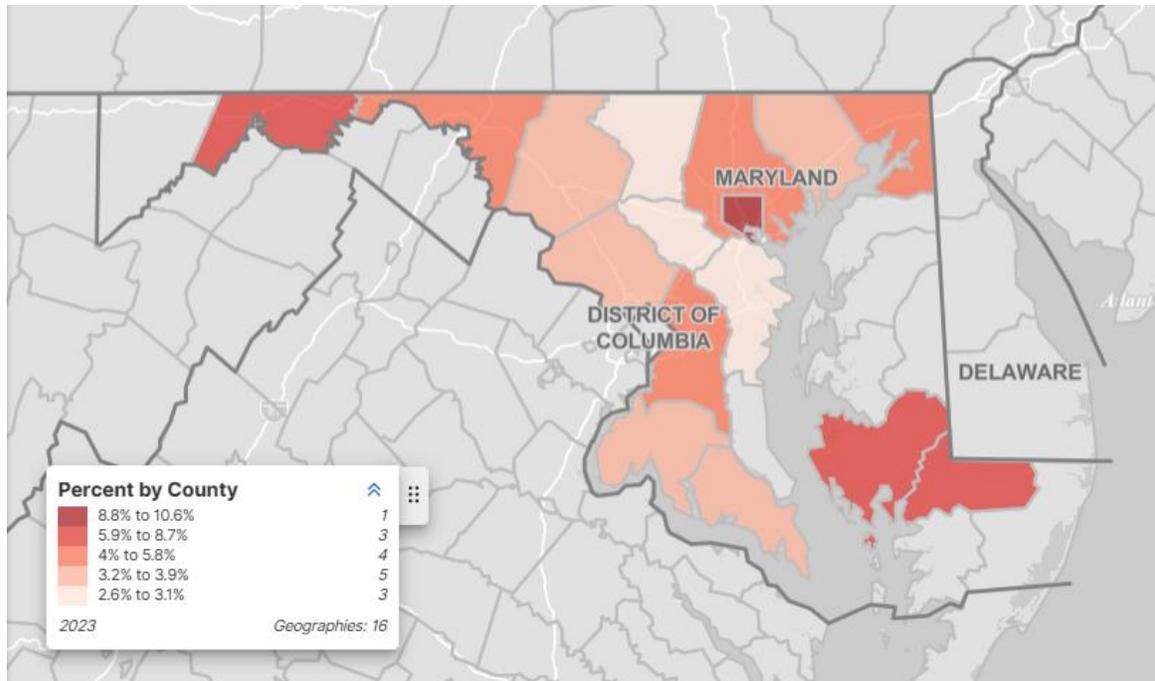


Appendix E: Cost Drivers for Maryland's Low- Income Energy Utility Bills



Caption: Percent of Households below 100% Federal Poverty Level in Maryland

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Introduction

On December 20th, 2024, the Commission issued an Order initiating the work group to develop limited income mechanisms for utility customers in conformance with § 4-309 of the Public Utilities Article (PUA) as amended by HB606 and which addresses fifteen issues identified by the Commission.¹

The Commission directed the Work Group to prepare a report to accompany the proposed mechanism which identified factors that contribute to the energy bills of limited-income customers, and which suggested ways to reduce customer bills. A subgroup was formed to address this Commission directive.

Please note that the following report is a survey of different data sources to try and glean information to help inform the Commission regarding limited-income customers. This report should not be viewed as an academic research paper with firm conclusions.

The following report first provides a survey of information that provides characteristics and locations of customers who are considered limited income and some of the pressures they may face. The report first focuses on characteristics of limited-income customers unrelated to energy which includes income, location, and costs. The second part of the report focuses on identifying energy burden in the State, home type, and energy usage of limited-income customers. Finally, the report discusses some recommendations identified by the subgroup members that could help limited-income customers with their bills.

1. General discussion of income

The following section provides a survey of income in Maryland to help inform limited-income customer demographics and locations. This report draws on a number of sources which provide data with sufficient granularity to help inform the characteristics of limited-income customers and the challenges they may face. This section draws heavily from the US Census Bureau's American Community Survey, Maryland Department of Labor, and Bureau of Labor Statistics.

For purposes of the limited-income mechanism directed by the Commission, 200% Federal Poverty Level ("FPL") was used as the eligibility requirement. FPL is the minimum income necessary to meet basic needs, and it is updated by the Department of Health and Human Services annually, based on national urban inflation. In 2025, the poverty level for a four-person household was \$32,150 and at 200% it was \$64,300. Various public assistance programs in Maryland, such as Supplemental Nutrition Assistance Program, Low Income Home Energy Assistance Program,

¹ Public Conference 59. Order Initiating Work Group to Develop Limited Income Mechanisms for Utility Customers and Report. December 20, 2024.

etc., recognize this fact and set their income threshold at 200% of the FPL.² In 2023 approximately 21% of all Maryland households earn less than 200% the FPL.³

Figure 1: 2025 Federal Poverty Level ⁴

Household/ Family Size	2025 Federal Poverty Level (100% FPL)	200% FPL	Hourly Equivalent (100% FPL)	Hourly Equivalent (200% FPL)
1	\$ 15,650	\$ 31,300	\$ 7.50	\$ 15.00
2	\$ 21,150	\$ 42,300	\$ 10.20	\$ 20.30
3	\$ 26,650	\$ 53,300	\$ 12.80	\$ 25.60
4	\$ 32,150	\$ 64,300	\$ 15.50	\$ 30.90
5	\$ 37,650	\$ 75,300	\$ 18.10	\$ 36.20
6	\$ 43,150	\$ 86,300	\$ 20.70	\$ 41.50
7	\$ 48,650	\$ 97,300	\$ 23.40	\$ 46.80
8	\$ 54,150	\$ 108,300	\$ 26.00	\$ 52.10
9	\$ 59,650	\$ 119,300	\$ 28.70	\$ 57.40
10	\$ 65,150	\$ 130,300	\$ 31.30	\$ 62.60

To help contextualize what this means for residents in various professions there is data available from the Maryland Department of Labor regarding employment and wages. The data set covers the 2.75 million jobs and helps illustrate the wage ranges of Maryland workers. Nearly a million or approximately 35% work in occupations where the estimated pay range is between \$15 - \$30 an hour, which depending upon household size and number of employed individuals in a home, has the potential to put them within the 200% FPL definition. This includes food service, servers, salespersons, cashiers, nurse assistants, maintenance, logistics and transport workers.

² DHHS Administration for Children and Families. <https://acf.gov/ocs/programs/liheap>

³ “Distribution of the Total Population by Federal Poverty Level (above and below 200% FPL)” KFF (formerly Kaiser Family Foundation). <https://www.kff.org/state-health-policy-data/state-indicator/population-up-to-200-fpl/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

⁴ Department of Health and Human Services. 2025 Federal Poverty Level. <https://aspe.hhs.gov/sites/default/files/documents/dd73d4f00d8a819d10b2fdb70d254f7b/detailed-guidelines-2025.pdf>

Figure 2: Number Employed, Wage, and Salary among Major Occupations in Maryland (2024 Wage Estimates)⁵

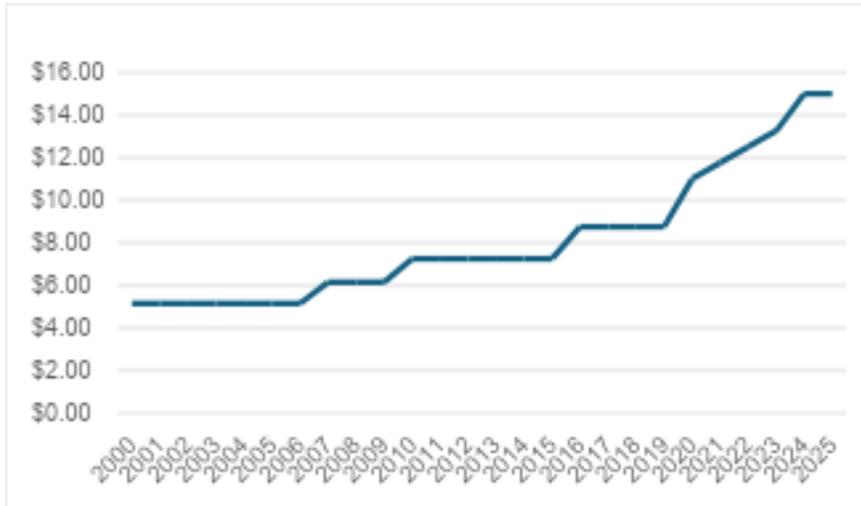
Occupation Category	Major Group	Employed		Entry Wage	Mean Wage	Exp. Wage		Entry Salary	Mean Salary	Experienced Salary
Food Prep, Serving	Y	209,380	8%	\$15.00	\$18.46	\$20.17		\$31,200	\$38,400	\$41,950
Sales	Y	214,130	8%	\$15.22	\$23.48	\$27.55		\$31,670	\$48,840	\$57,310
Personal Care, Home Health	Y	65,810	2%	\$15.22	\$20.15	\$22.57		\$31,650	\$41,900	\$46,950
Building Grounds, Maintenance	Y	84,920	3%	\$15.70	\$19.11	\$20.79		\$32,650	\$39,740	\$43,240
Healthcare Support	Y	99,770	4%	\$16.31	\$20.62	\$22.74		\$33,930	\$42,880	\$47,290
Transportation and Material Moving	Y	212,770	8%	\$16.40	\$23.61	\$27.15		\$34,120	\$49,100	\$56,480
Farming, Fishing, and Forestry	Y	3,720	0%	\$16.40	\$22.07	\$24.86		\$34,110	\$45,900	\$51,710
Production	Y	64,890	2%	\$16.76	\$25.78	\$30.22		\$34,850	\$53,620	\$62,870
Security	Y	74,210	3%	\$17.25	\$31.55	\$38.60		\$35,880	\$65,630	\$80,280
Office and Administrative	Y	317,090	12%	\$17.48	\$25.43	\$29.34		\$36,350	\$52,890	\$61,040
Education and Library	Y	177,720	6%	\$18.45	\$34.82	\$42.88		\$38,370	\$72,420	\$89,190
Community and Social Services	Y	51,010	2%	\$19.48	\$32.11	\$38.33		\$40,520	\$66,790	\$79,720
Arts, Design, Entertainment, Sports, and Media	Y	33,090	1%	\$19.56	\$36.29	\$44.53		\$40,690	\$75,490	\$92,630
Installation, Maintenance, and Repair	Y	93,000	3%	\$19.76	\$31.04	\$36.60		\$41,110	\$64,570	\$76,120
Construction and Extraction	Y	116,110	4%	\$20.16	\$30.52	\$35.62		\$41,930	\$63,470	\$74,090
Healthcare Practitioners and Technical Occupations	Y	174,110	6%	\$26.94	\$54.64	\$68.29		\$56,030	\$113,660	\$142,040
Life, Physical, and Social Science	Y	49,420	2%	\$27.59	\$50.29	\$61.46		\$57,390	\$104,590	\$127,840
Legal Occupations	Y	26,990	1%	\$28.01	\$61.84	\$78.50		\$58,270	\$128,620	\$163,270
Business and Financial Operations	Y	226,220	8%	\$28.64	\$49.04	\$59.09		\$59,570	\$102,000	\$122,900
Architecture and Engineering	Y	54,910	2%	\$33.37	\$55.95	\$67.08		\$69,400	\$116,380	\$139,520
Management	Y	257,470	9%	\$34.90	\$68.36	\$84.84		\$72,600	\$142,190	\$176,460
Computer and Mathematical	Y	139,570	5%	\$35.47	\$61.25	\$73.94		\$73,780	\$127,390	\$153,800
Total		2,746,310	100%							

⁵ Maryland Department of Labor. Quarterly Census of Employment and Wages (QCEW), Maryland. (Data Download) <https://www.labor.maryland.gov/lmi/wages/>.

Per the Maryland Department of Labor: “Entry level wages were calculated using the mean of the first third of the wage distribution. Experienced Level wages were calculated using the mean of the upper two-thirds of the wage distribution.”

In addition to general wages it helps to understand how wage growth and general inflation may impact these customers. One marker to consider is minimum wages. Maryland began to increase its minimum wage in the 2000s (**Figure 3**) increasing gradually at first, then more quickly after 2019. The Fair Wage Act, which became effective in 2024, raised the minimum wage to \$15.00 across the state. Montgomery County and Howard County were early adopters, whose minimum wage increased to \$15 in 2017 and \$14 in 2021 respectively.⁶

Figure 3: Trends in Maryland Minimum Wage, 2000-2025

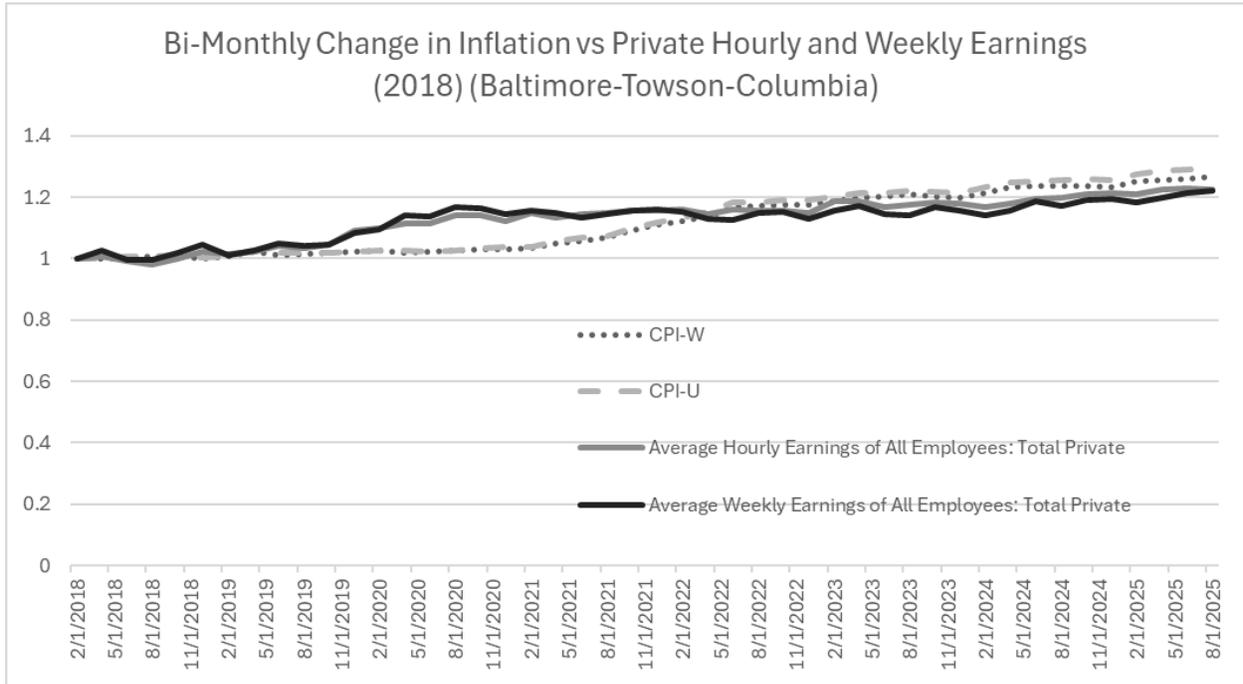


While minimum wage growth is important, consideration should also be given to non-minimum wage growth and how that may be impacted by inflation. The subgroup did not attempt to do a survey of the purchasing power of limited-income households versus others in the State, and the following information is illustrative and in aggregate. The following chart shows quarterly growth in inflation vs private job hourly and weekly earnings since 2018 for the Baltimore-Towson-Columbia region.⁷ As can be seen there are seasons where growth in earnings outpaced inflation and vice versa, but recently the rate of inflation has outpaced hourly and weekly earnings for private business.

⁶ Maryland Department of Labor. Minimum Wage and Overtime Law – Employment Standards Service. <https://www.labor.maryland.gov/labor/wages/wagehrfacts.shtml>

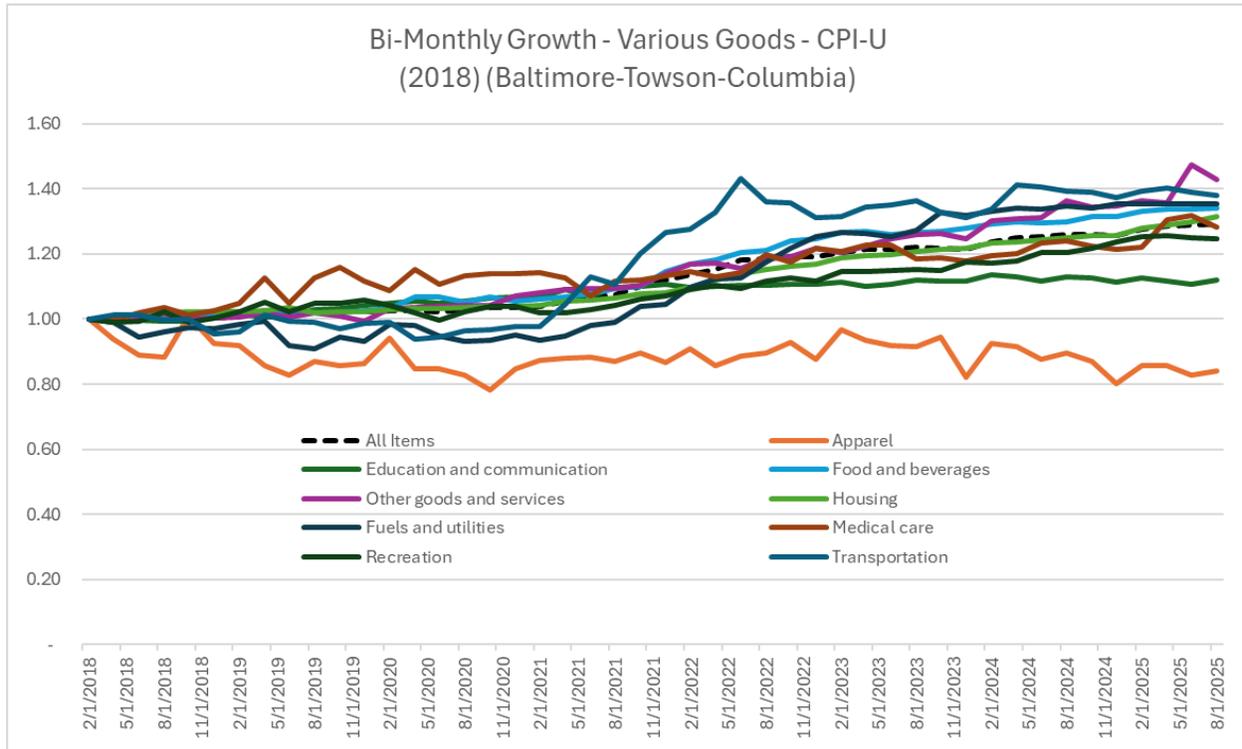
⁷ CPI-U Data Series: CUUSS35ESA0 (All items in Baltimore-Columbia-Towson, MD, all urban consumers, not seasonally adjusted) Source: U.S. Bureau of Labor Statistics
 CPI-W Data Series: CWUSS35ESA0 (All items in Baltimore-Columbia-Towson, MD, urban wage earners and clerical workers, not seasonally adjusted) Source: U.S. Bureau of Labor Statistics
 Average Hourly Earnings: U.S. Bureau of Labor Statistics and Federal Reserve Bank of St. Louis, Average Hourly Earnings of All Employees: Total Private in Baltimore-Columbia-Towson, MD (MSA) [SMU24125800500000003], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/SMU24125800500000003>.
 Average Weekly Earnings: U.S. Bureau of Labor Statistics and Federal Reserve Bank of St. Louis, Average Weekly Earnings of All Employees: Total Private in Baltimore-Columbia-Towson, MD (MSA) [SMU24125800500000011], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/SMU24125800500000011>.

**Figure 4: Bi Monthly Change in Inflation vs Hourly/Weekly Earnings
(Baltimore/Towson/Columbia)**



The following chart shows inflation for all goods and does not attempt to isolate any specific drivers. As can be seen, most start to see an increase in growth around the 2020 or 2021 timeframe.

Figure 5: Bi Monthly Change in various contributors to CPI-U (Baltimore/Towson/Columbia)⁸

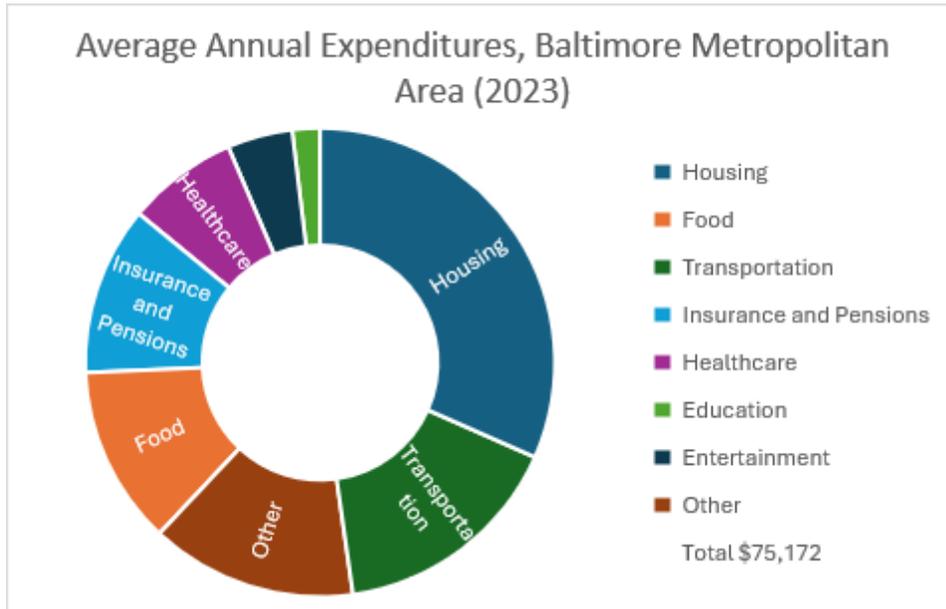


⁸ CPI-U Data Series:

CUURS35ESA0: All Items, CUURS35ESAA: Apparel, CUURS35ESAE: Education and communication, CUURS35ESAF: Food and beverages, CUURS35ESAG: Other goods and services, CUURS35ESAH: Housing, CUURS35ESAH2: Fuels and utilities, CUURS35ESAM: Medical care, CUURS35ESAR: Recreation, CUURS35ESAT: Transportation

Figure 6 below summarizes spending categories for the Baltimore Metropolitan Area as a proportion of total spending in 2023, with other spending including personal care, apparel, services, cash contributions, and miscellaneous spending. These values are for the Baltimore Metro Area and not based on individual income.

Figure 6: Average Annual Expenditure, Baltimore Metro Area (MD Proxy), 2023 ⁹



The previous chart is not normalized for limited-income spending power. There are studies out there that attempt to look at this, such as a report from United Way. United Way produces a report that focuses on the economic burden for households above the FPL but may still have trouble paying for basic living expenses. They refer to these households as asset limited income constrained, employee (“ALICE”) households. Though the household segment focused on by ALICE are not those below the FPL it can be a source to help illustrate all the various financial constraints on households tailored to Maryland.¹⁰ Interestingly, the ALICE report confirms that of the 20 most common occupations in Maryland in 2023, 10 paid less than \$20 per hour.¹¹

2. Income and Location

The following is a survey of data to help identify locations of limited income customers. Per the Federal Reserve Bank of St. Louis, Maryland's median household income, among 2.76 million workers, averaged over 2.27 million households and supporting a population of 6.26 million people, was approximately \$101,650 in 2023. Maryland consistently ranks among the highest earning states in the US, and Maryland’s median income has trended alongside but has always surpassed national income during at least the past 10 years. Note that Maryland’s income

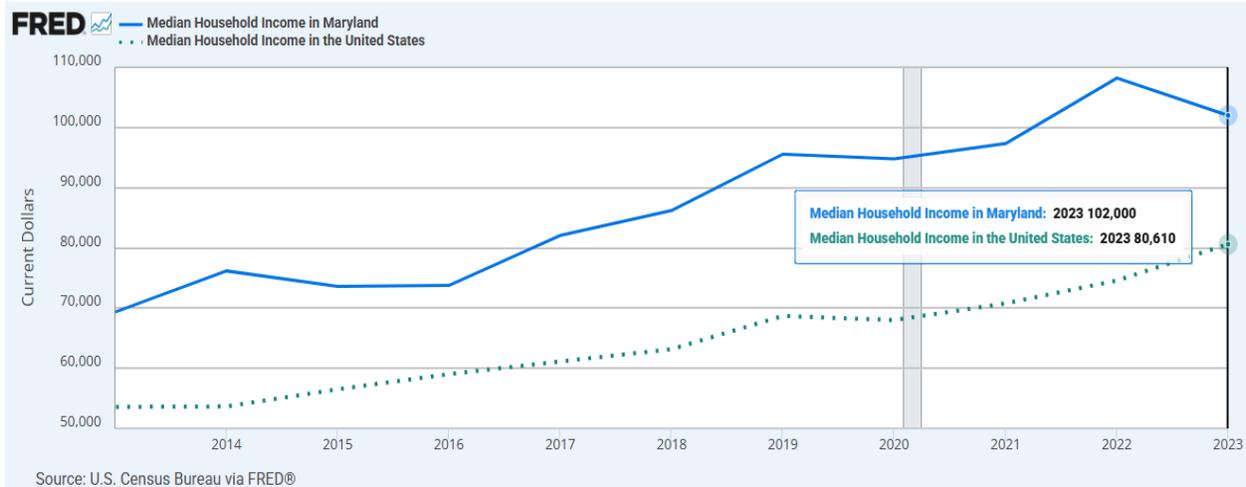
⁹ Bureau of Labor Statistics. Share of Average Expenditures for Selected Major Components, 2022-2023.

¹⁰ The State of Alice In Maryland, <https://www.unitedforalice.org/introducing-ALICE/Maryland>.

¹¹ 2025 ALICE Report. <https://uwcm.org/wp-content/uploads/2025/07/state-of-alice-report-maryland-2025.pdf>

declined in 2023 while the nationwide median income increased. Per the Maryland State Archives in 2023 approximately 81% of Maryland workers were employed by private industry and 19% by governmental entities.¹²

Figure 7: Comparison of Median Household Income Trends in MD and US, 2013-2023¹³



Looking at a different data source, the Census Bureau, information is available that allows for a visualization of income by counties as shown in following two figures. As seen in these figures there appears to be a concentration of high income in just a few suburban regions. Baltimore City, Allegany County, and Somerset County have the lowest median household income while Howard, Calvert, and Montgomery Counties have the highest median incomes.

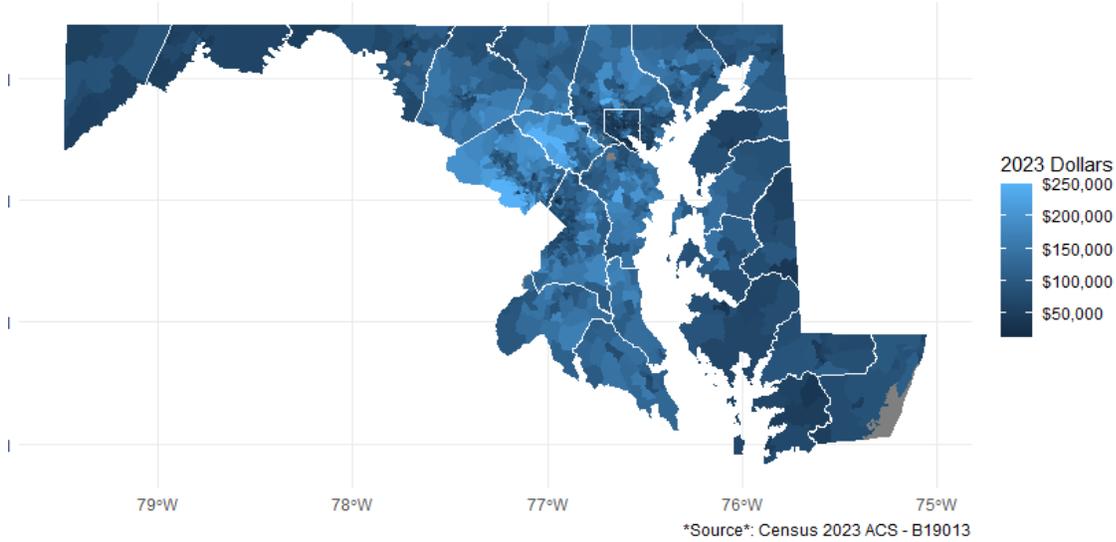
¹² Maryland State Archives.

<https://msa.maryland.gov/msa/mdmanual/01glance/economy/html/employ.html#employers>

¹³ Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/MEHOINUSMDA646N>

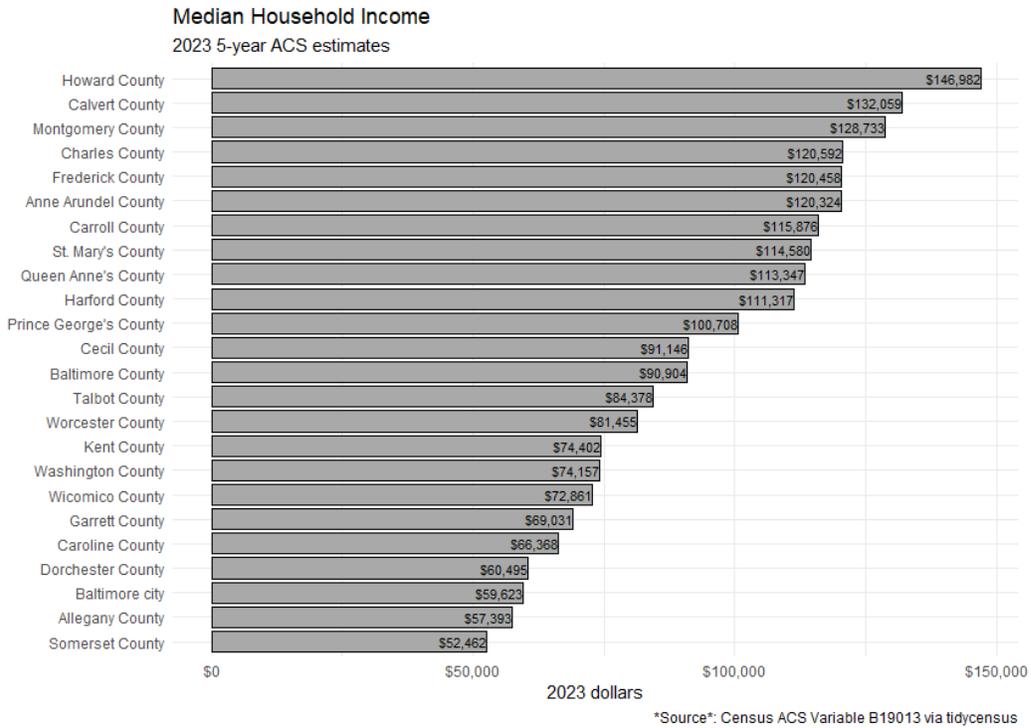
Figure 8: Geographic Comparison of 2023 Median Household Income within Maryland ¹⁴

Median Household Income
in the Past 12 Months



Note the light areas (high income) are concentrated between DC and Baltimore, and Fort Meade.

Figure 9: Comparison of 2023 Median Household Income within Maryland ¹⁵

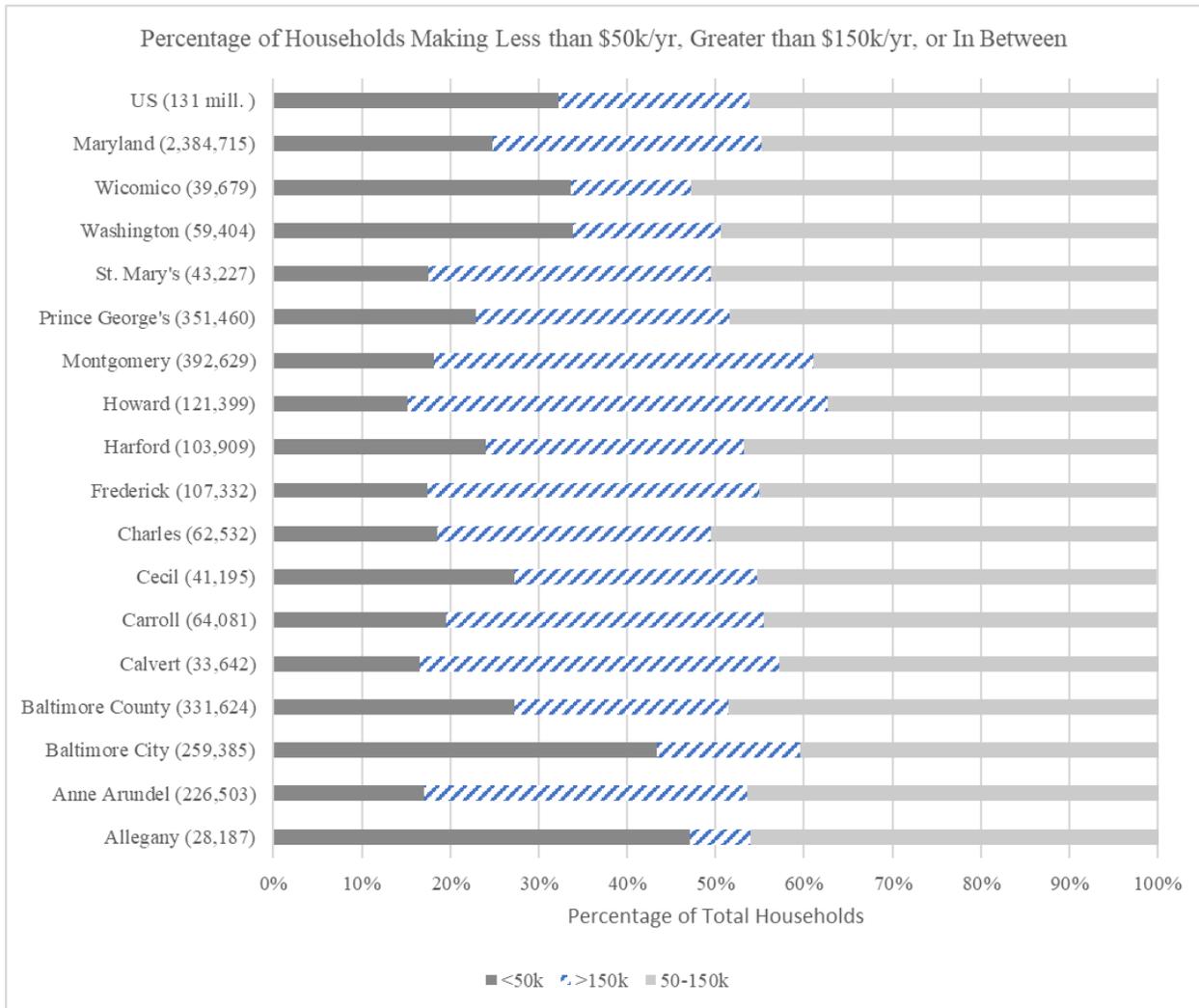


¹⁴ Census Bureau. American Community Survey 2023. B19013 via tidycensus. Median Household Income.

¹⁵ Census Bureau. American Community Survey 2023. B19013 via tidycensus. Median Household Income.

The following figure breaks down the above averages into population segments based on income. The light blue lines represent households making less than \$50,000 a year which is acting as a litmus test for lower-income household locations. This threshold was chosen to group the available Census data, which is provided into population segments at thresholds of \$10,000, \$15,000, \$25,000, \$35,000, \$50,000, \$75,000, \$100,000, \$150,000, and \$200,000. Almost 50% of all Baltimore City and Allegany County households earn less than \$50,000/year.

Figure 10: Number of Households and Percentage of Households Making Less than \$50k/yr, Greater than \$150k/yr, or Between \$50k/yr - \$150k/yr across Maryland ¹⁶



¹⁶ Census Bureau. American Community Survey 2023. S1901 Income in the Past 12 Months (in 2023 Inflation-Adjusted Dollars)

While the previous figures are in terms of dollars, the next two figures illustrate the location of households based on 100% FPL which is more representative of the limited-income households covered by the Commission mechanism and OHEP. Figure 11 shows the total magnitude of households by county, and Baltimore County, Montgomery County, and Prince George’s County have the most low-income households, but in terms of proportion of total (**Figure 12**), low-income households comprise a large proportion of Baltimore City, Allegany, and Eastern Shore.

Figure 11: Number of Individuals Earning Below 100 Percent of the FPL (2023) ¹⁷

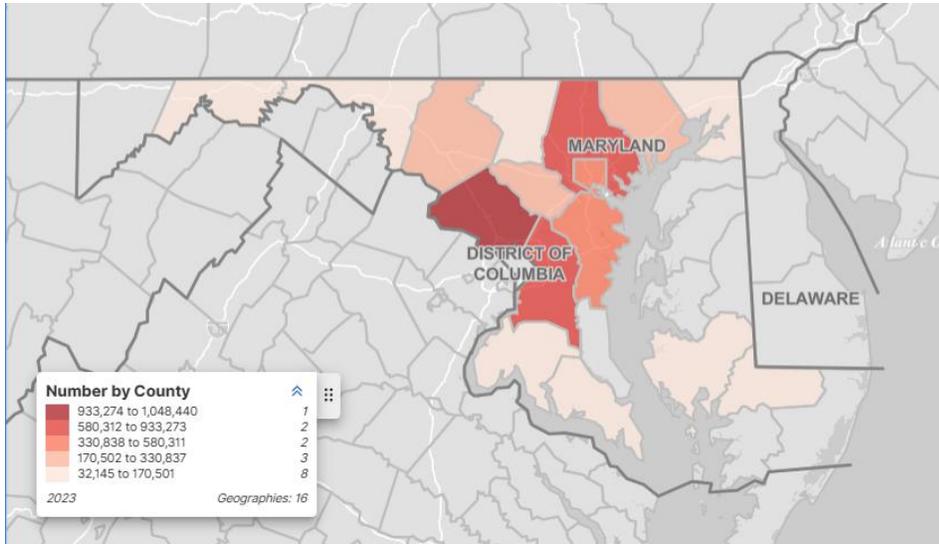
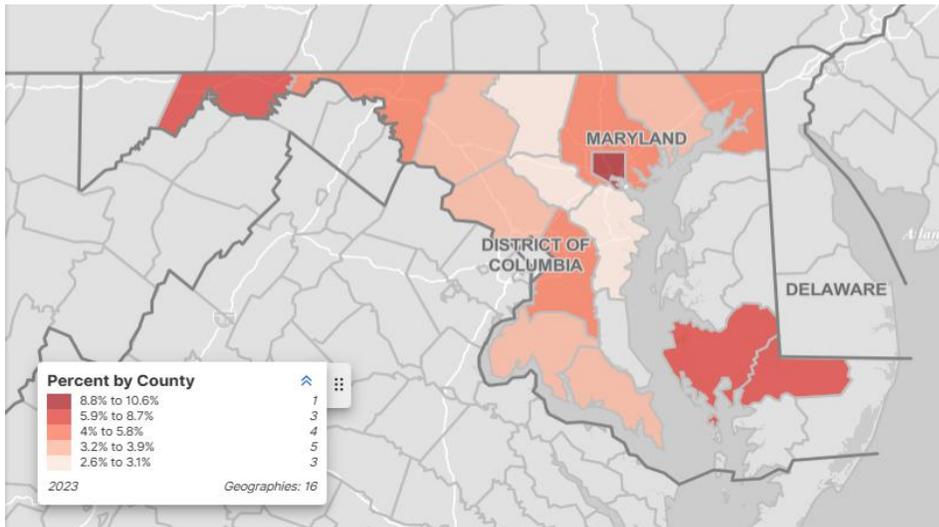


Figure 12: Percentage of Individuals Earning Below 100 Percent of the FPL (2023) ¹⁸



¹⁷ US Census Bureau. American Community Survey. S1703 Selected Characteristics of People at Specified Levels of Poverty in the Past 12 Months (2023). <https://data.census.gov/table/ACSST5Y2023.S1703>

¹⁸ US Census Bureau. American Community Survey. S1703 Selected Characteristics of People at Specified Levels of Poverty in the Past 12 Months (2023). <https://data.census.gov/table/ACSST5Y2023.S1703>

3. Demographics, Family Type, and Seniors

In addition to wages, it is helpful to understand the demographics of residents who may be considered low-income. A report produced in 2018 by the Office of People’s Counsel helps provide some of this context. The 2018 APPRISE report, produced by the Office of People’s Counsel, provides detailed information on the demographic profile of the low-income population. While a slightly older study, the Work Group used it as a survey point for this report to help identify characteristics of limited-income customers. The APPRISE Report defined limited-income households as those at or below 200% FPL.¹⁹ This study from 2018 found that seniors, defined as 60 years or older, make up the largest portion of the limited-income segment. This statistic is relevant because in the Apprise Report it estimated that nearly 200,000 Maryland households rely on very low-fixed income retirement benefits that will not increase as energy rates rise.²⁰ The Apprise Report estimated that approximately 60% of the identified elderly individuals live alone.²¹

About one-third of Maryland’s low-income families have a member between ages of 40 to 59 with an even split between these accounts having children and no children; and, 26% of low-income accounts are younger with a member 39 years or younger and nearly 80,000 having children.²² This information has been provided from the Apprise Report in Figure 12.

According to APPRISE data, 72% of Maryland’s low-income households include at least one person considered “vulnerable” because they are disabled, under 6 years-old or an older adult 60 years or older.²³ A review of the Apprise report indicates that the top counties where at least 75% of that low-income segment has at least one vulnerable resident are rural. These counties are, except Harford County; Washington, Carroll, Queen Anne’s, Talbot, Caroline, Dorchester, Allegany and Garrett counties.²⁴

¹⁹ Maryland Low Income Market Characterization Report, Applied Public Policy Research Instituted for Study and Examination, Oct. 2018. (referred to as APPRISE Report), p. ii.

²⁰ Nearly 200000 figure is from APPRISE report page 20 Table III-1 (109,911+74,010).

²¹ The report also identified the individuals have an average income of approximately \$12.8 k a year or about \$1.1 k a month. The figures were from 2014 - 2016 data and no adjustments have been made to them in this report. APPRISE report page 20 Table III-1

²² APPRISE report page 20 Table III-1

²³ APPRISE Report p. 23 Table III-4

²⁴ APPRISE Report p. 23 Table 3-6

Figure 13: Households by Age of Head of Household ²⁵

Age of Head of Household	# MD Households	% of LI Households	Avg 2018 Income
Senior Individual	109,911	25%	\$12,828
Senior Couple	74,010	17%	\$24,461
Older 40-59 w/out kids	71,252	16%	\$14,417
Older 40-59 w/ kids	72,238	16%	\$29,723
Less than 40 w/out kids	42,247	9%	\$13,386
Less than 40 w/ kids	78,205	17%	\$25,448
Total	447,863		\$19,985

4. Energy Burdens and Energy Rates

The previous sections dealt with defining demographic information for customers. The next two sections focus on energy burden and discussion of things that may impact customer electric bills.

The term energy burden refers to the proportion of gross income that is spent on energy such as electricity and gas. This concept is referenced in OPC's *Low Income Market Characterization* Report and was originally based off studies developed by economics consulting firm Fisher, Sheehan, & Colton in 2003.²⁶ Households spending greater than 6% of their income on energy costs are considered to be experiencing high energy burdens, based on the idea that a household can afford to spend 30 percent of income on shelter costs, and that 20 percent of those shelter costs are used for energy bills.

A report from ACEEE found that most households in the US spend 3-4% of their income on energy, many low-income households spend more than 10%.²⁷ Some states are using policy and rate reform to reduce energy burdens, like the approach being pursued in Maryland. There are a range of targeted energy burdens with 6% being typical and some, such as Nevada, being as low as 3%.²⁸ Note that as stated above, at least one report previously found that many US households spend about 3-4% of their income on energy.

In Maryland, the degree of energy burden varies substantially by income level. Anna Johnston from ACEEE, a member of the subgroup, performed the following analysis to help break down Energy Burden for the State of Maryland. Using 2018 – 2022 data from the US Census Bureau, households earning below 200% FPL experience energy burdens above the 6% threshold

²⁵ MD OPC APPRISE LI Report Page 20 Table 3-1

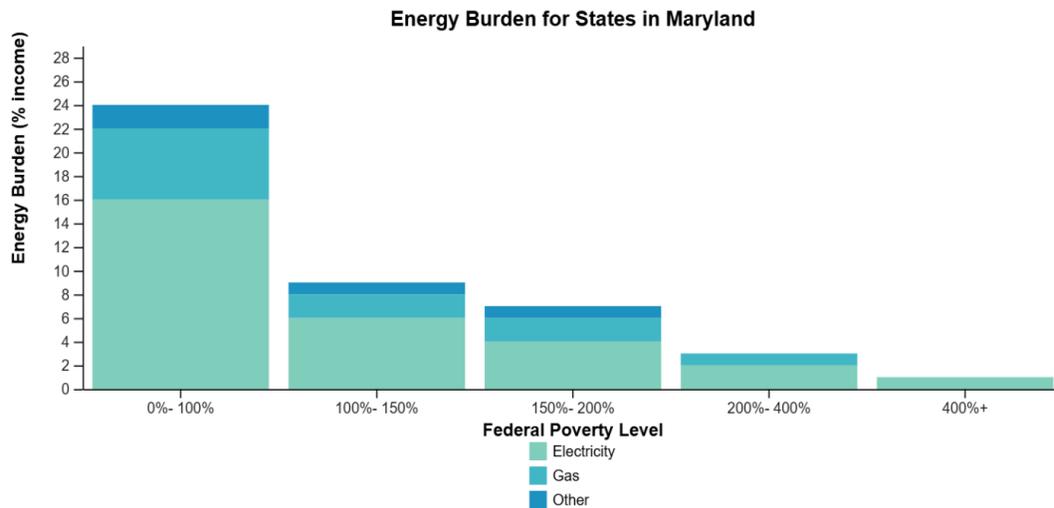
²⁶ Maryland Office of People's Counsel. Maryland Low Income Market Characterization Report. 2022 Report Update. September 2022. Page 4.

²⁷ Drehobl, A., Ross, L., and Ayala R. September 2020. "How High are Household Energy Burdens?" ACEEE.

²⁸<https://www.sierraclub.org/articles/2025/01/progressive-rate-reform-critical-tool-just-transition-homes-and-buildings-fossil>

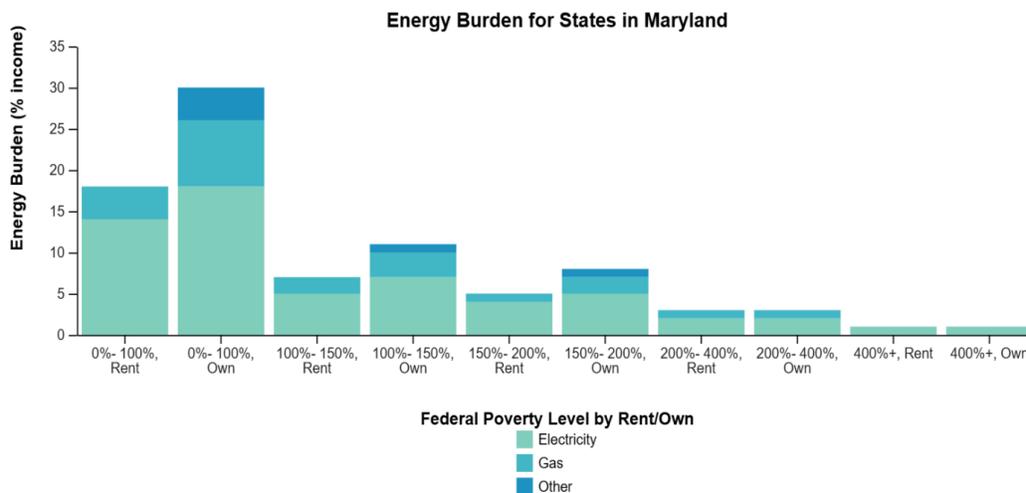
in MD. From this data, when a household reaches a FPL at or below 100%, the households energy burden goes up substantially relative to other energy burdened homes.(Figure 14).²⁹

Figure 14: Energy Burden in Maryland by Poverty Level



Additionally, low-income homeowners experience consistently higher energy burdens than low-income renters within lower-income brackets (Figure 13), while the differentiation in energy burdens between renters and homeowners is not apparent in higher income brackets. Since homeowners typically have utility accounts for these segments of the population the Commission may be able to more easily reach solutions than the renter segments who due to lack of ownership may not have the incentive or are restricted in their ability to improve the home's energy use.

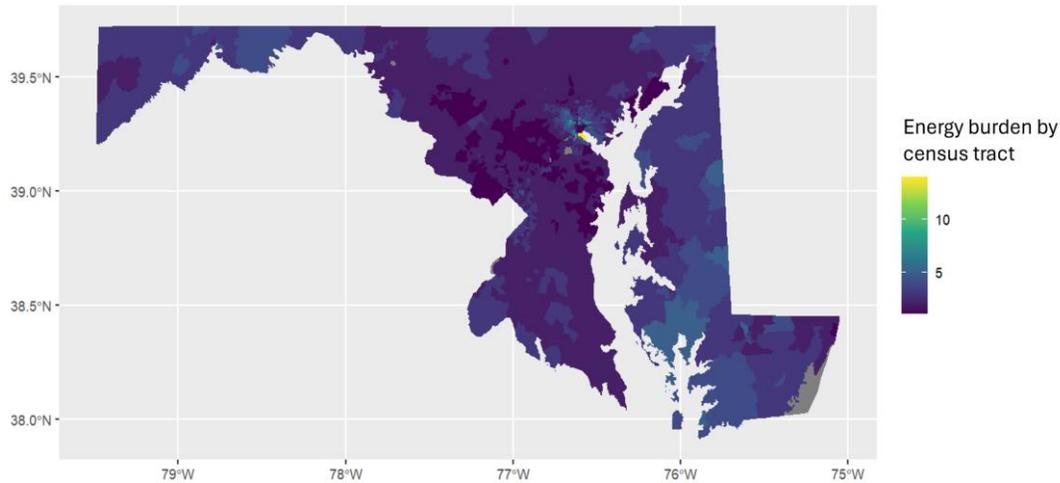
Figure 15: Energy Burden in Maryland by Poverty Level and Ownership Type



²⁹ US Census Bureau. American Community Survey 2018-2022, 5 year data. Charts formatted through Low-income Energy Affordability Data (LEAD) tool.

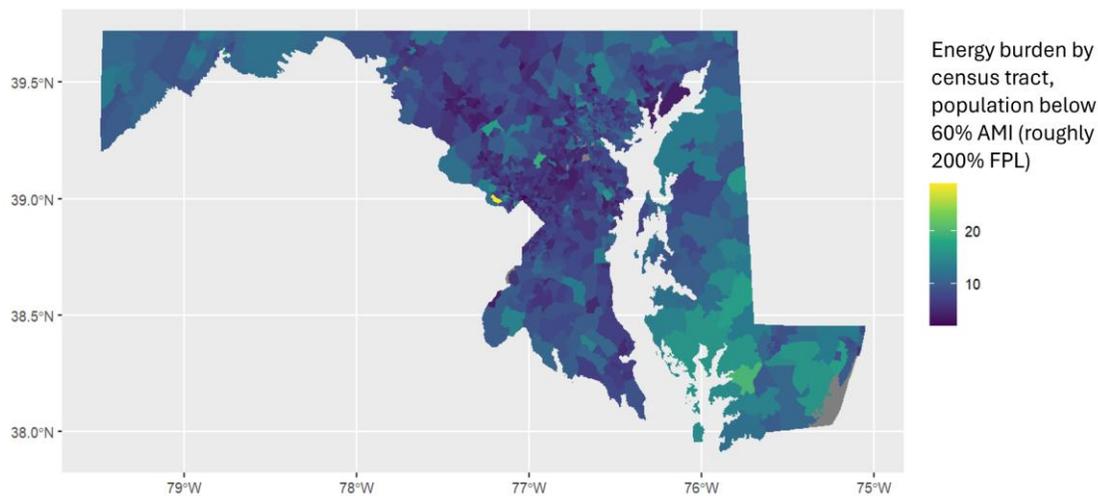
The degree of energy burden also varies substantially by geography in Maryland, with higher energy burdens concentrated within Baltimore City census tracts and within portions of the Eastern shore. This can be attributed to a combination of economic, infrastructural, and environmental reasons.

Figure 16: Energy Burden in Maryland by Geography



This trend is even stronger when looking at geographic variation in energy burdens just for population at 60% or below median income (**Figure 15**, below), the income level where energy burdens are highest, roughly equivalent to 200% FPL for a family of 4. For the population at or below 60% of median income, average energy burdens are higher at census tract level in much of the rural Eastern shore, Western regions, and within and around Baltimore City.

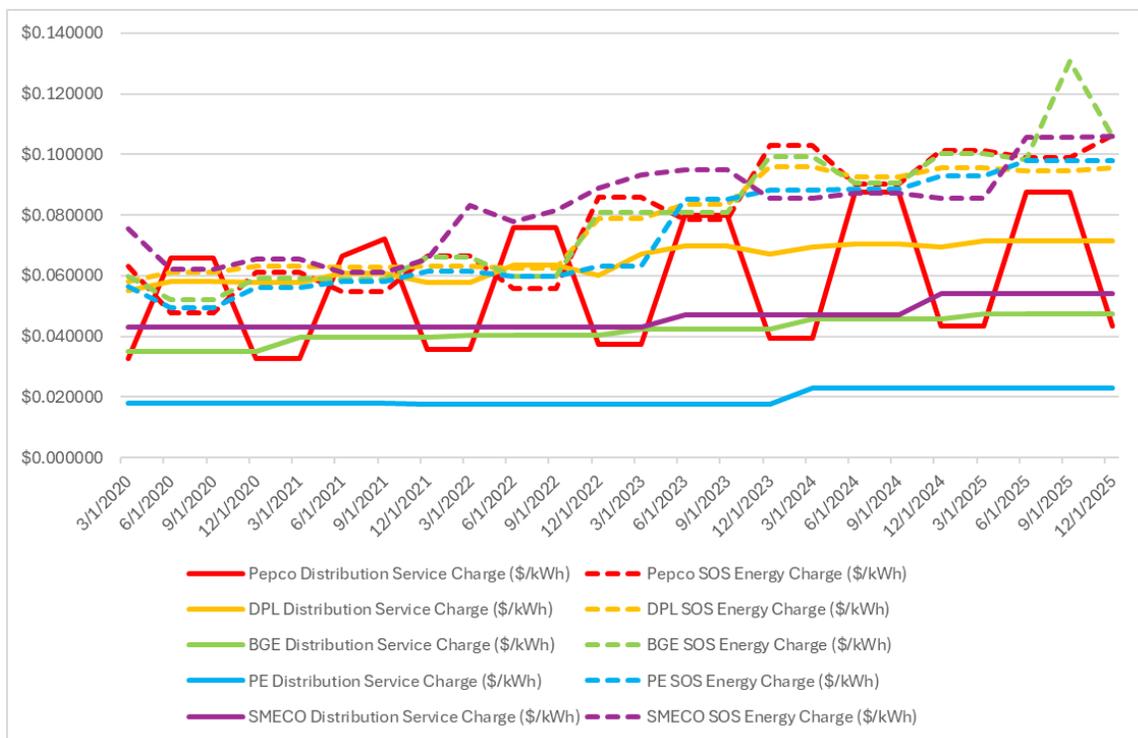
Figure 17: Energy Burden in Maryland by Geography, for Households earning below 60% Median Income



Energy assistance plays a crucial role in mitigating energy burden as discussed further below, especially for low-income households, by reducing the share of income spent on energy costs and preventing hardship such as utility shutoffs and unsafe living conditions.

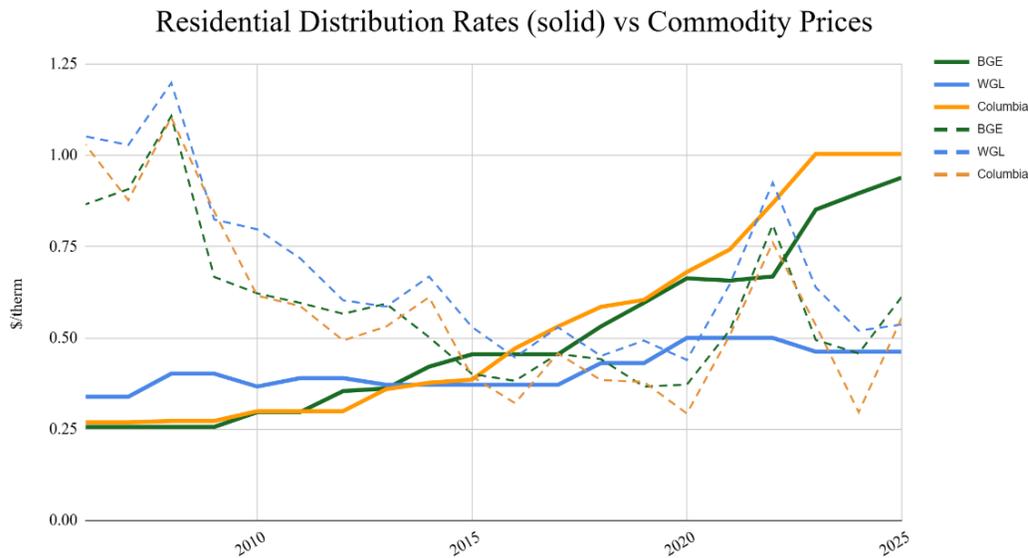
It should also be noted that in addition to customers' income, energy burden can also be driven by the price of energy (both supply and distribution costs). The following charts provide changes in distribution and supply rates by utility service territory over time. Utility spend and rate design is within the Commission's oversight and is an area where the Commission can more directly impact energy burdens, such as this docket to design a limited income mechanism. The next section discusses more direct characteristics of limited-income customers such as energy usage and housing.

Figure 18: Comparison of Electric Supply and Distribution Rates by Service Area ³⁰



³⁰ Maryland Public Service Commission, Technical Staff Division.

Figure 19: Comparison of Gas Supply and Distribution Rates by Service Area ³¹



5. Usage, Housing Type, and EmPOWER

Energy usage is going to dictate the size of a household's bill and have a significant impact on a customer's energy burden. DHCD provided the following analysis regarding characteristics of limited-income customer homes in their programs to help identify what may be driving bills. Please note that customers eligible for DHCD programs can have a higher income than 200% FPL. Additionally, the following is based on information from customers who have participated within DHCD programs and is not a more broad assessment of information regarding all limited-income households in Maryland.

One way to lower low-income utility bills is to reduce energy usage. The EmPOWER Maryland program was legislated in 2008 to reduce electricity usage. DHCD took over administering EmPOWER Low Income Energy Efficiency Program in 2012, and in 2025, the program was reformed to measure outcomes based on reduction in greenhouse gas emissions, rather than in energy savings.

DHCD performs data analysis for the purpose of characterizing limited income households on a regular basis, in order to better serve its customers. This analysis includes data from all households that were serviced by DHCD's Limited Income Programs between 2012 to the date of the analysis. The households examined fall into the income-eligible range that was valid at the time of their participation. In 2017, the data analysis focused on identifying regional differences and identified the following trends:

³¹ Maryland Public Service Commission, Technical Staff Division.

- Homes in Western MD are less likely to have existing air conditioning or a duct system to tie in central systems (historically a cooler climate zone)
- On the Eastern Shore, crawl spaces are more prevalent than in other parts of the State. Crawl space weatherization is labor and cost intensive and therefore the retrofits at the Shore cost more on average.
- Home size was smaller in urban areas than in rural areas, which also contributes to more costly retrofits outside of the urban areas.

In 2023, the analysis looked at what the average limited-income home looks like compared to the average Maryland home. The data review found that the average limited income home has a 27% higher energy consumption per square footage, most likely due to a larger portion of buildings built before 1980, prior to the wide adoption of building energy codes and building efficiency practices.³² In addition, older homes are often more expensive to repair or retrofit and have significant issues that reduce the ability to weatherize.

In addition, sixty percent of low-income homes are rentals. Landlords may have little incentive to invest in weatherization and efficient appliances when the utility bill is paid by the renter.³³ This has been partially addressed with the passing of SB 171/HB 139 Landlord and Tenant, which mandates that landlords whose tenants pay for utilities through them must supply the necessary utility billing information for the tenants to apply for energy assistance. The legislation took effect October 1, 2024.

Figure 20: Comparison of Low-Income Housing Characteristics with Average

	Average Limited Income Home	Average Maryland Home
Annual Energy Usage	11,912 kWh	11,526 kWh
Single-family Home Size	1,800 sq.ft.	2,200 sq.ft.
Avg. kWh per Square Foot	6.6	5.2
Rental Percentage	60%	33%
Homes built pre-1980	64%	53%
Percentage Fossil Fuel Heat	61%	54%

In 2024, the data analysis focused on identifying characteristics by type of home (e.g. mobile home, single-family detached, single-family attached, small multifamily, and large multi-

³² https://www1.eere.energy.gov/buildings/publications/pdfs/corporate/bt_stateindustry.pdf

³³ https://www.jchs.harvard.edu/sites/default/files/media/imp/harvard_jchs_carliner_research_brief.pdf

family), and specifically determining what type of heating systems are prevalent. DHCD used the data from projects that were completed at over 30,000 households, and then extrapolated the data to make assumptions about the limited income housing stock in Maryland overall. This data is shown in **Figure 22**, and **Figure 23** and has been used to prepare for electrification projects. **Figure 21** is data derived from the Maryland Low Income Market Characterization Report.³⁴

Figure 21: LI Housing Type	Total	Own	Rentals	% Renter
Single Family Attached	102,258	45,247	57,011	56%
Single Family Detached	149,657	110,545	39,112	26%
Multifamily (2-4 units)	32,631,	1,779	30,852	95%
Multifamily (5+ units)	151,743	11,579	140,164	92%
Mobile Homes	11,574	7,870	3,704	32%
Total LI Housing Units by Type	447,863	177,020	270,843	60%

Figure 22: LI Housing Age Built	Pre-1980	1981-2000	After 2000
Single Family Attached	72,123	22,957	7,179
Single Family Detached	105,553	33,598	10,506
Multifamily (2-4 units)	18,264	11,741	2,630
Multifamily (5+ units)	88,010	28,831	33,383
Mobile Homes	2,125	7,186	2,263
Total Age LI Housing Built	286,075	104,313	55,961
	64%	23%	13%

Figure 23: HVAC Type	Electric Resistance	Heat Pump	Natural Gas	Propane
Single Family Attached	5,113	37,835	59,310	0
Single Family Detached	19,455	32,925	10,476	86,801
Multifamily (2-4 units)	2,610	8,810	20,231	979
Multifamily (5+ units)	12,139	40,970	94,080	4,55
Mobile Homes	694	4,861	5,903	116
Total LI HVAC	40,013	125,402	190,000	92,448
	9%	28%	42%	21%

Aside from the characteristics of the housing stock, additional factors play into the energy consumption at low-income households, such as occupant behavior. DHCD does not collect data on these behavioral factors, however, has anecdotal input from its energy auditors who have visited

³⁴ <https://opc.maryland.gov/Portals/0/Files/Publications/Reports/APPRISE%20Maryland%20Low-Income%20Market%20Characterization%20Report%20-%20September%202018.pdf?ver=ScReQ-dA9Sk4xlj1V6bp1w%3D%3D>

thousands of households. They report that some of the main drivers for high energy consumption appear to be:

- Thermostat settings (how high/low heating and cooling are set).
- Water use habits (long showers, hot water temperature, frequency of laundry/dishwashing).
- Lighting and plug load use (leaving lights, TVs, computers, or chargers on).
- Presence at home (work-from-home, unemployed, or retired households often consume more energy than those away during the day).
- Number of occupants (more people means more water heating, laundry, cooking, and plug loads).

The Green and Healthy Task Force Report mandated by HB169 forecasted that it would take an additional 19 years, or until 2045, and cost \$7.7 billion in funding to fully improve this segment's energy efficiency. DHCD's latest Quarter 1 and 2 report stated the agency is expected to service up to about 5,000 homes in 2025 through EmPOWER.

This data is relevant for the PC59 Working Group because on many occasions PC59 Working Group members have suggested Low-income Energy Efficiency Programs as a possible, even primary, solution to the current low-income high-energy burdens. While the Low-Income Energy Efficiency Programs are important it should be recognized that they alone cannot likely address all low-income energy burden needs in the next few years. Greater investment in limited-income energy efficiency upgrades could, however, help to lower the overall cost of tiered discount programs for ratepayers, as well as reducing grid stress, especially during times of peak system demand.³⁵

There is also general limited-income usage that should be considered in this report. OHEP provided usage data to the Work Group of OHEP customer usage. The figures in the main Work Group report illustrate that as energy usage increases energy burden also increases. The following figures (figures 24 and 25) show a range of household usage throughout the State based on percentile of customer usage by service territory.³⁶ For example, the 5th percentile is the lowest energy users (5% of customers have energy usage below this) and 95th is the highest usage (5% of customers have more energy than this). This helps illustrate the range of customer usages in a service territory.

An idea discussed in the subgroup was identifying limited-income customers with high usage and targeting them for efficiency programs. DHCD pointed out that the Utilities already

³⁵ <https://dhcd.maryland.gov/Energy-Home-Repair/Pages/GreenHealthyTaskForce.aspx>

³⁶ Please note that this data is based on 2025 OHEP program data which means the customer usage could span from 2023 - 2025 since OHEP usage data is based on the previous 12 months at time of application. Additionally, for gas usage any 1 Therm or less usage was excluded from the estimates. In conversations with OHEP there may be instances of estimated or placeholder usage if the number has no impact upon the amount of award provided. Thus, this data is informatically useful, but improved analysis could be conducted with utility data.

provide DHCD reports on a regular basis about high-usage limited-income customers and subsequently DHCD contacts these customers to participate in EmPOWER programs.

Also note that DHCD also works with the Maryland Energy Administration on grant programs for low- and moderate-income customers, such as their Energy Efficiency Equity Grant Program.³⁷

Figure 24: Electric Utility Monthly Usage - kWh - Percentiles and Average

	Electric Percentile Monthly Usage					Average Usage
	5%	25%	50%	75%	95%	
BGE	212	445	700	1,074	1,839	823
Delmarva	284	591	926	1,332	2,092	1,022
PEPCO	193	440	706	1,088	1,881	830
PE	267	535	856	1,308	2,200	995
SMECO	353	735	1,110	1,558	2,474	1,221
Total	223	474	756	1,167	1,972	886

Figure 25: Gas Utility Monthly Usage - Therm - Percentiles and Average³⁸

	Gas Percentile Monthly Usage					Average Usage
	5%	25%	50%	75%	95%	
BGE	15	33	50	72	118	58
CHESAPEAKE	9	25	25	42	75	34
COLUMBIA	9	32	54	78	121	58
SANDPIPER ENERGY	9	17	26	39	56	29
WASHINGTON GAS	8	17	41	65	104	46
Total	9	31	48	71	116	55

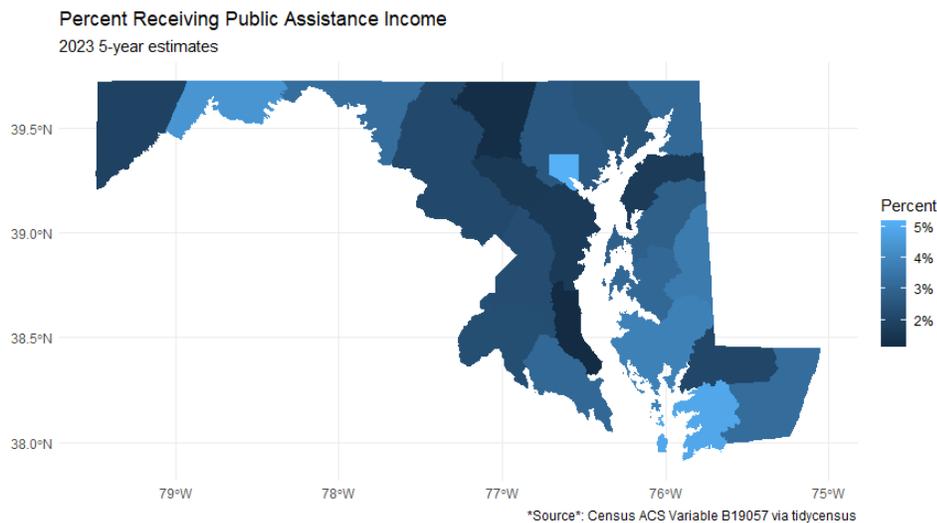
³⁷ Energy Efficiency Equity Grant Program, MEA, <https://energy.maryland.gov/govt/pages/cleanenergy/lmi.aspx>.

³⁸ Note that Sandpiper has some propane usage included within these values.

6. Public Assistance, Energy Assistance, and Arrearages

In addition to customer usage and income, the amount of assistance available to customers will impact energy burden and how much of an energy bill a household must pay. In addition to energy assistance, public assistance plays a foundational role in mitigating the financial and social burdens faced by low-income households. Programs offering cash support (TCA), food assistance (SNAP), health coverage (Medicaid and Medicare), housing subsidies (section 8), and childcare (WIC). **Figure 23** below shows the geographical distribution of households receiving public assistance as a proportion of total population.

Figure 26: SNAP Benefits Recipients in Maryland



Energy assistance programs are essential for low-income households to manage high utility bills. Maryland Energy Assistance Program (MEAP) offers heating assistance benefits. The Electric Universal Service Program (EUSP) provides electric bill assistance, arrearage retirement assistance, and crisis assistance. The Universal Service Protection Program (“USPP”) protects customers from utility service termination during the winter heating season, and helps customers avoid the accumulation of arrearages by requiring monthly payments.

Categorical eligibility and automatic enrollment greatly affected OHEP’s programs. From FY 2013 to FY 2023, EUSP received around 143,000 applications per year.³⁹ However, the implementation of categorical eligibility in FY 2024 saw applications increase to 243,252, which was 70 percent higher than the 10-year baseline. Though applications in FY 2025 decreased to 174,522, due in part to system improvements that denied duplicate applications, applications remain 22 percent higher than the baseline.⁴⁰

³⁹ EUSP Proposed Operations Plan FY 2026, pg. 20

⁴⁰ *Ibid*

This has impacted the amount of assistance that low income families receive. Since FY 2023, average statewide bill assistance amounts have dropped from \$939 to \$627 (FY 2024), and \$548 in FY 2025. Statewide average arrearage benefit amounts also decreased since FY 2023, though less drastically. Whereas the average arrearage retirement grant was \$1,119 in FY 2023, it dropped to \$1,032 in FY 2024, and then to \$974 in FY 2025.⁴¹

USPP has two methods to manage arrearages: the equal monthly plans and alternative supplemental plans. Equal monthly payment plans are the default arrangement for USPP participants to avoid termination and pay down arrearages, while supplemental payment plans are arranged for those unable to make payments under the default scheme.

Arrearage balance varies based on utility but is generally higher for USPP participants (Figure 27). Whereas during the 2020-2021 heating season, customers with alternative plans had higher arrears than default USPP plans, in 2024-2025, those default customer arrears exceeded alternative plan arrears. The current season’s average supplemental arrearage balance is about 160% larger than the arrearage balance of \$373 in 2019.⁴²

Figure 27: Average Arrearage Balances (2024-2025) for USPP, MEAP, and general customers

Utility	USPP Participants	MEAP-Eligible Non-Participants	Non-MEAP Customers
BGE	\$ 832	\$ 902	\$ 550
Columbia	\$ 254	\$ 328	\$ 305
DPL	\$ 1,342	\$ 1,328	\$ 668
Pepco	\$ 1,526	\$ 1,108	\$ 581
SMECO	\$ 822	\$ 207	\$ 458
PE	\$ 491	\$ 517	\$ 307
WGL	\$ 342	\$ 648	\$ 375
Statewide	\$ 615	\$ 682	\$ 414
<i>(2023-2024)</i>	<i>\$ 530</i>	<i>\$ 516</i>	<i>\$ 335</i>
<i>(2022-2023)</i>	<i>\$ 510</i>	<i>\$ 522</i>	<i>\$ 388</i>
<i>(2021-2022)</i>	<i>\$ 585</i>	<i>\$ 519</i>	<i>\$ 410</i>
<i>(2020-2021)</i>	<i>\$ 758</i>	<i>N/A</i>	<i>N/A</i>
<i>(2019-2020)</i>	<i>\$ 392</i>	<i>N/A</i>	<i>N/A</i>

These payment arrangements and arrears are a symptom of customers being able to pay their energy bills. While they are not drivers of initial energy bills it is a part of the final bill that

⁴¹ EUSP Proposed Operations Plan FY 2026, Attachment C

⁴² Staff USPP Report, 2024-2025 Heating Season

customers must determine how they will pay. Management of these arrears is something the Commission has previously weighed in on and continues to have oversight over.

7. Conclusion - Solutions

Part of the Commission direction to the Work Group was to propose ways customers could reduce bills.

Solutions to energy burdens faced by low-income households are primarily going to be focused on programs that either reduce customer energy usage or provide ways to reduce rates paid by customers.

As mentioned in the previous section DHCD's EmPOWER programs are a source of improving reductions in customer usage. This is a program reviewed semi-annually by the Commission and recently DHCD was given increased goals to meet through the program. DHCD works with the utilities on these programs, such as receiving information about high usage customers which in turn DHCD subsequently attempts to contact. To the extent the Commission wants to target limited income customers' energy usage through energy efficiency or demand response, the EmPOWER forums in Case No. 9705 with both DHCD and the utilities are the recommended venues. Note that EmPOWER likely cannot be a single solution to reducing energy usage.

Note that EmPOWER is within Commission control and a direct mechanism to help reduce limited-income customer usage. Generally, though anything that is done to help improve limited-income housing stock energy efficiency can help lower bills. But outside of the EmPOWER or other utility programs the Commission has less ability to influence these outcomes. The Work Group at this time has not explored ways that this could be facilitated.

On the flip side of customers' usage control is for customers to be able to take advantage of ways to reduce rates. This could be done through increasing Community Solar participation if a customer does not own a home or increasing customer participation in Net Energy Metering if they own a home. The demand response programs through EmPOWER offer an opportunity for these customers to receive funds back on their bill in addition to reducing their consumption.

Another option is to also increase participation in Time-Of-Use ("TOU") rates so long as the customer has the tools to control and be cognizant of their usage. TOU is also not a universal solution as some customers may not have the ability to flex their usage into alternative hours.

MEAC has recommended a solution to ensure that Community Solar discounts are delivered to OHEP customers. One aspect of the 2023 HB 908 which established community solar as a permanent program is that 40% of the energy load from solar farms and the accompanying solar discounts must be delivered to low- and moderate-income families (LMI). Yet the law does not specify that the grants must go to low-income families. If developers and the subscriber

organizations enrolled only moderate-income families, this would satisfy the law. Additionally, there are concerns that the current process to enroll OHEP eligible customers onto community solar can be a burdensome process such that these customers may not use it. Either the Commission or General Assembly could consider how to simplify or even auto-enroll customers into community solar. The Work Group leader notes that this may require legislative action.

Part of Commission jurisdiction is the setting of just and reasonable rates which the Commission does through litigated proceedings based on the evidence. OPC notes (and has reported on) that recent distribution rate increases in Maryland have, in many cases, outpaced the rate of inflation.⁴³ Figures 18 and 19 above provide a visual representation of the increasing rate for both electric and gas utilities in Maryland. Distribution rate increases are within the Commission’s purview, and higher rates—absent a corresponding increase in income or a decrease in usage to offset those increases—will lead to higher energy burdens for customers.

Finally, regarding rates, electricity use for commercial computing has the potential to drive significant increases in electricity demand.⁴⁴ OPC contends that this demand growth is now beginning to drive price increases for many Maryland households.⁴⁵ Ratepayer impacts should be front-of-mind when the Commission reviews proposed utility capital investment plans. Reviewing cost allocation between large load commercial customers and residential customers can help ensure affordability. This issue of certain costs being paid by these large load customers is currently being addressed in PC72.

⁴³ For electric utilities OPC identifies BGE, Delmarva, Pepco, and SMECO distribution rates exceeding inflation. For gas OPC identified BGE and Columbia exceeding inflation. Maryland Office of People’s Counsel, *Maryland Utility Rates and Charges – Explanation and data on utility bills, rates, and charges, and how—and why—they have changed over time* (June 2024, with updates for 2025-26 rate increases to pp. 6, 9, 12 in March 2025) at 10-13. See: https://opc.maryland.gov/Portals/0/Files/Publications/Reports/Utility%20Rates%20PowerPoint%202025%20update%203-11-25.pdf?ver=WE3Jb5lAWghiYWH_u9RLrA%3d%3d

⁴⁴ US Energy Information Administration, *Electricity use for commercial computing could surpass space cooling, ventilation*, (June 25, 2025). (“In our *Annual Energy Outlook 2025* (AEO2025) Reference case, we project the electricity consumed for commercial computing will increase faster than any other end use in buildings. Computing accounted for an estimated 8% of commercial sector electricity consumption in 2024 and grows to 20% by 2050. Ultimately, more electricity could be consumed by computing than for any other end use in the commercial sector, including lighting, space cooling, and ventilation.” See: <https://www.eia.gov/todayinenergy/detail.php?id=65564>

Maryland Office of People’s Counsel, *Data Center Power Demands Drive Record Power Auction Prices with Varying Impacts on Maryland Customers*, (July 2025).

See: <https://content.govdelivery.com/accounts/MDOPC/bulletins/3ead2f8>