting a Reasonable Consumption: the 80th Percentile Standard

In reviewing what utility allowances should be established for JHMHC, FSC reviewed actual utility consumption for JHMHC tenants for all months January 2004 through April 2012. This billing data was provided by the Hawaii Electric Company (HECO), the local electric utility.

In establishing a utility allowance, FSC set the consumption level at the 80th percentile. This decision-rule means that the level of consumption is set such that 80% of the tenants in the JHMHC tenant data base provided by HECO have consumption at or below the consumption level.

HUD has long recognized the need to set utility allowances above the "middle" (e.g., the average or mean, or the median). If one were to set a utility allowance using the median, by definition, it would be "too low" in half of all instances. By definition, the median (i.e., the 50th percentile) is that point at which half of all units have consumption less than the median and half of all units have consumption higher than the median.

The recognition that establishing utility allowances should be set at a percentile that exceeds the median (or mean) is used for purposes of setting utility allowances. For example, one task FSC undertakes each year is to prepare the "Standard Utility Allowance" ("SUA") for the Supplemental Nutrition Assistance Program ("SNAP") (formerly called "Food Stamps") for the states of Iowa, Wisconsin and Illinois. The SUA is used by those states to determine the utility cost component of the Excess Shelter Deduction for SNAP participants. The SUA is updated on an annual basis and submitted by each State to the U.S. Department of Agriculture ("USDA"), which administers SNAP, for review and approval. The Standard Utility Allowance for the Food Stamp offices of each of these three States is based on the 80th percentile decision-rule.

Using the 80th percentile rather than the mean (i.e., average) or median is not simply a “policy” or “methodological” choice. Its use is necessary to operationalize the principles identified above as applicable to the setting of utility allowances.

First, evidence that tenant consumption is routinely in excess of a proposed utility allowance, which would occur should utility allowances be based on a mean or median, gives rise to an inference that the allowances are inadequate to provide for reasonable consumption by an energy-conservative household of modest means. Second, routinely seeing consumption in excess of the utility allowance, which also would arise should a utility allowance be based on a mean or median, is material evidence that the utility allowance is out-of-line with the standard that rent burdens (including utility costs) should be reduced to no more than 30% of income. Finally, routinely seeing consumption in excess of the utility allowance is evidence that the excess consumption may be due to factors not within the control of the tenants.

This methodology for setting utility allowances is consistent with HUD’s “Utility Allowance Guidebook: For Optional Use by Public Housing Agencies” (September 1998). The Guidebook states:

. . .it is logical to assume that a sizable percentage of resident households will have consumption levels above the ‘point of central tendency’ (the average). Therefore, the [Housing Authority] must decide to what extent the utility use above the calculated average represents wasteful consumption which was within the ability of the residents to control.

* * *

A second approach to determining an acceptable range above the average is to divide the dwelling unit consumption data into *percentiles* (emphasis in original), and then selecting the level (e.g., the 85th

percentile) above which the [Housing Authority] feels that consumption is clearly excessive based on its familiarity with utility use patterns across the agency over time.

Utility Allowance Guidebook, at 102 – 103. A familiarity with low-income energy consumption patterns was used by FSC to select the 80th percentile (which is close to, albeit not identical to, the 85th percentile that the Guidebook uses as its example) as appropriate.

In addition to this precedential support for the use of an 80th percentile decision-rule, FSC independently assessed the reasonableness of the use of an 80th percentile usage for the particular Hawaii case. The FSC analysis compared the 80th percentile consumption level, by month, to the median consumption plus one standard deviation in each month for which data was provided (January 2004 through April 2012). The “standard deviation” measures the dispersion of a group of values. The tighter the dispersion, the smaller the standard deviation will be.

For energy consumption, the standard deviation measures the natural variability in consumption around the middle. Variability may exist for any number of quite legitimate reasons, none of which indicate “waste.” Household size and composition may differ. The choice and aging of appliances may differ. The amount and scheduling of time household members spend at home may differ. As a result of these normal, and quite expected, variations, some consumers will use less and some will use more.

A comparison of the JHMHC consumption at the 80th percentile to the median plus one standard deviation for one bedroom units shows that the median plus one standard deviation is *less* than the 80th percentile consumption level in only 24 of the 100 months of comparison (January 2004 through April 2012). Where the 80th percentile consumption was more than the median plus one standard deviation, the amount of excess was small. The maximum excess in any given month was only 24 kWh. The average amount of the excess in those 24 months was 10 kWh. In 13 of

the 24 instances, the difference was less than 10 kWh per month, while in 18 of the 24 instances, the difference was 12 kWh or less. For two bedroom units, the 80th percentile consumption did not exceed the median plus one standard deviation in any given month. It is clear that use of the 80th percentile usage level captures household consumption within a normal range; the 80th percentile usage does not extend to wasteful energy consumption.

Comparing Utility Allowances with Actual Monthly Utility Bills

A second task FSC undertook for the Jack Hall analysis was to compare the utility allowances actually in-place for JHMHC tenants to the actual bills received by tenants for the months of January 2004 through April 2012 (as measured in dollars). The objective was to assess the extent to which, if at all, tenant bills were routinely in excess of the utility allowances promulgated by JHMHC.

The deviations between actual energy bills received by JHMHC tenants and the utility allowances promulgated by JHMHC lead FSC to conclude that JHMHC tenants routinely paid more than 30% of their income for shelter costs, the affordability standard articulated by the Brooke Amendment. JHMHC tenants are billed directly for electricity by HECO. Since rents are set at 30% of income, any excess utility cost above the utility allowance amount, therefore, would be in addition to the rent, and would thus cause a household's total shelter costs to exceed the statutory thirty percent limit on rent burdens.

Using the data base provided by HECO, FSC compared the actual bills for each tenant to the utility allowances provided by JHMHC in the month in which the bill was incurred. The objective was to determine the extent to which, if at all, each tenant's bill was less than or greater than the utility allowance provided by JHMHC.

After cleaning the data (e.g., eliminating partial month data, eliminating months with JHMHC named as the tenant), FSC retained data for be-

tween 89 and 103 of the 104 total one bedroom units in any given month. Of those units:

- The percentage of units with actual bills exceeding the utility allowance did not fall below 80% in any month prior to December 2009. Indeed, in the period January 2004 through November 2009, on *average*, 94% of Tenant bills exceeded the utility allowance for one-bedroom units. The monthly proportion of Tenant bills exceeding the utility allowance in this time period ranged from 85% to 100%.
- From December 2009 through February 2012, on average, 76% of Tenant bills exceeded the utility allowance for one-bedroom units. The monthly proportion of Tenant bills exceeding the utility allowance ranged from 56% to 90%.
- Even for the two months after the most recent increase in the utility allowance (March/April 2012), between 41% and 46% of Tenant bills exceeded that allowance.

A similar result occurred for two bedroom units. Cleaning the data allowed FSC to retain data for between 30 and 38 of the 40 total two bedroom units. Of those units:

- From January 2004 through November 2009, on average, 91% of Tenant bills exceeded the utility allowance for two-bedroom units. The monthly proportion of Tenant bills exceeding the utility allowance in this time frame ranged from 67% to 100%, with the proportion exceeding 85% in 60 of the 71 months in the period.
- From December 2009 through February 2012, on average, 78% of Tenant bills exceeded the utility allowance. The monthly proportion of Tenant bills exceeding the utility allowance ranged from 63% to 88%, with the proportion

exceeding 75% in 20 of the 27 months in the period.

- Even for the three months after the most recent increase in the utility allowance (March/April/May 2012), between 49% and 56% of Tenant bills exceeded that allowance.

Monthly Electricity Consumption Implicit in the Utility Allowance

FSC finally assessed the reasonableness of the JHMHC utility allowance by determining how much kWh of electricity consumption is implicit within each month's utility allowance. The two important inputs for such a calculation were readily known: (1) the monthly utility allowance provided by JHMHC; and (2) the HECO "effective energy rates" reported by the Hawaii PUC for each June, for the years 2001 through 2011. For each month, therefore, FSC subtracted the monthly fixed customer charge from the utility allowance, and divided the amount of the utility allowance remaining by the per-kWh HECO rates to determine how many kWh the utility allowance would cover.

The usage implied in the utility allowances provided for one-bedroom units at JHMHC imply consumption ranges between 100 kWh per month (with the minimum being 96 kWh) and somewhat more than 200 kWh per month (with the maximum being 233 kWh). The usage implied in the utility allowances provided for two-bedroom units imply consumption ranges between somewhat more than 200 kWh (the minimum being 203 kWh) and just under 500 kWh (the maximum being 487 kWh).

These usage levels, FSC reported, are inherently unreasonable monthly electric consumptions. Not only are they substantially less than the kWh usage for each size of JHMHC units for each month, they are insufficient to meet basic levels of expected residential electricity needs.

Summary and Conclusions

FSC reported that the data and analysis presented both cumulatively, and independently, supported the conclusions that:

- The JHMHC utility allowances were inadequate to provide for reasonable consumption by an energy-conservative household of modest means;
- The JHMHC utility allowances were out-of-line with the payment standard set forth in the Brooke Amendment as well as in HUD regulations; and
- The excess bills above and beyond the utility allowance were due to factors not within the ability of JHMHC tenants to control.

FSC concluded further that the promulgation of a utility allowance through an "engineering" analysis cannot be completely divorced from actual consumption levels by public or Section 8 tenants. The reasonableness of an engineering analysis can, and must, be tested against the usage actually occurring within the tenant population.

For more information on the preparation of utility allowances for public and assisted housing, as well as for a copy of the full Hawaii analysis, please write: roger[at]fsconline.com

Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which FSC has worked include energy law and economics, fair housing, affordable housing development, local planning and zoning, energy efficiency planning, community economic development, poverty and telecommunications policy, regulatory economics, and public welfare policy.