

LIHEAP Performance Data Form

Calculations for Performance Measures Section

DEFINITION OF COMMON TERMS & SYMBOLS

1. Σ = Sum
2. **BP** = Number of Bill Payment-Assistance households
3. **BTI** = Benefit Targeting Index
4. **BRTI** = Benefit Reduction Targeting Index
5. **DN** = Disconnect or past due notice
6. **HB** = High burden
7. **hhlds** = Number of households
8. **MHF** = Main heating fuel type
9. **N.Gas** = Households heating with natural gas main heat
10. **Weighted Average** = The overall average of a set of values, in which each separate value is multiplied by an associated weight that is indicative of its frequency or magnitude.

SECTION V: ENERGY BURDEN TARGETING

I. Part A. Unduplicated Number of LIHEAP Bill Payment-Assisted Households – “All Households” (Manually Entered by Grantees)

Formula:

Total_{BP-All} = total number of LIHEAP Bill Payment assistance households served during the fiscal year

$$Total_{BP-All} = \Sigma(BP_{hhlds-fuel})$$

Where:

Σ = sum

BP_{hhlds-fuel} = number of Bill Payment assistance households for each main heating fuel

Example: You assisted 5,000 electric main heat households and 3,000 natural gas main heat households with LIHEAP Bill Payment assistance during the fiscal year. You did not assistance households that used any other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.¹

$$Total_{BP-All} = 5,000 + 3,000 = 8,000 \text{ Total Bill Payment Assistance Households}$$

II. Part B. All Households with 12 Consecutive Months of Bill Data (Main Fuel and Electric) – “All Households”

A. Line B.1: Unduplicated Number of Households with 12 Consecutive Months of Bill Data (Auto-Calculated)

Formula:

$$Total_{BP-Data} = \text{number of LIHEAP Bill Payment assistance households with complete data}$$

¹ Note: For simplicity, the examples shown only include terms for if you have complete data for households heating with electric main heat and households heating with natural gas main heat. If you have complete data for households heating with other main fuel types (i.e. Fuel Oil, Propane, and/or ‘Other’ Fuels), additional terms for these households will need to be added to the formulas.

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$$Total_{BP-Data} = \Sigma(BP_{hhlds_data-fuel})$$

Where:

$\Sigma = \text{sum}$

$BP_{hhlds_data-fuel}$ = number of Bill Payment assistance households with complete data for each main heating fuel

Example: You have complete data on **1,000 electric main heat households** and **500 natural gas main heat households** assisted with LIHEAP Bill Payment assistance during the fiscal year, but no data on households using other main heating fuels. Please see below for an example of how you would calculate this value in this scenario.

$$Total_{BP-Data} = 1,000 + 500 = 1,500 \text{ Total Bill Payment Assistance Households with complete data}$$

B. Line B.2: Average Annual Household Income (Manually Calculated by Grantees)

Formula:

AVG_{income} = weighted average annual income across main heating fuel types

$$AVG_{income} = \frac{\Sigma(AVG_{income-fuel} \times Fuel_{hhlds})}{Total_{hhlds}}$$

Where:

$\Sigma = \text{sum}$

$AVG_{income-fuel}$ = average annual household income for each main heating fuel

$Fuel_{hhlds}$ = number of households with complete data for each main heating fuel

$Total_{hhlds}$ = total number of households with complete data

Example: You have data on electric main heat households – **1,000 households with average annual income = \$10,000**, and natural gas main heat households – **500 households with average annual income = \$12,000**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{income} = \frac{(\$10,000 * 1,000) + (\$12,000 * 500)}{1,500} = \$10,667$$

C. Line B.3: Average Annual Total LIHEAP Benefit per Household (Manually Calculated by Grantees)

Formula:

$AVG_{benefit}$ = weighted average annual LIHEAP benefit across main heating fuel types

$$AVG_{benefit} = \frac{\Sigma(AVG_{benefit-fuel} \times Fuel_{hhlds})}{Total_{hhlds}}$$

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Where:

Σ = sum

$AVG_{benefit-fuel}$ = average annual LIHEAP benefit for each main heating fuel

$Fuel_{hhlds}$ = number of households with complete data for each main heating fuel

$Total_{hhlds}$ = total number of households with complete data

Example: You have data on electric main heat households – **1,000 households with average annual LIHEAP benefit = \$600**, and natural gas main heat households – **500 households with average annual LIHEAP benefit = \$800**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{benefit} = \frac{(\$600 * 1,000) + (\$800 * 500)}{1,500} = \$667$$

D. Line B.4: Average Annual Main Heating Fuel Bill (Manually Calculated by Grantees)

Formula:

$AVG_{bill-MHF}$ = weighted average annual heating bill across main heating fuel types

$$AVG_{bill-MHF} = \frac{\Sigma(AVG_{MHF\ bill-fuel} \times Fuel_{hhlds})}{Total_{hhlds}}$$

Where:

Σ = sum

$AVG_{MHF\ bill-fuel}$ = average annual heating bill for each main heating fuel type

$Fuel_{hhlds}$ = number of households with complete data for each main heating fuel

$Total_{hhlds}$ = total number of households with complete data

Example: You have data on electric main heat households – **1,000 households with average annual main heating fuel bill = \$600**, and natural gas main heat households – **500 households with average annual main heating fuel bill = \$1,200**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{bill-MHF} = \frac{(\$600 * 1,000) + (\$1,200 * 500)}{1,500} = \$800$$

E. Line B.5: Average Annual Electricity Bill (Manually Calculated by Grantees)

Formula:

$AVG_{bill-electric}$ = weighted average annual electricity bill across main heating fuel types

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$$AVG_{bill-electric} = \frac{\Sigma(AVG_{electric\ bill-fuel} \times Fuel_{hhlds})}{Total_{hhlds}}$$

Where:

Σ = sum

$AVG_{electric\ bill-fuel}$ = average annual electric bill for each main heating fuel type

$Fuel_{hhlds}$ = number of households with complete data for each main heating fuel

$Total_{hhlds}$ = total number of households with complete data

Note: the average annual electric bill for electric main heat households should be treated as **\$0**

Example: You have data on electric main heat households – **1,000 households whose average annual electricity bill should be treated as = \$0**, and natural gas main heat households – **500 households with average electricity bill = \$600**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{bill-electric} = \frac{(\$0 * 1,000) + (\$600 * 500)}{1,500} = \$200$$

F. Line B.6: Average Annual Total Residential Energy Bill (Auto-Calculated)

Formula:

$AVG_{bill-residential}$ = average annual residential energy bill for each main heating fuel type

$$AVG_{bill-residential} = \Sigma(AVG_{MHF\ bill-fuel} + AVG_{electric\ bill-fuel})$$

Where:

Σ = sum

$AVG_{MHF\ bill-fuel}$ = average annual heating bill for each main heating fuel type (**Line B.4**)

$AVG_{electric\ bill-fuel}$ = average annual electric bill for each main heating fuel type (**Line B.5**)

Example: The calculated “Average Annual Main Heating Fuel Bill” for natural gas main heat households is **\$1,200**, and the calculated “Average Annual Electricity Bill” for natural gas main heat households is **\$600**. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{bill-residential} = (\$1,200 + \$600) = \$1,800$$

G. Line B.7: Average Annual Burden Before Receiving LIHEAP (Auto-Calculated)

Formula:

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$AVG_{burden_pre-LIHEAP}$

= average annual energy burden **before** receiving LIHEAP across main heating fuel types

$$AVG_{burden_pre-LIHEAP} = \frac{AVG_{bill-residential}}{AVG_{income-fuel}} \times 100$$

Where:

$AVG_{bill-residential}$ = average annual residential energy bill for each main heating fuel (**Line B.6**)

$AVG_{income-fuel}$ = average annual household income for each main heating fuel (**Line B.2**)

Example: The calculated “Average Annual Total Residential Energy Bill” for natural gas main heat households is \$1,800, and the calculated “Average Annual Household Income” for natural gas main heat households is \$12,000. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{burden_pre-LIHEAP} = \frac{\$1,800}{\$12,000} \times 100 = 15\%$$

H. Line B.8: Average Annual Burden After Receiving LIHEAP (Auto-Calculated)

Formula:

$AVG_{burden_post-LIHEAP}$

= average annual energy burden **after** receiving LIHEAP across main heating fuel types

$$AVG_{burden_post-LIHEAP} = \frac{(AVG_{bill-residential} - AVG_{benefit-fuel})}{AVG_{income-fuel}} \times 100$$

Where:

$AVG_{bill-residential}$ = average annual residential energy bill for each main heating fuel (**Line B.6**)

$AVG_{benefit-fuel}$ = average annual LIHEAP benefit for each main heating fuel (**Line B.3**)

$AVG_{income-fuel}$ = average annual household income for each main heating fuel (**Line B.2**)

Example: The calculated “Average Annual Total Residential Energy Bill” for natural gas main heat households is \$1,800, the calculated “Average Annual LIHEAP Benefit per Household” for natural gas main heat households is \$800, and the calculated “Average Annual Household Income” for natural gas main heat households is \$12,000. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{burden_post-LIHEAP} = \frac{(\$1,800 - \$800)}{\$12,000} \times 100 = 8.3\%$$

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I. Line B.9: Average Percentage Point Change in Energy Burden (Auto-Calculated)

Formula:

AVG_{burden_change} = percentage point change between pre-LIHEAP and post-LIHEAP energy burden across main heating fuel types

$$AVG_{burden_change} = (AVG_{burden_pre-LIHEAP} - AVG_{burden_post-LIHEAP})$$

Where:

$AVG_{burden_pre-LIHEAP}$

= average annual energy burden **before** receiving LIHEAP across main heating fuel types (**Line B. 7**)

$AVG_{burden_post-LIHEAP}$

= average annual energy burden **after** receiving LIHEAP across main heating fuel types (**Line B. 8**)

Example: The calculated “Average Annual Burden Before receiving LIHEAP” for natural gas main heat households is 15% and the calculated “Average Annual Burden After receiving LIHEAP” for natural gas main heat households is 8.3%. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{burden_change} = (15\% - 8.3\%) = 6.7\%$$

J. Line B.10: Average Percentage Reduction in Energy Burden (Auto-Calculated)

Formula:

$AVG_{burden_reduction}$ = percentage point reduction between pre-LIHEAP and post-LIHEAP energy burden, as a proportion of pre-LIHEAP burden, across main heating fuel types

$$AVG_{burden_reduction} = \frac{(AVG_{burden_pre-LIHEAP} - AVG_{burden_post-LIHEAP})}{AVG_{burden_pre-LIHEAP}} \times 100$$

Where:

$AVG_{burden_pre-LIHEAP}$

= average annual energy burden **before** receiving LIHEAP across main heating fuel types (**Line B. 7**)

$AVG_{burden_post-LIHEAP}$

= average annual energy burden **after** receiving LIHEAP across main heating fuel types (**Line B. 8**)

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Example: The calculated “Average Annual Burden Before receiving LIHEAP” for natural gas main heat households is 15% and the calculated “Average Annual Burden After receiving LIHEAP” for natural gas main heat households is 8.3%. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{burden_reduction} = \frac{(15\% - 8.3\%)}{15\%} \times 100 = 45\%$$

III. Part C. *High Burden* Households with 12 Consecutive Months of Bill Data (Main Fuel and Electric) – “All Households” Columns

The calculations for Section C of the LIHEAP Performance Data Form-Performance Measures Section are the same as the calculations used to generate the statistics for Section B – with the exception that the calculations for Section C reflect information on those High Burden clients (Top 25%) for which grantees were able to collect complete data.

A. Line C.1: Unduplicated Number of High Burden Households (Top 25%) with 12 Consecutive Months of Bill Data (Auto-Calculated)

Formula:

$Total_{HB-hhlds}$ = number of High Burden households with complete data across main heating fuel

$$Total_{HB-hhlds} = \Sigma(HB_{hhlds-fuel})$$

Where:

Σ = sum

$HB_{hhlds-fuel}$ = number of High Burden households with complete data for each main heating fuel

Example: You have complete data on 200 high burden electric main heat households and 175 high burden natural gas main heat households assisted with LIHEAP Bill Payment assistance during the fiscal year, but no data on households using other main heating fuels. Please see below for an example of how you would calculate this value in this scenario.

$$Total_{HB-hhlds} = 200 + 175 = 375 \text{ Total High Burden Households with complete data}$$

B. Line C.2: Average Annual Household Income for High Burden Households (Manually Calculated by Grantees)

Formula:

$AVG_{income-HB}$ = weighted average annual income for HB households across main heating fuel

$$AVG_{income-HB} = \frac{\Sigma(AVG_{HB\ income-fuel} \times Fuel_{HB-hhlds})}{Total_{HB-hhlds}}$$

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Where:

Σ = sum

$AVG_{HB\ income-fuel}$ = average annual household income of HB households for each main heating fuel

$Fuel_{HB-hhlds}$ = number of HB households with complete data for each main heating fuel

$Total_{HB-hhlds}$ = total number of HB households with complete data

Example: You have data on electric main heat households – **200 high burden households with average annual income = \$5,000**, and natural gas main heat households – **175 high burden households with average annual income = \$6,000**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{income-HB} = \frac{(\$5,000 * 200) + (\$6,000 * 175)}{375} = \$5,467$$

C. Line C.3: Average Annual Total LIHEAP Benefit per High Burden Household (Manually Calculated by Grantees)

Formula:

$AVG_{benefit-HB}$ = weighted average annual LIHEAP benefit across main heating fuel types

$$AVG_{benefit-HB} = \frac{\Sigma(AVG_{HB\ benefit-fuel} \times Fuel_{HB-hhlds})}{Total_{HB-hhlds}}$$

Where:

Σ = sum

$AVG_{HB\ benefit-fuel}$ = average annual LIHEAP benefit of HB households for each main heating fuel

$Fuel_{HB-hhlds}$ = number of HB households with complete data for each main heating fuel

$Total_{HB-hhlds}$ = total number of HB households with complete data

Example: You have data on electric main heat households – **200 high burden households with average annual LIHEAP benefit = \$700**, and natural gas main heat households – **175 high burden households with average annual LIHEAP benefit = \$900**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{benefit-HB} = \frac{(\$700 * 200) + (\$900 * 175)}{375} = \$793$$

D. Line C.4: Average Annual Main Heating Fuel Bill for HB Households (Manually Calculated by Grantees)

Formula:

$AVG_{HB\ bill-MHF}$ = weighted average annual heating bill for HB households across main heating fuel

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$$AVG_{HB\text{ bill-MHF}} = \frac{\Sigma(AVG_{MHF\text{ bill}_{HB-fuel}} \times Fuel_{HB-hhlds})}{Total_{HB-hhlds}}$$

Where:

Σ = sum

$AVG_{MHF\text{ bill}_{HB-fuel}}$ = average annual heating bill of HB households for each main heating fuel type

$Fuel_{HB-hhlds}$ = number of HB households with complete data for each main heating fuel

$Total_{HB-hhlds}$ = total number of HB households with complete data

Example: You have data on electric main heat households – **200 high burden households with average annual main heating fuel bill = \$800**, and natural gas main heat households – **175 high burden households with average annual main heating fuel bill = \$1,300**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{HB\text{ bill-MHF}} = \frac{(\$800*200) + (\$1,300*175)}{375} = \$1,033$$

E. Line C.5: Average Annual Electricity Bill for High Burden Households (Manually Calculated by Grantees)

Formula:

$AVG_{HB\text{ bill-electric}}$ = weighted average annual electricity bill across main heating fuel types

$$AVG_{HB\text{ bill-electric}} = \frac{\Sigma(AVG_{electric\text{ bill}_{HB-fuel}} \times Fuel_{HB-hhlds})}{Total_{HB-hhlds}}$$

Where:

Σ = sum

$AVG_{electric\text{ bill}_{HB-fuel}}$ = average annual electric bill of HB households for each main heating fuel

$Fuel_{HB-hhlds}$ = number of HB households with complete data for each main heating fuel

$Total_{HB-hhlds}$ = total number of HB households with complete data

Note: the average annual electric bill for electric main heat households should be treated as **\$0**

Example: You have data on electric main heat households – **200 high burden households whose average annual electricity bill should be treated as = \$0**, and natural gas main heat households – **175 high burden households with average electricity bill = \$650**, but no data on households using other main heating fuel types. Please see below for an example of how you would calculate this value in this scenario.

$$AVG_{HB\text{ bill-electric}} = \frac{(\$0*200) + (\$650*175)}{375} = \$303$$

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F. Line C.6: Average Annual Total Residential Energy Bill for High Burden Households (Auto-Calculated)

Formula:

$AVG_{HB\text{ bill-residential}}$
= average annual residential energy bill of HB households for each main heating fuel

$$AVG_{HB\text{ bill-residential}} = \Sigma(AVG_{MHF\text{ bill}_{HB-fuel}} + AVG_{electric\text{ bill}_{HB-fuel}})$$

Where:

Σ = sum

$AVG_{MHF\text{ bill}_{HB-fuel}}$ = average annual heating bill of HB households for each main heating fuel (**Line C.4**)

$AVG_{electric\text{ bill}_{HB-fuel}}$ = average annual electric bill of HB households for each main heating fuel (**Line C.5**)

Example: The calculated “Average Annual Main Heating Fuel Bill for HB Households” for natural gas main heat households is \$1,300, and the calculated “Average Annual Electricity Bill for HB Households” for natural gas main heat households is \$650. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{HB\text{ bill-residential}} = (\$1,300 + \$650) = \$1,950$$

G. Line C.7: Average Annual Burden Before Receiving LIHEAP for High Burden Households (Auto-Calculated)

Formula:

$AVG_{HB\text{ burden}_{pre-LIHEAP}}$
= average annual energy burden of HB households **before** receiving LIHEAP, across main heating fuel

$$AVG_{HB\text{ burden}_{pre-LIHEAP}} = \frac{AVG_{HB\text{ bill-residential}}}{AVG_{HB\text{ income-fuel}}} \times 100$$

Where:

$AVG_{HB\text{ bill-residential}}$
= average annual residential energy bill of HB households for each main heating fuel (**Line C.6**)

$AVG_{HB\text{ income-fuel}}$ = average annual household income of HB households for each main heating fuel (**Line C.2**)

Example: The calculated “Average Annual Total Residential Energy Bill for HB households” for natural gas main heat households is \$1,950, and the calculated “Average Annual Household Income for HB households” for natural gas main heat households is \$6,000. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{HB\text{ burden}_{pre-LIHEAP}} = \frac{\$1,950}{\$6,000} \times 100 = 32.5\%$$

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H. Line C.8: Average Annual Burden After Receiving LIHEAP for HB households (Auto-Calculated)

Formula:

$AVG_{HB\text{ burden_post-LIHEAP}}$
= average annual energy burden of HB households **after** receiving LIHEAP, across main heating fuel

$$AVG_{HB\text{ burden_post-LIHEAP}} = \frac{(AVG_{HB\text{ bill-residential}} - AVG_{HB\text{ benefit-fuel}})}{AVG_{HB\text{ income-fuel}}} \times 100$$

Where:

$AVG_{HB\text{ bill-residential}}$ = average annual residential energy bill of HB households for each main heating fuel (**Line C.6**)

$AVG_{HB\text{ benefit-fuel}}$ = average annual LIHEAP benefit of HB households for each main heating fuel (**Line C.3**)

$AVG_{HB\text{ income-fuel}}$ = average annual household income of HB households for each main heating fuel (**Line C.2**)

Example: The calculated “Average Annual Total Residential Energy Bill for HB households” for natural gas main heat households is \$1,950, the calculated “Average Annual LIHEAP Benefit per HB household” for natural gas main heat households is \$900, and the calculated “Average Annual Household Income for HB households” for natural gas main heat households is \$6,000. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{\text{burden_post-LIHEAP}} = \frac{(\$1,950 - \$900)}{\$6,000} \times 100 = 17.5\%$$

I. Line C.9: Average Percentage Point Change in Energy Burden for HB Households (Auto-Calculated)

Formula:

$AVG_{HB\text{ burden_change}}$ = percentage point change between pre-LIHEAP and post-LIHEAP energy burden for HB households, across main heating fuel types

$$AVG_{HB\text{ burden_change}} = (AVG_{HB\text{ burden_pre-LIHEAP}} - AVG_{HB\text{ burden_post-LIHEAP}})$$

Where:

$AVG_{HB\text{ burden_pre-LIHEAP}}$ = average annual energy burden of HB households **before** receiving LIHEAP, across main heating fuel (**Line C.7**)

$AVG_{HB\text{ burden_post-LIHEAP}}$ = average annual energy burden of HB households **after** receiving LIHEAP, across main heating fuel (**Line C.8**)

Example: The calculated “Average Annual Burden Before receiving LIHEAP for HB households” for natural gas main heat households is 32.5% and the calculated “Average Annual Burden After receiving LIHEAP for HB

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households” for natural gas main heat households is 17.5%. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{HB \text{ burden_change}} = (32.5\% - 17.5\%) = 15\%$$

J. Line C.10: Average Percentage Reduction in Energy Burden for HB households (Auto-Calculated)

Formula:

AVG_{HB burden_reduction} = percentage point reduction between pre-LIHEAP and post-LIHEAP energy burden of HB households, as a proportion of pre-LIHEAP burden, across main heating fuel types

$$AVG_{HB \text{ burden_reduction}} = \frac{(AVG_{HB \text{ burden_pre-LIHEAP}} - AVG_{HB \text{ burden_post-LIHEAP}})}{AVG_{HB \text{ burden_pre-LIHEAP}}} \times 100$$

Where:

*AVG_{HB burden_pre-LIHEAP} = average annual energy burden of HB households **before** receiving LIHEAP, across main heating fuel (Line C.7)*

*AVG_{HB burden_post-LIHEAP} = average annual energy burden of HB households **after** receiving LIHEAP, across main heating fuel (Line C.8)*

Example: The calculated “Average Annual Burden Before receiving LIHEAP for HB households” for natural gas main heat households is 32.5% and the calculated “Average Annual Burden After receiving LIHEAP for HB households” for natural gas main heat households is 17.5%. Please see below for an example of how you would calculate this value for natural gas main heat households in this scenario.

$$AVG_{\text{burden_reduction}} = \frac{(32.5\% - 17.5\%)}{32.5\%} \times 100 = 46\%$$

IV. Part D. Benefit Targeting Index for High Burden Households (Auto-Calculated)

Formula:

BTI_{HB-hhlds} = index measure that highlights whether high energy burden households receive higher LIHEAP benefits than average households, across main heating fuel types.²

$$BTI_{HB-hhlds} = \frac{AVG_{\text{benefit-HB}}}{AVG_{\text{benefit}}} \times 100$$

² For more detailed information on the interpretation of the Benefit Targeting Index, please see the following 2016 NEUAC presentation: https://liheappm.acf.hhs.gov/sites/default/files/private/training/presentations/2016/Session6G_LIHEAPPM-McGrath.pptx

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Where:

$AVG_{benefit-HB}$

= average annual LIHEAP benefit for HB households, across main heating fuel types (**Line C.3**)

$AVG_{benefit}$ = average annual LIHEAP benefit across main heating fuel types (**Line B.3**)

Example: The calculated “Average Annual Total LIHEAP Benefit per HB households” for *high burden households with complete data* is \$793 and the calculated “Average Annual Total LIHEAP Benefit per households” for all available Bill Payment households with complete data is \$667. Please see below for an example of how you would calculate this index in this scenario.

$$BTI_{HB-hhlds} = \frac{\$793}{\$667} \times 100 = 119$$

V. Part E. Benefit Reduction Targeting Index for High Burden Households (Auto-Calculated)

Formula:

$BRTI_{HB-hhlds}$ = index measure that highlights whether high energy burden households have a larger share of their energy bill paid with LIHEAP than average households, across main heating fuel types.³

$$BRTI_{HB-hhlds} = \frac{AVG_{HB \text{ burden reduction}}}{AVG_{burden \text{ reduction}}} \times 100$$

Where:

$AVG_{HB \text{ burden reduction}}$ = percentage point reduction between pre-LIHEAP and post-LIHEAP energy burden of HB households, as a proportion of pre-LIHEAP burden, across main heating fuel types (**Line C.10**)

$AVG_{burden \text{ reduction}}$ = percentage point reduction between pre-LIHEAP and post-LIHEAP energy burden, as a proportion of pre-LIHEAP burden, across main heating fuel types (**Line B.10**)

Example: The calculated “Average Percentage Reduction in Energy Burden for HB Households” for *high burden natural gas main heat households with complete data* is 46% and the calculated “Average Percentage Reduction in Energy Burden” for all natural gas main heat households with complete data is 45%. Please see below for an example of how you would calculate this index for natural gas main heat households in this scenario.

$$BRTI_{HB-hhlds} = \frac{46\%}{45\%} \times 100 = 102$$

³ For more detailed information on the interpretation of the Benefit Reduction Targeting Index, please see the following 2016 NEUAC presentation: https://liheappm.acf.hhs.gov/sites/default/files/private/training/presentations/2016/Session6G_LIHEAPPm-McGrath.pptx

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SECTION VI: RESTORATION OF HOME ENERGY SERVICE

I. Part A. All Occurrences of LIHEAP Households that Had Home Energy Service Restored – “All Occurrences”:

A. Energy Service Restored After Disconnection (auto-calculated)

Formula:

Total_{Restore-disconnect} = total number of occurrences in which LIHEAP assistance led to the restoration of a household’s energy service after a disconnection, across energy sources where benefit applied.

$$\mathbf{Total}_{\text{Restore-disconnect}} = \Sigma(\text{Disconnect}_{\text{hhlds-fuel}})$$

Where:

Σ = sum

Disconnect_{hhlds-fuel} = Occurrences LIHEAP used to restore a disconnected households home energy service for each main heating fuel

Example: You assisted **300 disconnected electric households** and **500 disconnected natural gas households** with the restoration of their electric and natural gas service, during the fiscal year. Please see below for an example of how you would calculate this value in this scenario.

$$\mathbf{Total}_{\text{Restore-disconnect}} = 300 + 500 = 800$$

B. Fuel Delivered to Home that Ran Out of Fuel (auto-calculated)

Formula:

Total_{Restore-fuel} = total number of occurrences in which LIHEAP assistance resulted in the delivery of fuel to a home after the household had run out of fuel, across energy sources where benefit applied.

$$\mathbf{Total}_{\text{Restore-fuel}} = \Sigma(\text{Fuel}_{\text{hhlds-fuel}})$$

Where:

Σ = sum

Fuel_{hhlds-fuel} = Occurrences LIHEAP used to restore home energy service to a home that had run out of fuel, for each main heating fuel

Example: You assisted **200 fuel oil households** and **100 propane households** who had run out of their delivered fuel with the restoration of their energy service during the fiscal year. Please see below for an example of how you would calculate this value in this scenario.

$$\mathbf{Total}_{\text{Restore-fuel}} = 200 + 100 = 300$$

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C. Repair/Replacement of Inoperable Home Energy Equipment (auto-calculated)

Formula:

Total_{Restore-equipment} = total number of occurrences in which households had inoperable heating or cooling equipment repaired or replaced using LIHEAP funds, across energy sources where benefit applied.

$$\mathbf{Total}_{\text{Restore-equipment}} = \Sigma(\text{Inoperable}_{\text{hhlds-fuel}})$$

Where:

Σ = sum

Inoperable_{hhlds-fuel} = Occurrences LIHEAP used to repair/replace a household's inoperable home energy equipment, based on the fuel source for the equipment that was repaired or replaced.

Example: You assisted **150 electric households** and **200 natural gas households** with the replacement of their inoperable heating/cooling home energy equipment during the fiscal year. Please see below for an example of how you would calculate this value in this scenario.

$$\mathbf{Total}_{\text{Restore-equipment}} = 150 + 200 = 350$$

SECTION VII: PREVENTION OF HOME ENERGY SERVICE

I. Part A. All Occurrences of LIHEAP Households that Had Loss of Home Energy Service Prevented – “All Occurrences”:

A. Past Due Notice or Utility Disconnect Notice (auto-calculated)

Formula:

Total_{Prevent-disconnect} = total number of occurrences in which LIHEAP assistance led to the prevention of a household's loss of energy service after the receipt of a utility past due or disconnection notice, across energy sources where benefit applied.

$$\mathbf{Total}_{\text{Prevent-disconnect}} = \Sigma(\text{DN}_{\text{hhlds-fuel}})$$

Where:

Σ = sum

DN_{hhlds-fuel} = Occurrences LIHEAP used to prevent the loss of home energy service for a household that received a past due or disconnect notice, for each energy source type.

Example: You assisted **400 electric households** and **500 natural gas households which had received disconnection notices** with a LIHEAP benefit that resulted in the prevention of the household's loss of home energy service. Please see below for an example of how you would calculate this value in this scenario.

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Calculations for Performance Measures Section

$$Total_{Prevent-disconnect} = 400 + 500 = 900$$

B. Imminent Risk of Running out of Fuel (auto-calculated)

Formula:

Total_{Prevent-fuel} = total number of occurrences in which LIHEAP assistance resulted in the delivery of fuel to a home in imminent risk of running out of fuel, across energy sources where benefit applied.

$$Total_{Restore-fuel} = \Sigma(Low\ Fuel_{hhlds-fuel})$$

Where:

Σ = sum

Low Fuel_{hhlds-fuel} = Occurrences LIHEAP used to prevent the loss of home energy service for a household in imminent risk of running out of fuel, for each energy source type.

Example: You assisted **300 fuel oil households** and **400 propane households** who were at risk of running out of their delivered fuel with a LIHEAP benefit that resulted in the prevention of the household's loss of home energy service. Please see below for an example of how you would calculate this value in this scenario.

$$Total_{Prevent-fuel} = 300 + 400 = 700$$

C. Repair/Replacement of Operable Home Energy Equipment (auto-calculated)

Formula:

Total_{Prevent-equipment} = total number of occurrences in which households had operable heating or cooling equipment repaired or replaced using LIHEAP funds, across energy sources where benefit applied.

$$Total_{Prevent-equipment} = \Sigma(Operable_{hhlds-fuel})$$

Where:

Σ = sum

Operable_{hhlds-fuel} = Occurrences LIHEAP used to repair/replace a household's operable home energy equipment to prevent the imminent loss of home energy service, based on the fuel source for the equipment that was repaired or replaced.

Example: You assisted **500 electric households** and **500 natural gas households** with the repair or replacement of their operable heating/cooling home energy equipment during the fiscal year, in order to prevent the imminent loss of the household's energy service. Please see below for an example of how you would calculate this value in this scenario.

$$Total_{Prevent-equipment} = 500 + 500 = 1,000$$