

Data Sharing and Data Availability to Improve Affordability Outcomes

December 11, 2023



NATIONAL COUNCIL
ON ELECTRICITY POLICY

*Moderator: Hon. Sarah Freeman,
Commissioner, Indiana Utility Regulatory
Commission*



Speakers:



Sanem Kiser,
Senior Manager,
Analytics
*Oracle Energy and
Water*



David Konisky, Professor
of Environmental Studies,
*Indiana University,
Bloomington; Co-Director,
Energy Justice Lab*



Courtney Henderson,
Truckee Town Council
Member & Former
Mayor, *Truckee, CA;*
Clean Energy Strategist
& Consultant



www.naruc.org/ncep/



The National Council on Electricity Policy

Unique forum for state electricity decision-makers throughout the country to examine the ways new technologies, policies, regulations, and markets impact their state and the grid.

NCEP thanks the U.S. Department of Energy for its ongoing support. NCEP is an initiative supported by NARUC.

Resources

Mini-Guide Series

- [PUCs and the Investment Community](#): Opportunities for Engagement (2023)
- [Transportation Electrification](#): State-Level Roles and Collaboration among Public Utility Commissions, State Energy Offices, and Departments of Transportation (2022)
- [Transmission Siting](#): State Agency Decision-Making (2022)
- Engagement between States and [Regional Transmission Organizations](#) (2022)
- Engagement between Public Utility Commissioners (PUCs) and [State Consumer Advocates](#) (2021)
- Engagement between PUCs and [State Energy Officials](#) (2020)
- Engagement between PUCs and [State Legislatures](#) (2019)
- State Agency Coordination During [Energy-Related Emergencies](#) (2019)
- [Local Government Engagement](#) with PUCs (2019)

Mini-Guides in Development

- Engagement between Air and Environmental Regulators and PUCs and SEOs
- Partnerships between State Government Agencies and Higher Education Institutions for Workforce Recruitment and Retention

Events

Webinars:

- Two Member Updates (February & July/August)
- Two topical webinars

Annual Meeting:

- Typically September
- Past annual meetings have explored **Affordability, The Evolving Customer, Coordinated Electricity Planning, and Transmission & Distribution Coordination**

Events & Resources

Website & Webinar Reminders

- Join the NCEP listserv to be notified of future events by selecting NCEP as an interest area in your MYNARUC account at www.naruc.org/mynaruc/.
- This webinar is being recorded. The presentation and recording will be posted at www.naruc.org/ncep/.
- Type questions in the Q&A box. Unanswered questions will be sent to speakers for follow up.

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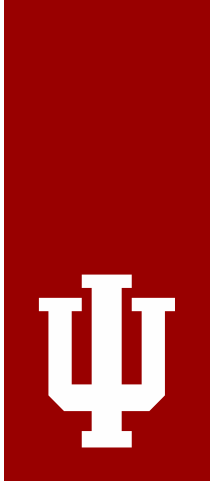
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Utility Disconnections Dashboard

NARUC Webinar on Data Sharing and Data Availability for Improving Affordability Outcomes

December 11, 2023

David Konisky

Lynton K. Caldwell Professor

Co-Director, Energy Justice Lab

O'Neill School of Public and Environmental Affairs

Indiana University

<https://energyjustice.indiana.edu>



About the Lab

The Energy Justice Lab is a research collaboration between Indiana University (IU) and the University of Pennsylvania (Penn), co-directed by Dr. David Konisky of IU and Dr. Sanya Carley of Penn. The Lab mission is to explore, measure, and improve the equity and justice dimensions of society's ongoing energy transition. [Meet the team](#)



INDIANA UNIVERSITY
O'NEILL SCHOOL OF PUBLIC
AND ENVIRONMENTAL AFFAIRS



**Kleinman Center
for Energy Policy**

What are we doing?

- Explaining prevalence and patterns of energy insecurity
- Evaluating potential solutions
- Collecting and making accessible utility data on disconnections and related policy



Utility Disconnections



Disconnections Dashboard

Data Explorer

Nearly 3 million people have their electricity shut off annually because they cannot afford to pay monthly bills.

The Energy Justice Lab is tackling this problem head-on by collecting data, developing interactive tools, and conducting research.

<https://utilitydisconnections.org>



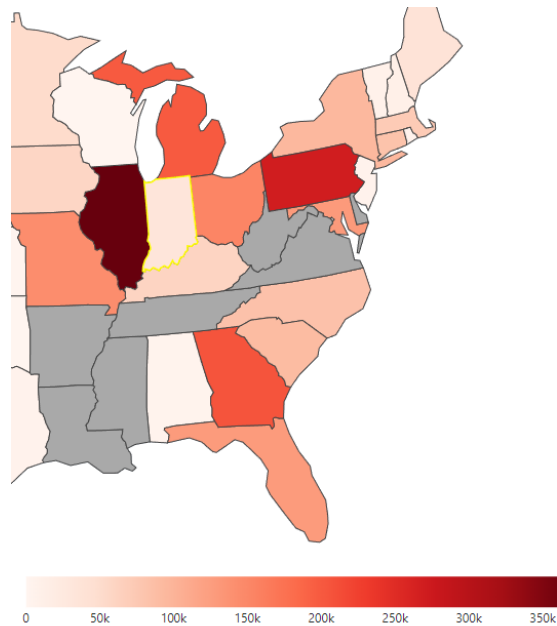
INDIANA UNIVERSITY BLOOMINGTON



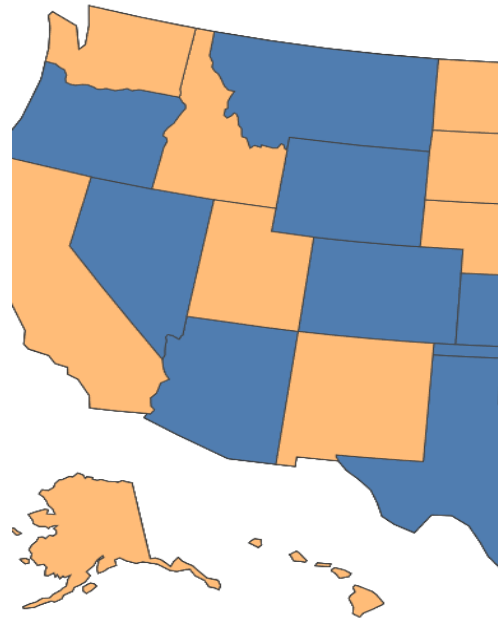
Without Power...

Utility Disconnections Dashboard

Utility Disconnections Map



Utility Disconnections Policy Map



Utility Disconnections Data Trends

North Carolina

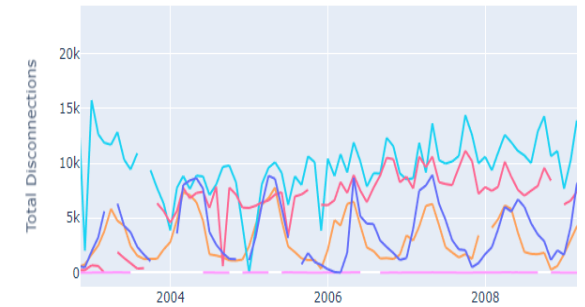
Select Utility Provider

Select Year

Select Service Type

Select Utility Type

Total Disconnections



Methodology

Disconnections data:

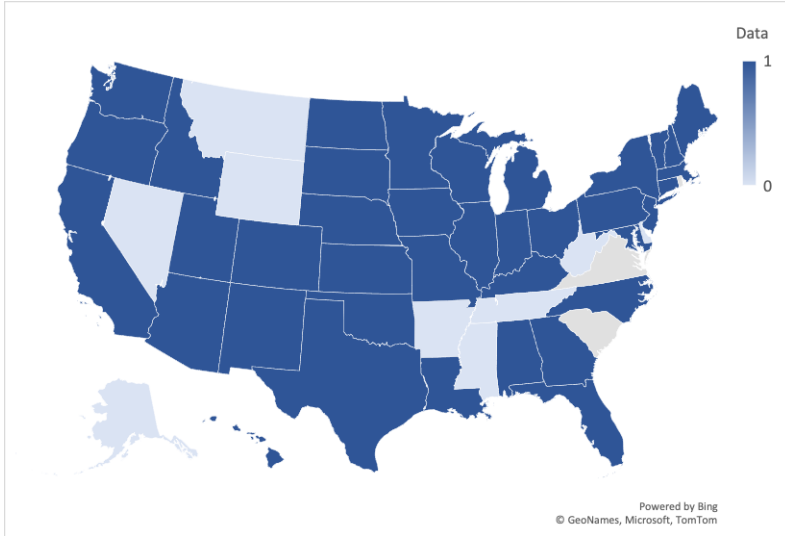
- Public utility commissions via web/PDF scraping, manual entry
- Public information requests to municipal power providers
- Network contacts: National Consumer Law Center, National Energy Assistance Directors' Association, Center for Biological Diversity
- Disconnection rates: $\text{Disconnections} \div \text{Total number of customers}$

Policy data:

- Legal analysis: LexisUni, bill search, regulatory dockets



A Few Statistics on Dashboard



Some data from
42 states, plus DC



332 utilities with data
(70% of these with 3+ years,
35% with 5+ years)

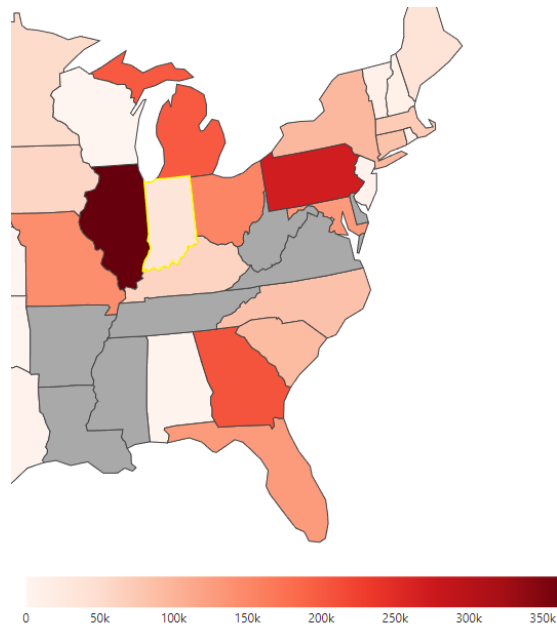


~ 80 million residential
customers covered in data.

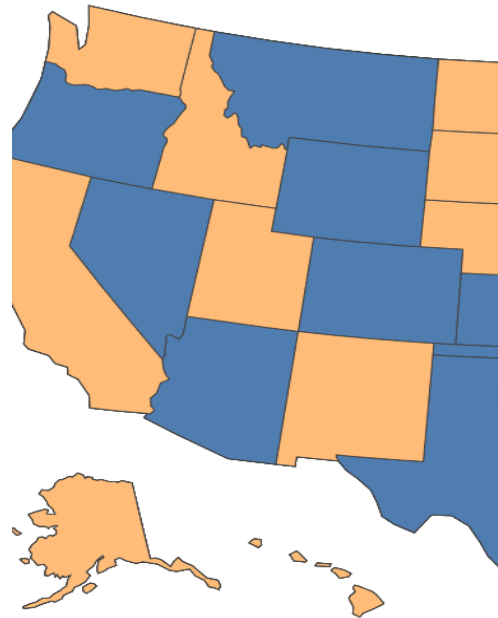


Utility Disconnections Dashboard

Utility Disconnections Map



Utility Disconnections Policy Map



Utility Disconnections Data Trends

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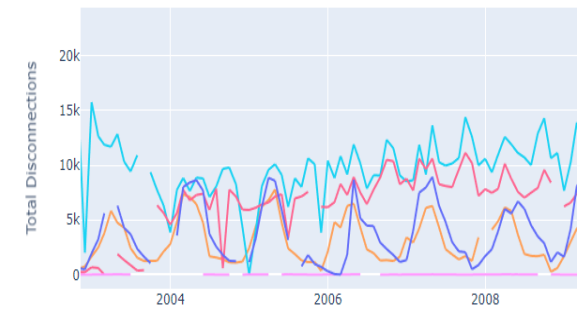
Select Utility Provider

Select Year

Select Service Type

Select Utility Type

Total Disconnections



Limitations of the Dashboard

Data availability:

- Many (most) utilities do not report their disconnections
- Reporting that does happen often lacks geographic resolution
- We know very little about municipal and cooperative utilities

Disconnection counts (or rates) tell only a partial story.

- Who do utilities disconnect?
- Why are some customers disconnected, and others not?
- Are disconnections used as a last resort, or as a routine collections strategy?



Who is energy insecure?

Low income yes, but research from our Lab has identified other household characteristics, including:

- People of color
- Families with young children
- People who are medically vulnerable
- People living in poor housing conditions

Important implication: strategies that target energy assistance only to LMI customers will be inadequate.

How might utilities better identify customers in need?



Contact: David Konisky (dkonisky@indiana.edu)



Crisis Technologies Innovation Lab
Environmental Resilience Institute



Energy Justice Lab

Research

Workshops

Podcast

Research Team

News & Events

Contact Us



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Leveraging data to accelerate energy affordability

NCEP Webinar

Sanem Kiser

Senior Manager, Analytics

Oracle / Opower

December 2023



According to federal standards, over 60% of Americans could be considered low or moderate income



Data and technology adds the breadth to the depth provided by community engagement



JOINT UTILITY DAY



THURSDAY, AUGUST 25, 2022

Utility representatives will be on-site to assist you.


Please join our representatives on the concourse of the **Entertainment & Sports Arena** from **3:30 p.m. to 6:30 p.m.** We can answer questions about your utility services, help you make payments, or discuss water and energy efficiency solutions.

You can also explore payment plans and budget programs, such as deferral options, budget billing, and automated payments.

Your utility partners are here to help! Please plan to visit on August 25.

Confirmed Partners: Washington Gas, Pepco, DC Water, DC DOEE*, DC PSC, DC OPC and Councilmember Trayon White Sr. will also be on site with staff to assist residents.

*DOEE will provide information but cannot accept applications.



WHAT:
Joint Utility Day

WHEN:
Thursday, August 25, 2022,
3:30 p.m. to 6:30 p.m.

WHERE:
**Entertainment & Sports
Arena, Concourse**
1100 Oak Drive, SE
Washington, DC 20032
(Across from the Congress
Heights Metro Station)

Managed by: 



Account #*****7890

Sarah,
keep your bills
affordable and stay
cozy this winter



Winter bills can be higher
than you expect

\$176 was your highest
bill last winter



 You successfully completed your survey!

Your Savings Hub

You're eligible for n programs
based on your survey answers



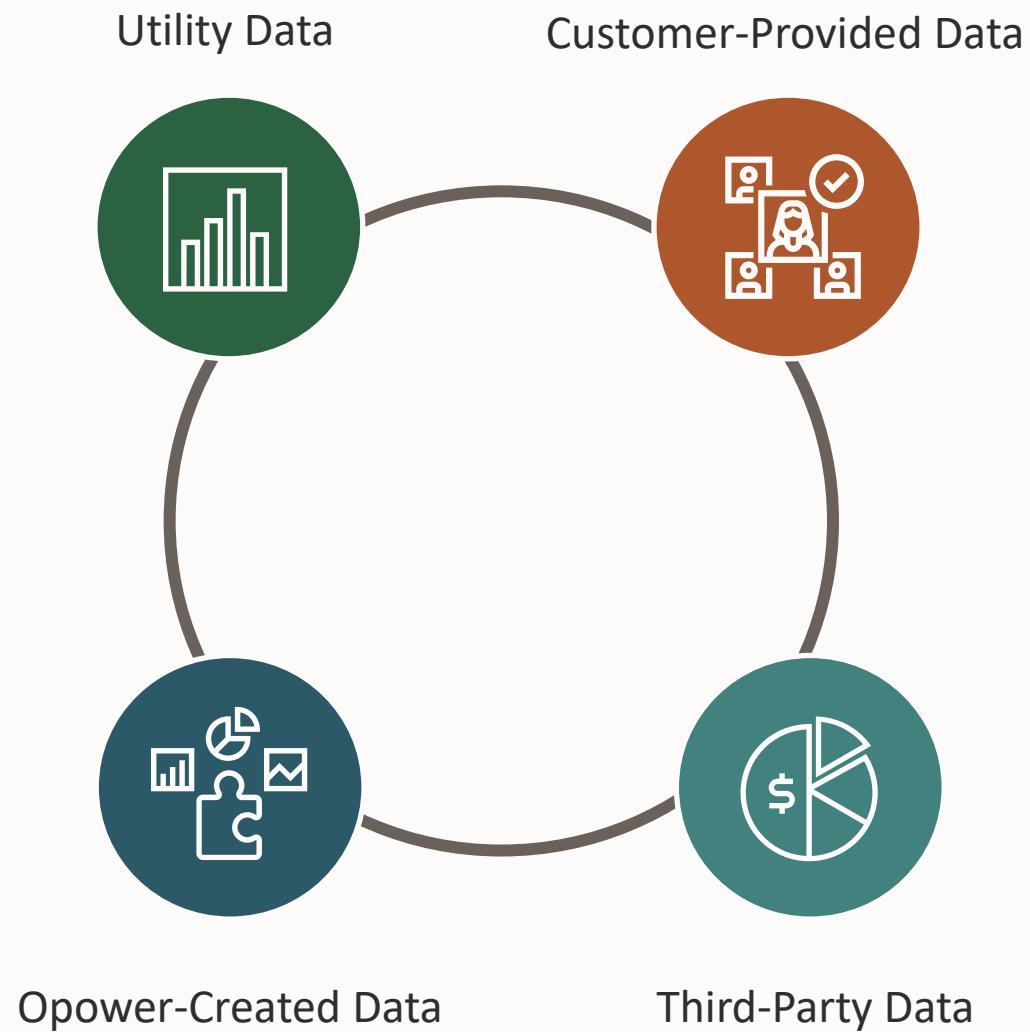
Results are prioritized by the value they
provide you.

 Top recommendation

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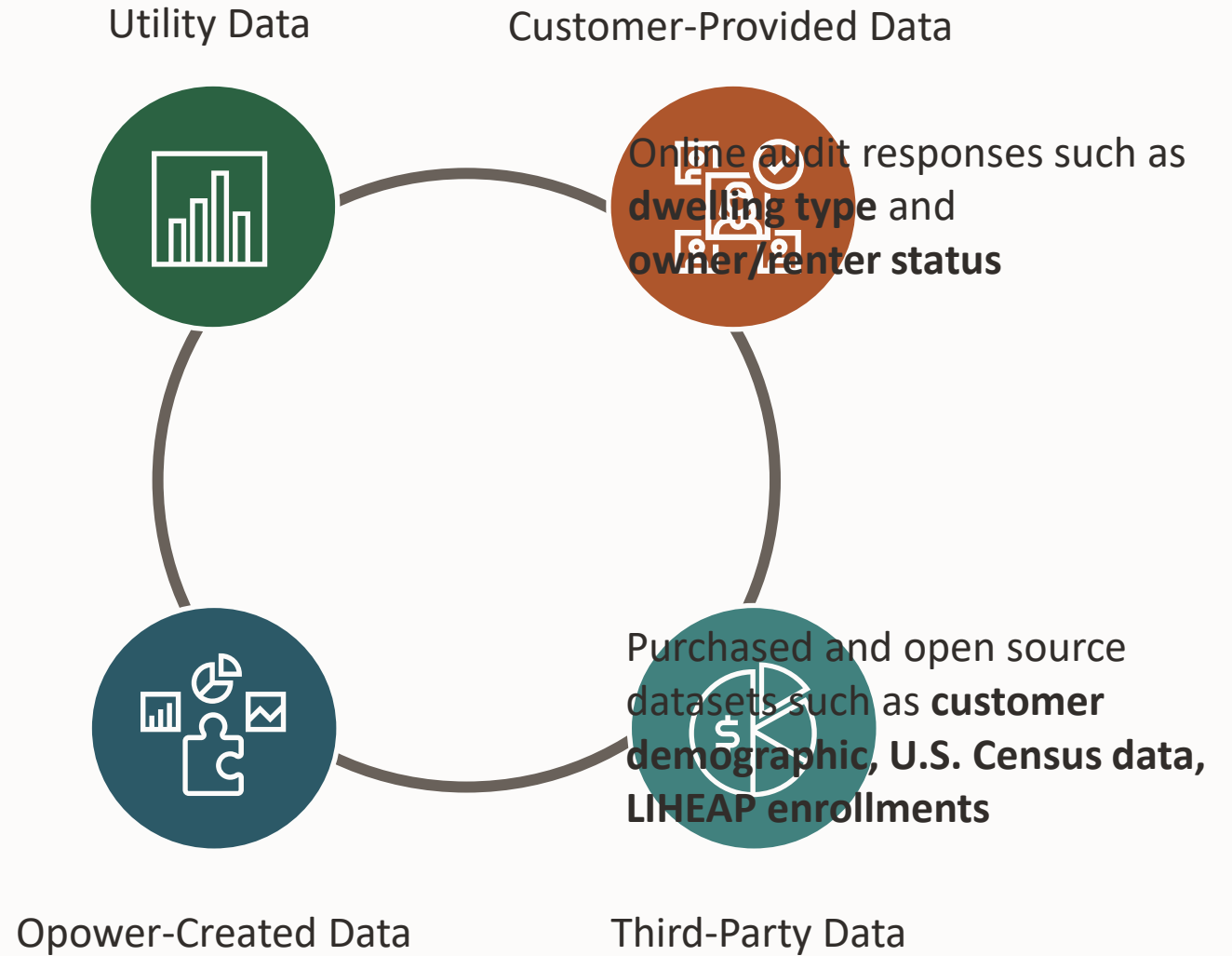
12/11/2023

**We ingest a
wealth of data
from multiple
sources**

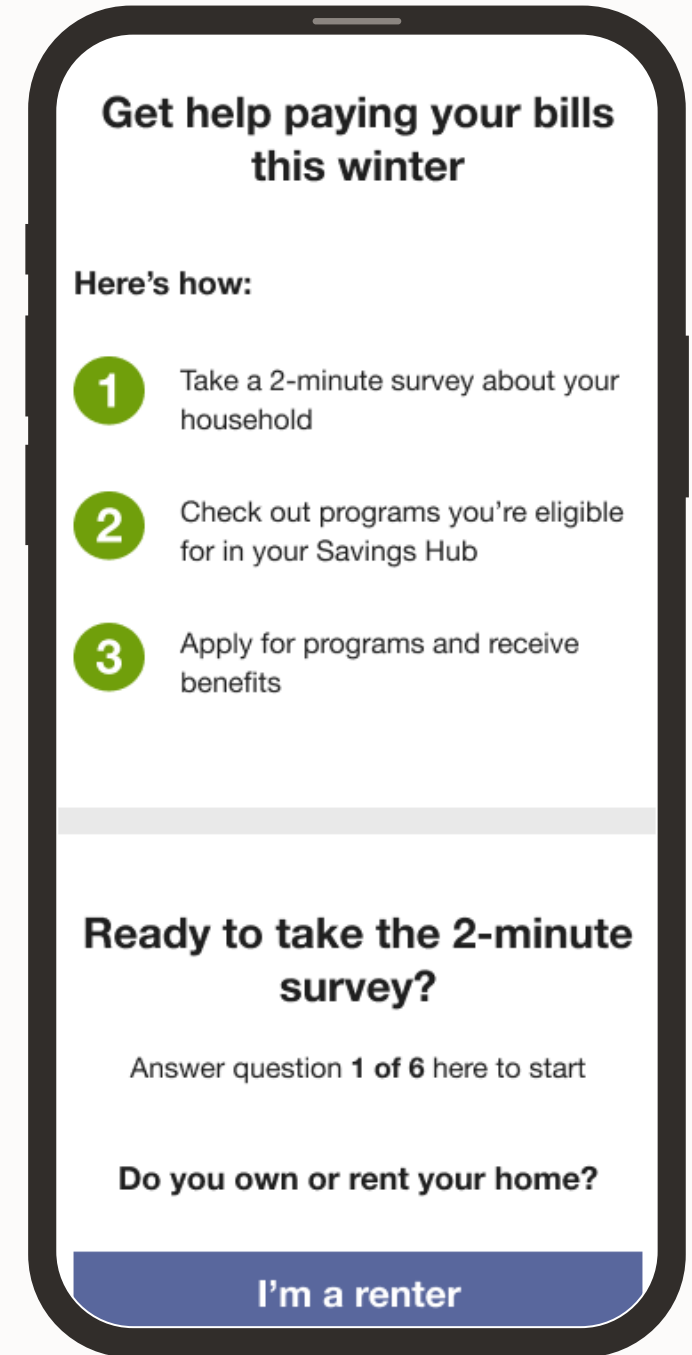
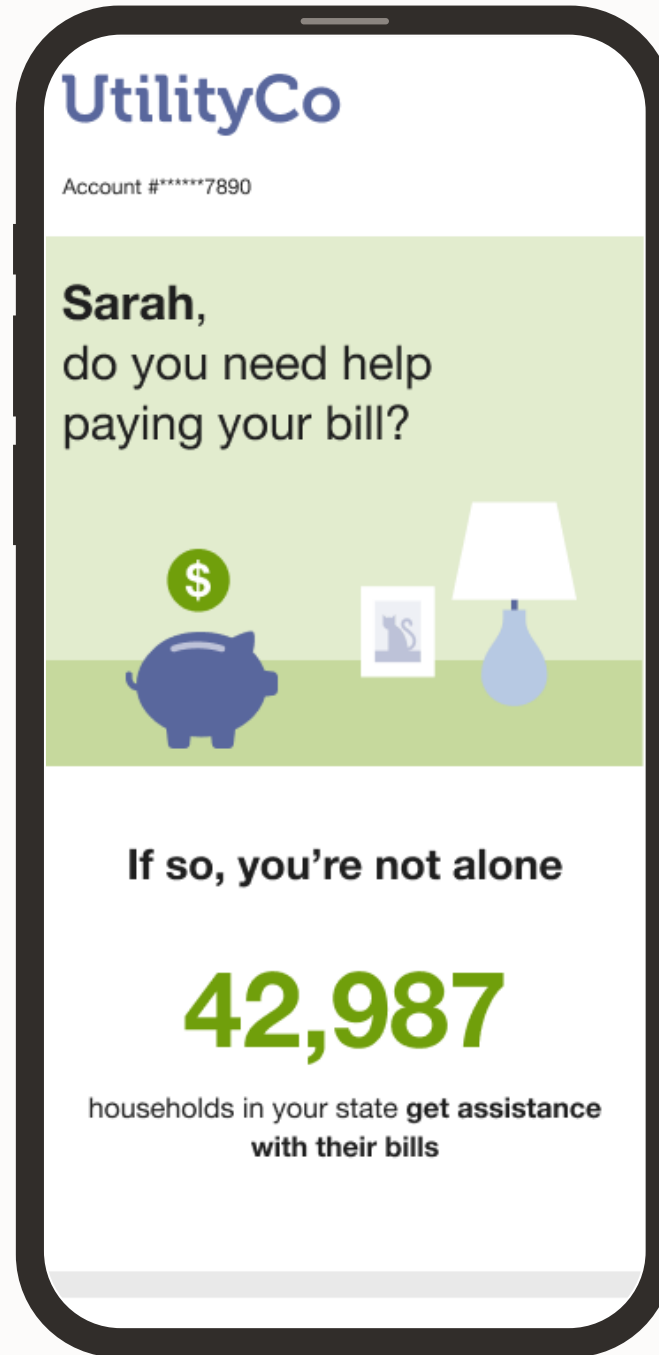


Customer information such as **monthly bills, collections data, and rate codes**

Analytics and machine learning models such as **household energy burden** and **usage disaggregation**



Reach people with messaging that resonates




An easy path
to personalized results...

UtilityCo

☰

Question 2 of 6



How many people live in your home?

Count U.S. citizens and resident aliens only.

Select

▼

[▶ Why we're asking](#)

BACK

NEXT


An easy path
to personalized results...

with a Savings Hub for
affordability programs

UtilityCo

☰

Question 2 of 6



How many people live in your home?

Count U.S. citizens and resident aliens only.

Select

▼

[▶ Why we're asking](#)

BACK

NEXT

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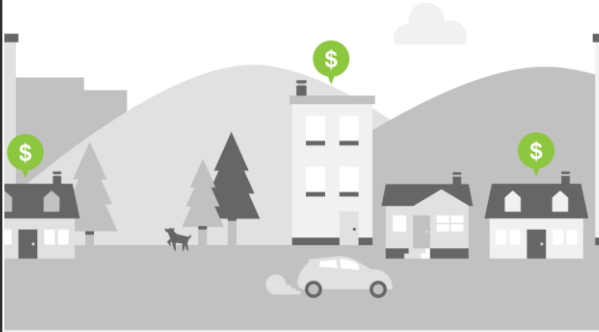
✓

You successfully completed your survey!

✕

Your Savings Hub

You're eligible for **n** programs based on your survey answers



Results are prioritized by the value they provide you.

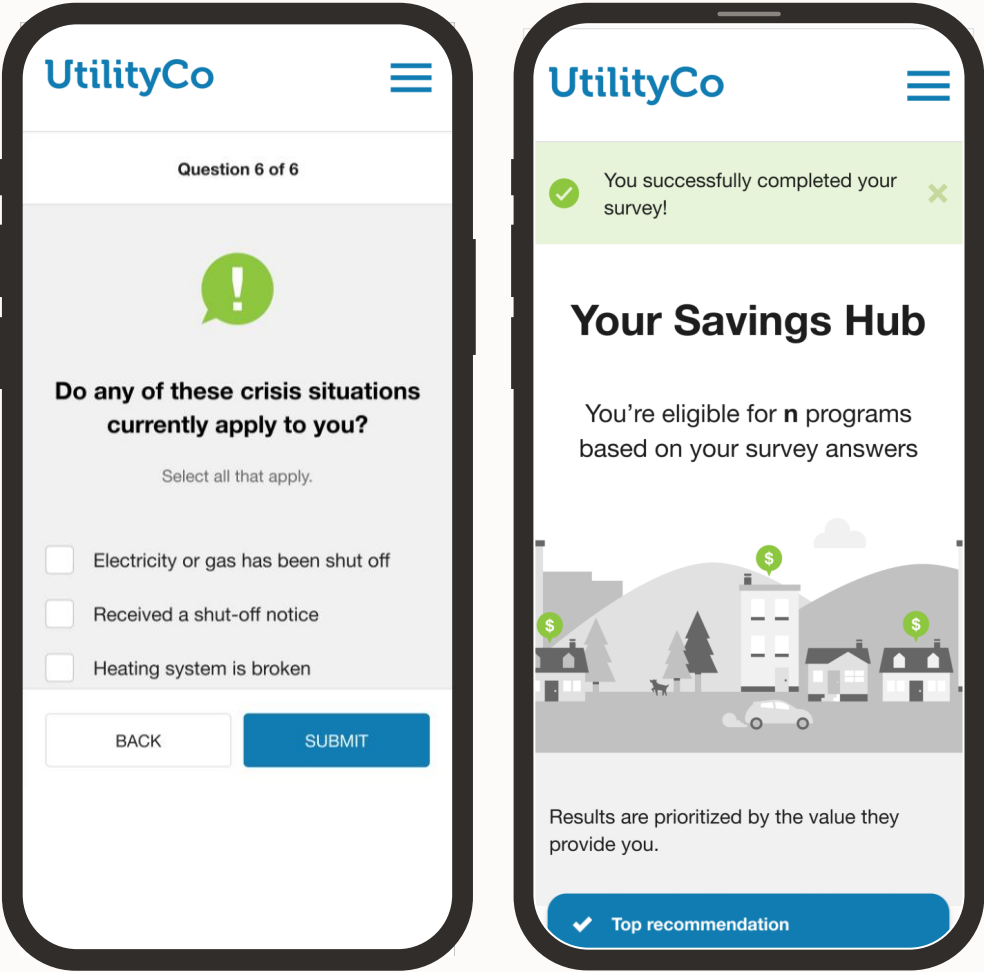
✓

Top recommendation

Data increases personalization and precision in targeting

Web-only solution

One-stop shop with personalized program recommendations based on survey responses.



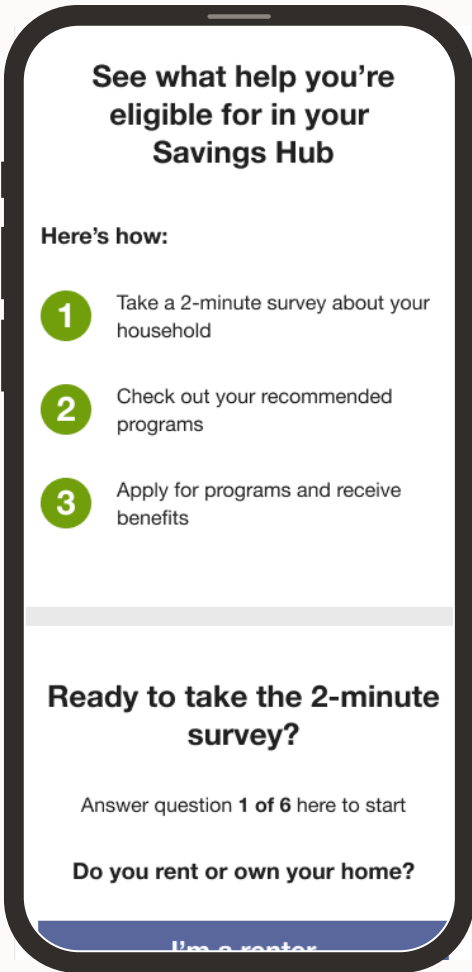
Data increases personalization and precision in targeting

Web-only solution

One-stop shop with personalized program recommendations based on survey responses.

+ email addresses

Outbound email communications to increase awareness of assistance programs.



Data increases personalization and precision in targeting

Web-only solution

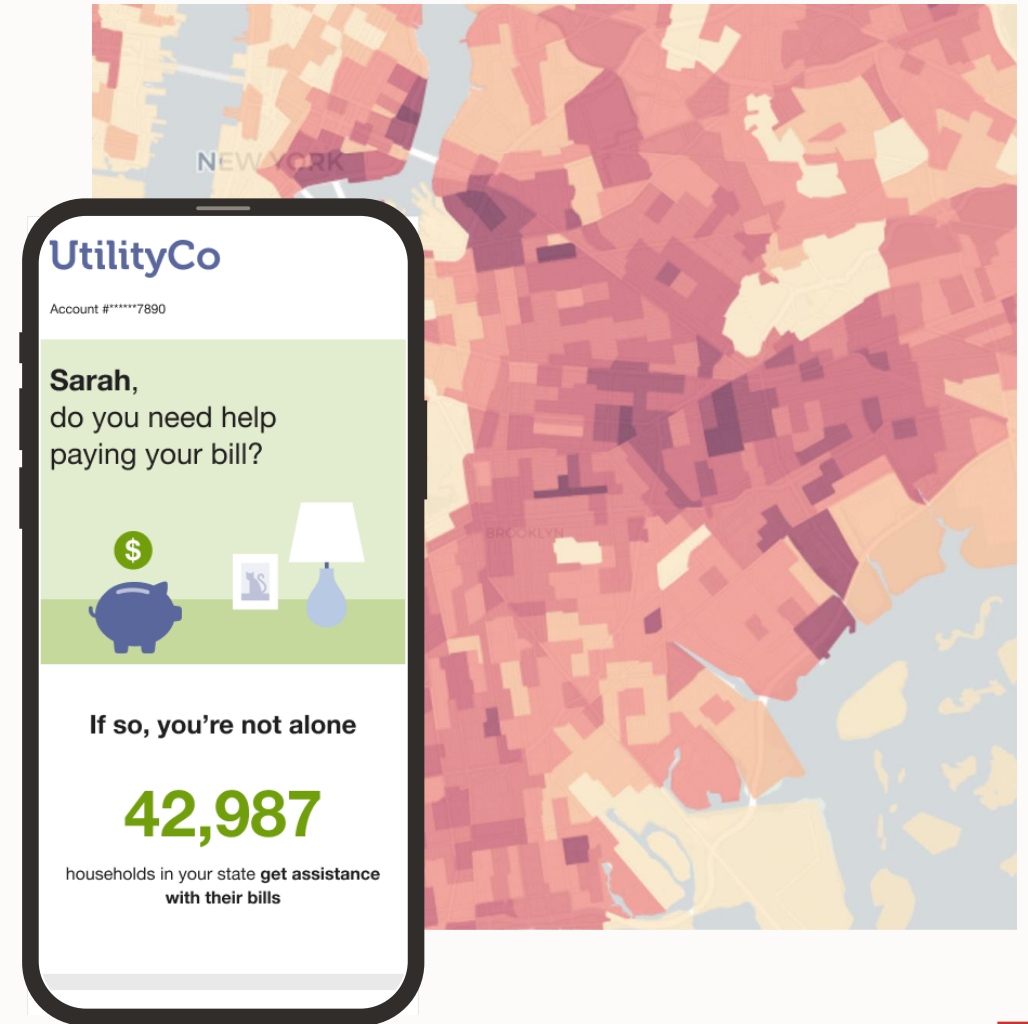
One-stop shop with personalized program recommendations based on survey responses.

+ email addresses

Outbound email communications to increase awareness of assistance programs.

+ mailing addresses

Targeted messaging to customers living in disadvantaged communities.



Data increases personalization and precision in targeting

Web-only solution

One-stop shop with personalized program recommendations based on survey responses.

+ email addresses

Outbound email communications to increase awareness of assistance programs.

+ mailing addresses

Targeted messaging to customers living in disadvantaged communities.

+ utility and usage data

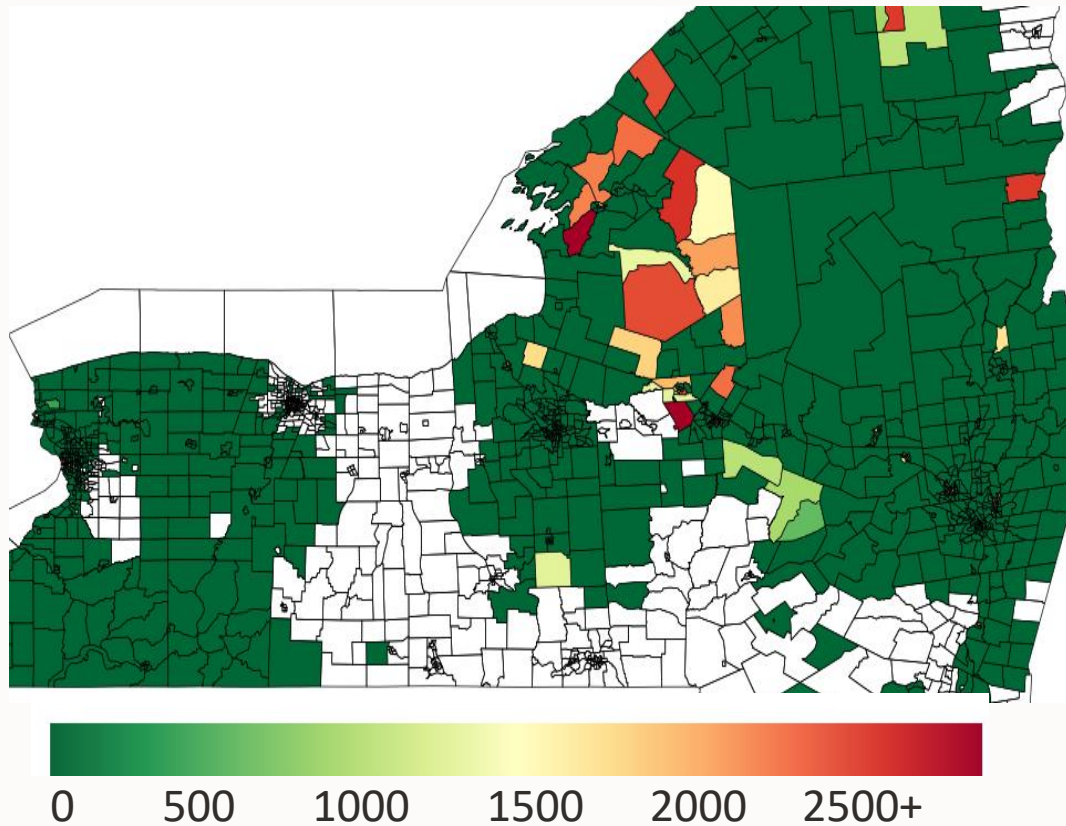
Household-level targeting leveraging third party datasets and calculated insights such as income, energy burden, and high heating/cooling load.



More granular energy burden data gives you a better view of the LMI landscape within your service territory

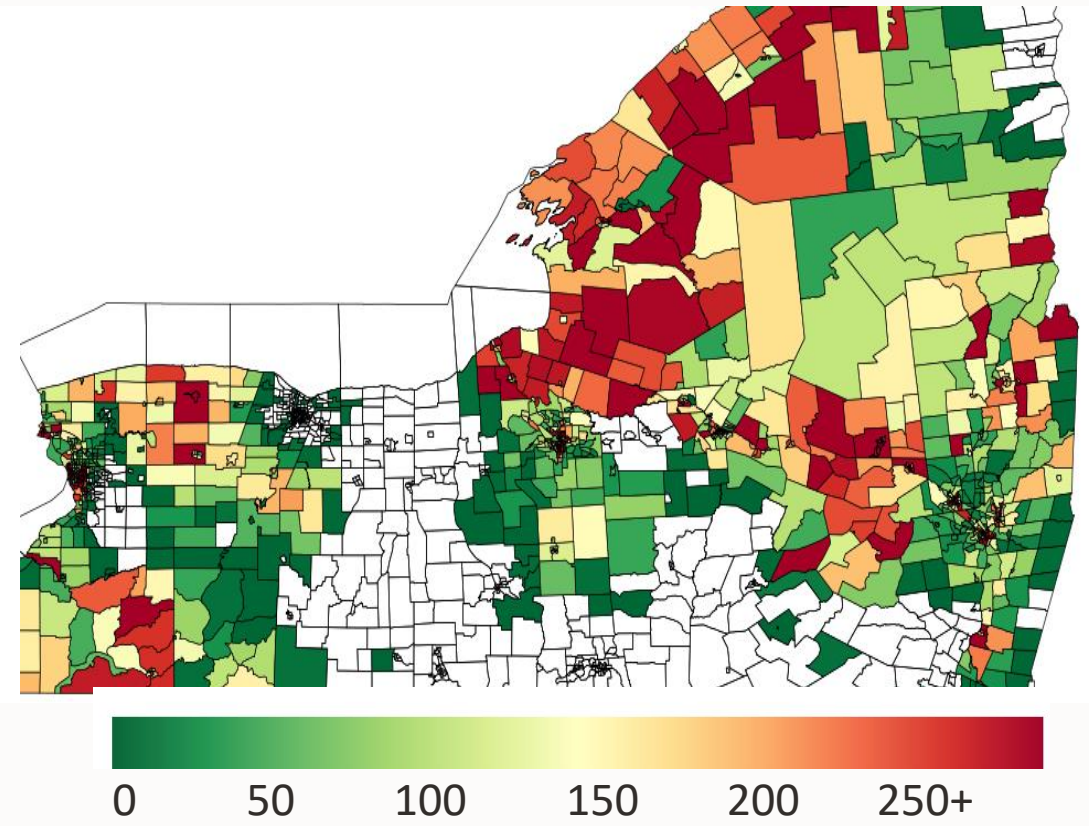
Energy burdened (6%+) HHs based on DOE's Low-income Energy Affordability Data (LEAD) Tool

6.5M New York State households



Energy burdened (6%+) HHs based on HH-level data

6.5M New York State households



How can we work across organizations and within our own?

Technology

- Use a variety of metrics from the utility, SEOs, and outside sources to identify customers in need of assistance today and those that might tomorrow
- Create a one-stop shop to make it easier for LMI customers to learn about all utility, state, and federal assistance programs in one place
- Connect customers to assistance programs at the moments that matter to them like the first moment they enter arrears

Policy

- Encourage data sharing for the shared goal of increasing program participation
- Make the application process more streamlined – explore opportunities for self-attestation
- Require customer engagement plans from utilities when creating arrearage management plans



Thank you!

Sanem Kiser

Senior Manager, Analytics

Oracle / Opower

sanem.kiser@oracle.com





**Data Sharing & Data Availability to Improve
Affordability Outcomes: Humanizing Data**

Dr. Courtney Henderson

Council Member & Former Mayor,
Experienced Clean Energy Strategist,
Mom, & Pro Mountain Biker

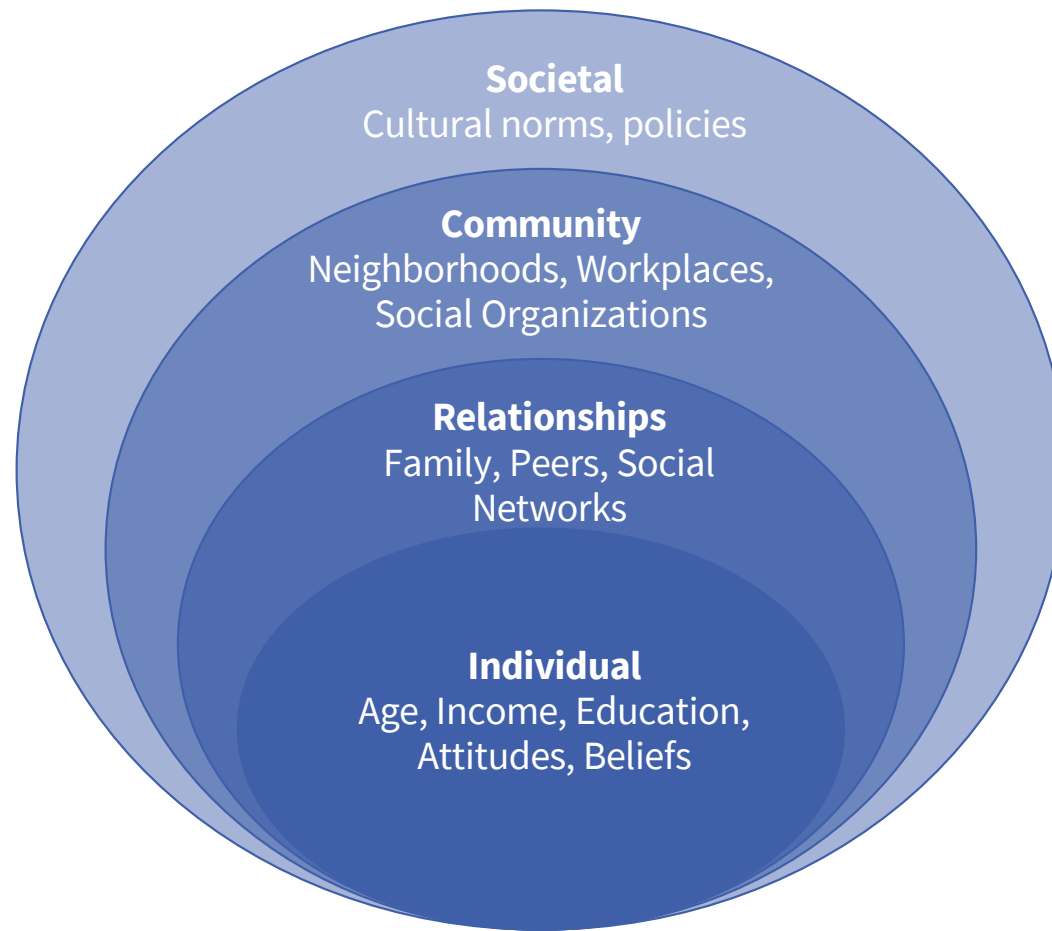
Why We Care....

About Humanizing Data to Drive Affordability Outcomes.

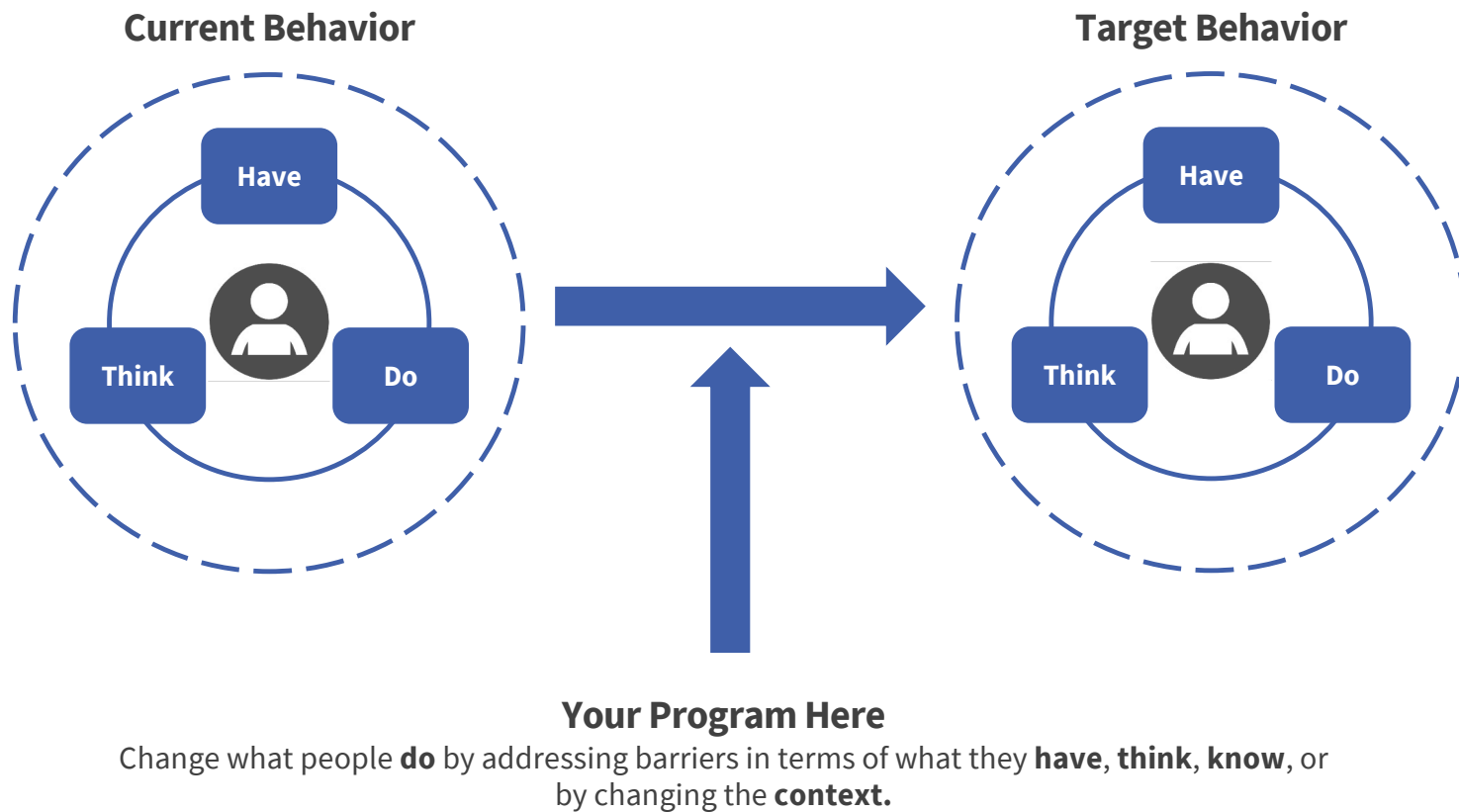
- Energy savings at the meter are a lagging indicator
- Opportunities to provide fast feedback & earlier insights
- Continuous improvement & iteration leads to better outcomes
- Data + customer-centric work is powerful!



We Can Leverage Public Health Models to Drive Energy Behaviors.



We Can Use Data to Understand & Influence Customer Behaviors.



A vintage computer setup featuring a CRT monitor and a keyboard. A person's hands are positioned above the keyboard, as if about to type. The entire image is covered with a semi-transparent blue gradient, which serves as a background for the white text.

Make sure you're building the right it, before
you build it right.

-Albert Savoia

What Is It? How Do We Do It?

Preto-typing

Make sure – as quickly and cheaply as you can – that you are building the right it before you build it right.

Validate the premise, “if we build it, they will use it.”

Proto-typing

More detailed.

Create after measuring interest, use.

Testing whether it can be built and will work as expected.

“Don’t find customers for your products, find products for your customers.”

-Seth Godin, Best-Selling Author & Entrepreneur



Customer-Centric Data

A few lessons.


Empathetic Design-Thinking

- Has anyone ever been in an MRI machine?
- Did you like the experience?
- What did it make you feel?



Empathetic Design-Thinking

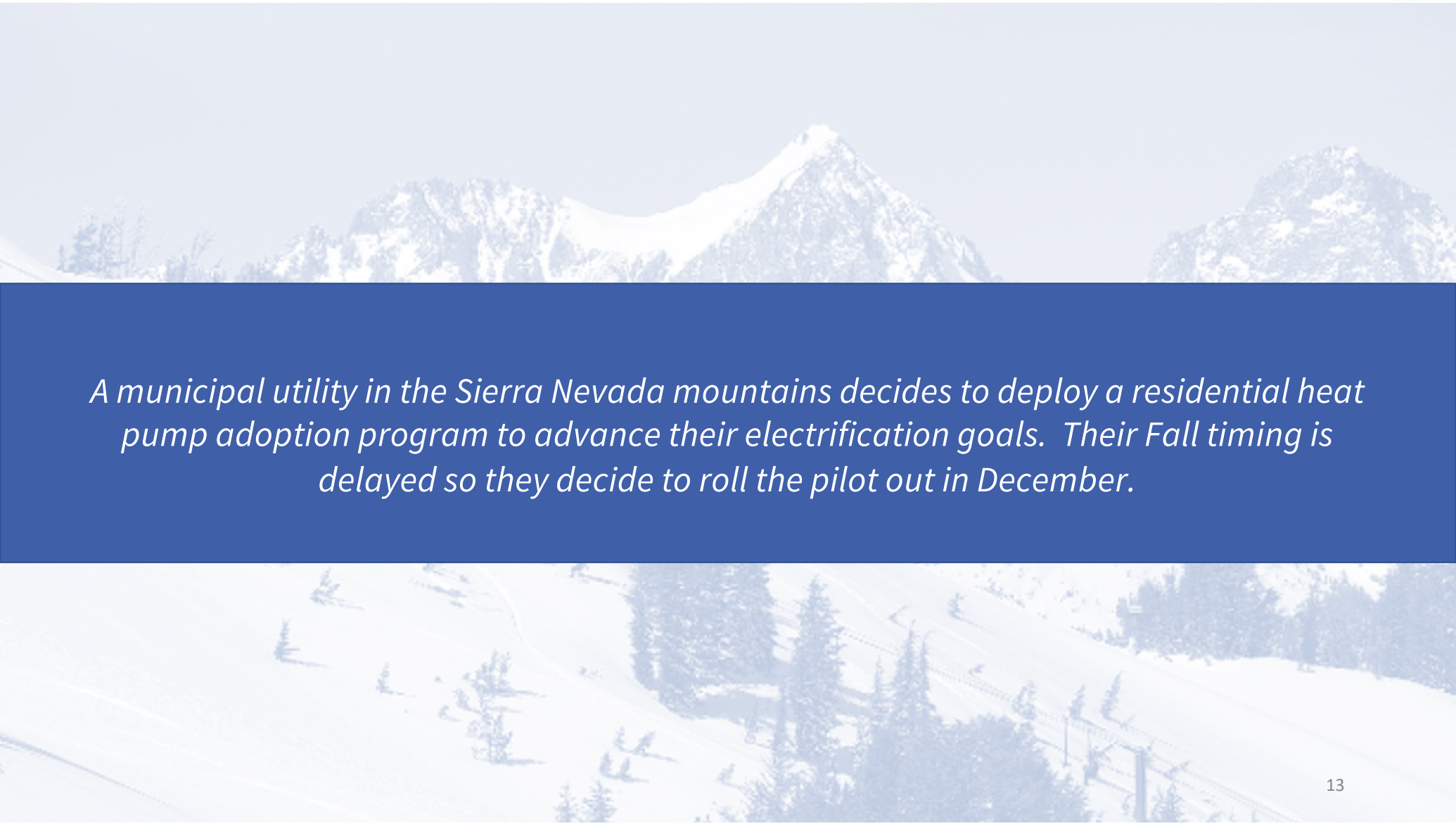




A public health intervention aims to reduce malaria illness through the deployment of insecticide-treated bed nets.

They are used
for fishing.





A municipal utility in the Sierra Nevada mountains decides to deploy a residential heat pump adoption program to advance their electrification goals. Their Fall timing is delayed so they decide to roll the pilot out in December.

Reality of rural
mountain
living.





Successful Data Use

Real-world strategies that have worked.

- Know your customers
- Empathize with your customers
- Provide frictionless, high-quality experiences

PARTING THOUGHT:

Work with your customers, not
against them.



A photograph of Courtney Henderson, a woman with dark hair, smiling and sitting in a black leather office chair. She is wearing a dark blue zip-up jacket. Behind her is a wooden plaque with a mountain and train scene, and the text "Incorporated 1993". To the left is an American flag, and to the right is a California state flag and a blue and white flag. A large blue circle is overlaid on the left side of the image, containing white text.

Get in Touch!

Courtney Henderson

Council Member & Former Mayor

w: chenderson@townoftruckee.com

p: Courtney.e.Henderson@gmail.com

m: 401.338.0800

For a healthy community & resilient tomorrow