

SPOTLIGHT

# Repair Needs Among Weatherization Assistance–Eligible Homeowners

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## Introduction

The U.S. Department of Energy’s Weatherization Assistance Program (WAP) funds energy efficiency-enhancing home improvements for low-income households to reduce utility costs and improve resident health and safety.<sup>1</sup> Income requirements are set at the state level but are generally 200 percent or less of the federal poverty guidelines (FPG), which equates to \$55,500 for a household of four

in 2023.<sup>2</sup> Many states prioritize WAP applications from households with elevated risks of adverse housing-related health impacts, such as those with children, older adults, or people with disabilities.<sup>3</sup> Although both homeowners and renters are eligible for WAP, the vast majority of participants are homeowners,<sup>4</sup> as renters face additional administrative hurdles to accessing funds.<sup>5</sup> Eligible households can be

<sup>1</sup> For more information, see [www.energy.gov/sites/default/files/2022-06/wap-fact-sheet\\_0622.pdf](http://www.energy.gov/sites/default/files/2022-06/wap-fact-sheet_0622.pdf).

<sup>2</sup> Some states use an income threshold of 60 percent of the state median income if this is higher than 200 percent of the FPG. Four states (Alaska, Nevada, Texas, and Utah) use a lower threshold of 150 percent of the FPG. For details, see [liheapch.acf.hhs.gov/tables/POP.htm](http://liheapch.acf.hhs.gov/tables/POP.htm).

<sup>3</sup> See [www.energy.gov/scep/wap/how-apply-weatherization-assistance](http://www.energy.gov/scep/wap/how-apply-weatherization-assistance).

<sup>4</sup> In a national survey of WAP participants, 87 percent of respondents were homeowners. See [weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEval-FinalReports/ORNL\\_TM-2015\\_22.pdf](http://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEval-FinalReports/ORNL_TM-2015_22.pdf).

<sup>5</sup> For a discussion of barriers to renter participation in WAP, see [www.jchs.harvard.edu/sites/default/files/research/files/harvard\\_jchs\\_weatherization\\_martin\\_etal\\_2023.pdf](http://www.jchs.harvard.edu/sites/default/files/research/files/harvard_jchs_weatherization_martin_etal_2023.pdf).

deferred from the program if they have other physical housing deficiencies that may reduce the efficacy of improvements (e.g., leaky roofs).<sup>6</sup> These households can reapply once these problems are resolved, but many low-income homeowners may be unable to afford the cost of repairs.

In 2022, Congress significantly increased funding for low-income weatherization programs, elevating concerns that funds may be underutilized if vulnerable households are unable to participate because of unaddressed home repair needs.<sup>7</sup> Additionally, community development practitioners are increasingly looking to streamline enrollment across low-income home improvement programs, leveraging the full scope of repair, weatherization, and modification resources to comprehensively address household needs.<sup>8</sup> To inform these conversations, this brief provides tabulations of the prevalence and cost of addressing repair needs among low-income homeowners with burdensome energy costs — presumably, those most likely to seek weatherization assistance.

Tables 1–5 summarize these results, indicating that over one-quarter of low-income homeowners are both energy-burdened and have at least one repair need, with an average repair cost of \$4,444. Over half of these households are headed by older adults, and over one-third have at least one household member with a disability. Additionally, average repair costs are somewhat higher among the subset of these households that have children present or include at least one member with a disability.

## Methodology

The following tables integrate data on household and unit characteristics from the 2021 American Housing Survey (AHS) with 2022 repair cost data from Gordian/RSMMeans. A detailed description of the repair cost estimation methodology is available in previous reports.<sup>9</sup> This analysis is

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limited to owner-occupied households with incomes of 200 percent of FPG or less. Although renters are also eligible for WAP, this brief focuses on homeowners because of their predominance among WAP participants and their increased likelihood of being eligible for complementary home repair or improvement programs. Households are considered energy-burdened if their combined heating and electrical costs exceed 6 percent of total household income, a definition adapted from Drehobl, Ross, and Ayala (2020).<sup>10</sup> It is important to note that some issues that may prompt a WAP deferral are not captured in the American Housing Survey (e.g., the presence of knob-and-tube electrical wiring), and not every repair need captured will necessarily result in a deferral.

<sup>6</sup> For a detailed overview of deferral in the WAP, see [weatherization.ornl.gov/wp-content/uploads/pdf/WAPRecoveryActEvalFinalReports/ORNL\\_TM-2014\\_364.pdf](https://weatherization.ornl.gov/wp-content/uploads/pdf/WAPRecoveryActEvalFinalReports/ORNL_TM-2014_364.pdf).

<sup>7</sup> See [www.npr.org/2022/05/13/1096114029/low-income-energy-efficient-weatherization-program-3-5b-needed](https://www.npr.org/2022/05/13/1096114029/low-income-energy-efficient-weatherization-program-3-5b-needed).

<sup>8</sup> See [shelterforce.org/2022/08/05/in-pa-bill-aims-to-help-homeowners-pay-for-costly-home-repairs/](https://shelterforce.org/2022/08/05/in-pa-bill-aims-to-help-homeowners-pay-for-costly-home-repairs/).

<sup>9</sup> Available at [www.philadelphiafed.org/community-development/housing-and-neighborhoods/measuring-and-understanding-home-repair-costs](https://www.philadelphiafed.org/community-development/housing-and-neighborhoods/measuring-and-understanding-home-repair-costs).

<sup>10</sup> See [www.aceee.org/sites/default/files/pdfs/u2006.pdf](https://www.aceee.org/sites/default/files/pdfs/u2006.pdf).

# Summary of Home Repair Needs Among Low-Income, Energy-Burdened Homeowners

TABLE 1

Energy Burden and Repair Needs, Low-Income Homeowners

Region	Low-Income Homeowners						
	Households (Millions)	Energy Burdened					
		Share in Category	Households (Millions)	Energy Burdened with Repair Needs			
				Share in Category	Households (Millions)	Agg. Costs (Billions)	Avg. Cost
All	18.2	74.0%	13.5	27.8%	5.1	\$22.5	\$4,444
Northeast	2.5	84.1%	2.1	30.5%	0.8	\$3.2	\$4,235
South	8.7	73.0%	6.4	27.7%	2.4	\$10.9	\$4,491
Midwest	3.9	73.4%	2.9	28.1%	1.1	\$4.9	\$4,488
West	3.1	69.6%	2.2	25.4%	0.8	\$3.5	\$4,440

Source: Author's analysis of 2021 AHS and 2022 RSMeans data from Gordian.

Note: Averages calculated for households with estimated repair costs >\$0. Figures in 2022 dollars. Regions defined by U.S. Census Bureau. Regional figures may not sum to value in "All" row because of rounding.

TABLE 2

Repair Needs by Category,<sup>11</sup> Low-Income, Energy-Burdened Homeowners

Repair Category	Share Reporting Issue	Households (Thousands)	Avg. Cost in Category
Electrical	5.9%	797.2	\$1,514
Heating	6.1%	822.9	\$1,087
Leaks and Mold	14.8%	1,991.5	\$2,114
Pests	4.6%	620.1	\$546
Plumbing	5.0%	677.6	\$1,354
Structural	21.2%	2,867.0	\$5,213

Source: Author's analysis of 2021 AHS and 2022 RSMeans data from Gordian.

Note: Percentages calculated for all low-income, energy-burdened homeowners. Averages calculated for low-income, energy-burdened households with estimated repair costs >\$0. Figures in 2022 dollars.

<sup>11</sup> Categories are based on survey module groupings in the AHS Codebook, available at [www.census.gov/data-tools/demo/codebook/ahs/ahsdict.html](http://www.census.gov/data-tools/demo/codebook/ahs/ahsdict.html).

# Summary of Home Repair Needs Among Weatherization Assistance Priority Households

TABLE 3

**Energy Burden and Repair Needs, Low-Income, Owner-Occupied Households with at Least One Older Adult (65 or Older)**

Low-Income, Owner-Occupied Households with at Least One Older Adult							
Energy Burdened							
Energy Burdened with Repair Needs							
Region	Households (Millions)	Share in Category	Households (Millions)	Share in Category	Households (Millions)	Agg. Costs (Billions)	Avg. Cost
All	9.4	79.4%	7.5	25.6%	2.4	\$10.1	\$4,172
Northeast	1.4	86.5%	1.2	27.6%	0.4	\$1.6	\$4,084
South	4.4	77.6%	3.5	25.8%	1.1	\$5.1	\$4,462
Midwest	1.9	80.5%	1.5	24.2%	0.5	\$1.7	\$3,782
West	1.7	76.8%	1.3	24.8%	0.4	\$1.6	\$3,888

Source: Author's analysis of 2021 AHS and 2022 RSMMeans data from Gordian.

Note: Averages calculated for households with estimated repair costs >\$0. Figures in 2022 dollars. Regions defined by U.S. Census Bureau. Regional figures may not sum to value in "All" row because of rounding.

TABLE 4

**Energy Burden and Repair Needs, Low-Income, Owner-Occupied Households with at Least One Child (17 or Younger)**

Low-Income, Owner-Occupied Households with at Least One Child							
Energy Burdened							
Energy Burdened with Repair Needs							
Region	Households (Millions)	Share in Category	Households (Millions)	Share in Category	Households (Millions)	Agg. Costs (Billions)	Avg. Cost
All	4.8	60.0%	2.9	25.5%	1.2	\$5.9	\$4,828
Northeast	0.6	71.2%	0.4	29.7%	0.2	NA	NA
South	2.3	62.6%	1.5	26.8%	0.6	NA	NA
Midwest	1.1	53.3%	0.6	26.5%	0.3	\$1.5	\$5,325
West	0.9	54.1%	0.5	17.9%	0.2	NA	NA

NA: Not available because of sample size constraints.

Source: Author's analysis of 2021 AHS and 2022 RSMMeans data from Gordian.

Note: Averages calculated for households with estimated repair costs >\$0. Figures in 2022 dollars. Regions defined by U.S. Census Bureau. Regional figures may not sum to value in "All" row because of rounding.

TABLE 5

## Energy Burden and Repair Needs, Low-Income, Owner-Occupied Households with at Least One Resident with a Disability

Low-Income, Owner-Occupied Households with at Least One Resident with a Disability							
Energy Burdened							
Energy Burdened with Repair Needs							
Region	Households (Millions)	Share in Category	Households (Millions)	Share in Category	Households (Millions)	Agg. Costs (Billions)	Avg. Cost
All	6.2	76.2%	4.7	35.2%	2.2	\$10.8	\$4,941
Northeast	0.9	84.4%	0.7	38.8%	0.3	\$1.5	\$4,310
South	3.0	75.1%	2.2	35.1%	1.0	\$5.6	\$5,408
Midwest	1.4	76.3%	1.1	35.6%	0.5	\$2.2	\$4,543
West	1.0	72.0%	0.7	31.6%	0.3	\$1.5	\$4,711

Source: Author's analysis of 2021 AHS and 2022 RSMeans data from Gordian.

Note: Averages calculated for households with estimated repair costs >\$0. Figures in 2022 dollars. Regions defined by U.S. Census Bureau. Regional figures may not sum to value in "All" row because of rounding.



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