

Energy Burden Analysis (EBA) 2024 Calendar Year

Exhibit TAH-10 to Initial Direct Testimony of Troy A. Hutson,
PSE's 2026 General Rate Case (GRC), Dockets UE-260005/UG-260006



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1. Introduction

What is Energy Burden and Why Do We Care?

What is Energy Burden and Why do we Care?


$$\text{Energy Burden (EB)} = \frac{\text{Annual Household Energy Bill}}{\text{Annual Household Income}}$$

Commerce guidelines for CETA: Energy bill includes electric, gas, and other heating fuel sources.



Customers with **EB > 6%** have **high energy burden (HEB)** / are “**energy-burdened**”



CETA (RCW 19.405.120): must submit biennial reports that include a cumulative assessment of previous funding levels for energy assistance compared to the funding levels needed to meet 60% of the current EAN, or increasing energy assistance by 15% over the amount provided in 2018, whichever is greater by 2030; and 90% of the current EAN by 2050.

PSE conducted the Energy Burden Analysis (EBA) pursuant to Washington 2019 State Law – CETA

- ◆ PSE conducted its first energy burden analysis in 2020 to comply with [RCW 19.405.120](#) - Section 120, Energy assistance for low-income households, of the 2019 Clean Energy Transformation Act (CETA), which requires that:
 - ◇ all Washington electric utilities must provide energy assistance funding and programs to low-income households by July 31, 2021 (“*to the extent practicable, priority must be given to low-income households with a higher energy burden*”);
 - ◇ all Washington electric utilities are required to assess energy assistance available to low-income households across the state, **the energy burden of low-income households**, and the need for more assistance, and provide their findings biennially to the Washington State Department of Commerce (“Commerce”).
 - ◇ Commerce is required to compile and aggregate data provided by all electric utilities and to publish biennial reports for the Washington State Legislature.

Key statutory definitions

RCW 19.405.020 CETA (2019) Definitions:

- ◇ **"Energy assistance"** means a program undertaken by a utility to reduce the household energy burden of its customers.
- ◇ **"Energy burden"** means the share of annual household income used to pay annual home energy bills.
- ◇ **"Low-income"** means household incomes as defined by the department or commission, provided that the definition may not exceed the higher of eighty percent of area median household income or two hundred percent of the federal poverty level, adjusted for household size.

Commerce Guidelines* for CETA, RCW 19.405.120:

- ◇ Commerce set the threshold for determining **energy assistance need** at 6% energy burden.
- ◇ An **affordable energy burden** should be at or below six percent of household income.

WAC 480-100-605 Clean Energy Transformation Standards (CETS) Definitions:

- ◇ **"Energy assistance need"** as "the amount of assistance necessary to achieve an energy burden equal to six percent for utility customers."

The EBA enables identification and analysis of low-income and energy-burdened customers

Energy Burden Analysis:

- ◆ Enables PSE to estimate the number of low-income (LI) customers, identify those with high energy burdens (HEB), and quantify their energy assistance need (EAN).*
- ◆ Supports PSE in analyzing and better understanding shared characteristics among LI and HEB customers, as well as customers in highly impacted communities (HIC), highly vulnerable populations (High VP), and those with electric deepest need (eDN) designations.*
- ◆ Informs the design and tailoring of products, services, outreach efforts, and energy assistance programs to better serve customers with the greatest need.
- ◆ Serves as a core component of PSE's reporting requirements (see next slide), supporting evaluations of energy assistance programs and progress toward advancing energy equity.

EBA supports key legislative and regulatory reporting and analysis requirements

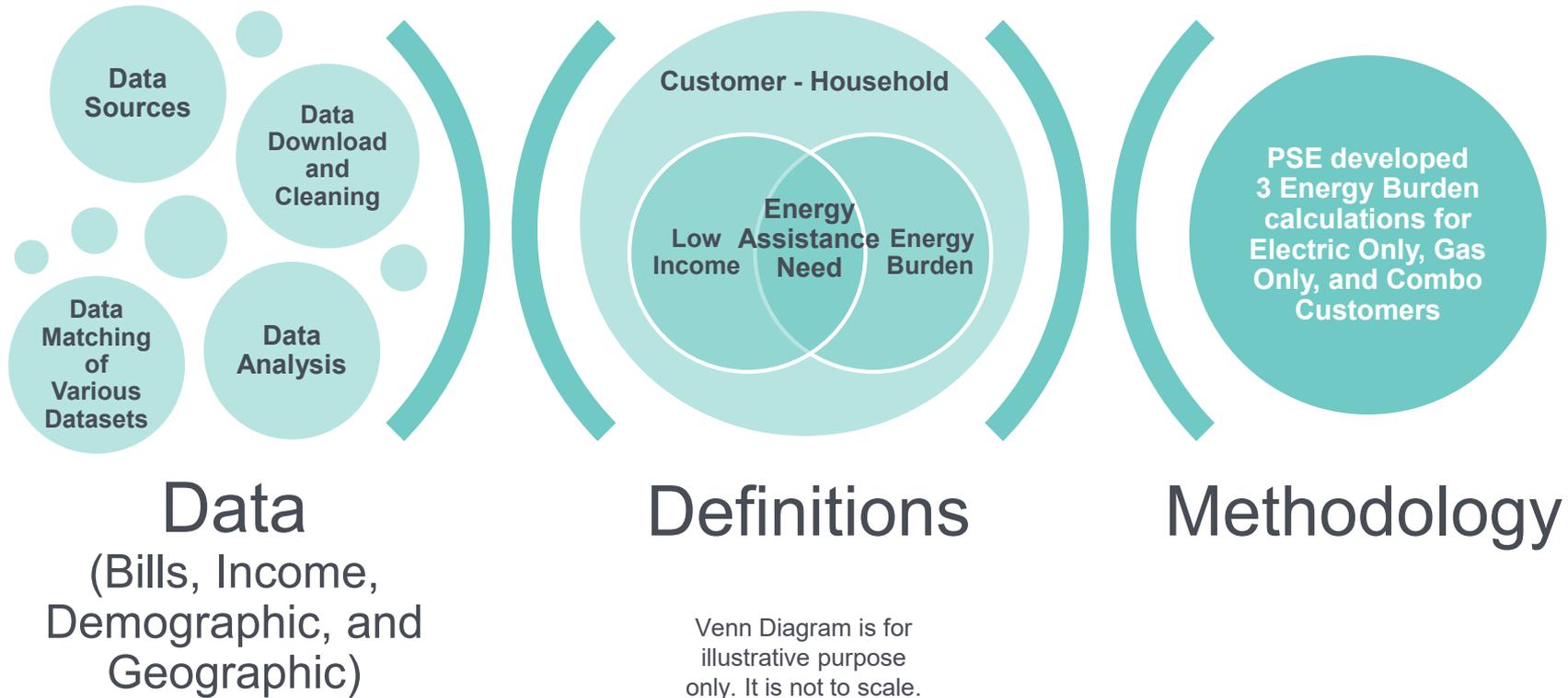
To name a few:

- ◆ **Clean Energy Transformation Act (CETA):**
 - ◇ CETA Section 120 biennial energy assistance reports to the Department of Commerce
 - ◇ Clean Energy Implementation Plans (CEIPs) / PSE's Integrated System Plan (ISP), including annual progress and compliance reports
- ◆ **PSE's General Rate Cases (GRCs) / Multi-Year Rate Plans (MYRPs)**
 - ◇ Annual MYRP metric reports
 - ◇ Energy Equity, Customer Programs, and Energy Assistance testimonies
- ◆ **Performance Based Regulation (PBR)**
 - ◇ Reported metrics and development of performance incentive metrics (PIMs)
- ◆ **Customer Energy Management (CEM)**
 - ◇ Biennial Conservation Plans (BCPs)
- ◆ **RCW 80.28.068** (2021 Engrossed Substitute Senate Bill (ESSB) 5295):
 - ◇ Design and evaluations of tiered Bill Discount Rates (BDR) and other energy assistance programs

2. Methodology

Summary of methodology, data sources, and definitions

Energy Burden Analysis methodology overview



Data sources for 2024 EBA

◆ Income data

- ◇ 2024 Third-party data vendor and Ground Truth Estimates from PSE Survey Data
- ◇ 2022 U.S. Department of Energy (DOE) / National Renewable Energy Laboratory (NREL) Low-Income Energy Affordability Data (LEAD) Tool
- ◇ Area Median Income (County) Income Limits: 2025 U.S. Department of Housing and Urban Development (HUD)

◆ Billed amounts

- ◇ 2024 PSE billing data
- ◇ 2022 DOE/NREL LEAD Tool data

◆ Geographic Information

- ◇ 2020 U.S. Census Jurisdictions: Census block groups aggregated to tracts

◆ Named community Information

- ◇ 2022 [Washington State Department of Health Environmental Health Disparities Map](#) data;
- ◇ 2023 PSE Vulnerable Populations analysis per PSE 2021 CEIP Order 08;
- ◇ 2023 PSE Deepest Need analysis per PSE 2021 CEIP Order 08.
- ◇ See, the latest version of [PSE's named communities](#) map: <https://www.arcgis.com/apps/mapviewer/index.html?webmap=55b43c36edd44731992f4e207dc19f70>

Monthly Income Guidelines



CETA definition of low-income: the higher of 80% Area Median Income (County) or 200% Federal Poverty Level, adjusted for household size

Household Size	King County	Snohomish County	Kitsap County	Pierce County	Thurston County	Island County	Kittitas County	Skagit County	Whatcom County	Lewis County
1 Person	7,071	7,071	5,804	5,642	5,446	5,200	5,029	5,104	5,058	4,425
2 Persons	8,079	8,079	6,633	6,446	6,225	5,942	5,746	5,833	5,783	5,058
3	9,088	9,088	7,463	7,250	7,004	6,683	6,463	6,563	6,504	5,692
4	10,096	10,096	8,288	8,054	7,779	7,425	7,179	7,292	7,225	6,321
5	10,904	10,904	8,954	8,700	8,404	8,021	7,754	7,875	7,804	6,829
6	11,713	11,713	9,617	9,346	9,025	8,617	8,329	8,458	8,383	7,333
7	12,521	12,521	10,279	9,988	9,650	9,208	8,904	9,042	8,963	8,108
8	13,329	13,329	10,942	10,633	10,271	9,804	9,479	9,625	9,538	9,025
9	14,138	14,138	11,604	11,279	10,892	10,396	10,054	10,208	10,117	9,942
10	14,946	14,946	12,267	11,921	11,517	10,992	10,858	10,858	10,858	10,858
11	15,750	15,750	12,929	12,567	12,138	11,775	11,775	11,775	11,775	11,775
12	16,558	16,558	13,592	13,213	12,758	12,692	12,692	12,692	12,692	12,692
13	17,367	17,367	14,258	13,854	13,608	13,608	13,608	13,608	13,608	13,608
14	18,175	18,175	14,921	14,525	14,525	14,525	14,525	14,525	14,525	14,525
15	18,983	18,983	15,583	15,442	15,442	15,442	15,442	15,442	15,442	15,442
16	19,792	19,792	16,358	16,358	16,358	16,358	16,358	16,358	16,358	16,358
17	20,596	20,596	17,275	17,275	17,275	17,275	17,275	17,275	17,275	17,275
18	21,404	21,404	18,192	18,192	18,192	18,192	18,192	18,192	18,192	18,192
19	22,213	22,213	19,108	19,108	19,108	19,108	19,108	19,108	19,108	19,108
20	23,021	23,021	20,025	20,025	20,025	20,025	20,025	20,025	20,025	20,025
21	23,829	23,829	20,942	20,942	20,942	20,942	20,942	20,942	20,942	20,942
22	24,638	24,638	21,858	21,858	21,858	21,858	21,858	21,858	21,858	21,858
23	25,442	25,442	22,775	22,775	22,775	22,775	22,775	22,775	22,775	22,775
24	26,250	26,250	23,692	23,692	23,692	23,692	23,692	23,692	23,692	23,692
25	27,058	27,058	24,608	24,608	24,608	24,608	24,608	24,608	24,608	24,608

For households with less than 6 members, 80% AMI is greater than 200% FPL, across all counties in PSE's service territory.

Source: 2025 U.S. HUD used in 2025-2026 PSE HELP Program Monthly Income Guidelines

80% AMI is the higher threshold
200% FPL is the higher threshold

Annual Income Guidelines



CETA definition of low-income: the higher of 80% Area Median Income (County) or 200% Federal Poverty Level, adjusted for household size

Household Size	King County	Snohomish County	Kitsap County	Pierce County	Thurston County	Island County	Kittitas County	Skagit County	Whatcom County	Lewis County
1 Person	84,850	84,850	69,650	67,700	65,350	62,400	60,350	61,250	60,700	53,100
2 Persons	96,950	96,950	79,600	77,350	74,700	71,300	68,950	70,000	69,400	60,700
3	109,050	109,050	89,550	87,000	84,050	80,200	77,550	78,750	78,050	68,300
4	121,150	121,150	99,450	96,650	93,350	89,100	86,150	87,500	86,700	75,850
5	130,850	130,850	107,450	104,400	100,850	96,250	93,050	94,500	93,650	81,950
6	140,550	140,550	115,400	112,150	108,300	103,400	99,950	101,500	100,600	88,000
7	150,250	150,250	123,350	119,850	115,800	110,500	106,850	108,500	107,550	97,300
8	159,950	159,950	131,300	127,600	123,250	117,650	113,750	115,500	114,450	108,300
9	169,650	169,650	139,250	135,350	130,700	124,750	120,650	122,500	121,400	119,300
10	179,350	179,350	147,200	143,050	138,200	131,900	130,300	130,300	130,300	130,300
11	189,000	189,000	155,150	150,800	145,650	141,300	141,300	141,300	141,300	141,300
12	198,700	198,700	163,100	158,550	153,100	152,300	152,300	152,300	152,300	152,300
13	208,400	208,400	171,100	166,250	163,300	163,300	163,300	163,300	163,300	163,300
14	218,100	218,100	179,050	174,300	174,300	174,300	174,300	174,300	174,300	174,300
15	227,800	227,800	187,000	185,300	185,300	185,300	185,300	185,300	185,300	185,300
16	237,500	237,500	196,300	196,300	196,300	196,300	196,300	196,300	196,300	196,300
17	247,150	247,150	207,300	207,300	207,300	207,300	207,300	207,300	207,300	207,300
18	256,850	256,850	218,300	218,300	218,300	218,300	218,300	218,300	218,300	218,300
19	266,550	266,550	229,300	229,300	229,300	229,300	229,300	229,300	229,300	229,300
20	276,250	276,250	240,300	240,300	240,300	240,300	240,300	240,300	240,300	240,300
21	285,950	285,950	251,300	251,300	251,300	251,300	251,300	251,300	251,300	251,300
22	295,650	295,650	262,300	262,300	262,300	262,300	262,300	262,300	262,300	262,300
23	305,300	305,300	273,300	273,300	273,300	273,300	273,300	273,300	273,300	273,300
24	315,000	315,000	284,300	284,300	284,300	284,300	284,300	284,300	284,300	284,300
25	324,700	324,700	295,300	295,300	295,300	295,300	295,300	295,300	295,300	295,300

For households with less than 6 members, 80% AMI is greater than 200% FPL, across all counties in PSE's service territory.

Source: 2025 U.S. HUD used in 2025-2026 PSE HELP Program Monthly Income Guidelines

80% AMI is the higher threshold

200% FPL is the higher threshold

Key working definitions used in 2024 EBA

Household (HH)

HH: Residential PSE customer, identified by business partner ID

- Business partners (BP) with single and up to 30 customer accounts (CA)
- Customers with available income and other data

Est. Low-income (LI)

LI: HHs with annual income $\leq 80\%$ AMI, HH adjusted

- CETA: Area Median Income (AMI, County) $\leq 80\%$ or $\leq 200\%$ Federal Poverty Level (FPL), whichever is highest, adjusted for HH size

Energy Burden (EB)

HEB: EB > 6% and SEB: EB > 10%

- **Energy Burden (EB):** Annual home total (incl. electric, gas, and other heating fuel) energy expenses as a % of annual household (HH) income [CETA]
- **High energy burden (HEB):** HHs with energy burden above 6% [CETA / Commerce]
 - **Medium-HEB (MHEB):** HHs with energy burden above 6% but equal to or lower than 10%; MHEB is a subset of HEB.
 - **Severe energy burden (SEB):** HHs with energy burden above 10% [[APPRISE](#) / [DOE](#)]; SEB is a subset of HEB.

Energy Assistance Need (EAN)

EAN: The dollar amount in assistance necessary to reduce energy burden to equal 6% for one year. [CETA / Commerce / WAC CETS]

- **Total EAN:** Includes total energy costs of a customer, including estimates of non-PSE utility bills
- **PSE-bill portion EAN:** EAN associated only with PSE bills

Additional working definitions for EBA for named communities and other customer designations

Known Low-income (KLI)

KLI: customers who received PSE HELP or LIHEAP energy assistance in the past 24 months (for 2024 EBA, that's CY2024 and CY2023)

- **PSE HELP:** Home Energy Lifeline Program, funded by PSE's ratepayers (Sch. 129)
- **LIHEAP:** Federally-funded Low-Income Home Energy Assistance Program

Highly impacted community (HIC)

CETA: A community designated by the Department of Health based on the cumulative impact analysis required by RCW 19.504.140 or a community located in census tracts that are fully or partially on "Indian country."

High vulnerability population (High VP)

High VP: Census block groups with High level VPs. PSE identified Vulnerable Populations in conjunction with its Clean Energy Implementation Plan a methodology described in PSE's CEIP and using feedback from PSE's Equity Advisory Group.

CETA: HIC - Communities that experience a disproportionate cumulative risk from environmental burdens due to: adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, linguistic isolation, and sensitivity factors, such as low birth weight and higher rates of hospitalization.

Electric deepest need (DN or eDN)

PSE with EAG, LIAC, and CRAG per Order 08 of 2021 CEIP: Electric customers with severe energy burdens ("SEB", energy burden at or above 10%), plus additions from: PSE used a spatial analysis technique to identify clusters of individual electric customers with SEB and included customers in the top 50th percentile of block groups counts of severely-energy-burdened customers.

Defining Energy Burden

- ◆ A household's **energy burden** is the percentage of income spent on home energy bills.
- ◆ *Commerce guidelines for CETA: Home energy bill includes electric, gas, and other heating fuel sources.

Energy Burden Equation:

$$\frac{\textit{Annual (Electricity Bill + Gas Bill + Other Heating Fuels Bill)}}{\textit{Annual Income}}$$

- ◆ Commerce set the threshold for determining **energy assistance need at 6% energy burden**. Customers with energy burden of above 6% are defined as “energy-burdened”

PSE Energy Burden formula permutations

Energy Burden Equation:

$$\frac{\text{Annual (Electricity Bill + Gas Bill + Other Heating Fuels Bill)}}{\text{Annual Income}}$$

- PSE's Combined Electric and Gas customers:

$$\text{Yearly } \frac{\text{PSE Electricity Bill} + \text{PSE Gas Bill} + \text{Other Heating Fuels Bill}}{\text{Income}}$$

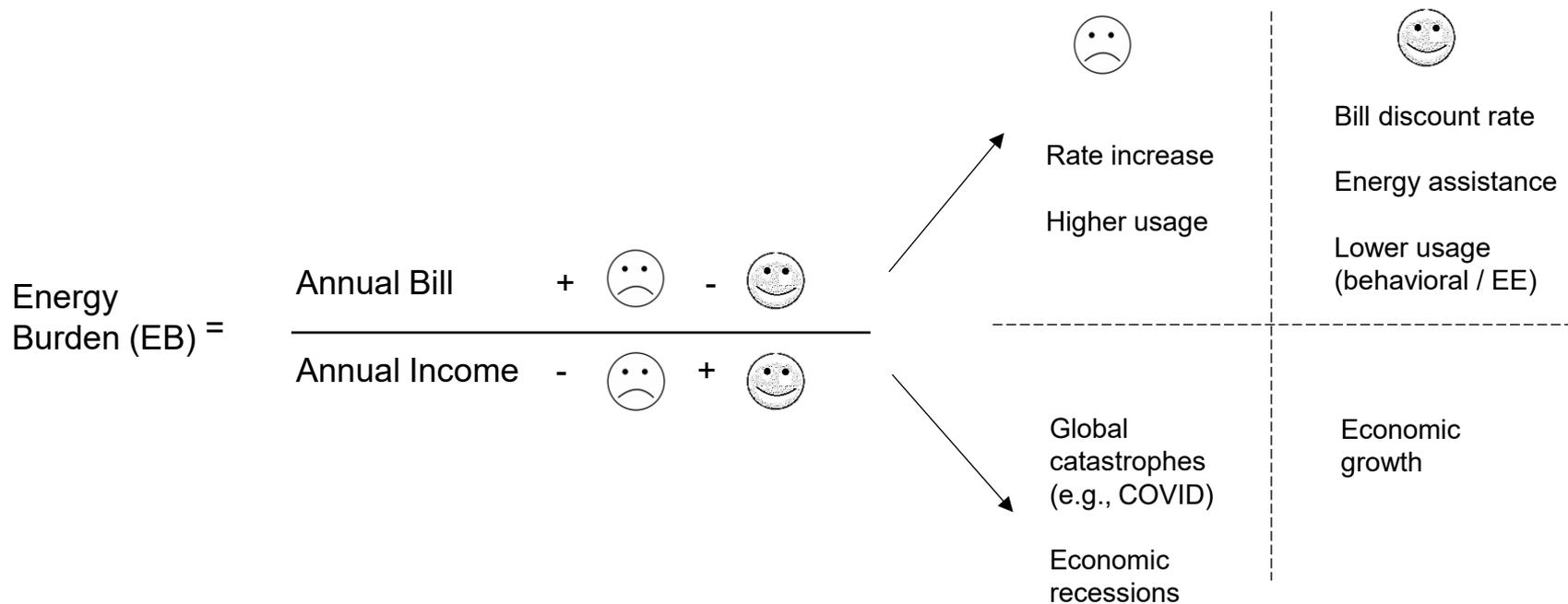
- PSE's Electric Only customers:

$$\text{Yearly } \frac{\text{PSE Electricity Bill} + \text{Other Gas Bill} + \text{Other Heating Fuels Bill}}{\text{Income}}$$

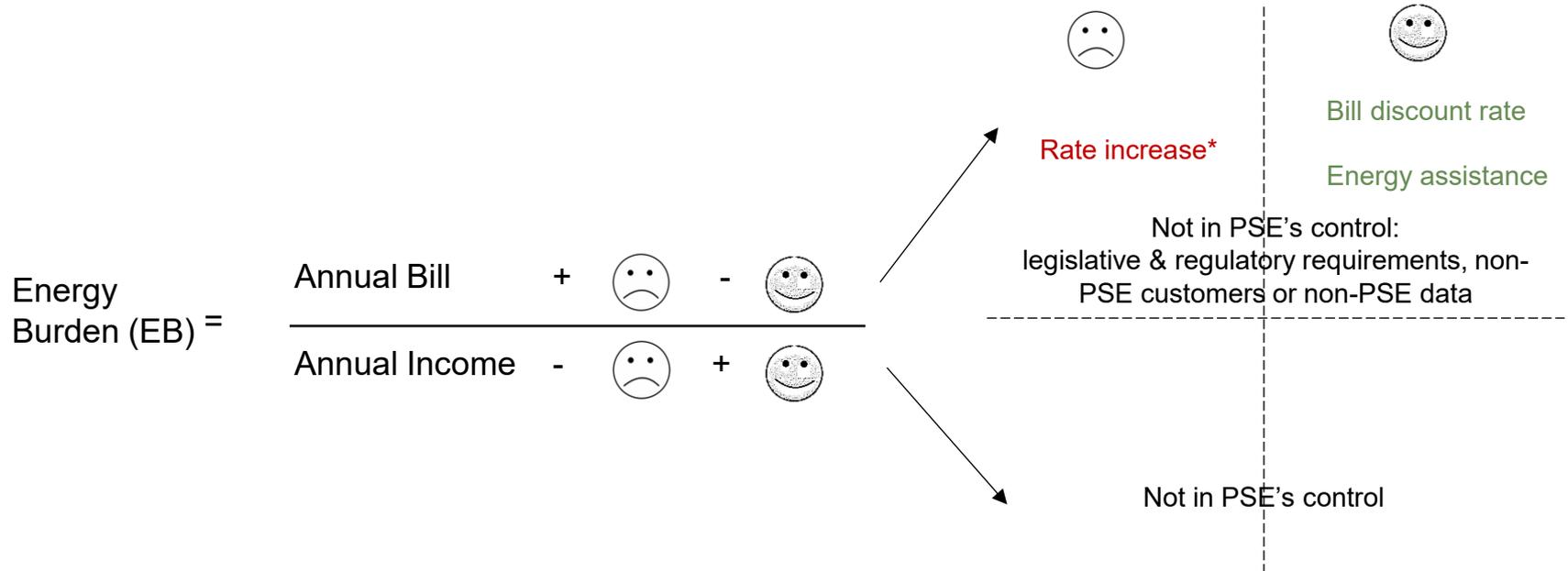
- PSE's Gas Only customers:

$$\text{Yearly } \frac{\text{Other Electricity Bill} + \text{PSE Gas Bill} + \text{Other Heating Fuels Bill}}{\text{Income}}$$

Elements of Energy Burden Change



Elements on Energy Burden Change: Simplified



3. Executive Summary

Key Insights and Summary of Results

Key Insights from 2024 Energy Burden Analysis

Key insights:

- ◆ PSE's analysis can estimate total annual energy burdens of its residential customers, at household level.
- ◆ Customers with total annual energy burden above 6% are “energy-burdened” or have “high energy burden” (HEB) (defined per CETA/Commerce).
- ◆ While 51% of PSE's customers are estimated low-income (LI), most customers have low energy burden with only 19% who are estimated low-income with high energy burdens. Meanwhile, majority (97%) of high energy-burdened customers are low-income.
- ◆ While over a third of low-income customers (38%) are high energy-burdened, energy burden tends to concentrate at lower end of income spectrum.
- ◆ As income increases, proportion of customers with high energy burden decreases – indicating income is a large determinant for energy assistance need.
- ◆ Median energy burden of all customers is 2.7%, of low-income customers 4.7%, and of low-income and high energy-burdened customers 10.3%.
- ◆ Usage is a large driver of energy burden: LI-HEB customers have higher average usage compared to non-LI and LI overall.
- ◆ Electric customers tend to experience more high energy burden than natural gas customers as most high energy burden customers (80%) are electric customers.
- ◆ Estimated low-income, known low-income, energy burden and electric deepest need are customer designations at household level; highly impacted communities and high-vulnerable populations are named community designations that are geographic/community customer designations.
- ◆ Every geography has low-income customers who are energy-burdened, while number and percentage of LI-HEB customers vary by geography.
- ◆ Energy burden is generally more prevalent in named communities - populations designated vulnerable and highly impacted per CETA.
- ◆ PSE provides a suite of energy assistance programs including bill discount rate and other bill and arrearage (past-due bills) assistance.
- ◆ Energy assistance is provided to all eligible low-income (income-qualified) customers and is provided equitably across named communities/customer designations.
- ◆ Energy assistance need (EAN) is the amount of energy assistance (EA) necessary to achieve a level of household energy burden equal to 6%. 2024 estimate for PSE bill-portion EAN for LI-HEB customers is \$221 million.
- ◆ PSE spent \$95 million in direct benefits energy assistance (EA) in 2024, and 73% of that (\$70M) went towards lowering high energy burdens. PSE provided EA to 126,700 customers, about 60% of them (77k) were HEB. EA participants' median EB decreased from 7.7% to 4.7%. The number of LI-HEB customers who became non-HEB after receiving EA is about 32,005.

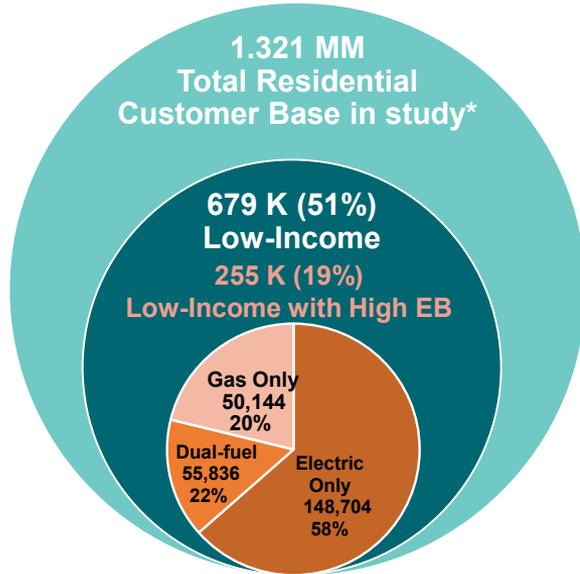
Key takeaways:

- ◆ There are many drivers of energy burden that are outside of a utility's control, such as economics (e.g., incomes), customer participation in energy assistance programs, and statutory, policy, and regulatory directives that drive rate increases which in turn increase energy burden, as well as customer usage.
- ◆ PSE's energy assistance efficacy to lower energy burden for low-income customers who are highly energy-burdened can be improved if authorized to be focused for that purpose.

All Customers | Not all estimated low-income customers experience high energy burden



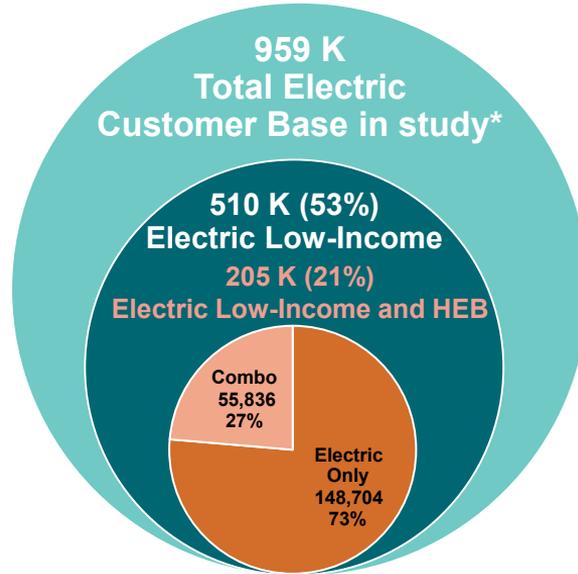
All Customers



Post-energy assistance (\$95.1 M**):

- LI-HEB: 223 K (17% of total)
- EA Recipients: 127 K (HEB: 77 K)
 - Their Median EB: 7.7% → 4.7%

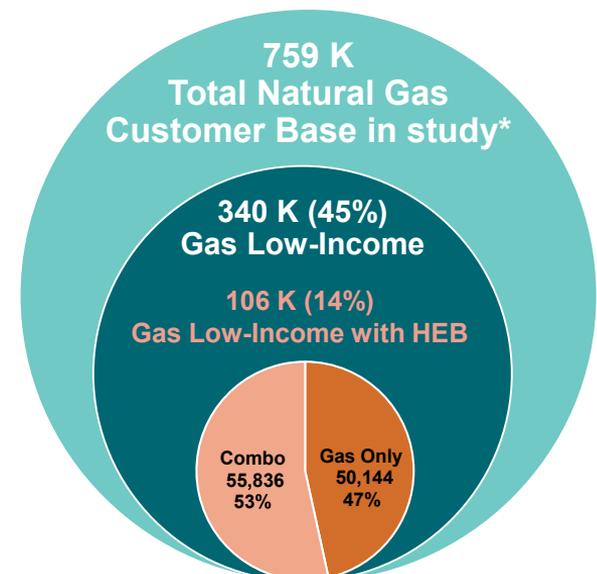
Electric



Post-energy assistance (\$81.4 M**):

- LI-HEB: 179 K (19% of total)
- EA Recipients: 93 K (HEB: 58 K)
 - Their Median EB: 8.0% → 4.3%

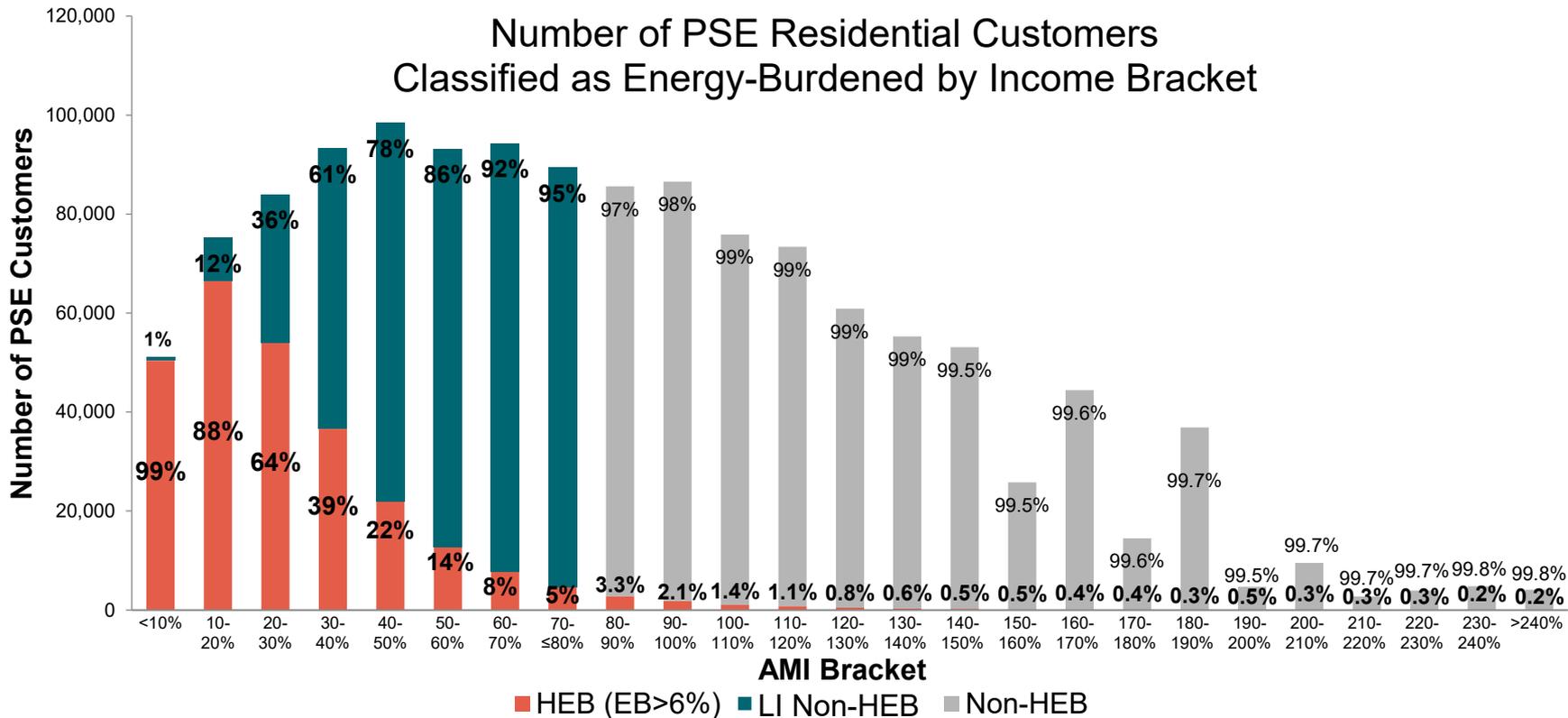
Natural Gas



Post-energy assistance (\$42.8 M**):

- LI-HEB: 89 K (12% of total)
- EA Recipients: 74 K (HEB: 41 K)
 - Their Median EB: 6.8% → 4.8%

All Customers | As income increases, proportion of customers with high energy burden (EB>6%) decreases



Number of customers by energy burden segment by customer designations

Counts of customers	All Customers	Known LI	Estimated LI	HIC	High VP	Deepest Need (electric)
ALL TOGETHER	1,320,928	80,254	678,871	332,342	397,160	76,797
Non-HEB: Below 6% EB	1,058,167	26,167	424,187	248,504	287,771	17,774
HEB: EB > 6%	262,761	54,087	254,684	83,838	109,389	59,023
MHEB: 6-10% EB	129,345	17,684	122,498	40,348	50,682	8,705
SEB: >10% EB	133,416	36,403	132,186	43,490	58,707	50,318
ELECTRIC (Electric Only + Dual-Electric)	959,037	69,454	510,463	251,383	316,094	76,690
Non-HEB: Below 6% EB	747,291	22,629	305,923	185,777	225,773	17,727
HEB: EB > 6%	211,746	46,825	204,540	65,606	90,321	58,963
MHEB: 6-10% EB	102,583	15,229	96,474	31,198	41,247	8,686
SEB: >10% EB	109,163	31,596	108,066	34,408	49,074	50,277
GAS (Gas Only + Dual-Gas)	759,018	29,125	339,744	177,706	190,317	14,851
Below 6% EB	648,936	10,936	233,764	141,610	149,696	4,434
HEB: EB > 6%	110,082	18,189	105,980	36,096	40,621	10,417
MHEB: 6-10% EB	58,104	6,451	54,777	18,479	20,619	1,875
SEB: >10% EB	51,978	11,738	51,203	17,617	20,002	8,542

Median energy burden of estimated low-income and energy-burdened customers is 10%

Median energy burden by customer designation:						
Customer segment	All	KLI	ELI	HIC	High VP	E-DN
All customers in 2024 EBA	2.7%	9.0%	4.7%	3.2%	3.4%	13.2%
Estimated Upper-income (income >115% AMI)	1.5%	n/a	n/a	1.6%	1.5%	2.0%
Estimated Moderate-income (income >80% and ≤115% AMI)	2.1%	n/a	n/a	2.2%	2.2%	2.9%
Estimated Low-income (income ≤80% AMI)	4.7%	9.3%	4.7%	4.9%	5.0%	14.7%
Estimated Low-income & Non-HEB (EB≤6%)	3.4%	4.1%	3.4%	3.4%	3.4%	3.9%
Estimated Low-income & Energy-burdened (EB>6%)	10.3%	13.8%	10.3%	10.4%	10.7%	16.4%

Annual energy assistance need (EAN) – PSE portion

PSE-bill portion of EAN is about 63% of total estimated EAN for CY2024

About 80% of PSE's EAN is for severely energy-burdened customers (EB>10%)

PSE-bill portion of EAN (\$ million)	Estimated EAN for Low- Income HEB Customers*	Estimated EAN for Low- Income SEB Customers
Low-Income	\$220.9 million	\$176.1 million
Electric Only	\$125.8 million	\$102.2 million
Gas Only	\$41.4 million	\$31.9 million
Combo	\$53.6 million	\$42.0 million

*NOTE: data is pre-energy assistance
Note: HEB data is inclusive of SEB data.

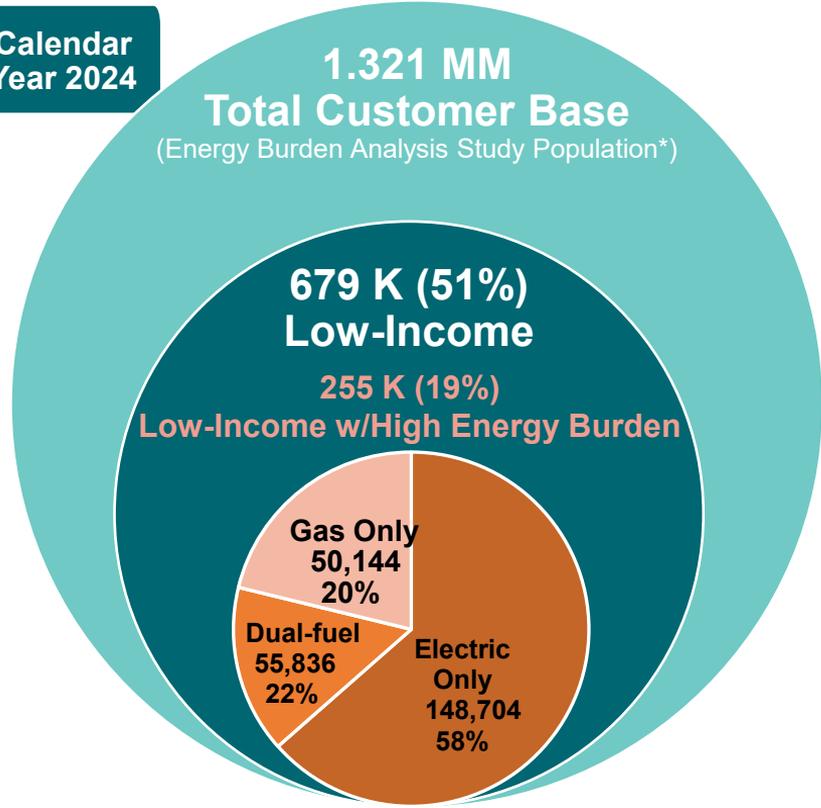
4. Additional Detailed Results – All Customers

Total Customer Base – All Customers, pre-EA

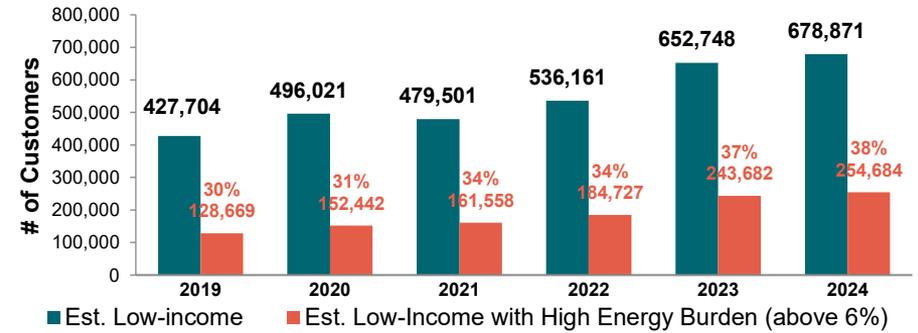
All Customers | PSE's low-income and energy burden customer numbers over time and to date (CY 2024)



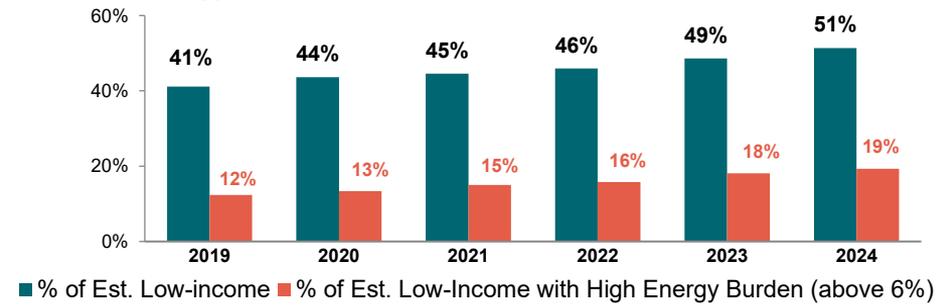
Calendar Year 2024



PSE's Est. LI and Est. LI+HEB change over time



% of Est. LI and Est. LI+HEB of Total Customers

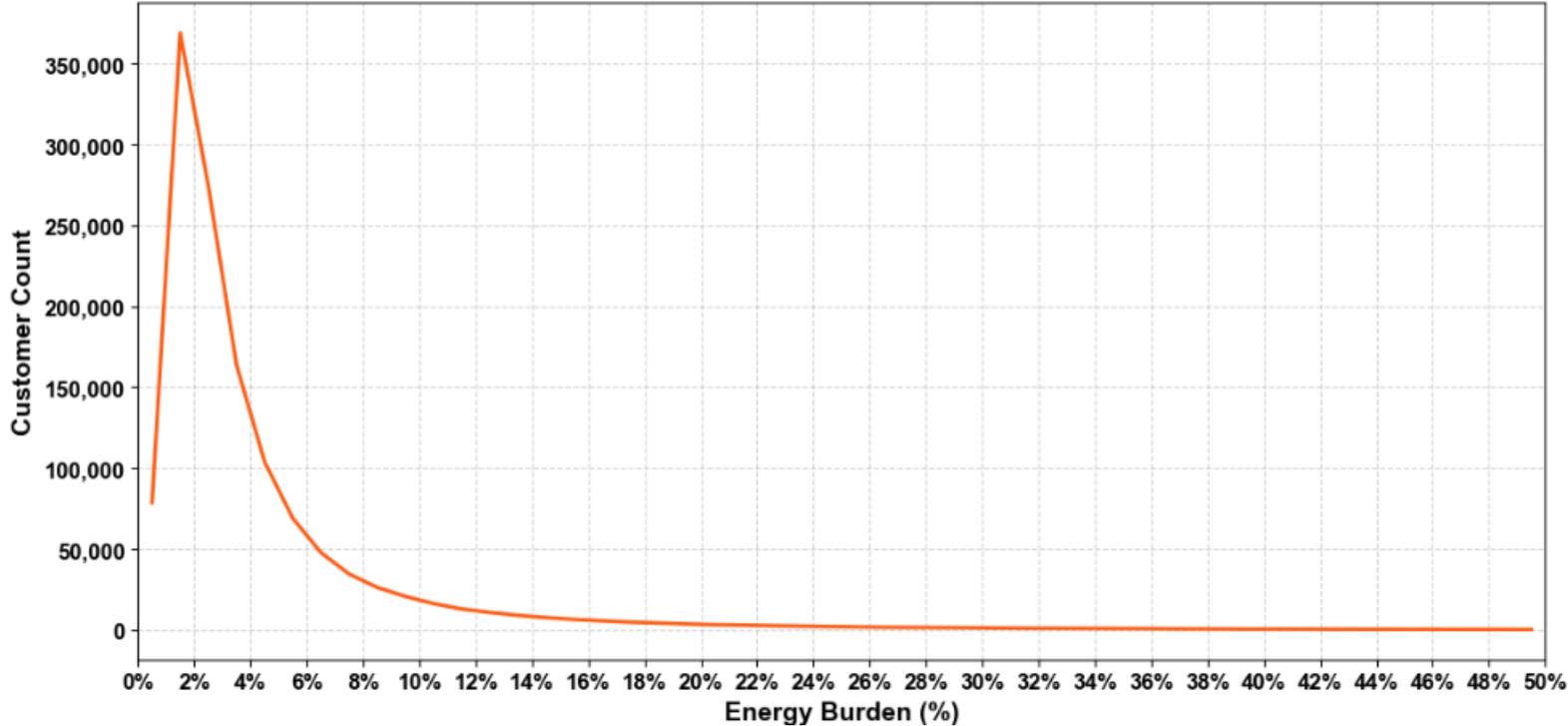


NOTE: Data is pre-energy assistance; LI = Low-Income; HEB = High Energy Burden (energy burden above 6%); LI-HEB = low-income customers with high energy burdens (above 6%).
*Note: Energy Burden Analysis includes roughly 89% of total customer base (based on PSE's 2024 10-K: 1.483 million total residential customers) because of several data challenges.

All Customers | Number of customers by energy burden segment in each energy burden segment (expanded view)



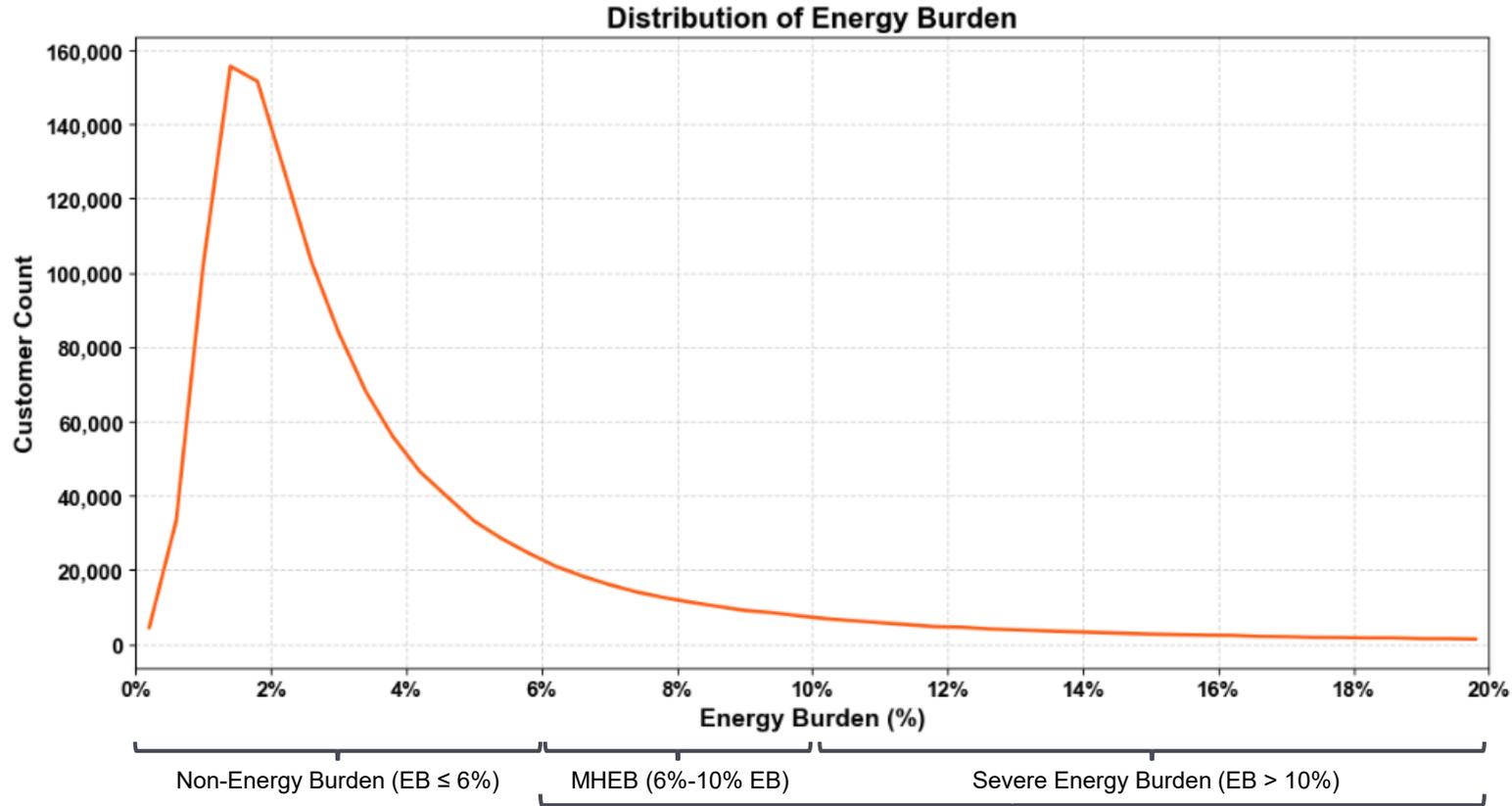
Distribution of Energy Burden



Non-Energy Burden (EB < 6%) | MHEB: 6-10% EB | High Energy Burden > 6% | Severe Energy Burden > 10%

Customers with EB greater than 50% = 15,359 (1.16%)

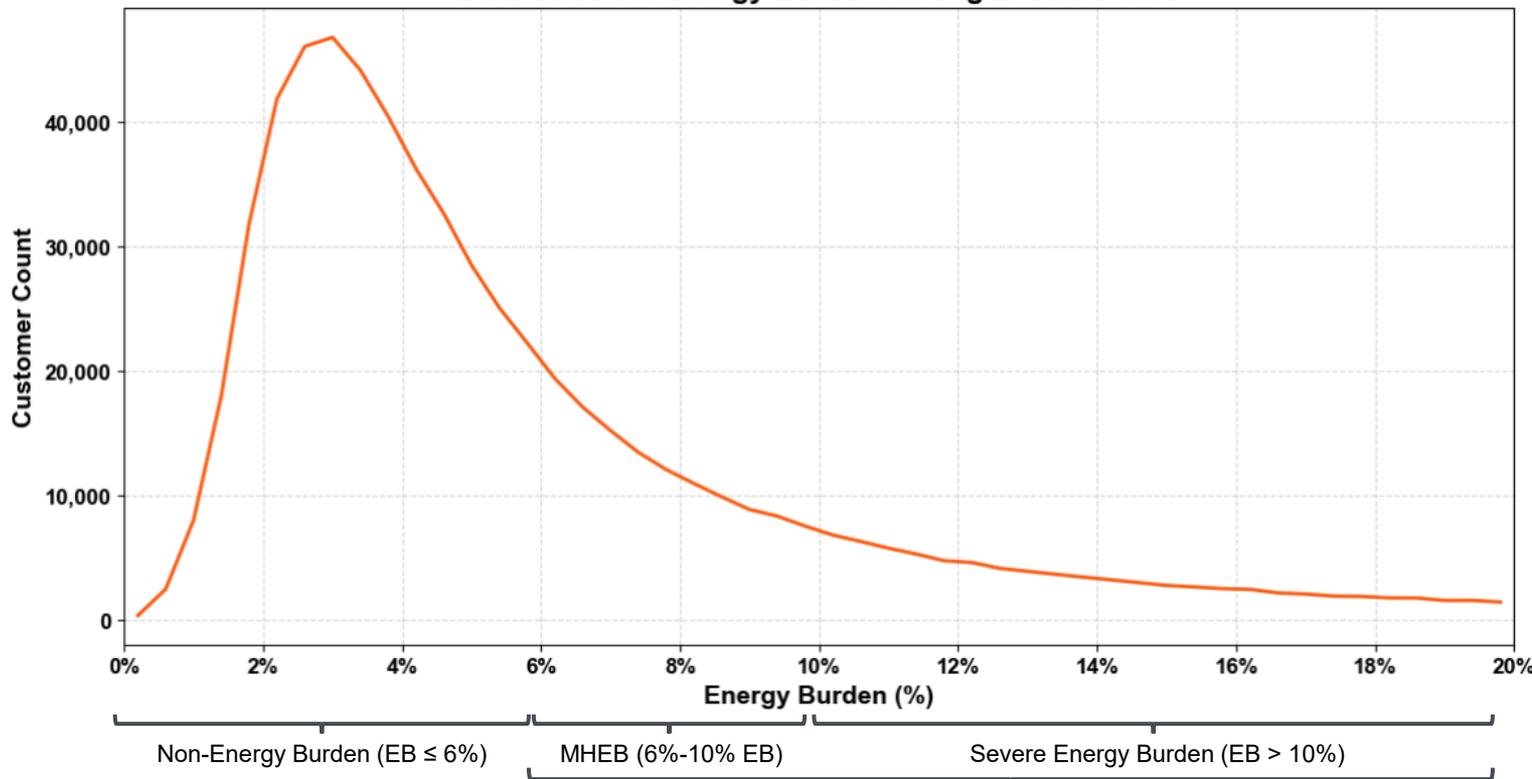
All Customers | Number of customers by energy burden segment in each energy burden segment (up to 20% EB)



Customers with EB greater than 20% = 42,660 (3.23%)

All LI Customers | Number of customers by energy burden segment in each energy burden segment

Distribution of Energy Burden Among LI Customers

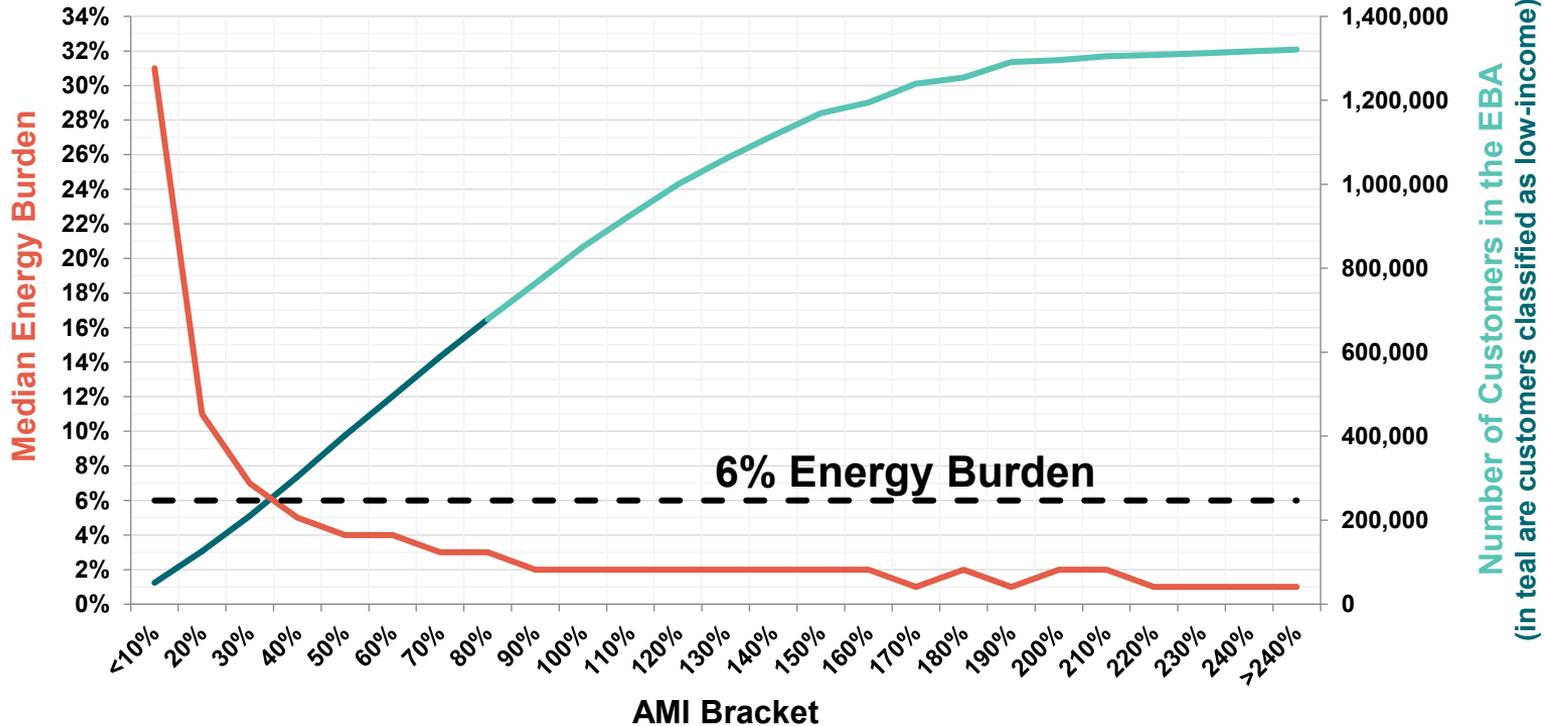


LI Customers with EB greater than 20% = 42,476 (6.26%)

Median EB decreases significantly with increasing income, and for 0-30% AMI range, median EB is above 6%

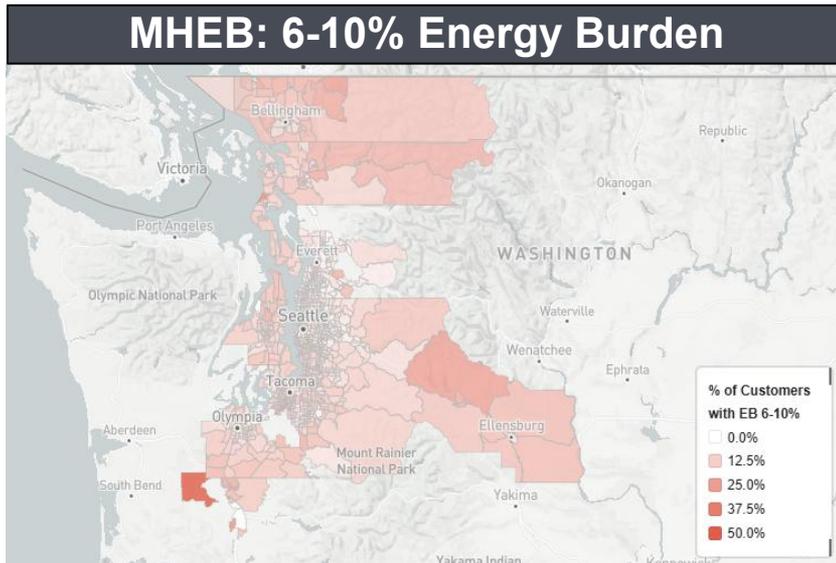


Cumulative Number of PSE Customers versus Median Energy Burden by Income Bracket

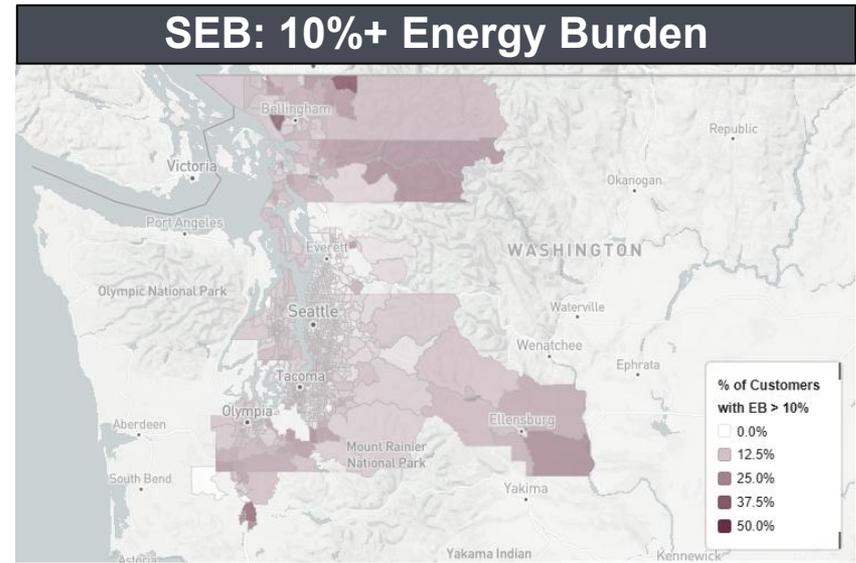


A geographical view of Energy Burden across PSE service territory highlights areas with more energy-burdened customers on average

Interactive maps illustrate census tracts with higher portions of PSE customers in the ranges of:



Data shown here: EB from > 6% to equals to 10% EB (Medium-HEB)

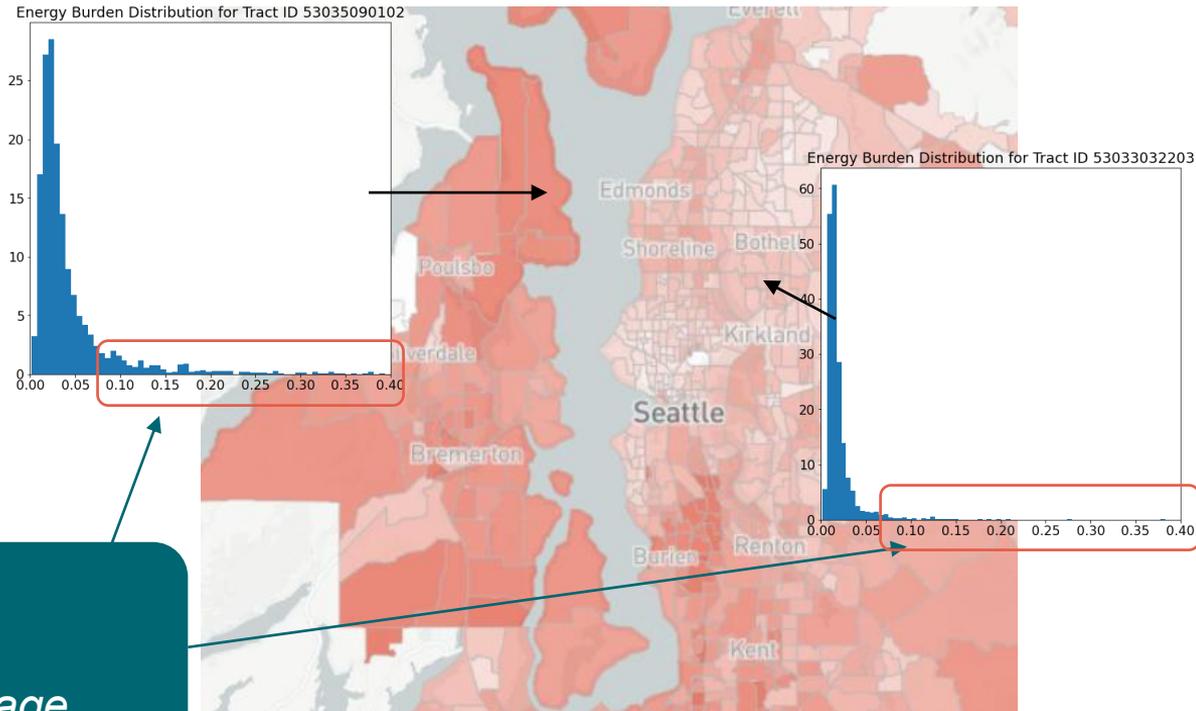


Data shown here: EB > 10% (SEB)

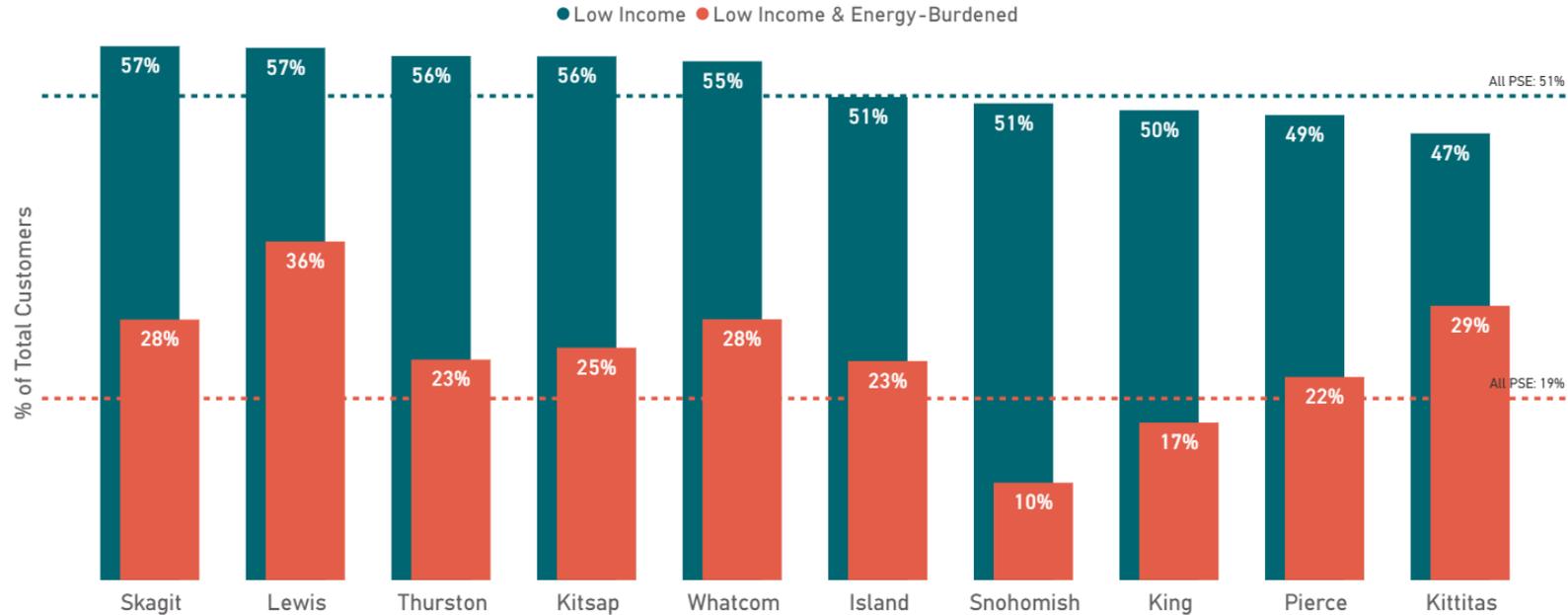
There are energy-burdened customers within each area

Within each census tract, energy burden tends to reflect right-skewed shape. As a result, talking about “average” energy burden within any geography is misleading.

Each geography will have many households with energy burden significantly higher than the average.



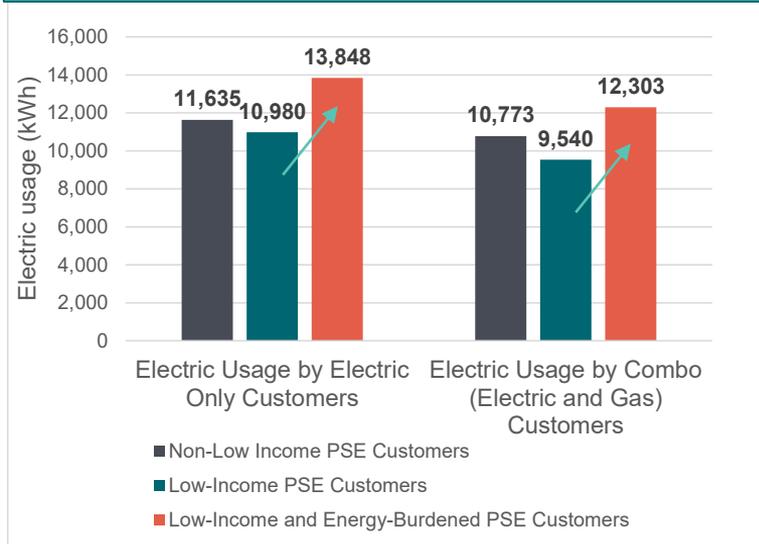
Comparisons by county also show the importance of identifying customers classified as LI and their EBs



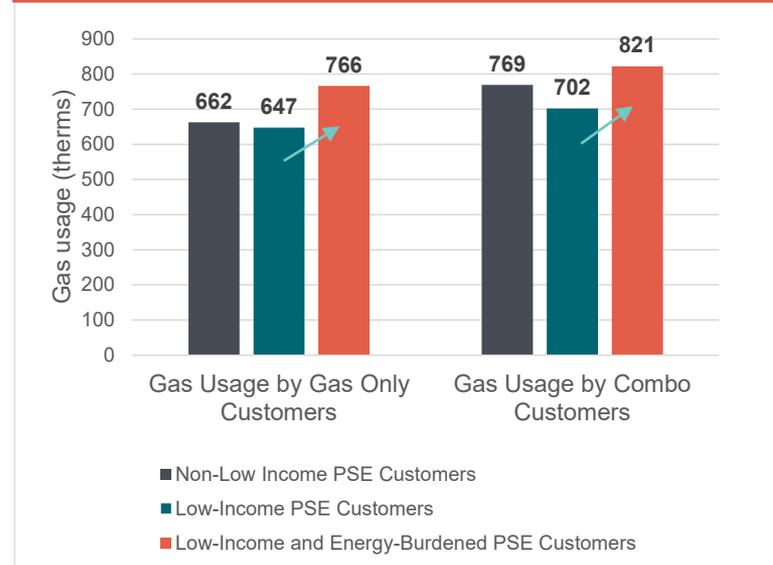
- Skagit County have one of the highest percent of customers (57%) classified as low-income, and about half of them were estimated to be energy-burdened (or 28% for the county).
- Kittitas County has the lowest percentage of customers classified as low-income (47%), but majority (62%) of those customers are estimated as low-income with high energy burdens (or 29% for the county).

LI Customers with high energy burden (LI-HEB) use more energy than non-LI and LI overall

Electric Billed avg. Usage (annual) by Customer Type



Gas Billed avg. Usage (annual) by Customer Type



On average, Electric Only customers' usage is higher than Combo customers' electric usage. Electric usage of customers classified as low-income with high energy burden is higher than for overall low-income customers in the EBA by about 26% on average

Natural gas usage of customers classified as low-income with high energy burden is higher than for overall low-income customers in the EBA by about 18% on average

All Customers | PSE's Current Low-Income Energy Assistance Programs: Eligibility



1. Energy Efficiency Program [E&G]

2. Budget Payment Plan [E&G]

3. Payment Arrangements [E&G]

4. Efficiency Boost Program (90% AMI) [E&G]

The greater of 200% FPL or 80% AMI (CETA definition):

5. PSE HELP (eff. Oct 1, 2021) [E&G]

6. Warm Home Fund (eff. Oct 1, 2023) [E&G]

7. Bill Discount Rate (eff. Oct 1, 2023) [E&G]

8. Community Solar Income-Qualified (eff. Oct 1, 2023) [E]

9. Past Due Bill Forgiveness (PDBF) (eff. Oct 1, 2024) [E&G]

10. PSE Low-Income Weatherization (LIW) (60% SMI / 200% FPL or 80% AMI) [E&G]

11. Cap-and-Invest Low Income Credit (eff. Oct 1, 2023) [G]

12. Federal LIHEAP (150% FPL) [E&G]

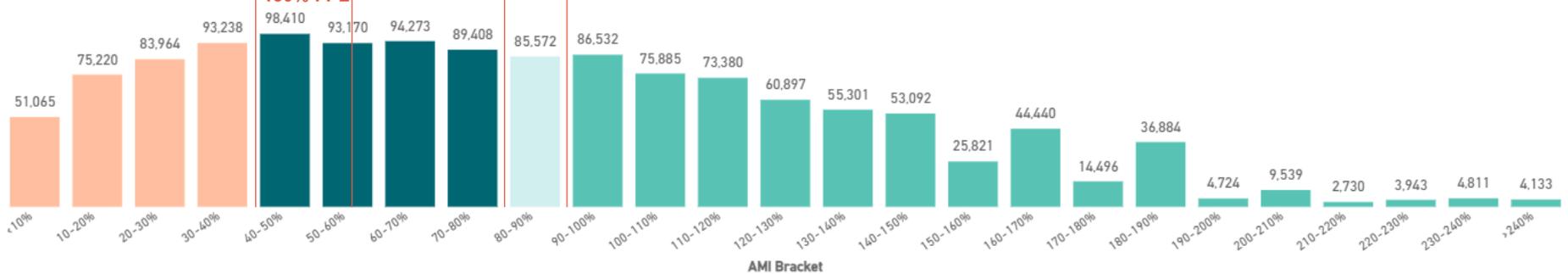
90% AMI

80% AMI

150% FPL

200% FPL

Number of Customers by Income Bracket (2024)



Acronyms

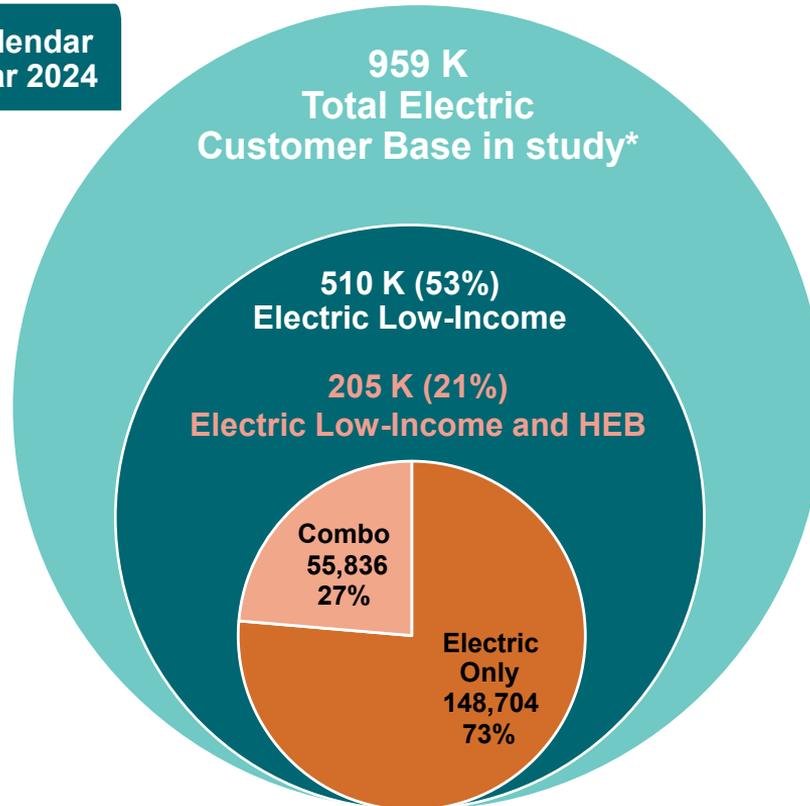
AMI: Area Median Income (county)
SMI: State Median Income
LIHEAP: Low Income Home Energy Assistance Program
FPL: Federal Poverty Level guidelines, used by federal agencies for determining eligibility for federal assistance programs

4. Detailed Results - Electric

Electric utility (electric only and combined-electric customers), pre-EA

Electric Customers | PSE's 2024 EBA key results and takeaways, pre-EA

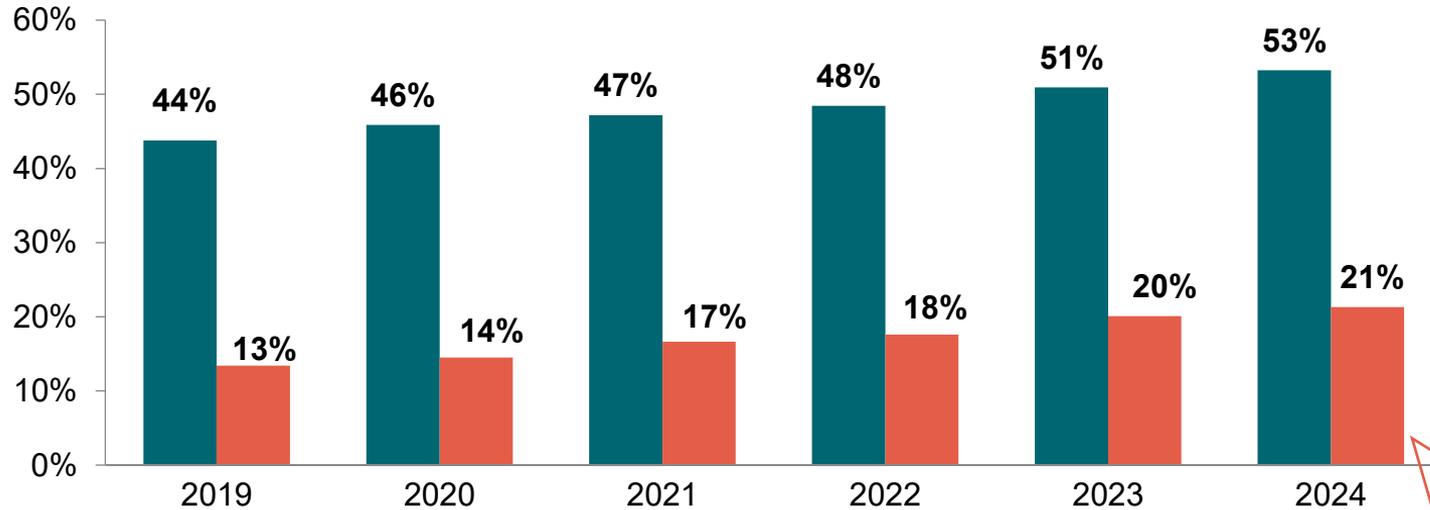
Calendar
Year 2024



NOTE: Data is pre-energy assistance; Electric = Electric Only + Combo-Electric
*Note: Energy Burden Analysis includes roughly 88% of total electric customer base (based on 2024 10-K) because of several data challenges.
NOTE: data is pre-energy assistance.

Electric Customers | PSE's low-income and energy burden customers over time as a % of electric customers, pre-EA

Electric: Est. LI and Est. LI+HEB as % of Total EBA Customers



Low-income with high energy burden (above 6%) as a percent of estimated Low-income customers

**Note: Energy Burden Analysis includes roughly 88% of total electric customer base (based on 2024 10-K) because of several data challenges.
Electric = Electric Only + Combo-Electric.
NOTE: data is pre-energy assistance.*

Electric | PSE's Current Low-Income Programs: Eligibility



- 1. Energy Efficiency Program [E&G]
- 2. Budget Payment Plan [E&G]
- 3. Payment Arrangements [E&G]

- 4. Efficiency Boost Program (90% AMI) [E&G]
- The greater of 200% FPL or 80% AMI (CETA definition):
- 5. PSE HELP (eff. Oct 1, 2021) [E&G]
- 6. Warm Home Fund (eff. Oct 1, 2023) [E&G]
- 7. Bill Discount Rate (eff. Oct 1, 2023) [E&G]
- 8. Community Solar Income-Qualified (eff. Oct 1, 2023) [E]
- 9. Past Due Bill Forgiveness (PDBF) (eff. Oct 1, 2024) [E&G]
- 10. PSE Low-Income Weatherization (LIW) (60% SMI / 200% FPL or 80% AMI) [E&G]
- 11. Cap-and-Invest Low Income Credit (eff. Oct 1, 2023) [G]

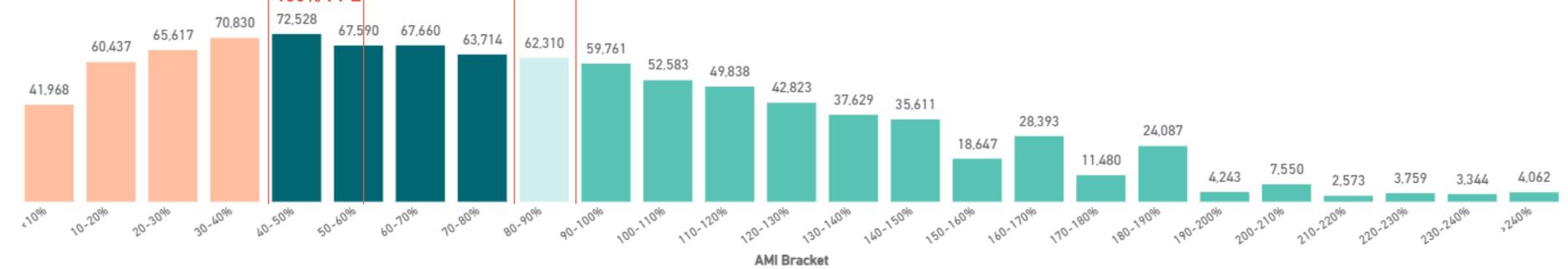
90% AMI

80% AMI

150% FPL

200% FPL

Number of Customers by Income Bracket (2024)



Acronyms

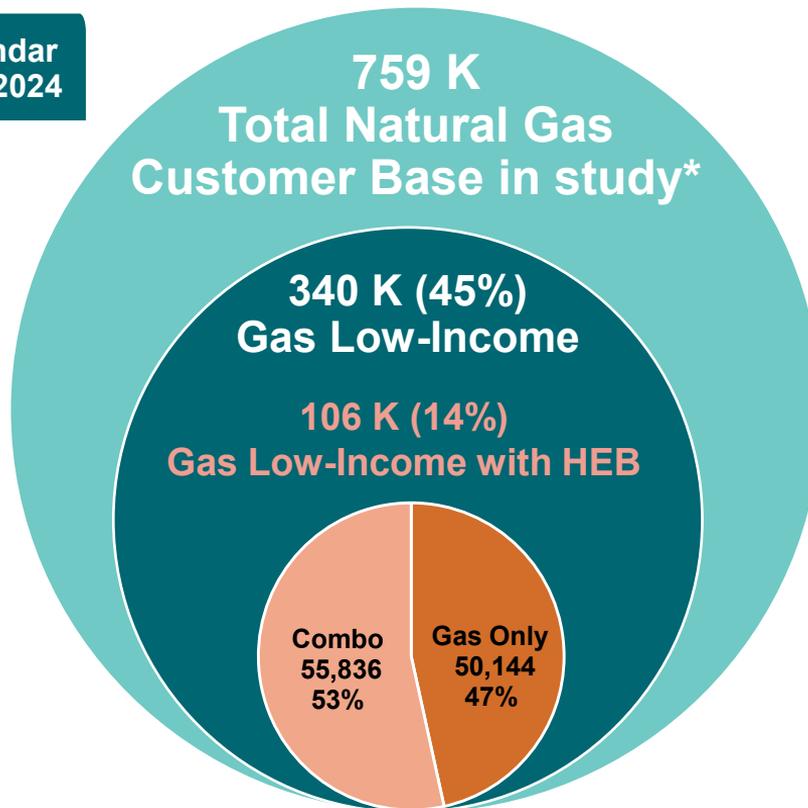
- AMI: Area Median Income (county)
- SMI: State Median Income
- LIHEAP: Low Income Home Energy Assistance Program
- FPL: Federal Poverty Level guidelines, used by federal agencies for determining eligibility for federal assistance programs

4. Detailed Results - Gas

Natural Gas utility (gas only and combined – gas customers), pre-EA

Natural Gas | PSE's 2022 EBA summary results, pre-EA

Calendar
Year 2024

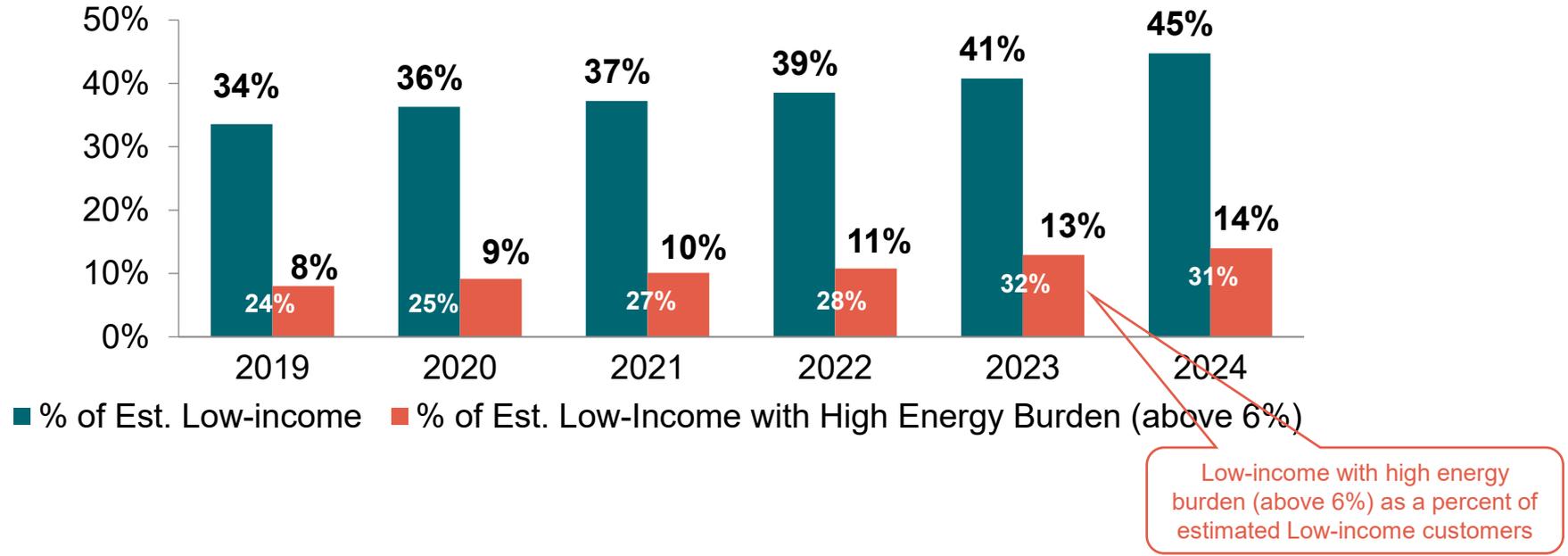


*Note: Energy Burden Analysis includes roughly 93% of total natural gas customer base (based on 2024 10-K) because of several data challenges.
Gas = Gas Only + Combo-Gas.
NOTE: data is pre-energy assistance.

Natural Gas | PSE's low-income and energy burden customers over time as a % of natural gas customers



Gas: Est. LI and Est. LI+HEB as % of Total EBA Customers



Natural Gas | PSE's Current Low-Income Programs: Eligibility



- 1. Energy Efficiency Program [E&G]
- 2. Budget Payment Plan [E&G]
- 3. Payment Arrangements [E&G]

4. Efficiency Boost Program (90% AMI) [E&G]

The greater of 200% FPL or 80% AMI (CETA definition):

- 5. PSE HELP (eff. Oct 1, 2021) [E&G]
- 6. Warm Home Fund (eff. Oct 1, 2023) [E&G]
- 7. Bill Discount Rate (eff. Oct 1, 2023) [E&G]
- 8. Community Solar Income-Qualified (eff. Oct 1, 2023) [E]
- 9. Past Due Bill Forgiveness (PDBF) (eff. Oct 1, 2024) [E&G]
- 10. PSE Low-Income Weatherization (LIW) (60% SMI / 200% FPL or 80% AMI) [E&G]
- 11. Cap-and-Invest Low Income Credit (eff. Oct 1, 2023) [G]

12. Federal LIHEAP (150% FPL) [E&G]

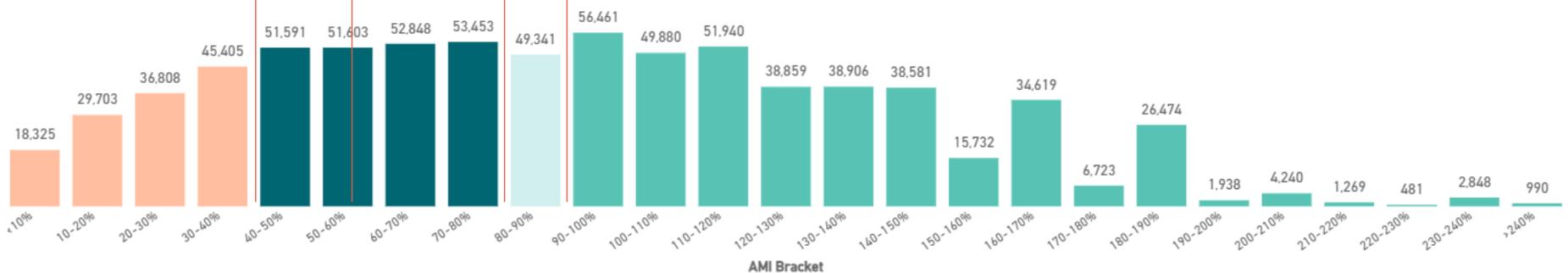
90% AMI

80% AMI

150% FPL

200% FPL

Number of Customers by Income Bracket (2024)



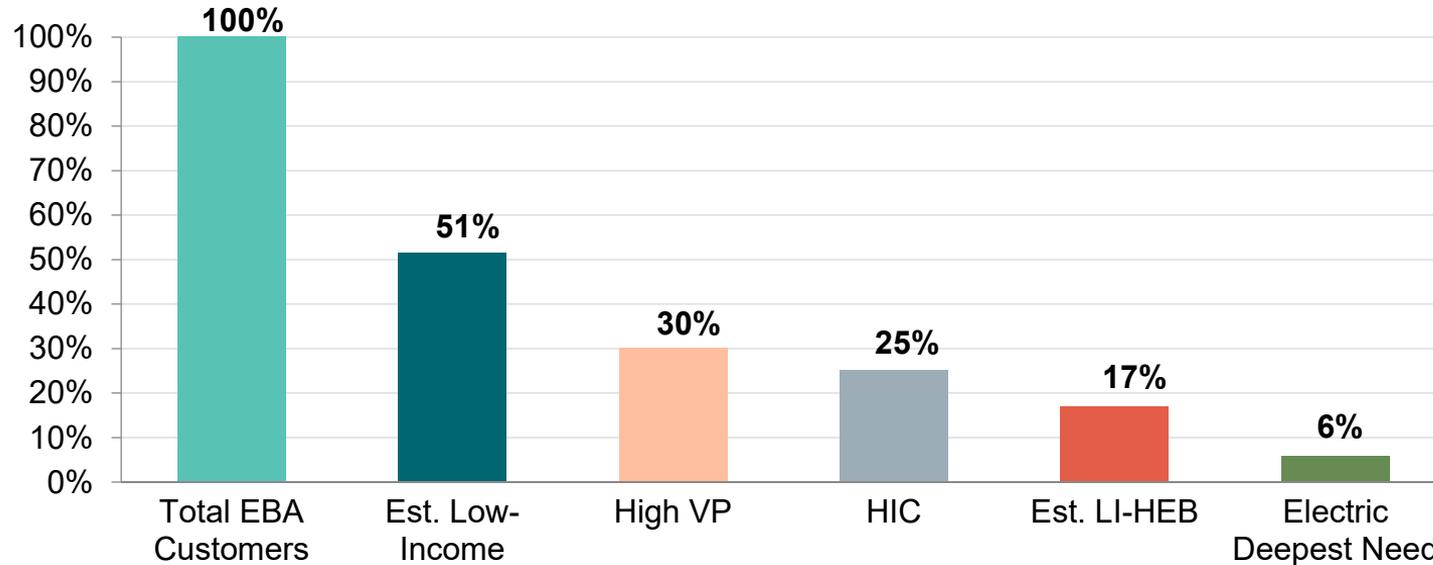
Acronyms	
AMI:	Area Median Income (county)
SMI:	State Median Income
LIHEAP:	Low Income Home Energy Assistance Program
FPL:	Federal Poverty Level guidelines, used by federal agencies for determining eligibility for federal assistance programs

5. Analysis of Energy Burden by Named Communities and Other Customer Designations

Known Low-Income, Estimated Low-Income, named communities (HIC and High VP), and electric deepest need (pre-EA)

Percentage of PSE customers estimated in various customer designations varies by definitions

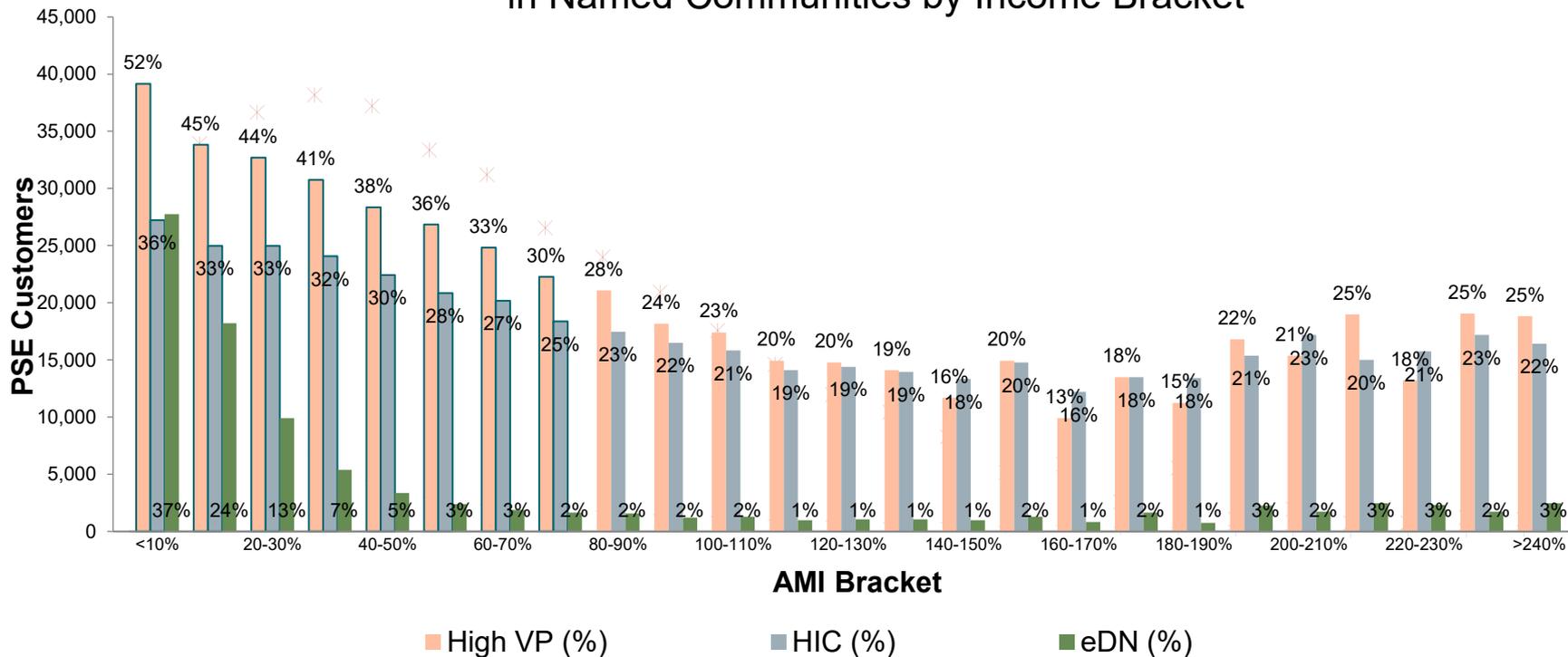
Proportion of Customers in Customer Designations



Community impacts and vulnerabilities are highest for lower income groups, yet present across the spectrum

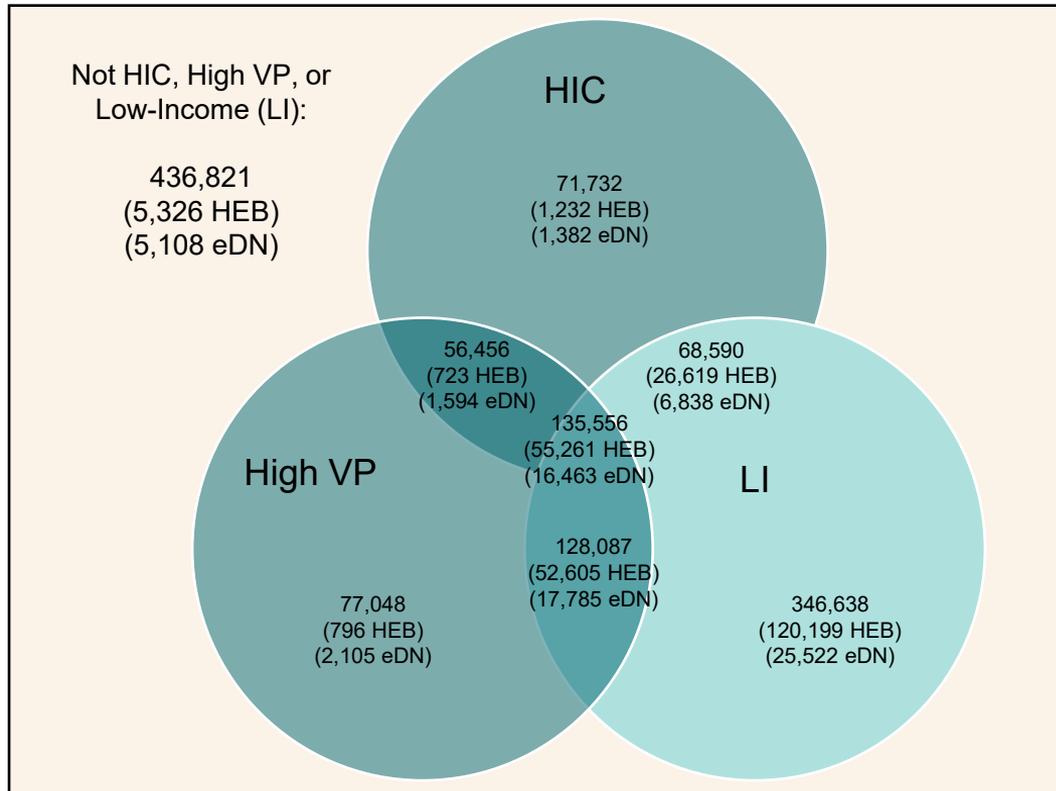


Number of PSE Residential Customers in Named Communities by Income Bracket



Identifying the overlap between named communities and low-income customers

1,320,928 Customers Total

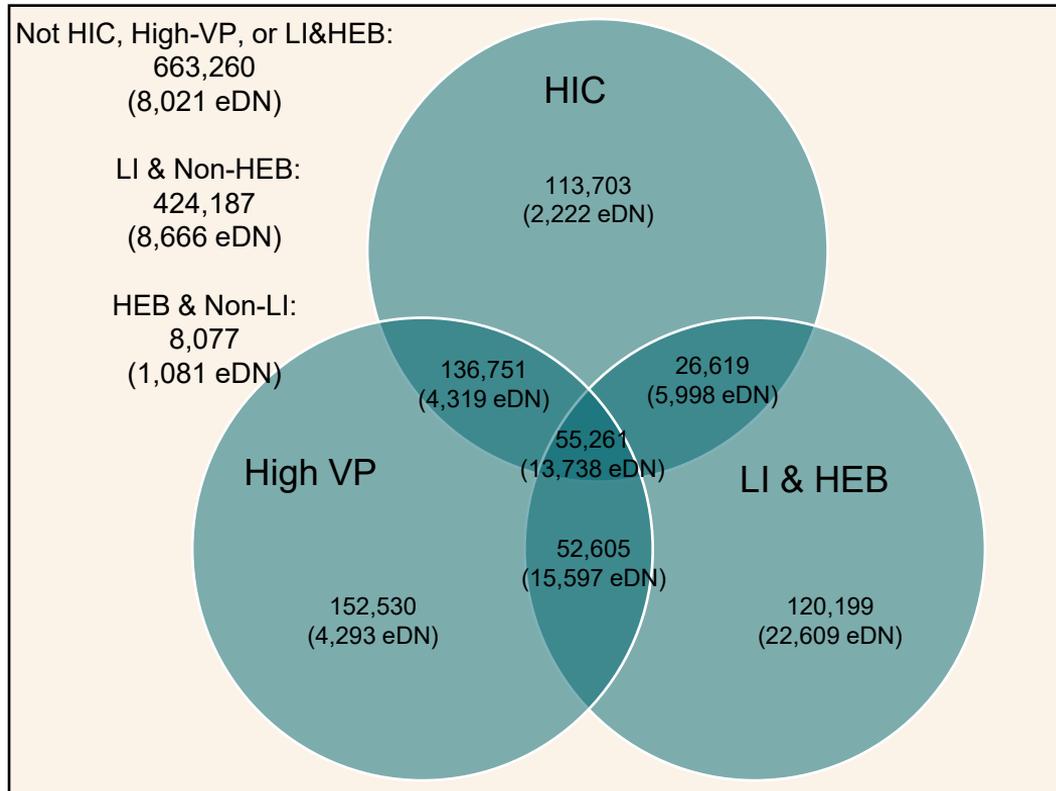


- While there is some overlap, these three groups identify somewhat distinct customer sets
- 67% of EBA 2024 Customers are either HIC, High VP, or LI
- About 136K customers are in all three groups (HIC, High-VP, and LI)
- The vast majority of electric deepest need (eDN) customers, 86.7%, are also Low-Income

*Note: LI & HEB designations are at customer level, while HIC and VP designations are at Census Block group levels (communities/areas)

Identifying the overlap between named communities and low-income & energy-burdened customers

1,320,928 EBA Customers Total

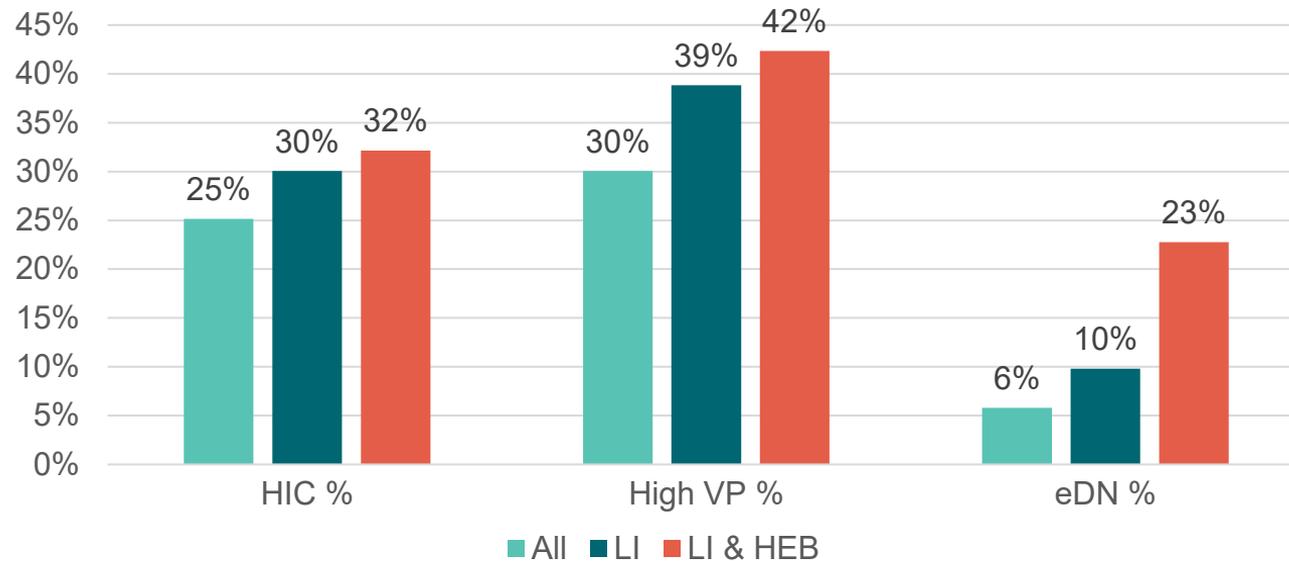


- While there is some overlap, these three groups identify somewhat distinct customer sets
- 50% of EBA 2024 Customers are either HIC, High-VP, or LI-HEB
- About 55K customers are in all three groups (HIC, High VP, and LI-HEB)
- The majority of electric deepest need (eDN) customers, 75.4%, are Low-Income and Energy-Burdened
 - Total eDN = 76,797 customers
 - eDN+LI&HEB = 57,942 (75.4%)
- 62% of LI-HEB customers are either HIC, High VP, or elec deepest need.
 - Total LI-HEB = 254,684
 - Total LI-HEB that are also either HIC, High VP, or eDN = 157,094 (62%)

*Note: LI & HEB designations are at customer level, while HIC and VP designations are at Census Block group levels (communities/areas)

Low-income & energy-burdened customers are more likely to be in named communities

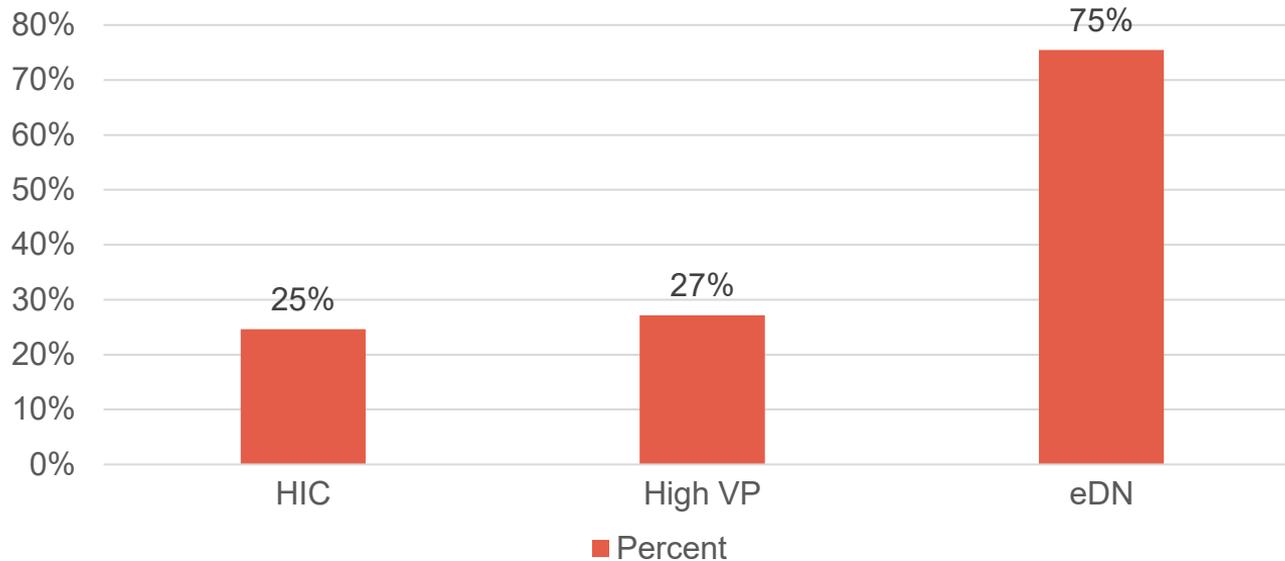
Customers in Named Community as a percent of total, low-income, and LI-HEB populations



- LI & HEB customers are more likely to be in HIC or in High VP, and significantly more likely to be electric deepest need, than PSE's all current customers overall

Customers in named communities are more likely to be low-income and energy-burdened

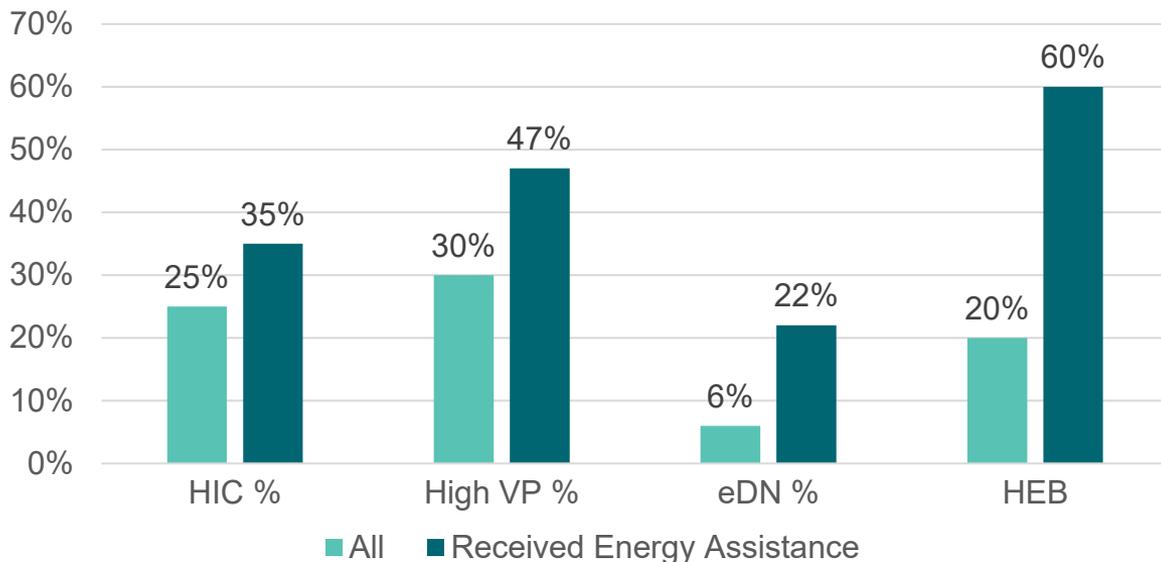
Proportion of Low-Income and Energy-Burdened (LI & HEB) Customers in Named Communities



- For HIC and High VP subgroups, 25% and 27% are LI-HEB, respectively
- For electric deepest need customers, 75% are LI-HEB

Named communities strongly represented in customers who received energy assistance

Proportion of Energy Assisted Customers in Named Communities

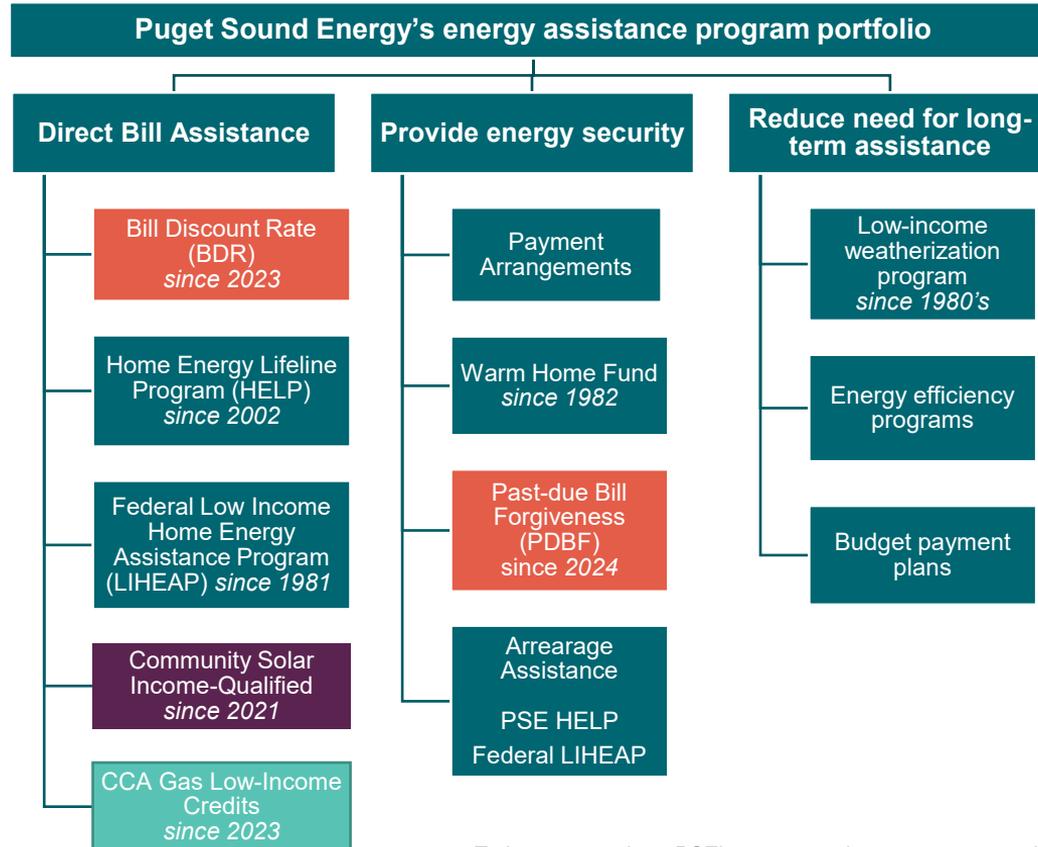


- In 2024, 126,732* unique residential customers received energy assistance.
- Of these customers:
 - 35% are in Highly Impacted Communities (versus 25% overall customer base in 2024 EBA)
 - 47% are in High Vulnerability Population (versus 30% overall customer base in 2024 EBA)
 - 22% are electric Deepest Need (versus 6% overall customer base)
 - 60% are energy-burdened (versus 20% overall customer base in 2024 EBA)*

6. Analysis of Energy Burdens Post-Energy Assistance

Total Customer Base, post-EA

PSE's energy assistance program portfolio



PSE's energy assistance program descriptions



Program	Description
Bill Discount Rate (BDR)	Monthly bill discount of 5–45% based on income/household size. Works with HELP. Eligibility: ≤ 80% AMI or 200% FPL .
HELP (Home Energy Lifeline Program)	\$250–\$1,000 credit covering 20–60% of annual bill; applied to arrears first. Same eligibility as BDR.
LIHEAP (Federal)	Federal bill assistance + crisis support + weatherization. Applies to arrears first. Eligibility: ≤ 150% FPL .
Community Solar Income-Eligible (CS IE)	Free solar subscription to local solar shares providing monthly bill credits at no cost to income-qualified customers.
CCA Gas Low-Income Credits (CCA LI)	Credits offsetting all CCA gas charges for customers who received BDR/HELP/LIHEAP in the past 24 months.

Program	Description
Payment Arrangements	Flexible payment plans, available to all PSE customers, allowing weekly or monthly extensions for bill due dates.
Warm Home Fund	Up to \$600 for customers facing disconnection.
Past Due Bill Forgiveness (PDBF)	Forgives 1/12 of arrears per on-time payment; up to \$2,500 forgiven over 12 months. Must be on BDR + received HELP.
HELP (Arrearage)	Pays arrears first; then remaining credit (up to \$1,000) goes to future bills.
LIHEAP (Arrearage)	Can cover arrears plus additional bill support.
HeadStart Benefit (2025)	One-time credit for arrearages: \$5-\$15,000 for income-eligible customers.

Program	Description
Low-Income Weatherization (LIW)	Free energy-efficiency upgrades (insulation, duct sealing, repairs). Eligibility: ≤ 80% AMI, 60% SMI, or 200% FPL .
Energy Efficiency Programs	Everyday rebates, available to all PSE customers, to help customers adopt clean energy products, reduce bills, and improve home comfort.
Budget Payment Plan	Predictable monthly payments based on past annual energy use. Available to all PSE customers.
Efficiency Boost (since 2020)	Higher rebates for moderate-income customers (≤ 90% AMI) to reduce upfront costs of high-efficiency equipment.

All Customers | PSE's Current Low-Income Energy Assistance Programs: Eligibility



- 1. Energy Efficiency Program [E&G]
- 2. Budget Payment Plan [E&G]
- 3. Payment Arrangements [E&G]

4. Efficiency Boost Program (90% AMI) [E&G]

- The greater of 200% FPL or 80% AMI (CETA definition):
- 5. PSE HELP (eff. Oct 1, 2021) [E&G]
 - 6. Warm Home Fund (eff. Oct 1, 2023) [E&G]
 - 7. Bill Discount Rate (eff. Oct 1, 2023) [E&G]
 - 8. Community Solar Income-Qualified (eff. Oct 1, 2023) [E]
 - 9. Past Due Bill Forgiveness (PDBF) (eff. Oct 1, 2024) [E&G]
 - 10. PSE Low-Income Weatherization (LIW) (60% SMI / 200% FPL or 80% AMI) [E&G]
 - 11. Cap-and-Invest Low Income Credit (eff. Oct 1, 2023) [G]

12. Federal LIHEAP (150% FPL) [E&G]

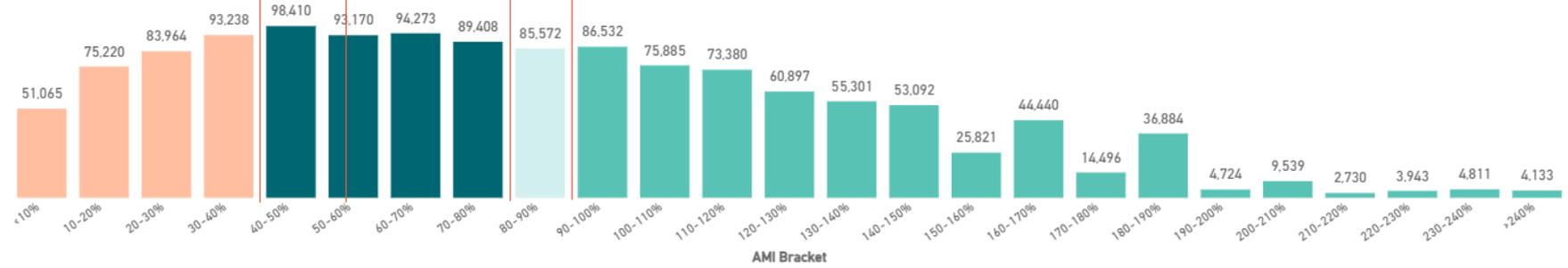
90% AMI

80% AMI

150% FPL

200% FPL

Number of Customers by Income Bracket (2024)

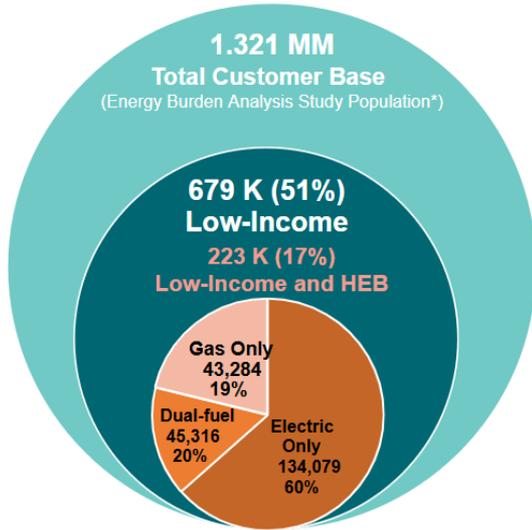


Acronyms

- AMI: Area Median Income (county)
- SMI: State Median Income
- LIHEAP: Low Income Home Energy Assistance Program
- FPL: Federal Poverty Level guidelines, used by federal agencies for determining eligibility for federal assistance programs

Post-EA | Number of estimated low-income (LI) and LI with high energy burden (LI-HEB) (HEB>6%) residential customers

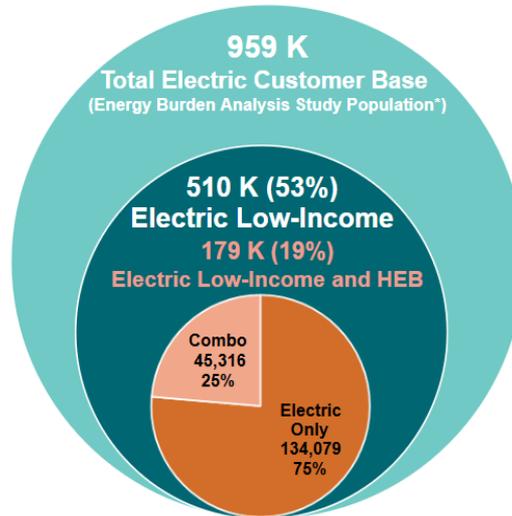
Total



Post-energy assistance (\$95.1 M**):

- LI-HEB: 223 K (17%)
- EA Recipients: 127 K (HEB: 77 K)
 - Their Median EB: 7.7% → 4.7%

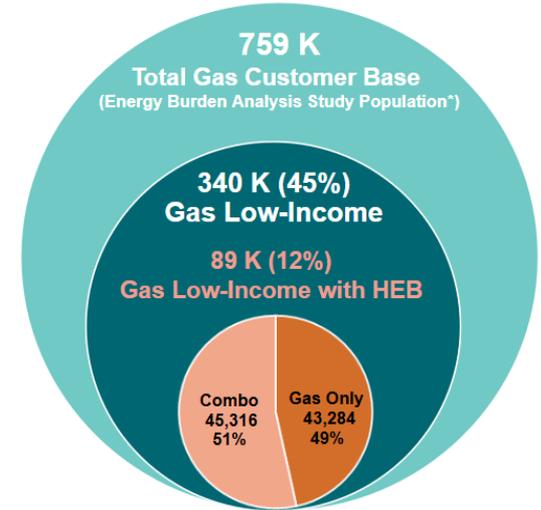
Electric



Post-energy assistance (\$81.4 M**):

- LI-HEB: 179 K (19%)
- EA Recipients: 93 K (HEB: 58 K)
 - Their Median EB: 8.0% → 4.3%

Natural gas



Post-energy assistance (\$42.8 M**):

- LI-HEB: 89 K (12%)
- EA Recipients: 74 K (HEB: 41 K)
 - Their Median EB: 6.8% → 4.8%

*Note: Energy Burden Analysis includes roughly 89% of total customer base (based on PSE's 2024 10-K: 1.483 million total residential customers) because of several data challenges.

Electric = Electric + Combo-Electric; Gas = Gas Only + Combo-Gas.
Data is post-energy assistance and includes mitigation from CI NVCS.

2024 Energy Assistance Metrics

- ◆ Total Energy Assistance* provided to PSE customers: **\$95.1M**
 - ◇ EA that went towards reducing Energy Burden: **\$69.9M (73%)**

- ◆ Total Energy Assistance recipients: **126.7k**
 - ◇ EA recipients with High Energy Burden: **77k (60%)**
 - ◇ Percent of all High Energy Burden customers who received EA: **29%**

- ◆ Reduction in High Energy Burden customers pre vs. post assistance: **32,487 (12.3%)**
 - ◇ Reduction in LI-HEB customers pre- vs. post- assistance: **32,005 (12.6 %)**

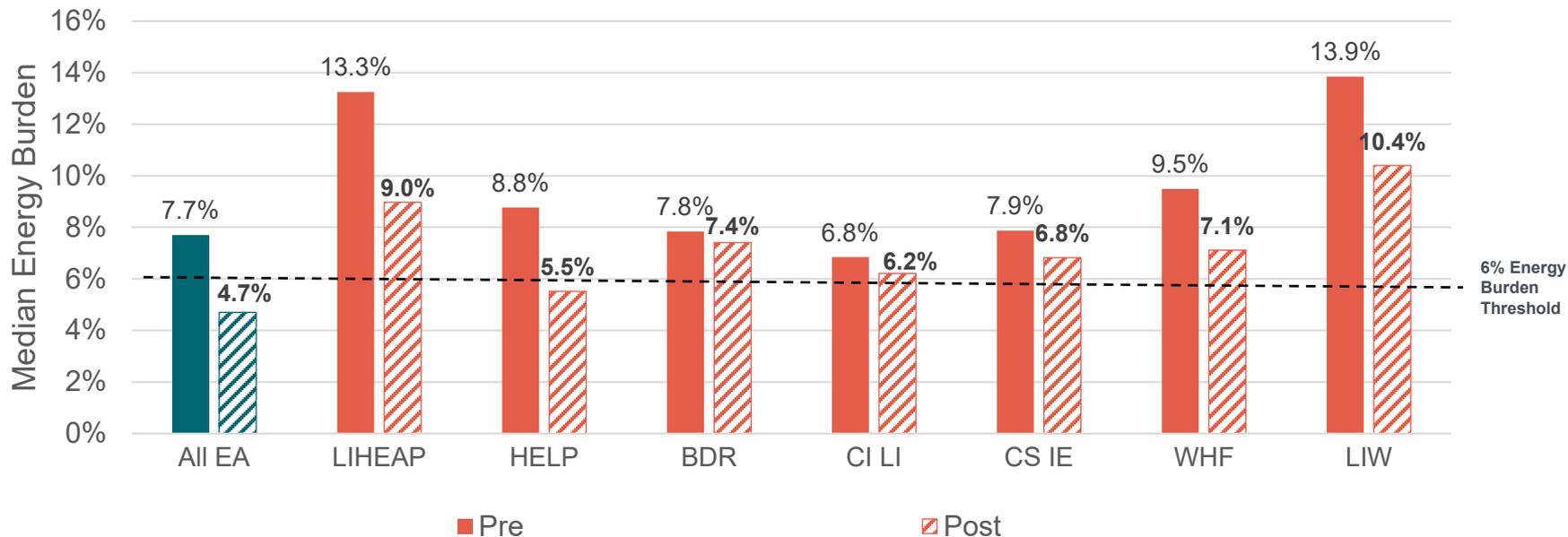
2024 EA Program Participation

Program	Recipient Count
All 2024 Energy Assistance (EA) Programs*	126,739
BDR: Bill Discount Rate – G & E	118,698
CI LI: Cap-and-Invest Low Income Credit – G	72,254
HELP: Home Energy Lifeline Program – G & E	66,552
LIHEAP: Low-Income Home Energy Assistance Program – G & E	12,932
CS IE: Community Solar Income Eligible – E	2,629
WHF: Warm Home Fund – G & E	2,598
LIW: Low Income Weatherization – G & E	500

To learn more about PSE's energy assistance programs, visit: [PSE | Assistance programs](#)

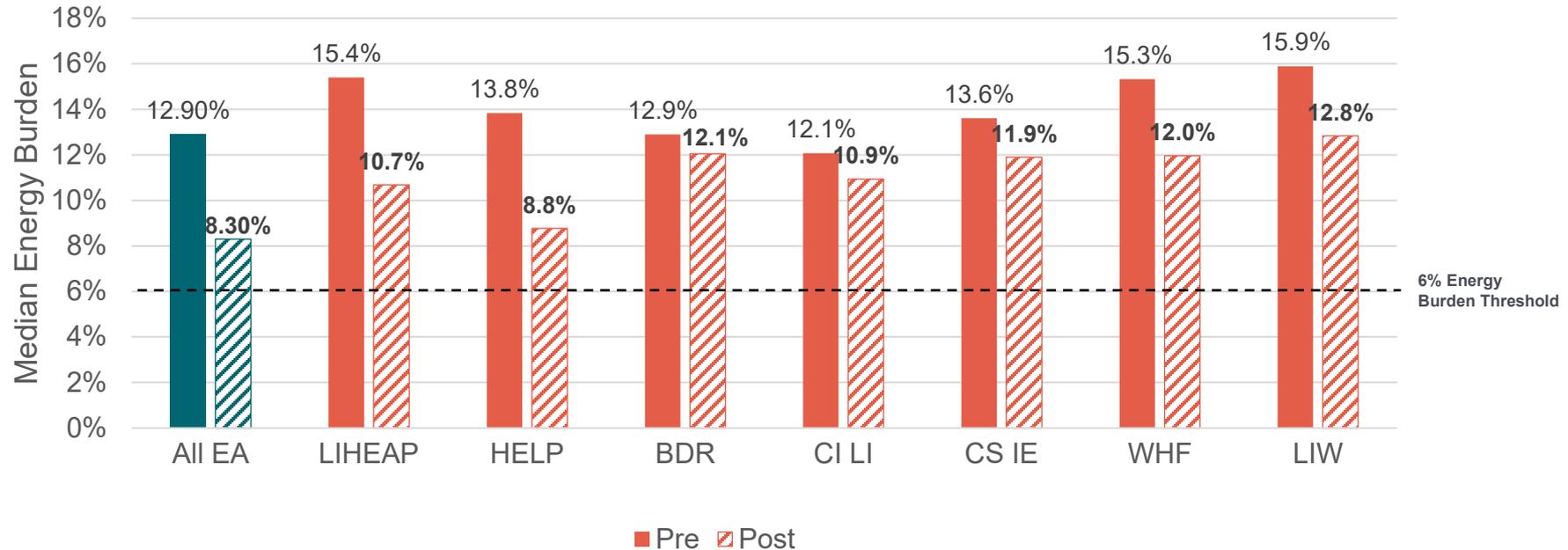
Energy Burden Efficacy: for EA recipients

Impact of EA on Median EB among all EA Recipients



Energy Burden Efficacy: for HEB EA recipients

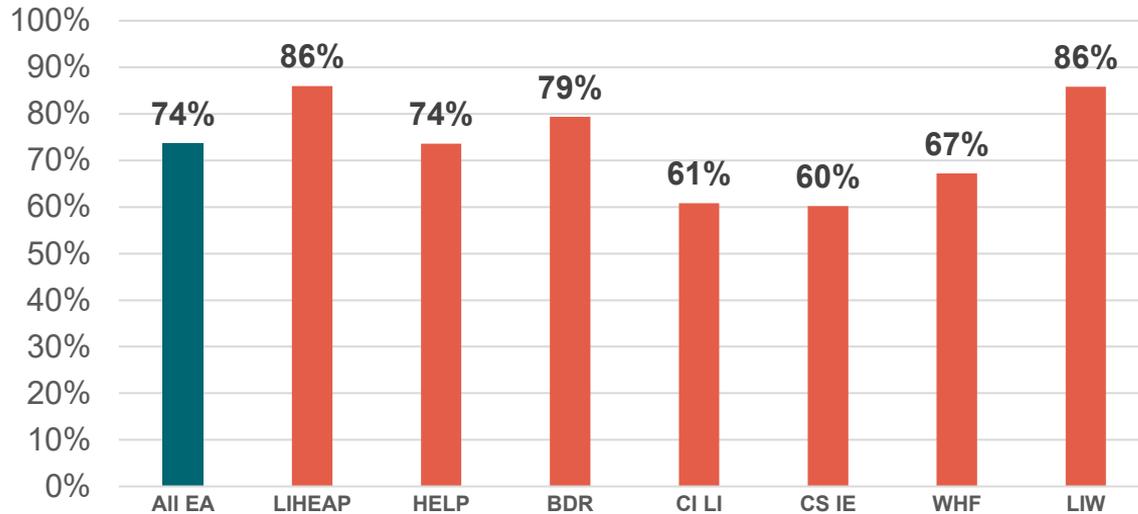
Impact on Median EB among all HEB EA Recipients



EA Delivery Depth: efficacy of EA provided in lowering energy burden



Proportion of EA that went towards lowering EB

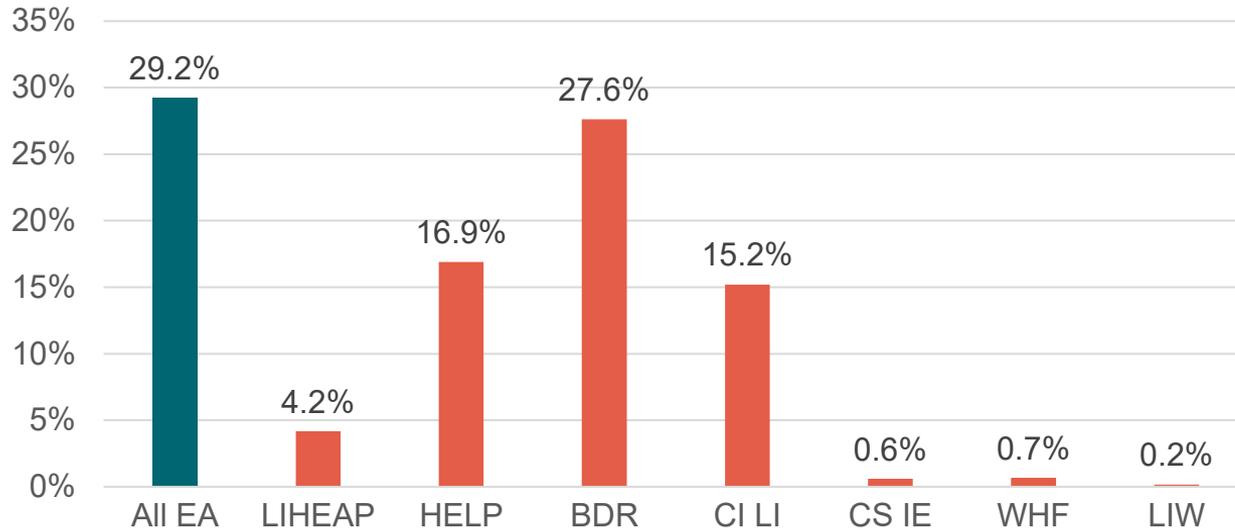


Program	EA that went towards reducing EB	Total EA benefits
All EA	\$69.9M	\$94.9M
LIHEAP	\$7.7M	\$8.9M
HELP	\$37.7M	\$51.3M
BDR	\$13.3M	\$16.7M
CI LI	\$9.6M	\$15.8M
CS IE	\$407k	\$676k
WHF	\$968k	\$1.4M
LIW	\$295k	\$344k

EA Delivery Depth: efficacy of EA provided for HEB customers



Proportion of all HEB customers who received EA



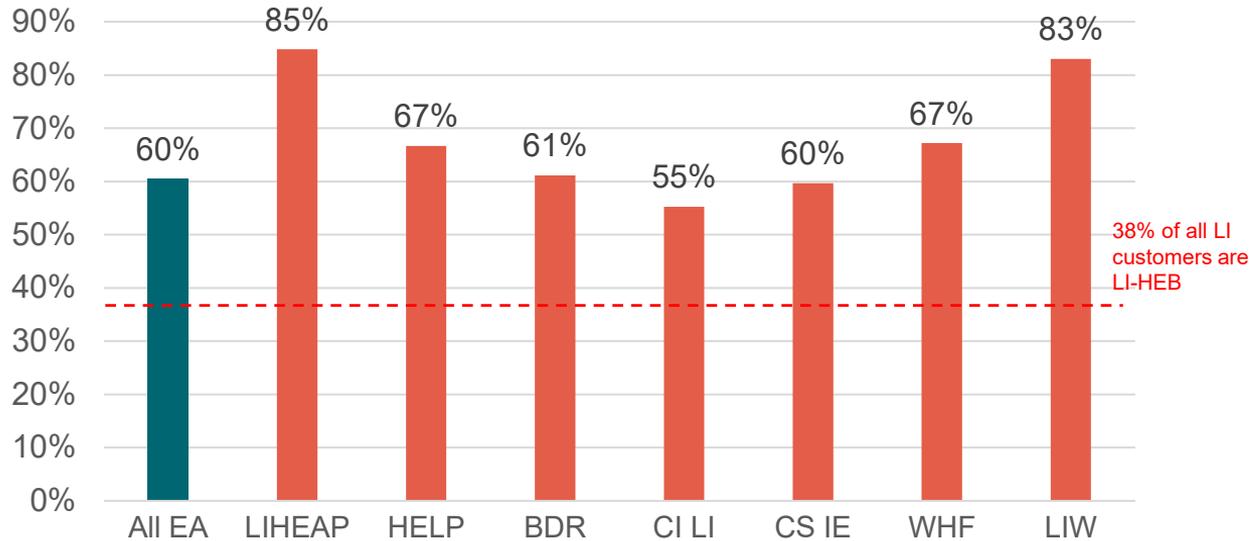
Total HEB Customers = 262,761

Program	HEB Recipient
All EA	76,652
LIHEAP	10,968
HELP	44,376
BDR	72,577
CI LI	39,934
CS IE	1,569
WHF	1,746
LIW	415

Delivery Depth: Proportion of EA recipients who are HEB



Proportion of EA Recipients who are HEB



Program	HEB EA Recipients	All EA Recipients
All EA	76,652	126,732
LIHEAP	10,968	12,932
HELP	44,376	66,552
BDR	72,577	118,698
CI LI	39,934	72,254
CS IE	1,569	2,629
WHF	1,746	2,598
LIW	415	500

7. Contacts

For more information, please visit: [PSE | Energy burden analysis](#)

Questions? Contact PSE at: EnergyBurdenAnalysis@pse.com