**Section 8 Existing Housing Program:**

**Contract Rent Annual Adjustment Factors Methodology**[[1]](#footnote-2)

**1. Overview**

The United States Housing Act of 1937 requires that certain assistance contracts signed by owners participating in the Department’s Section 8 housing assistance payment programs provide annual adjustments to monthly rentals for units covered by the contracts. Additionally, for owners subject to a Reserve for Replacement deposit requirement, the required deposit amount must also be adjusted annually using the same adjustment factor. The Department of Housing and Urban Development (HUD) develops the rent adjustment factors, called Annual Adjustment Factors (AAFs), on the basis of changes in residential rent and utility costs.

HUD publishes the AAFs annually in the Federal Register. Specific details about how AAFs are applied can be found in notices published by HUD's Offices of Housing and of Public and Indian Housing; this paper concentrates on the rent indices and methodology used to update AAFs.

The AAFs are based on a formula using residential rent and utility cost changes from the most recent annual Bureau of Labor Statistics (BLS) Consumer Price Index (CPI) survey, and market rents from a total of six possible private sector rent data sources. AAFs were historically based on the shelter and gross rent inflation factors used in HUD’s Fair Market Rent (FMR) calculation. HUD maintained this practice by updating the AAF methodology in line with the FMR methodology changes that HUD first adopted for FY 2024 to include private company rental data.

HUD's published AAFs are shown in two schedules, one for adjusting the rent of units where the highest-cost utility (usually heating)[[2]](#footnote-3) is included in the contract rent (termed “Highest Utility Included” in the tables) and the other for units where the tenant pays for the highest-cost utility (“Highest Utility Excluded”). Separate AAF schedules are published for a total of: (a) about 600 separate metropolitan core-based statistical areas, and about (b) 2,000 nonmetropolitan counties.

**2. CPI-Based Rent Indices**

**2.1 Summary**

Consumer Price Index data on changes in residential rents and fuel and other utilities are available for a total of 23 local CPI areas and four Census Regions. For each area,

1. The change in the residential rent and utilities components are taken from the most recent CPI annual average change data;

2. A shelter rent factor is calculated by eliminating the effect of the heating costs included in the rent of many CPI survey units; and

3. A gross rent factor is calculated by weighting the CPI shelter rent and CPI utility components with the corresponding components from the most recent American Community Survey (ACS).

**2.2 Detailed Description**

**2.2.1 The CPI Survey**

The Consumer Price Index survey is conducted monthly by the Bureau of Labor Statistics, and made available in early-February of each year, covering the previous year.The residential rent component of the CPI is based on a sample of about 50,000 rental units in urban areas throughout the country.[[3]](#footnote-4) The fuel and other utilities component of the CPI, however, are not collected from renters. Homeowners provide fuel and utilities survey data for each CPI area. The change in these amounts are about the same regardless of whether or not it is paid by a homeowner or a renter.

**2.2.2 CPI and HUD Geography**

The CPI survey is conducted at the Core-Based Statistical Area (CBSA) level. As of the 2018 geographic revision, the CPI sample consists of 75 urban areas, of which 23 are published at the CBSA level. HUD uses local CPI data for FMR areas within Class A metropolitan areas covered by local CPI data. These local CPI areas correspond to approximately 80 HUD-defined AAF areas, which are the same as Fair Market Rent areas. HUD uses CPI data aggregated at the Census region level for all Class B and C size metropolitan areas and non-metropolitan areas.

**2.2.3 Shelter Rent Increase** (Tenant Pays For Utilities)

The Residential Rent CPI index is a mixture of units with and without separate utility bills. For indexing purposes HUD first calculates a *Shelter Rent* CPI for each of the CPI areas, which excludes the cost of heating, starting with the following formula:

**Shelter Rent Change:** Decomposing CPI “Rent of primary residence" statistic to remove the influence of utilities from contract rents

|  |
| --- |
| 1. RPR= (1- GRw) \* SR+ GRw \* GR 2. RPR= (1- GRw) \* SR+ GRw \* [(1 - Uw) \* SR+ Uw \* U] 3. SR= [ RPR - (GRw x Uw x U) ] / [ 1 - (GRw x Uw) ] |

**GR** is the change in gross rents from year to year (unknown);

**GRw** is the fraction of renters who pay gross rents (known from a special tabulation of Consumer Price Index Housing Survey Data provided by the BLS each year to HUD);

**RPR** is the change in contract rents from year to year (known from the BLS CPI Series the “Rent of Primary Residence” -BLS Code SEHA);

**SR** is the change in CPI shelter rents from year to year (unknown);

**U** is the change in utility costs from year to year (known from the BLS CPI Series the “Housing – Fuels and Utilities” – BLS Code SAH2)**;**

**Uw** is the fraction of gross rents attributable to utilities for CPI areas (CBSAs).

**2.2.4 Gross Rent Increase Factor** (Landlord Pays For Utilities)

For units where the landlord supplies utilities as part of the rent, a gross rent increase factor is calculated. Using the same variables as above, and the calculated value of the shelter rent increase factor (R), the***gross rent increase*** *factor* is:

**CPI Gross Rent Change:** a weighted average of the change in area CPI shelter rents and the change in CPI utility costs

|  |
| --- |
| GR = (1 - Uw) \* SR+ Uw \* UΔ |

**3. Private Source-Based Rent Indices**

**3.1 Summary**

Private rental company data on changes in residential rents are available for a large number of HUD-defined AAF areas. For each area,

1. HUD calculates the change in the residential rent from available private data sources and household fuels and utilities as measured from the most recent CPI annual average change data;

2. A gross rent factor is calculated by weighting the Private shelter rent and CPI utility components with the corresponding components from the most recent American Community Survey (ACS).

**3.2 Detailed Description**

**3.2.1 Private Company Rental Data**

HUD uses measures of contract rents obtained from a total of six possible sources of commercial rental companies (“Private data”). The measures of rent used by HUD are the RealPage (formerly Axiometrics) average effective rent per unit, Moody’s Analytics REIS average market rent, CoStar Group average effective rent, CoreLogic, Inc. single-family combined 3-bedroom median rent, Apartment List Rent Estimates, and Zillow Observed Rent Index[[4]](#footnote-5). To produce private gross rents, HUD combines the private rent data with the fuel and other utilities component of the CPI, as described above.

**3.2.2 Private Data and HUD Geography**

Each private data source is available for different CBSAs. HUD uses a local measure of private rent inflation for markets that are covered by at least three of the six available sources of private rent data. HUD uses these data for all AAF areas. For FY25, a total of 637 out of 2,601 HUD FMR areas were covered by a local private inflation factor, or approximately 85% of the U.S. population.

For areas without at least three of the six private rent data sources available, HUD uses a regional average of private rent inflation factors. HUD constructs the regional average mirroring the construction of CPI-Rent Regional Class B/C Factors. HUD takes the rental unit-weighted average of the change in rents of each area in a region that does have private rent data coverage yet excludes the CPI Class A metro areas. As an example of calculating a weighted average, if a given region contained non-Class A areas A, B, and C with 4,000; 3,000; and 1,000 rental units respectively, and private inflation factors of 10 percent, 5 percent, and 1 percent, the regional inflation factor would be 10% \* 0.5 + 5% \* 0.375 + 1% \* 0.125 = 7 percent. This ensures that smaller areas which are not covered directly by the private sources directly still have current rental market conditions taken into account in the calculation of the rent inflation factor for such areas.

**3.2.3 Shelter Rent Increase** (Tenant Pays For Utilities)

Unlike the CPI, HUD makes an implicit assumption that the private rent changes represent units with separate utility bills and thus constitute *shelter rent*. Therefore, HUD first takes the annual average of each statistic, then its year-to-year change. HUD then takes the average of all available private rents for each area which constitutes the private *shelter rent (SR)*.

**3.2.4 Gross Rent Increase Factor** (Landlord Pays For Utilities)

For units where the landlord supplies utilities as part of the rent, a gross rent increase factor is calculated. Using the same variables as above, and the calculated value of the shelter rent increase factor (SR), the***gross rent increase*** *factor* is:

**Private Gross Rent Change:** a weighted average of the change in area private shelter rents and the change in CPI utility costs

|  |
| --- |
| GR = (1 - Uw) \* SR+ Uw \* UΔ |

**GR** is the change in gross rents from year to year (unknown);

**SR** is the change in private shelter rents from year to year (unknown);

**U** is the change in utility costs from year to year (known from the BLS CPI Series the “Housing – Fuels and Utilities” – BLS Code SAH2);

**Uw** is the fraction of gross rents attributable to utilities for CPI areas (CBSAsubs).

The Private gross rent factor is then combined with the CPI factor (see below.)

**4. Computing a Weighted Average Private and CPI Inflation Factor**

**4.1 Summary**

Upon calculating both a CPI and Private *shelter* and *gross rent* inflation factor for each area, respectively, HUD combines the two using a weighting scheme such that the weighted national average of the CPI and Private gross rent inflation factors equals the change in the ACS national recent mover gross rents.To derive the FY 2025 weights, HUD compared the national average private rent inflation rates and the CPI rent of primary residence to the national average of recent mover rents in the ACS from 2018 to 2022.

**4.2 Detailed Description**

**4.2.1 Determining the Weights**

HUD weights the private data averages and overall CPI rent of primary residence in such a way as to minimize the root mean squared error (RMSE) between the resulting average and the ACS recent mover rents. When weighting the private data with the CPI rent of primary residence with weights of approximately 75 percent and 25 percent respectively, the RMSE (a measure of accuracy) is minimized at 2.80 percent. No other combination of weights produces a lower RMSE. HUD will update the weights each year by adding the most recent years of ACS recent mover rents, private rent data, and CPI rent of primary residence to the analysis.

**4.2.2 Final AAF Calculation**

Upon determining the optimal weighting scheme, HUD calculates an AAF for each area as a function of the weighted average of the Private rent change and CPI rent change.

|  |
| --- |
| AAF Highest Cost Utility Included = Wp \* GRp + Wcpi \* GRcpi  AAF Highest Cost Utility Excluded = Wp \* SRp + Wcpi \* SRcpi |

**GRp** is the change in private gross rents from year to year;

**SRp** is the change in private shelter rents from year to year ;

**Wp** is the weight allocated to private data;

**GRcpi** is the change in CPI gross rents from year to year;

**SRcpi** is the change in CPI shelter rents from year to year ;

**Wcpi** is the weight allocated to CPI data;

1. Prepared by the Program Parameters & Research Division, Office of Policy Development and Research, Department of Housing and Urban Development. Portions were derived from earlier descriptions issued in 1981, 1991, 1999 and 2007. [↑](#footnote-ref-2)
2. A landlord who pays for heat or air conditioning (where the latter is the highest-cost utility) gets an adjustment listed as "Highest Utility Included;" this adjustment is based on a gross rent concept. Where tenants pay for their own heat (or air conditioning), the AAF is listed under the column "Highest Utility Excluded;" the landlord in this case gets a rent adjustment based on a shelter rent concept. [↑](#footnote-ref-3)
3. <https://www.bls.gov/opub/hom/pdf/cpi-20180214.pdf> [↑](#footnote-ref-4)
4. RealPage, REIS, CoStar & CoreLogic come from HUD purchased data. Apartment List and Zillow are publicly available online. [↑](#footnote-ref-5)