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Appendix: Estimate of 2007 Operating Subsidy for Utility Costs

The analysis contains an estimate that housing agencies will be eligible for \$1.674 billion in utility-related operating subsidies in 2007. This appendix explains the formula HUD will use to set eligibility for utility-related operating subsidies for 2007 and the way we estimated the 2007 eligibility level.

HUD's Formula for Utility-Related Operating Subsidies

In calculating agencies' eligibility for operating subsidies for 2007, HUD will, for the first time, use a new formula it established by regulation in September 2005. Under this formula, the amount agencies can receive to cover utility costs they pay (known as the "utilities expense level" in HUD terminology) is calculated by multiplying a quantity of utilities consumed by a unit price.¹

- The quantity of utilities consumed (also known as the "payable consumption level") will be based on agencies' utility consumption during July 2005-June 2006. To provide an incentive for conservation, however, agencies that consumed less during July 2005-June 2006 than in an earlier three-year "rolling base" period of July 2002-June 2005 will have 75 percent of the difference between the two periods added to their payable consumption level. Similarly, agencies that consumed *more* during the July 2005-June 2006 period than in the earlier rolling base period will have 75 percent of the difference *deducted* from their payable consumption level.
- The unit price will be the rate that agencies paid for utilities during July 2005-June 2006, adjusted by an inflation factor of 11.95 percent. HUD determined this percentage based on the change in the Fuel and Utilities Consumer Price Index from May 2005 to May 2006.
- The utilities expense level will then be calculated by multiplying an agency's payable consumption level by the applicable rate and making other (generally minor) adjustments.

¹ See 24 C.F.R. §990.170.

CBPP's Method for Estimating Eligibility for 2007 Utility Subsidies

No national data are publicly available on the average utility rates that local housing agencies paid or their total utility consumption during the base periods that will be used to determine agencies' eligibility for utility-related funds in 2007. Therefore, any estimate of agencies' overall eligibility level for 2007 is necessarily an approximation.

Yet it is likely that the utilities expense level applicable to 2007, before the 11.95 percent inflation adjustment is applied, will fall somewhere between the amounts of utility-related operating subsidies agencies were eligible for in 2005 (\$1.354 billion) and 2006 (\$1.637 billion), for the reasons explained below. We therefore estimated the utility cost component of 2007 operating subsidy eligibility by taking the average of the 2005 and 2006 subsidy eligibility levels, or \$1.496 billion, and applying HUD's 11.95 percent inflation factor to this base, for a total of \$1.674 billion.

Discussion of 2005 and 2006 Eligibility Levels Used in Estimate

As with 2007 eligibility, HUD calculated agencies' 2005 and 2006 eligibility for utility-related operating subsidies by multiplying a quantity of consumption by a utility rate, with certain adjustments. But under the formula then in effect, HUD determined the consumption level and utility rate used for this purpose somewhat differently than it will under the formula that will go into effect in 2007.

HUD used a consumption level calculated by averaging the quantity of utilities an agency consumed during the three-year period that ended two years prior to the year for which funding eligibility was being determined — for example, 2006 eligibility was based on consumption from 2002 to 2004. HUD then multiplied this consumption level by either the utility rate in effect at the time that the agency submitted its budget (which was near the end of the year prior to the year for which the funding level was being determined)² or an anticipated utility rate for the year to be funded that was published by a utility company (if one was available and the housing agency chose to submit it). In either case, HUD applied no inflation adjustment to the rates.

The *quantity of utility consumption* may have been somewhat lower during the base period for 2007 (July 2005-June 2006) than during the three-year base periods HUD used for 2005 and 2006 eligibility, because the climate during the July 2005-June 2006 period was, on average, somewhat milder. The conservation incentives described above, however, would offset most of the difference by providing added 2007 funding to agencies whose consumption dropped during the July 2005-June 2006 period. As a result, the overall amount of utility consumption on which HUD will base agencies' eligibility for 2007 likely will be only modestly below the amounts that were used to calculate eligibility for 2005 and 2006.

² Agencies were required to submit 2006 budget by December 2005. Deadlines for submission of 2005 budgets ranged from October 2004 to May 2005, with different agencies assigned deadlines depending on the individual agency's fiscal year end date.

Utility rates during the July 2005-June 2006 base period used for 2007 were almost certainly significantly higher than those on which HUD based 2005 eligibility, but probably somewhat lower than those used to set 2006 eligibility. July 2005-June 2006 rates would have been well *above* the 2005 base rates because utility prices rose rapidly during 2005 and the 2005 base rates could not have fully reflected this growth.

The July 2005-June 2006 utility rates were likely *lower* overall than the 2006 base rates because some agencies' 2006 eligibility levels took into account anticipated rate increases that the agencies submitted. The anticipated increases would have gone into effect in January 2006 at the earliest, so anticipated rates would exceed the rates reflected in at least the July-December 2005 portion of the 2007 base period. (And utility inflation during January-June 2006 was relatively low, so it is unlikely that anticipated rates would have *underestimated* rates during the second half of the 2007 base period.)

When agencies did not submit anticipated 2006 rates, HUD would have set their eligibility based on actual rates from late 2005, which likely would have been close to the July 2005-June 2006 average rates that HUD will use to set 2007 eligibility.³ No information is publicly available on the proportion of agencies that submitted anticipated rates or the size of the anticipated increases, so it is difficult to gauge the extent to which anticipated rates pushed up 2006 base rates. If few agencies submitted anticipated rates, actual average July 2005-June 2006 rates could be quite close to base 2006 rates overall; in any case, it is unlikely that July 2005-June 2006 rates were *closer* to base 2005 rates than to base 2006 rates.

The significance of this for estimating utility-related subsidy eligibility in 2007 is that it is possible that the 2007 pre-inflation utilities expense level will be substantially closer to the higher 2006 eligibility level of \$1.637 billion than our estimate of \$1.496 billion assumes (our \$1.496 billion estimate assumes that the expense level will be half-way between the level used to calculate 2006 eligibility and the level used to calculate 2005 eligibility), and it is very unlikely that the 2007 pre-inflation expense level will be lower than \$1.496 billion. Consequently, the estimate of \$1.674 billion that we derived by applying HUD's inflation factor to \$1.496 billion should be viewed as a conservative estimate of utility related operating subsidy eligibility in 2006.

Estimate Excludes Costs of Tenant-Paid Utilities

In addition, the \$1.674 billion figure includes only the subsidies that local housing agencies will need to cover utility costs that they pay directly. These figures do *not* reflect *tenant-paid* utility costs that local housing agencies will have to absorb.

As discussed in the body of this analysis, agencies deduct tenant-paid utilities from tenants' rental payments up to an agency-set limit (or "utility allowance"). When an agency raises that allowance in response to an increase in utility rates, its rental revenues decline and its need for operating subsidies

³ The process of preparing operating budgets and submitting them to agency boards for approval takes some time, so agencies would often have submitted actual rates from as early as October 2005 (two months before the December 2005 deadline by which 2006 operating budgets had to be submitted). October 2005 is well before the mid-point of the June 2005-July 2006 period that will be used in setting 2007 eligibility, but CPI data show that prices rose very sharply during July-October 2005 and then much more slowly during November 2005-June 2006. As a result, by October 2005 utility prices on average already had risen to a level close to the average for the full June 2005-July 2006 period.

increases. The operating subsidy formula requires HUD to add agency costs that result from increases in utility allowances to the amount of subsidies for which an agency is eligible, but HUD's budget documents do not show the amount of utility allowance costs it assumed in estimating 2007 operating subsidy needs, or even indicate whether HUD assumed any increase above the utility allowances in earlier years.

As this analysis explains, HUD's Budget Justifications contain an estimate of *agency-paid* utility costs in 2006, and this estimate turns out to be well below the actual level of agency-paid utility costs that HUD reported in July 2006. It thus is not surprising that the estimate for agency-paid utility costs in 2007 contained in the HUD Budget Justifications appears to be substantially too low as well. (These underestimates primarily reflect the fact that the HUD estimates do not fully take into account the growth in utility costs that occurred during 2005 and largely persists today.) These underestimates of utility costs affect *tenant-paid* utility costs as well and consequently affect agencies' rental revenues.

This suggests that if, in developing its 2007 budget request for operating subsidies, HUD used an estimate of added costs for *tenant-paid* utilities that agencies will have to absorb, this estimate is likely not to fully reflect the utility price growth that has occurred. Accounting fully for the increases in tenant-paid utilities and the corresponding reductions in agencies' rental revenues could add \$50 million or more to the amount of operating subsidies for which agencies will be eligible in 2007. These funds would be in addition to the nearly \$290 million in added funding that this analysis estimates will be needed to cover growth in agency-paid utility costs that HUD's February 2006 budget documents do not account for.