







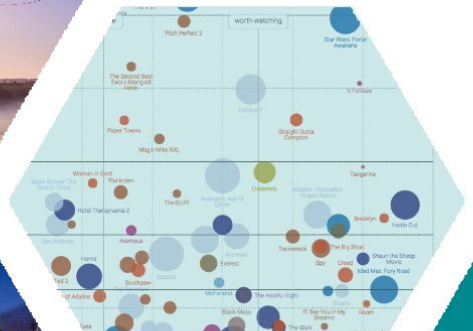


2022 Energy Burden Assessment

Limited Income Collaborative Meeting 9/29/2022

empower dataworks

Welcome!

Hassan Shaban, PhD
Principal, Empower Dataworks
Wenatchee, WA

Ask me about:

Energy assistance and limited income programs: planning, evaluation and marketing

hassan@empowerdataworks.com

Project Overview

- ➔ We're conducting an **energy burden assessment** for Spire's residential customers in Missouri
- ➔ Project goal is to support Spire Missouri's rate case requirement to "assess current limited-income programs, analyze primary and secondary data and make recommendations for programs moving forward"
- ➔ Today's presentation is split into two parts:
  - ◆ Part 1: Energy burden assessment of Spire's service area in Missouri
  - ◆ Part 2: Evaluation of existing limited income programs

Note: These are draft results and subject to change.
All figures are for calendar year 2021 unless otherwise noted.

Data Sources

From Spire:

- ➔ Monthly Billing Data (by address)
- ➔ Energy assistance data
- ➔ Budget Billing
- ➔ Disconnections and past due notices

From Third Parties:

- ➔ Demographic data
- ➔ Census/American Community Survey
- ➔ Benchmarking data from other utilities

Methodology

Data Wrangling:

- ➔ Data cleanup and aggregation
- ➔ Monthly energy usage and bills
- ➔ Mapping and combining datasets
- ➔ Iterative Proportional Fitting (IPF) to develop census tract statistics

Analysis:

- ➔ Energy burden calculations
- ➔ Program impact analysis

The primary metric of success is
reduction in energy insecurity

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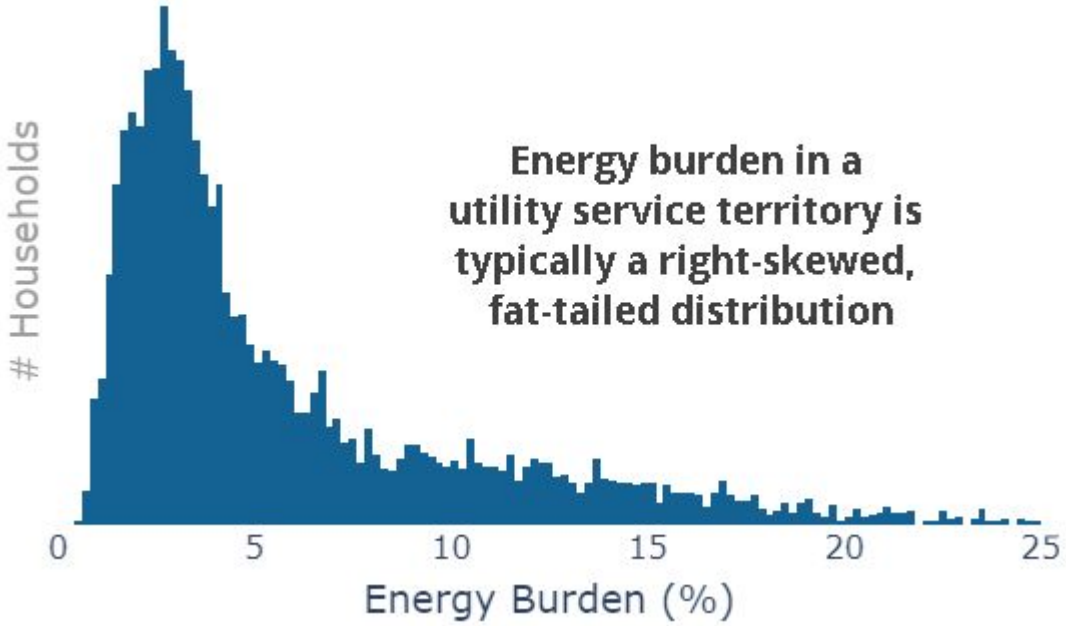
Energy Burden is a Distribution



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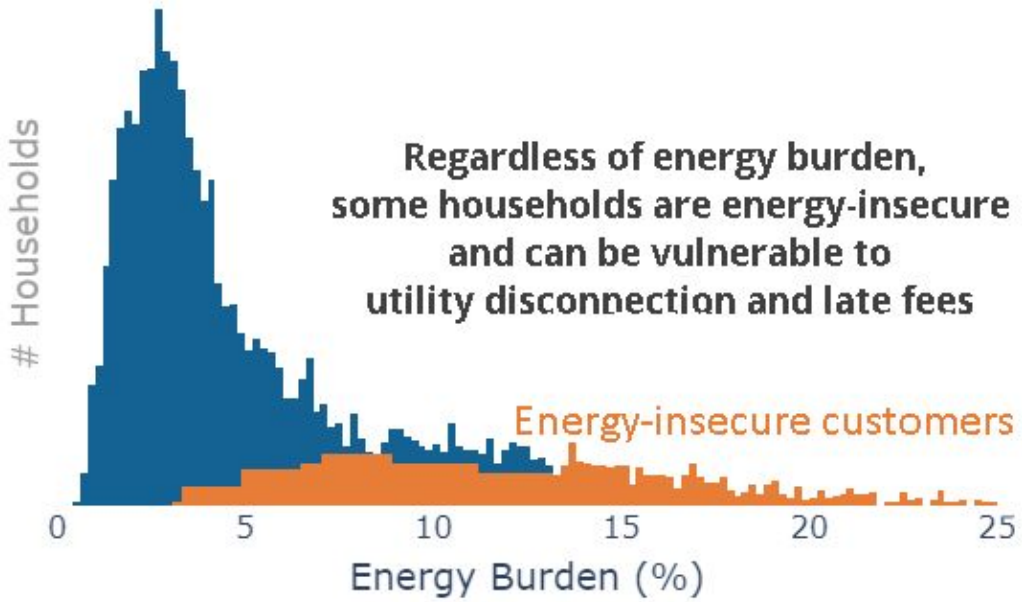
Energy Insecurity is Harder to Measure



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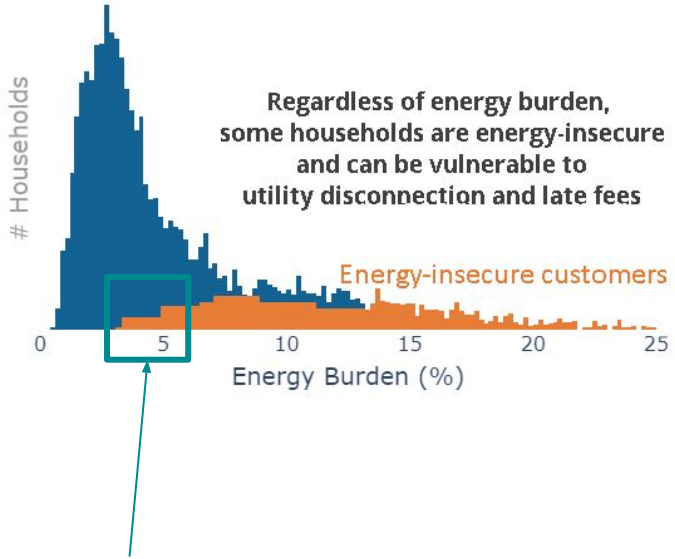
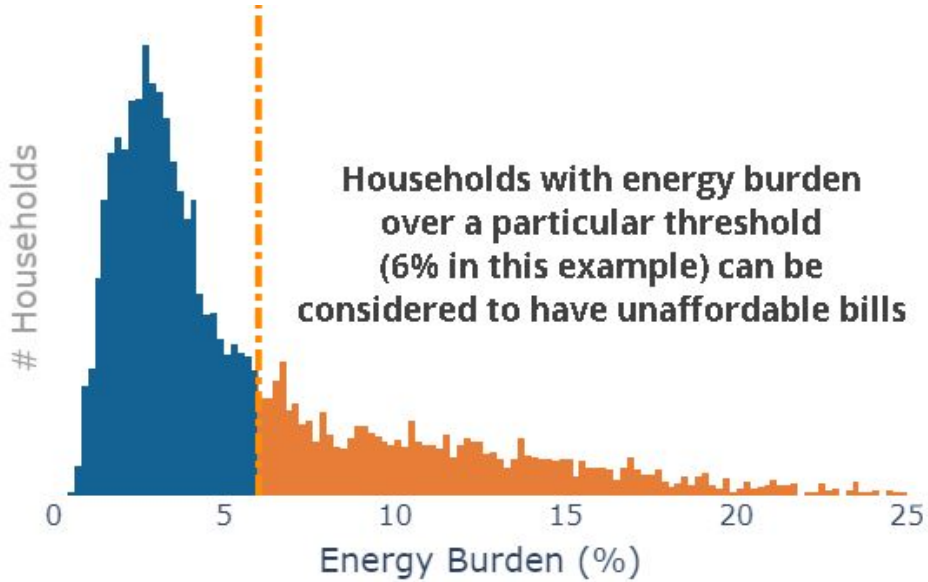
Energy Burden is a Proxy for Energy Insecurity



Low burden but energy -insecure



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The primary, measurable metric of success is
reduction in energy burden
for high-burden customers

Insights: **Energy Burden**

Number of Households

~1.1-1.2M

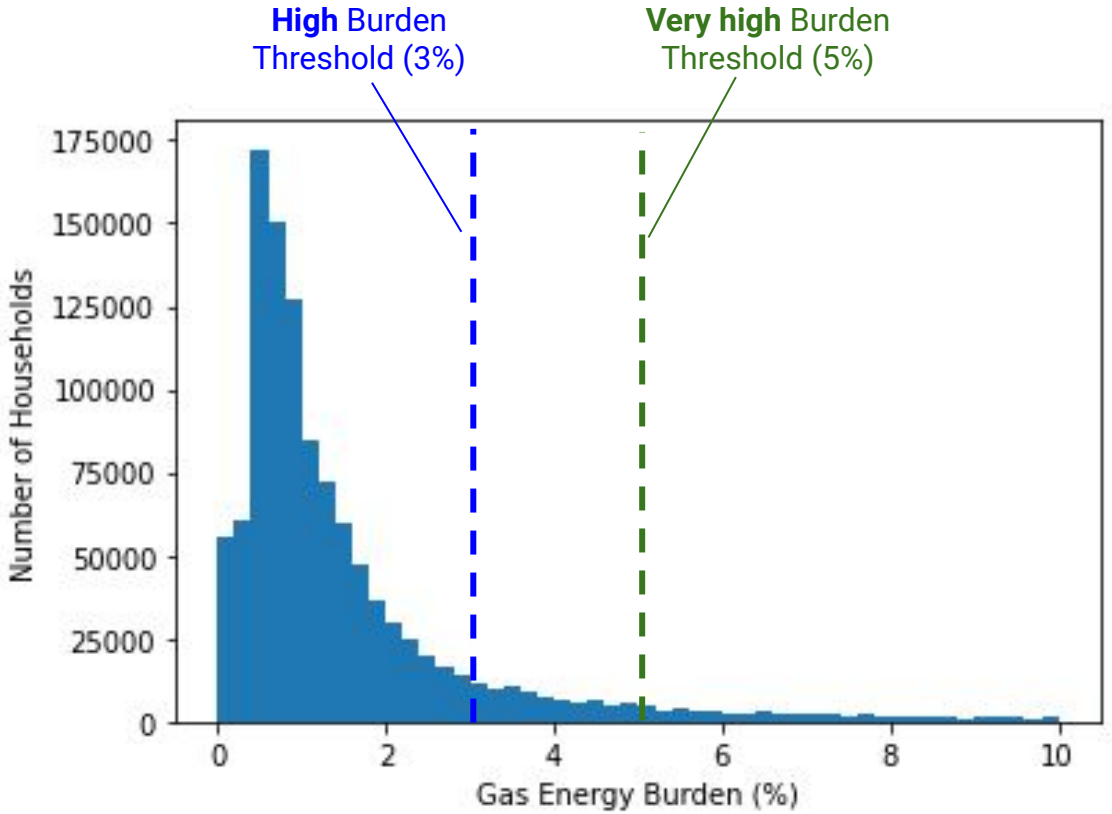
Low Income Households

Under 150% FPL: **~190k (~16% of customers)**

High Burden Households

~155,000 (~13% of customers)

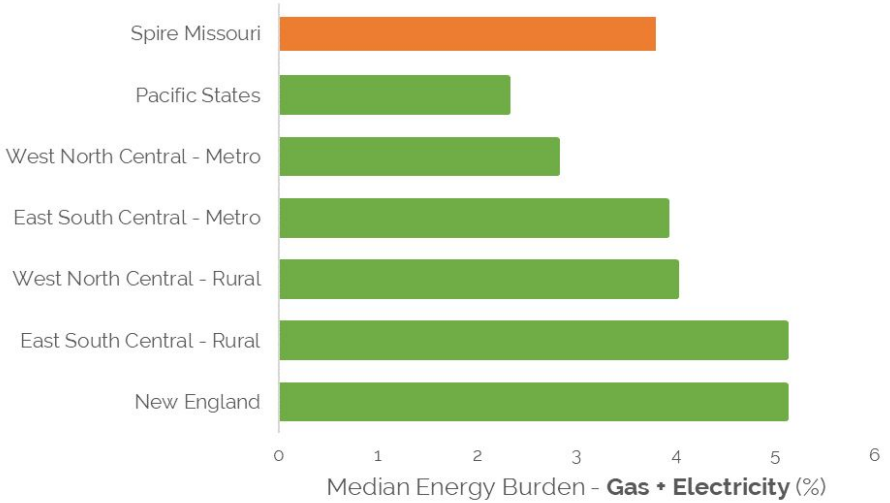
Gas Energy Burden
All Customers: **~1.8%**
Low-Income: **4.6%**
High-burden: **6.6%**



Takeaway: The prime target for our programs is approximately 155k high-burden and 78k very high burden customers.

Insights: **Energy Burden**

- ➔ Spire Missouri residential customers have relatively average natural gas bills, and there is a moderate level of poverty in the service area, resulting in average energy burden compared to other regions.
- ➔ The level of energy burden is comparable to values published by ACEEE (2018) for the Central states.



*Total energy burden is calculated assuming an average gas-heat customer pays $800/year for electricity in addition to their gas bill

- *West North Central*: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
- *East South Central*: Alabama, Kentucky, Mississippi, Tennessee

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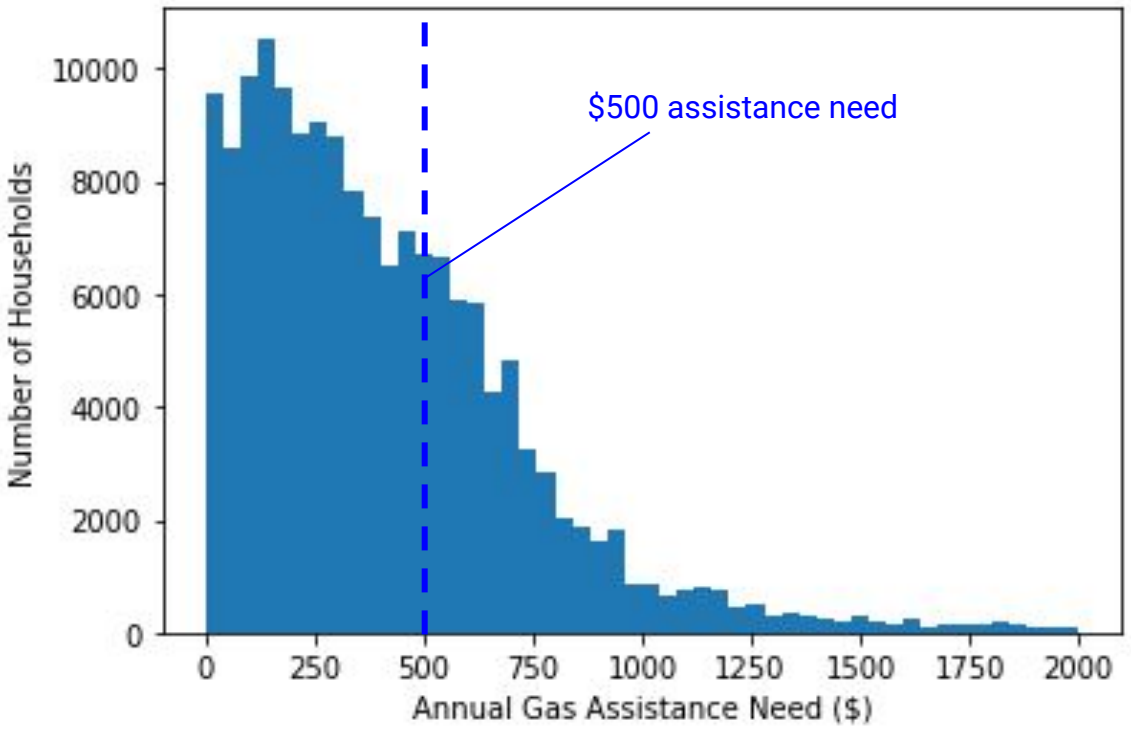
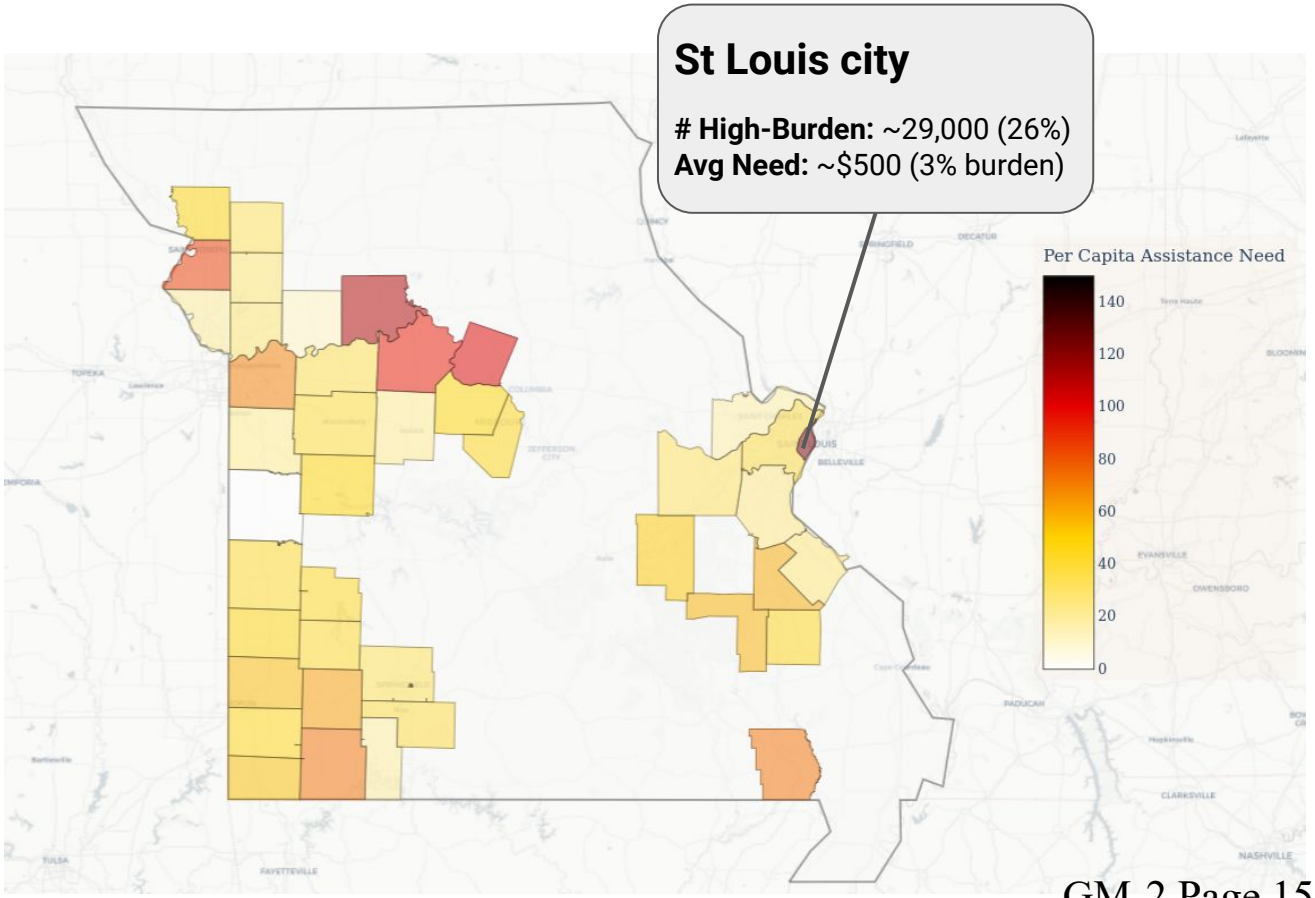


Spire's Customers' Annual Energy Assistance Need for Missouri

~$55 M/year exceeding 3% gas burden

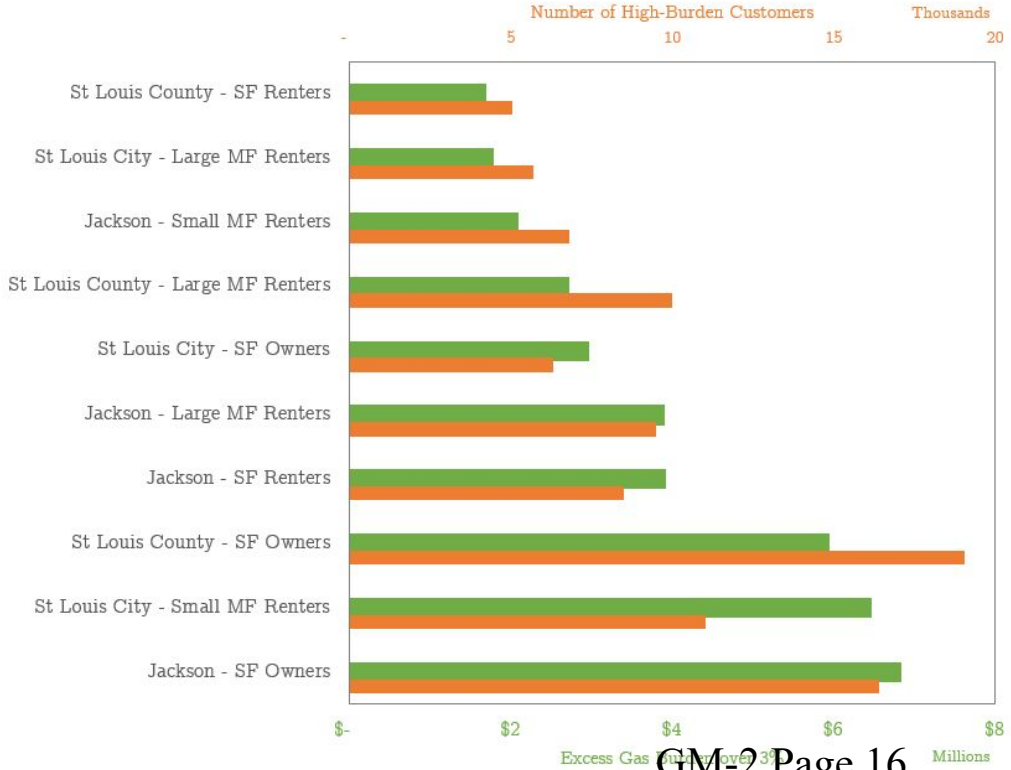
~$30 M/year exceeding 5% gas burden

Energy Burden Overview



Customer Segments - Highest Volume of Energy Burden

As expected, the bulk of the need is in densely populated areas, mostly among single family owners and renters.



Customer Segments - Highest Concentration of Energy Burden

Rural areas have a higher concentration of energy burden but fewer high- burden customers. One exception is renters of small multifamily homes in St Louis City.

Dashboard Demo

Question for Deborah B

How does the new Customer Success team anticipate using this information to support Spire's customers?

Program Effectiveness

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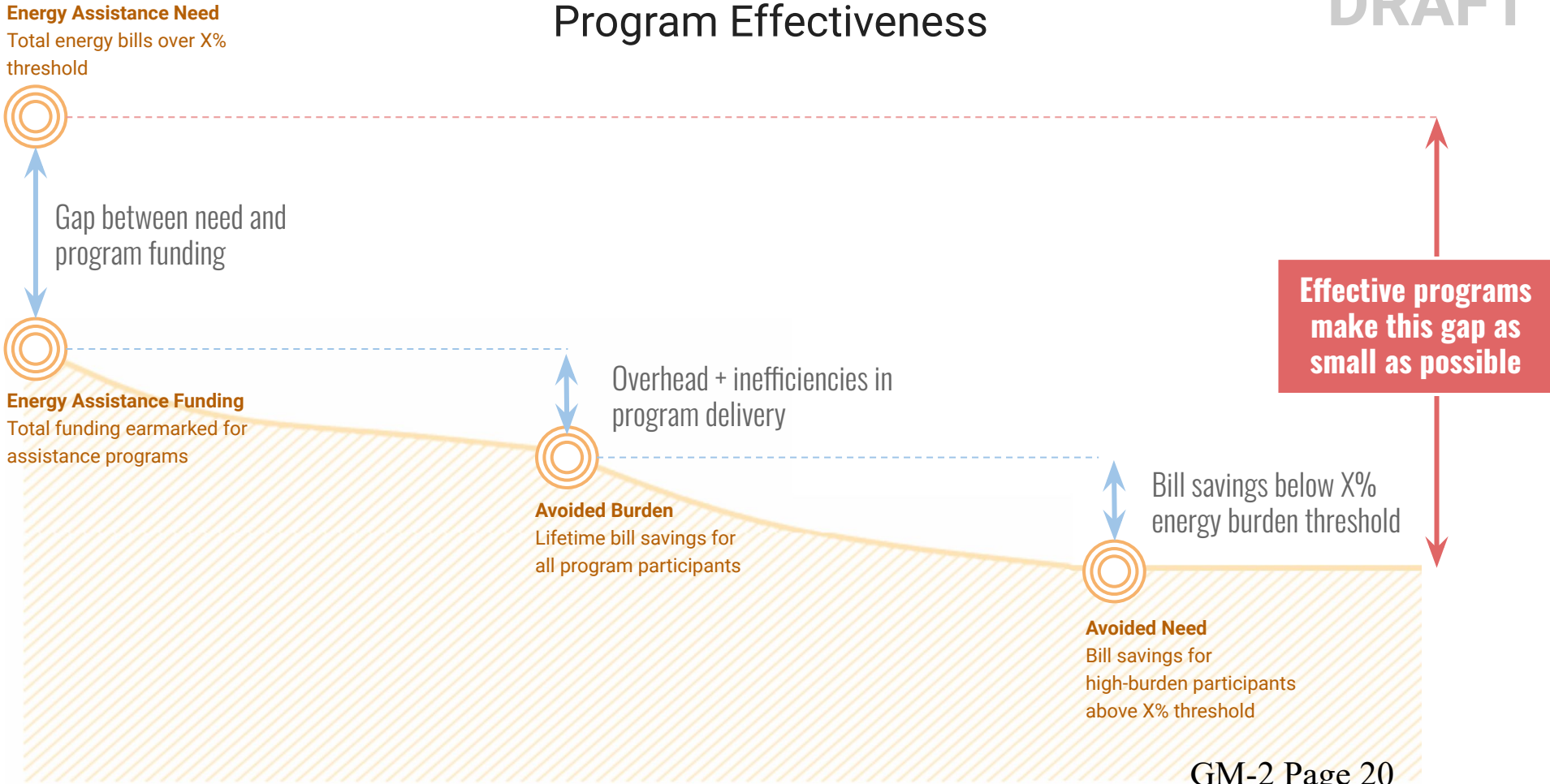


Insights: **High-level Assistance Gap**

- ➔ The total energy assistance need for Spire Missouri residential customers is approximately **$55M.**
- ➔ **About 30% of this need** is already distributed through current programs (incl. LIHEAP) (benchmark for other utilities is to fund 40-60% of the need)
- ➔ Approximately 50-60% of program benefits flow to high-burden customers (benchmark for other utilities is 30-40%)

Current energy assistance need

~$55M

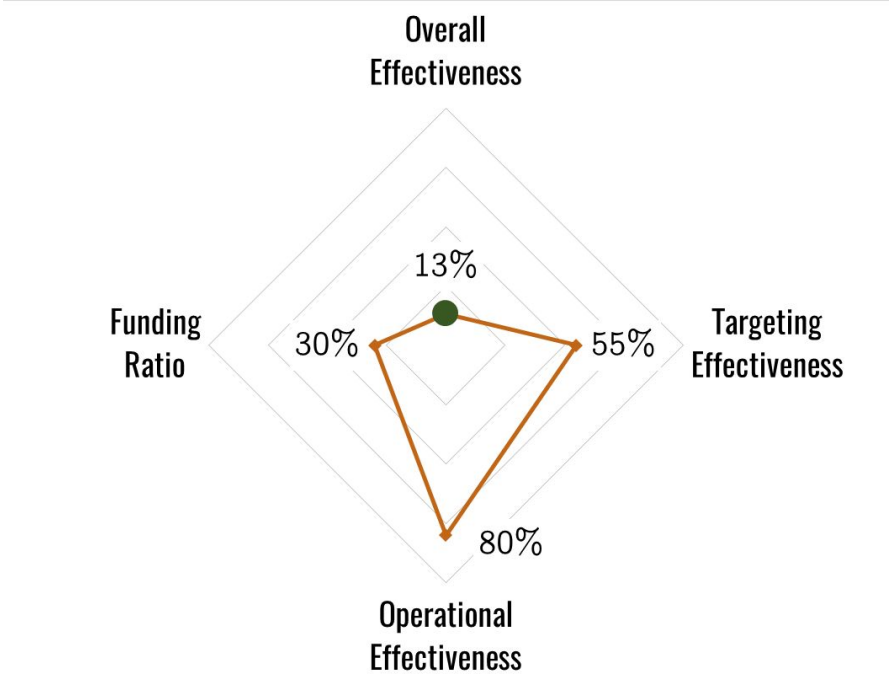
Current energy assistance spending

$16M (Direct, incl. LIHEAP)

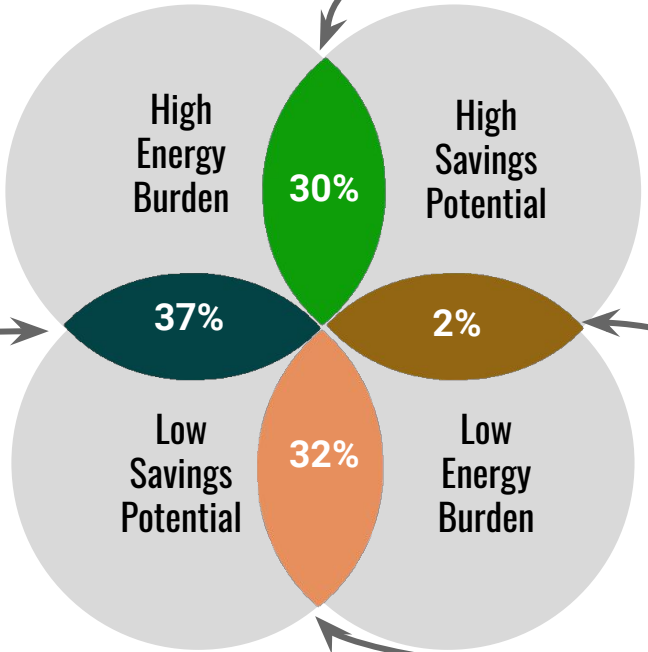
$2M est. Wx

~$4M est. (Admin)

Energy Assistance Scorecard



Program Mix



Low Income EE

No cost efficiency
Weatherization
Furnace Repair

Traditional EE + Financing

No upfront costs
PAYS

Low Income Discounts/Rates

Affordability
LIHEAP

Emergency Programs

Arrearages
ECIP
ERAP
Payment Partner
DollarHelp

Main Takeaways - Energy Burden Assessment

- The gas energy assistance need in Spire's Missouri service territory was about $55M/year in 2021
- Most of the need is localized in a few regions, meaning that targeted programs will be more effective
- Rural areas have a higher per capita level of burden and lower program participation, but much fewer high burden customers
- In 2019-21, funding was a bit low (~30%) relative to the need
- Most existing programs are aimed at preventing hardship and service disconnections, as opposed to improving affordability

Question for Deb S

What are the main barriers for the agencies in scaling up programs in areas of high need?

And what have been the successes and challenges of working with agencies outside the known areas of high need? For example, rural and suburban areas?

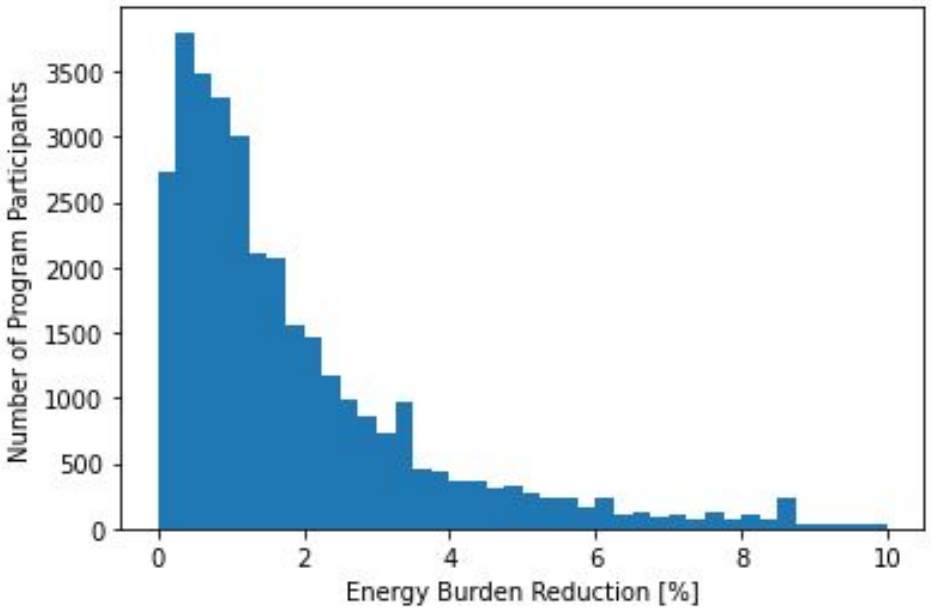
Energy Assistance Portfolio

	# Participants		Direct Assistance Funding ($M)	
Program	**2020**	**2021**	**2020**	**2021**
LIHEAP	18,000	23,000	5.8	9.6
ECIP	4,200	3,600	1.4	1.1
DollarHelp	3,100	3,000	1.1	1.1
Agency Pledges	6,800	7,400	2.0	2.3
ERAP	-	4,200	-	1.4
Unique accounts receiving any form of assistance	25,800	33,400	Approximately 60% of participants return year over year	

Impact Analysis Methodology

- The treatment group is composed of program participants in the 2020 calendar year.
- Metrics are compared in the 12 months before and after program participation
- The comparison is made up of future program participants (2021-22). Their metrics are calculated in the 12 months preceding program participation and compared to the 12 months before that.

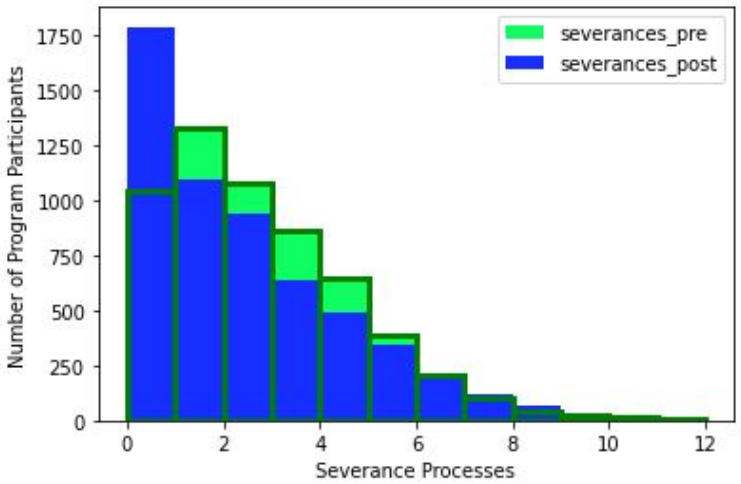
Impact of Energy Assistance on Energy Burden



2.1% average energy burden reduction

34% of program participants receive an energy burden reduction greater than 2%

Impact of Energy Assistance on Disconnections



51% net reduction in severance events for program participants (1.3 fewer processes per participant)

67% net reduction in disconnections for program participants overall

32% net reduction in uncollected arrearages for program participants ($45 reduction per participant)

Impact of Budget Billing

	2020	2021
New Enrolments	32,900	28,100

32% net reduction in disconnections for program participants overall

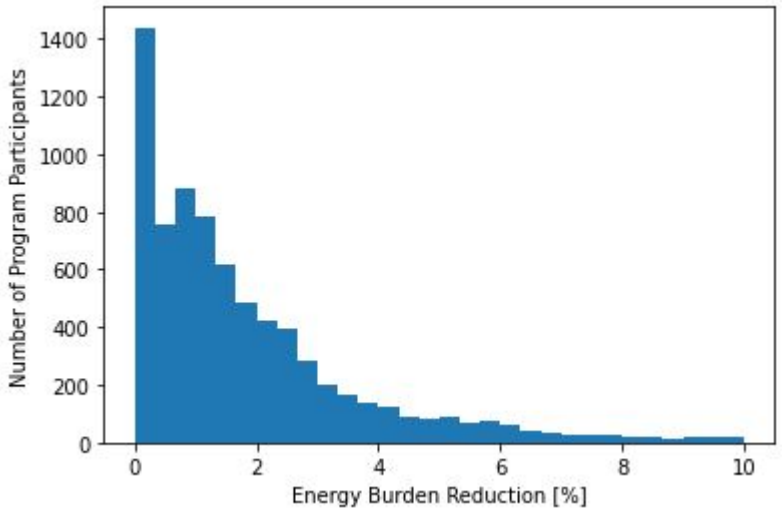
28% reduction in severance events for program participants (0.5 fewer processes per participant)

13% reduction in uncollected arrearages for program participants ($17 reduction per participant)

Payment Partner Program

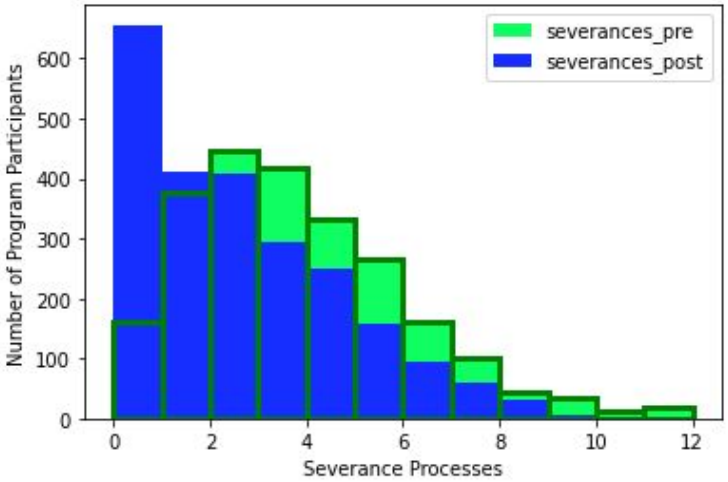
	2020	2021
Participants	2,500	7,500
Budget Credit	$0.4M	$1.0M
Pledges	$1.4M	$2.6M
Payment Credits	<$100k	$110k
Avg Budget Payments	5.5	4.8
Avg number of completed PPP payments	1.2	0.5
Payment Arrangement Status	79% Broken 6% Cancelled	34% Broken 41% Cancelled

Impact of Payment Partner Program on Energy Burden



1.5% average energy burden reduction

Impact of Payment Partner Program on Disconnections



51% net reduction in severance events for program participants (2.1 fewer processes per participant)

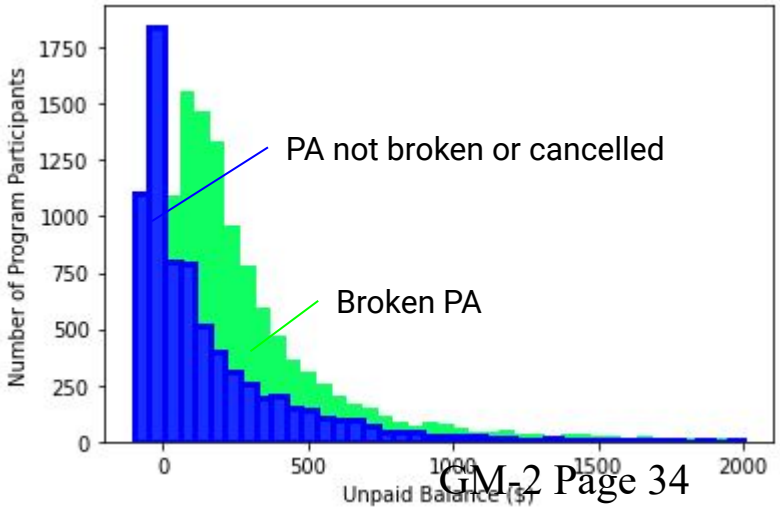
76% net reduction in disconnections for program participants overall

45% net reduction in uncollected arrearages for program participants ($120 reduction per participant)

What's working with the PPP?

	Starting Balance	Remaining Balance after Pledge
Broken Payment Arrangements	$576	$351
Successful Customers	$269	-$30

Customers whose arrearages are eliminated by the initial pledge tend to be more successful in the program and vice versa.



Program Impact - 2020

	Disconnections per 1,000 participants	Severance Processes per 1,000 participants	Unrecoverable arrearages	Average direct cost per participant	Number of Participants
Payment Partner Program	-301 (-76%)	-2133 (-51%)	-$120	$1,106	2,500
Energy Assistance Grants	-161 (-67%)	-1349 (-51%)	-$45	$463	25,800
Budget Billing	-49 (-32%)	-488 (-28%)	-$17	Admin only	32,900

Question for Christopher G

What has Spire staff’s experience been with administering and communicating the Payment Partner Program?

Main Takeaways - Program Evaluation

- Existing programs (energy assistance, budget billing and payment partner program) have a significant impact on energy burden and keeping participants connected to gas service
- Payment Partner Program reduces disconnections by up to 76%. However the program has a low completion rate and participation is limited. Its most successful component is arrearage forgiveness.
- Several federal, state and Spire programs already offer assistance at the point of payment crisis

Payment Partner Program Options

PPP Option 1: Status quo with ongoing customer engagement
Connect regularly with program participants to communicate the value of on-time payments and the repercussions of broken payment arrangements (loss of budget credit, payment matching)

PPP Option 2: Simplify and focus on arrearage forgiveness
Sunset the PPP program and roll company-funded portion of funds into DollarHelp or turn PPP into a targeted arrearage forgiveness program

PPP Option 3: Create a bill affordability program
Design a simplified income-based bill discount program that maintains bill affordability prior to customers accumulating arrearages

Other Recommendations

Payment Flexibility: Budget billing has a sizeable impact on customers' payment patterns even though it's a low-cost program. Consider introducing budget billing as an *opt-out* feature for all new accounts. Consider other flexible payment features like BNPL, prepaid billing, due date customization.

Energy Burden Data Sharing: Design and build the technical infrastructure, data sharing agreements and reporting tools for agencies to share demographic data with Spire, in order to target high-burden customers and better evaluate program performance.

Targeted marketing: This recommendation is for Spire to identify high-burden neighborhoods using data from this Energy Burden Assessment and use these customer lists for targeted informational campaigns about existing programs. These campaigns should be timed during periods of high bills or arrearages (e.g. January/February).

Expand local partnerships: Local presence is an important factor for rural customers and satellite offices of agencies or local community-based organizations can be very effective at reaching these customers. To improve program access, consider partnering with local community organizations for referrals or program intake.

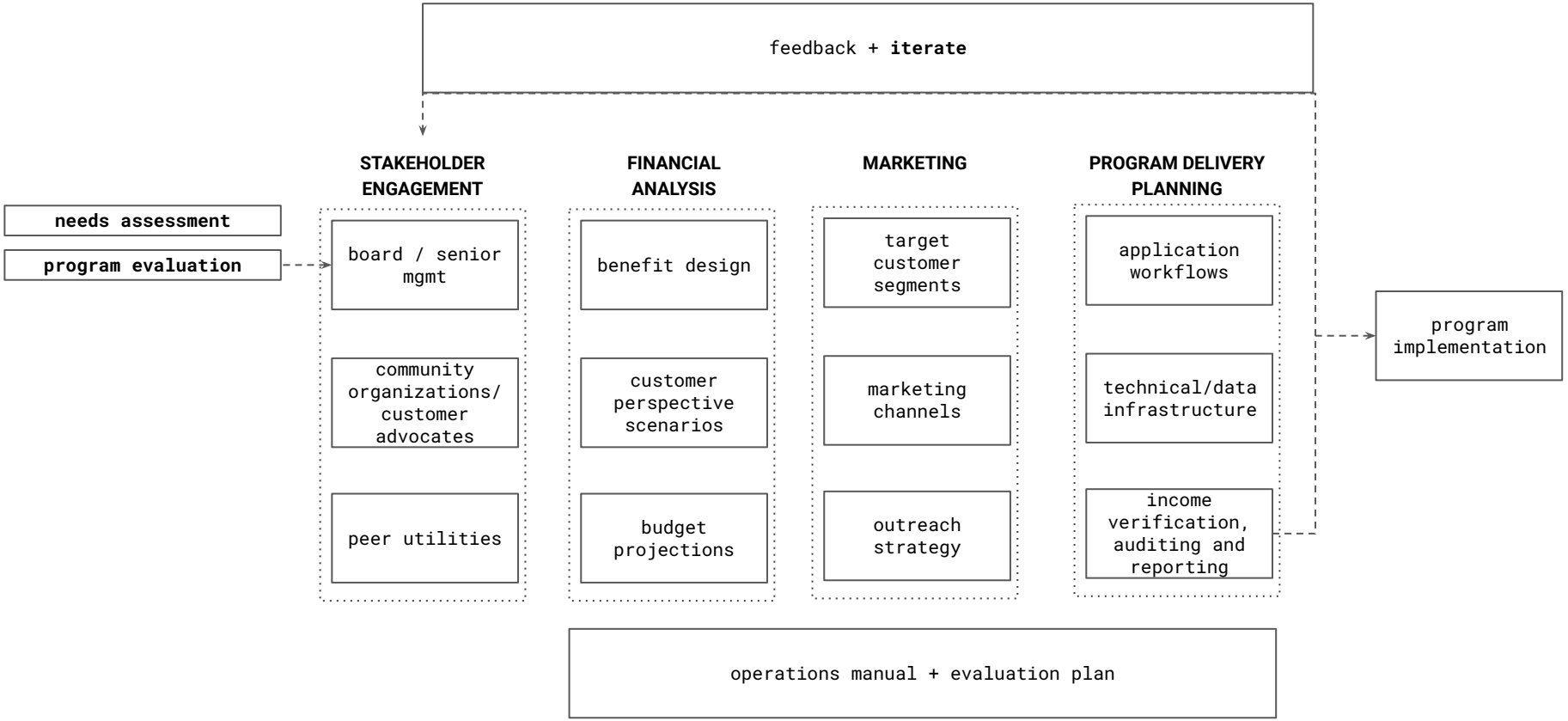
Improved customer experience on website/social: The program finder on the website is useful for finding relevant programs. Consider developing a mobile-friendly program wizard or chatbot that can be embedded on the Spire website and social media to provide a more personalized experience for customers who are looking into energy assistance options (e.g. eligibility, estimated assistance amounts).

Discussion questions for stakeholders

- What are stakeholders' reactions to the energy burden data and information?
- Given the data related to the Payment Partner Program's performance, which of the three options are most appealing to you?
- Are there new opportunities for coordination with the local agencies on outreach and marketing that Spire should explore?

Affordability Program Design

Next Step: Program Design



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Program Models for Energy Affordability

Eligibility

- Hardship-qualified
- Income-qualified
- Burden-qualified

Assistance Model

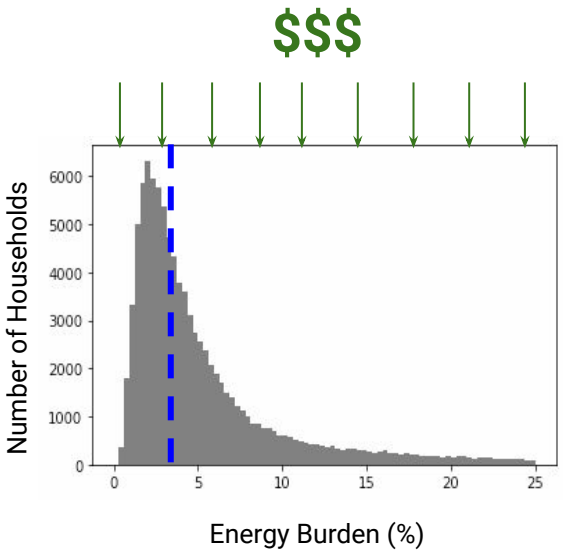
- Fixed or percentage bill discount
- Tiered discount based on income
- Percentage of Income Payment Plan (PIPP)

Other considerations

- Application process
- Targeted marketing/outreach
- Discount design and budgets
- Income verification: self-certification, audit protocol

Additional resource:
https://www2.ed.gov/policy/highered/reg/hearulemaking/2021/codoraholdharmreportfin.pdf

Fixed discounts



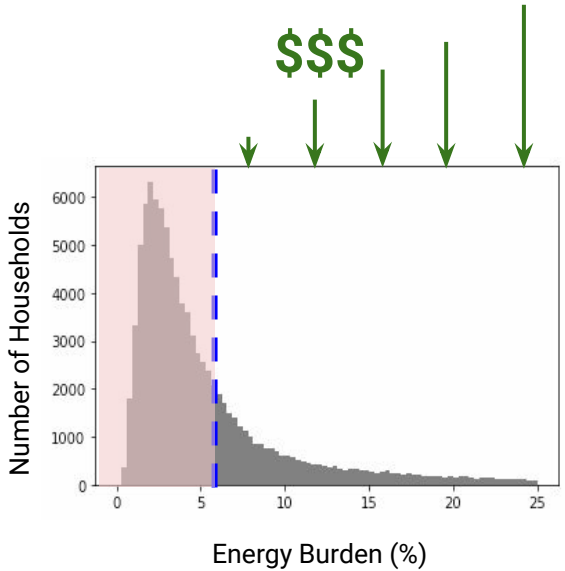
- Fixed or percentage bill discount for all eligible customers. Similar to LIHEAP
- Untargeted approach, so participation is high but average impact on energy burden and affordability is low
- Easy to administer

Tiered Discounts

Annual Household Income	Discount %
$0-10k	75%
$10-20k	30%
$20-30k	20%
$30k+	10%

- Assistance is tied to income level
- Provided as a fixed benefit or as a percent of total bill
- More targeted approach, with most benefits flowing to customers in need
- Slightly more complicated to administer

Percentage of Income Model



- Personalized benefit that ensures customer payments do not exceed a certain percent of income (e.g. 3% or 5%)
- Highly targeted approach, with benefits directly addressing high energy burden
- Very complicated to administer