

### Marketing, Education, and Outreach

#### **Expert Presentation Series | August 4, 2025**

This expert level presentation series session will provide the Massachusetts Electric Rate Task Force an opportunity to learn from experts and/or other jurisdictions on the above topic.

Note: The contents of this presentation do not necessarily reflect the views or positions of the Massachusetts Department of Energy Resources.

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### **Massachusetts Electric Rate Task Force Goals**

The Rate Task Force brings together diverse stakeholders to reimagine how electric rates and the regulatory framework can drive an affordable, equitable, and decarbonized energy future.

Through targeted conversations, expert presentations, and thoughtful exploration of complex issues, the Task Force aims to deepen understanding, surface critical questions, clarify challenges, and build the foundation for durable regulatory reform and action.

The Rate Task Force will use the Massachusetts Interagency Rates Working Group's Long-Term Ratemaking Study and Recommendations as a starting point for discussion and knowledge building on rate designs, ratemaking, and regulatory mechanisms.



Facilitate open, inclusive dialogue

Engage in **open, inclusive dialogue** about complex ratemaking and regulatory issues outside of a regulatory proceeding

Frame critical questions and opportunities

Empower stakeholders to identify **critical questions and opportunities** for the advancement of rate design and ratemaking reform





### **Ground Rules & Engagement**

#### This work is complex – and your insight matters; let's focus on learning, listening, and shaping together!

#### Participation, Engagement, & Respect

- Everyone's perspective is valuable this space works best when all voices are heard
- Respect differences in background, experience, and priorities
- Bring curiosity ask questions and offer potential answers
- Focus on understanding others' goals and values, not just their positions
- <u>It's okay not to have a solution help us shape the right questions</u>

#### **Collaboration, Not Consensus**

- This body is deliberative, it is not a decision-making space
- We don't need to agree on everything, but we should work toward shared understanding
- Where we disagree, help clarify what the tension is and why it matters

#### **Transparency & Trust**

- We'll be clear about how input is used
- Share what you can; identify when you're speaking on behalf of your organization or personally
- Materials, summaries, and key findings will be shared openly to support accountability

#### **Focus & Productivity**

- Stay on topic and honor the scope of the Task Force
- Raise related concerns, but help us stay anchored in the rate design and regulatory issues at hand
- Use the structures provided (i.e., expert sessions, targeted conversations, office hours) to deepen discussion
- Avoid discussion about open and ongoing proceedings at the DPU



### **Expert Presentations**

#### I. Marketing, Education, & Outreach (MEO)

#### Hawks Peak Strategies, Dr. Courtney Henderson

Present on the opportunities to leverage MEO to better serve customers and the IRWG near- and long-term recommendations

#### II. Missouri's Time of Use (TOU) Experience

#### Missouri Office of the Public Counsel, Geoff Marke, PhD

Present on the roll-out of TOU in Missouri, the opportunity of TOU rates, and lessons learned.

#### III. MEO for Time-Varying Rate (TVR) Programs – Best Practices Across U.S.

#### **GridX, Michael Pirro**

Present on best practices and common challenges in implementing TVR, in addition to a case study of customer experience and education

#### **IV. Dynamic Rates Engagement**

#### **Oracle, Samantha Caputo**

Present on leveraging AMI for customer engagement and empowerment through the deployment of dynamic rates, in addition to a case study of a utility deployment

#### V. Embedded Intelligence in the Electric Grid

#### Sense, Mike Phillips

Present on the opportunities of edge computing and real-time applications for customer engagement and home/grid optimization

#### Reminder

Expert presentation sessions are not fo substantive deliberation amongst participants. Questions for each speake will be taken as time allows.









Marketing, Education, & Outreach

**Dr. Courtney Henderson** 

Founder & President, Hawks Peak Strategies Council Member & Former Mayor

# Thank You!

I appreciate the opportunity to present on marketing, education, and outreach (MEO) to the Massachusetts Interagency Rates Working Group stakeholders. I also want to thank everyone who is working tirelessly for a clean, resilient, and affordable energy future for all Massachusetts residents.

Founded by Dr. Courtney Henderson, Hawks Peak Strategies employs the latest insights in behavioral science to drive policy strategy, market and go-to-market strategy and design, and customer-centric, equity-focused marketing and solutions design. At Hawks Peak, we believe in a just and equitable clean energy transition that benefits everyone.

## Agenda

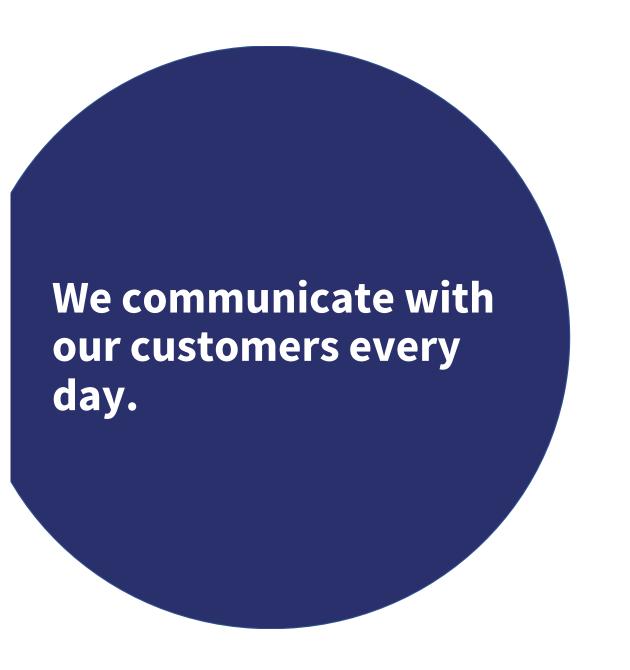
The Opportunity

Recommendations & Rationale

**Additional Opportunities** 

**Closing Thoughts** 





Ease, convenience, and simplicity are crucial for frictionless customer experiences and driving desired consumer behaviors through MEO.

We must use **meaningful**, **easily understood**, **accessible**, **and motivating** communications that grab our customers' attention.

## **Why It Matters**





Communicate with consumers in the ways they communicate

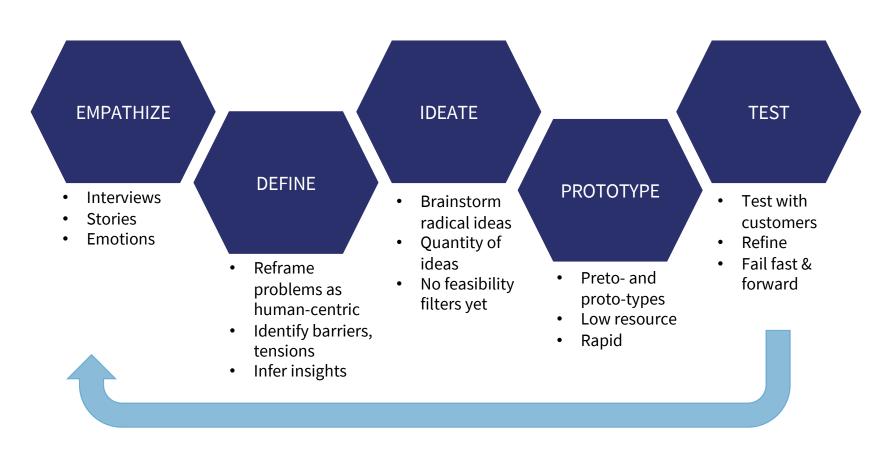


Drive participation, enrollment, satisfaction, & trust



Risk wasting valuable resources

# We can leverage **human-centered design** to create, implement, and put MEO into market. It is an iterative cycle.



# Can customers be served better by MEO?



# YES!



# The IRWG's short- and long-term MEO recommendations focus on enhancing customer-centricity.

- Minimize technical terms
- Use plain-language terms (5<sup>th</sup> grade reading level)
- Provide a single point of contact for all (or several) programs, rebates, etc.
- Reduce & simplify documentation and verification requirements
- Ensure customers can easily reach knowledgeable utility staff (CSRs, website)
- Recognize & respond to language needs for limited English customers
- Meet customers where they are
- Use language that resonates (multi-cultural)
- Recognize that different communities have different barriers & motivations
- Use a variety of outreach channels
- Ensure collaboration & partnerships with community-based organizations & community members
- Target individual households based on needs & risks (as AMI is implemented)



This is a good way to gain buy-in amongst diverse stakeholders & helps ensure an implementable plan that is:

- Customer-centric
- Cost-effective
- Strategic
- Targeted

Minimize technical terms. Use plain language terms instead.

## Arrears forgiveness

Means-tested programs

Arrearage management

Acronyms



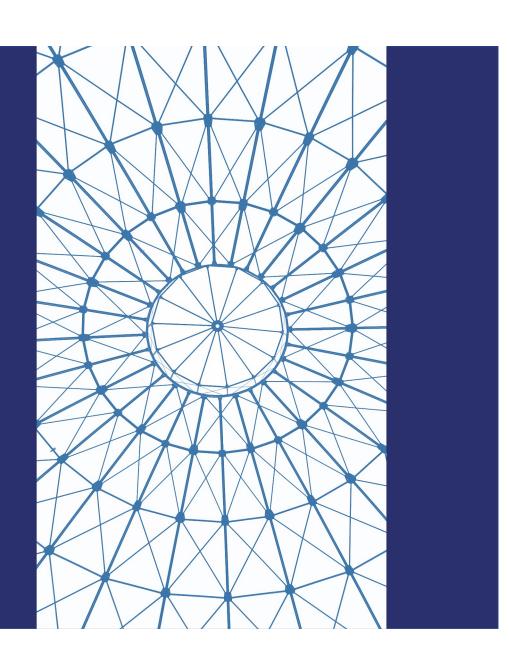
## Want to save money? Could you use a discount?

If you meet certain criteria, you may be eligible for a discount on your electric rate and/or arrears forgiveness—here's how.

## Replace with terms customers easily understand.

- "You may be able to get payment assistance."
- "You may qualify for help with your bill."

Customers often do not perceive energy solutions as discrete offerings.





- Work toward consistency in requirements
- Streamline applications
- Develop data-sharing agreements between utility & state programs
- Develop one-stop shop

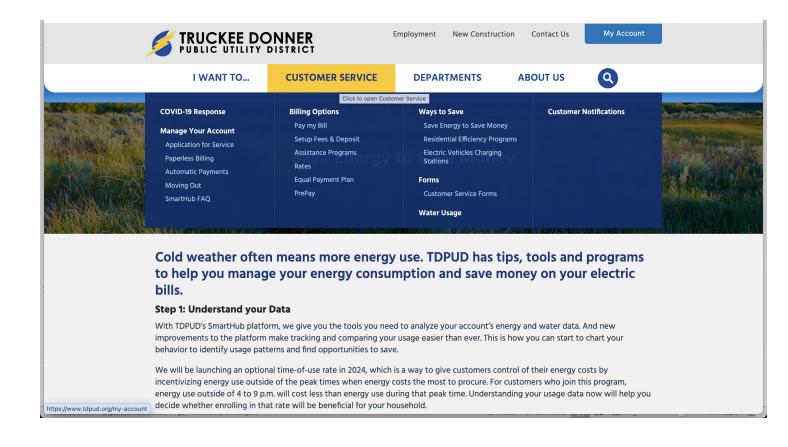


- Accessibility build trusts
- Ensure consumers have the resources they need, when they need them
- For websites, consider navigability & wayfinding; navigating across providers
  - Is the program path easily identifiable for consumers?
  - Is it buried in multiple drop-down menus?
  - Is it clear which options are available to owners, renters, etc.?

# How easy is your website for customers?

Have you tested it for usability?

- Do customers know where to look for what they need?
- How easily navigable is your site?
- How many dropdowns and/or clickthroughs must a customer navigate?
- How far down do customers have to scroll?





- Spanish, Portuguese,
   Mandarin all spoken in MA
- Language must be:
  - Clear
  - Precise
  - Unambiguous
  - In the appropriate language
  - Attention-grabbing

# **Enhancing Customer- Centricity**

Several opportunities.

**Not customer-centric:** "While PJM is not projecting generation capacity shortages that would limit customer usage..."

**Specificity:** no time frame on when customers should reduce their energy use.

**Call to action:** this contains multiple calls to action. Most consumers can only process 1-2 CTAs in a comms piece.

**Other CTA considerations:** placement, visibility, specificity, links to other sites.



#### Prepare Now for Winter Weather & Extreme Cold

PJM, the organization responsible for managing the electric transmission grid in 13 states including Ohio, and the District of Columbia, has issued a **cold weather alert** ahead of forecasted frigid temperatures across several states. While PJM is not projecting generation capacity shortages that would limit customer usage, we always encourage customers to use energy wisely.

Our crews are ready to go to restore power if needed. We want you to be ready too:

- Stay tuned to your <u>local forecast</u> for weather updates.
- · Assemble or refresh an emergency kit.
- Protect yourself from fire hazards and <u>heat</u> your home safely
- Consider <u>these tips</u> to save energy and money.
- Set the latest information by signing up for text alerts, downloading our mobile app and

Meet customers where they are. Use a variety of outreach channels.





Equitable community engagement requires:

- Developing community-based stakeholder groups with representation from diverse stakeholders
- Ensuring communities have a voice in design
- Sharing outcomes with communities
- Hiring & providing incentives

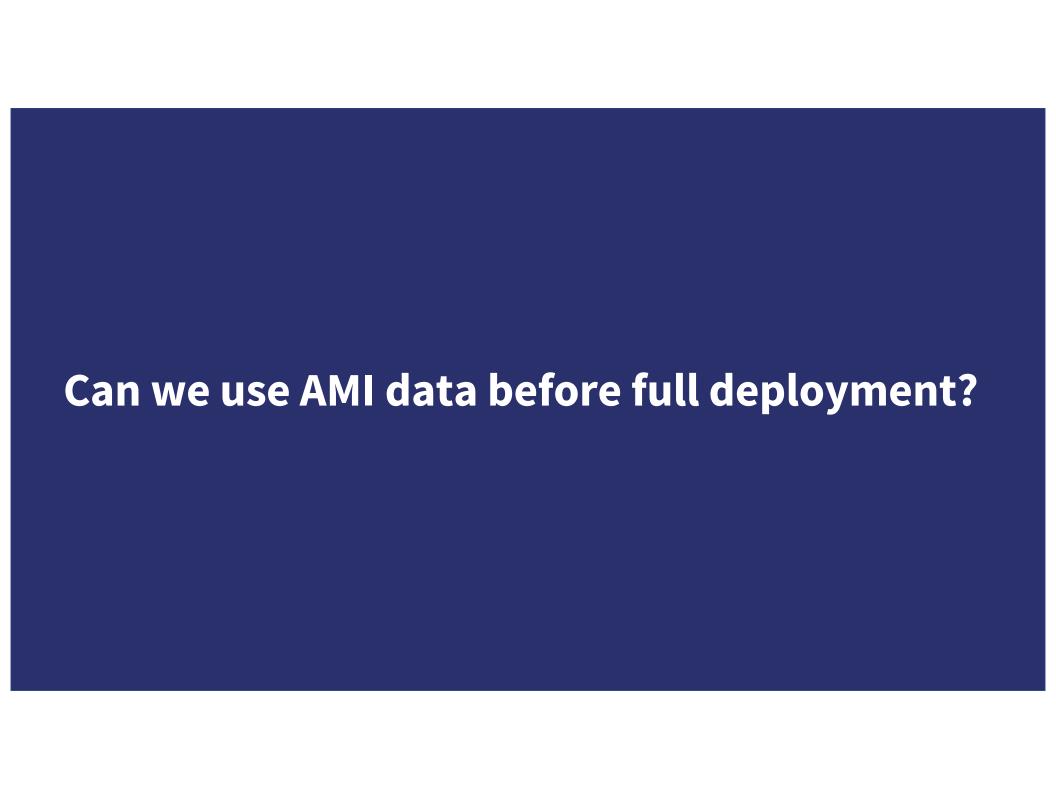
Source: Strengthening Equity in Energy - Case Studies



"If you're falling behind on your bills..."

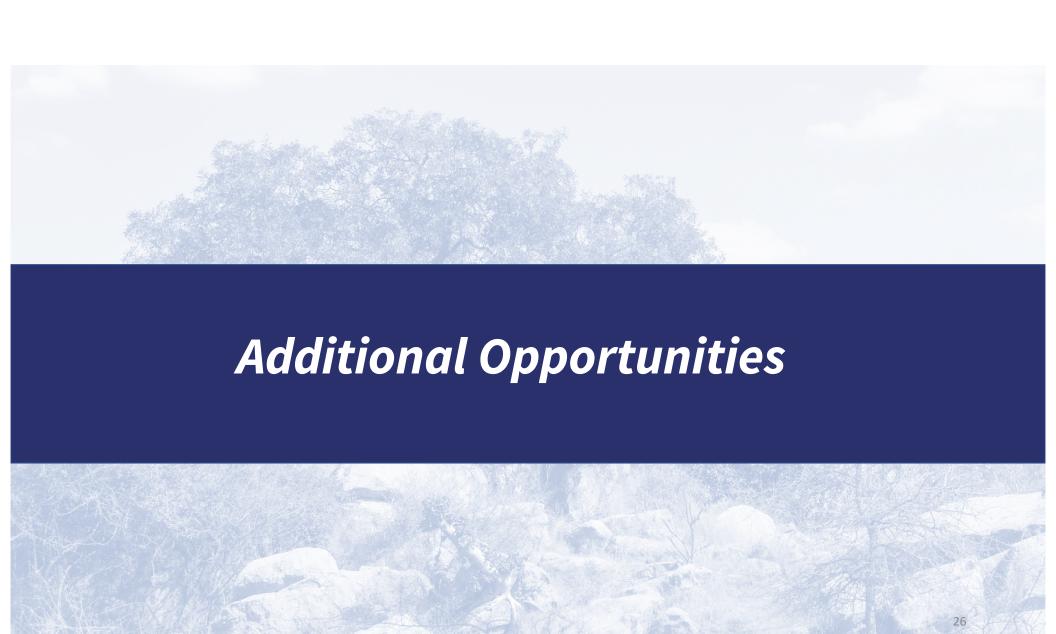
"If you need help, here is a program for you..."

"We see you're behind on your bills, this program can help you."



# YES!

This is a great opportunity to innovate our MEO efforts, and to target & test MEO.



### Consider:

- Imagery & the power of pictures: don't use stock imagery, textbased social media posts, & "executive speak" in videos.
- **Calls to Action:** noticeable, meaningful, & specific. Consider language, placement, context, tone, prioritization.
- Wayfinding: across channels & communications.



We must test it! We can do this efficiently and expediently!

- Interviews, focus groups
- Message testing (qual, quant)
- Including consumer voices in utility proceedings, rate cases, & program design
- Iterating on communications



Work with your customers, not against them.



## **Closing Thoughts**

- Customer-centricity can be applied to all that we do in MEO & solution design.
- Embrace discomfort.
- Don't fail. Learn.





### Bio

Dr. Courtney Henderson is an energy, climate, and health strategist with 20 years of experience in those sectors, as well as the Founder and President of Hawks Peak Strategies, a strategy and consulting firm that provides market strategy, branding and go-to-market services, customer-centric research, policy and regulatory solutioning, and thought leadership in the utility and clean energy sectors. Her work has taken her throughout the United States and as far afield as Western Africa and Northern India. She has extensive experience helping utility companies and consumer advocacy organizations achieve their energy and customer goals to move toward a cleaner, more equitable energy future, and in public health, supporting organizations in the development of health research infrastructure and improving the provision of healthcare.

Dr. Henderson brings a unique lens to the energy landscape, in that she is also an elected official. In 2020, she was elected to the Truckee Town Council, immediately nominated to Vice Mayor, and subsequently, to Mayor. She is rerunning for election this year, and serves on multiple committees, including the Legislative Correspondence Committee, League of California Cities, Truckee Chamber of Commerce, Nevada County Economic Resources Council, Sierra Business Council's Climate Action and Mitigation Partnership, and boards of local non-profits working on climate solutions.

She holds a Bachelor of Science from Cornell University, Master of Public Health from Brown University, and Doctorate in Public Health from the University of California, Berkeley. Courtney lives in Truckee, California where she is also a prolevel mountain bike racer, all-around adventure seeker, and mom to a thrill-seeking eight-year-old boy.

LinkedIn: https://www.linkedin.com/in/courtney-henderson-539a29a/

# Peaks and Valleys: Missouri's Time of Use Experience



Geoff Marke, PhD Chief Economist

Missouri Office of the Public Counsel

Geoff.marke@opc.mo.gov

### About your speaker

Geoff Marke, PhD

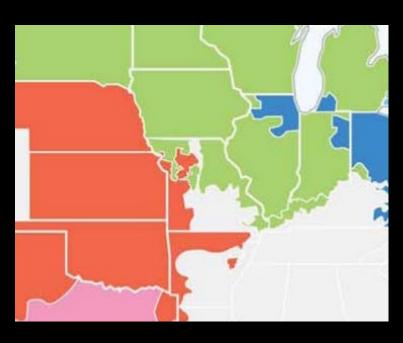
Chief Economist, Missouri Office of the Public Counsel ("OPC")

- Consumer Advocate Office for ratepayers in:
  - Vertically Integrated Electric, Natural Gas, Water, and Sewer cases before the Missouri Public Service Commission

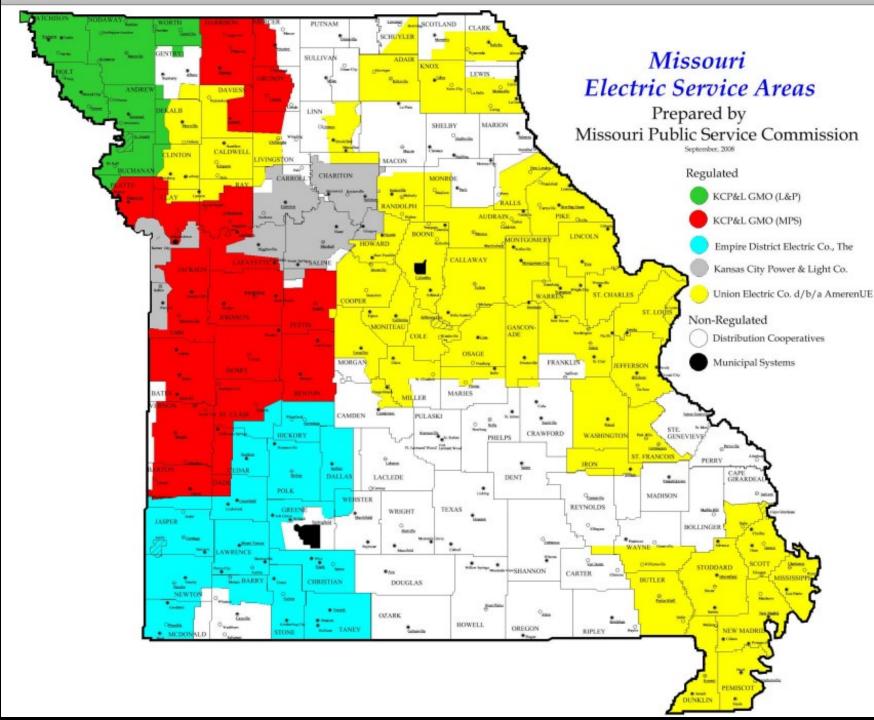
### • Obligatory Disclaimer:

• The comments and work product are my own and do not necessarily reflect any position of the Missouri OPC.

## Missouri The "Show-Me" State



Red = SPP Green = MISO Grey = Co-Ops



• "The fact is, if you don't find it reasonable that prices should reflect relative scarcity, then fundamentally you don't accept the market economy, because this is about as close to the essence of the market as you can find."

Joseph Heath, Economics without Illusions

## A little background on the TOU roll-out in Missouri

(2021-2023)

## 2021-2022 electric rate cases (residential TOU opt-out differentials)

- Ameren Missouri = training wheel approach 2-cent differential
- Liberty Missouri = training wheel approach 2-cent differential
- Evergy Missouri Metro/West = originally ordered rates
   9 cents (off-peak) 38 cents (on-peak 4-8 pm weekdays)
- That is a 322% increase

## Wait, what? How did that happen?

## 15 ratepayer-paid 3<sup>rd</sup> party studies

- <sup>12</sup> The third-party studies that OPC is aware of include the following (which does not include the many 3<sup>rd</sup>-party customer surveys Evergy has charged to ratepayers):
  - Electric Power Research Institute (EPRI)-Matching Electric Service Plans to KCP&L's Strategic Objectives (EPRI-ESP)—EPRI Supplemental Research Project, 2012-2014;
  - KCP&L SmartGrid Residential Time-of-Use Pilot (SGDP-TOU) a component of the KCP&L Division of Energy SmartGrid Demonstration Project, 2010-2015;
  - EPRI-KCP&L Residential Time-of-Use Impact Study (EPRI-TOU) EPRI Smart Grid Demonstration Project Analysis, 2010-2015;
  - ERPI-Measuring Customer Preferences for Alternative Electricity Service Plans (EPRI-ESP) EPRI Supplemental Research Project, 2014-2015;
  - KCP&L 2016 Demand Side Management (DSM) Potential Study (DSM-TOU) Applied Energy Group, 2016-2017;
  - BMcD-KCP&L and GMO Residential Rate Design Strategy Study (BMcD-TOU)-Burns & McDonnell Engineering Company, 201718
  - KCP&L Greater Missouri Operations Company Seasonal Rate Structure Study December 12, 2017 per Commission Report and Order in Case No. ER-2016-0156;
  - KCP&L Block Rate Study December 8, 2017 per Commission Report and Order in Case No. ER-2014-0370 and ER-2016-0156;
  - KCP&L Greater Missouri Operations Company Time of Use Rate Study Project No. 97119 Final Report 12/13/2017 per Commission Report and Order in Case No. ER-2016-0156

### Continued....

- KCP&L 2020 Demand Side Management (DSM) Potential Study (DSM-TOU) Applied Energy Group,
- Evergy Missouri Metro & Evergy Missouri West: Time of Use Rate (TOU) Rate Design Case Report, June
   2021 Case No: EO-2021-0349 & EO-2021-0350;
- 12. Guidehouse Evaluation, Measurement and Verification ("EM&V") of Evergy TOU Pilot December 31, 2021
- Brattle: Transitioning to Default TOU: Observations from Other Jurisdictions March 28, 2023 in Case No. ET-2023-0290.
- AEG: Evergy 2023 DSM Market Potential Study see pages 31-36 in Case No. EO-2023-0212
- Oracle: Evergy TOU Rate Change Analysis July 2023. Results presented August 10, 2023 at MO PSC Agenda. Actual study obtained through discovery in Case No. ET-2023-0290.
  - Installation started in 2010
  - Historical investment: \$268,487,600
  - Was seeking recovery for 2<sup>nd</sup> generation AMI meters
  - Company did not follow Commission directives

# How do you implement a 21-cent differential rate design?

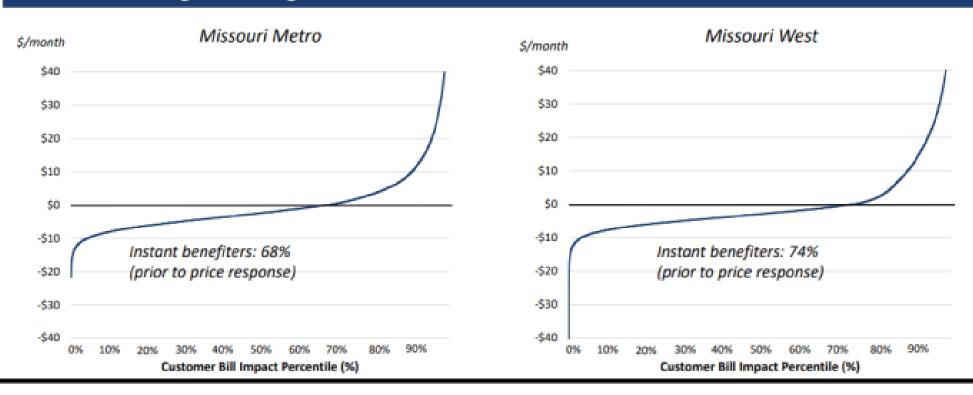
## The Brattle Study:

Figure 1: Distribution of Bill Impacts 17

#### Distribution of bill impacts

68% to 74% of customers are instant benefiters on the 2-period TOU, but around 10% could experience an average bill increase of at least \$10/month.

#### Average Bill Change from Standard Non-TOU Rate to Default 2-Period TOU Rate



## Study #2: Oracle

- The Oracle study updated the estimated number of "winners" to encompass 89% of Evergy Metro and 91% of Evergy West customers on an annual basis. Those numbers were further broken down as follows:
  - 53% Metro and 56% West would see little change in annual bill
  - 26% and 25% would see moderate savings (5 to 10% annually)
  - 10% of customers would see significant savings (10%+ annually)
  - "losers" were largely space-heating customers on previously "frozen" promotional rates
  - Importantly, these results assumed no behavioral modification

## What about deferred investments?

Figure 4: Evergy Metro TOU Summer Potential for Evergy Metro 19,20

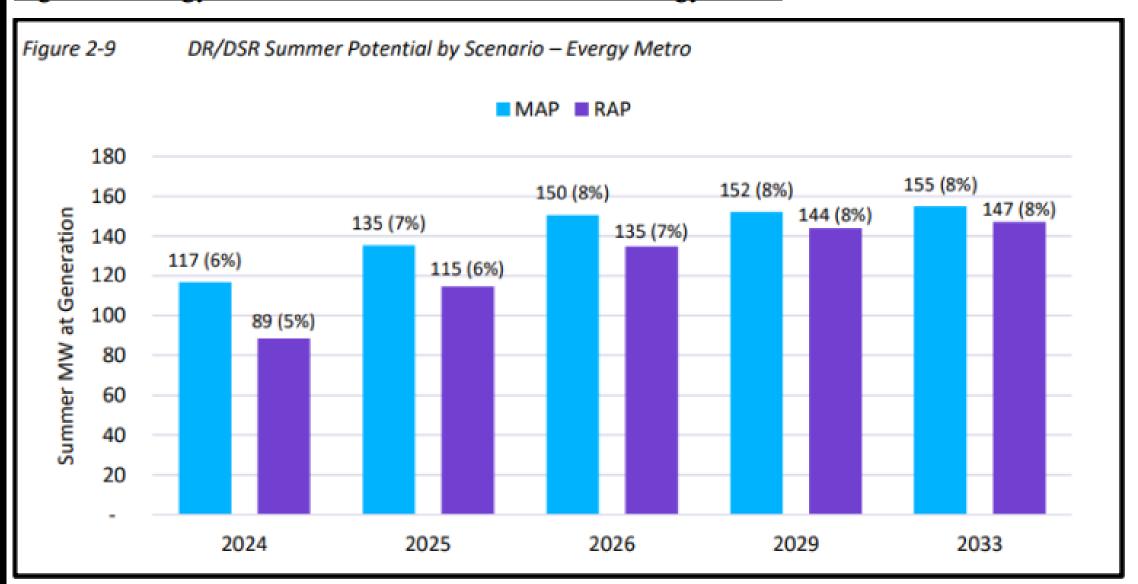
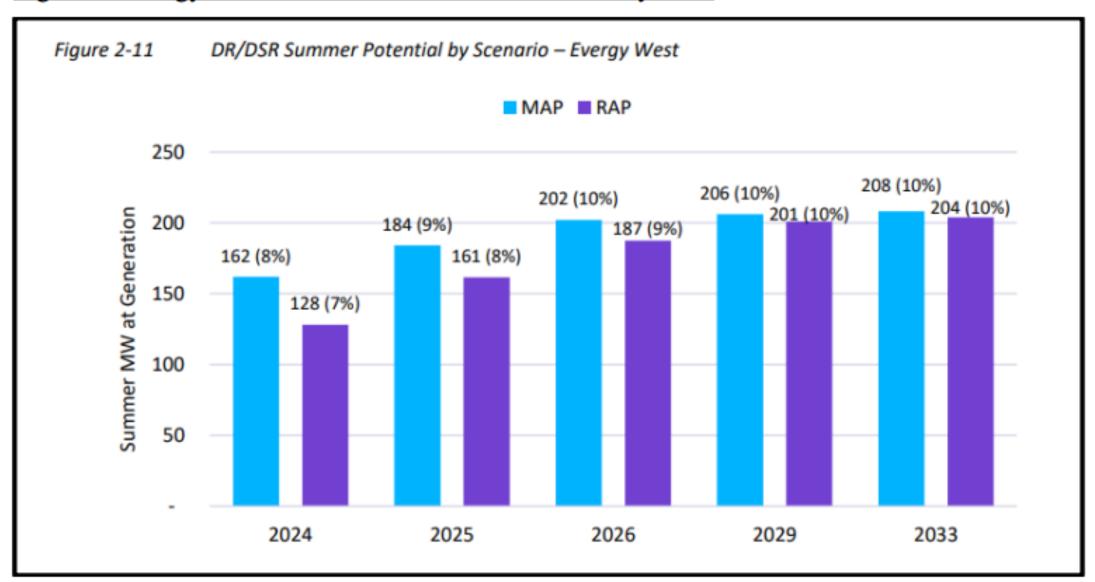


Figure 5: Evergy West TOU Summer Potential for Every West<sup>21</sup>

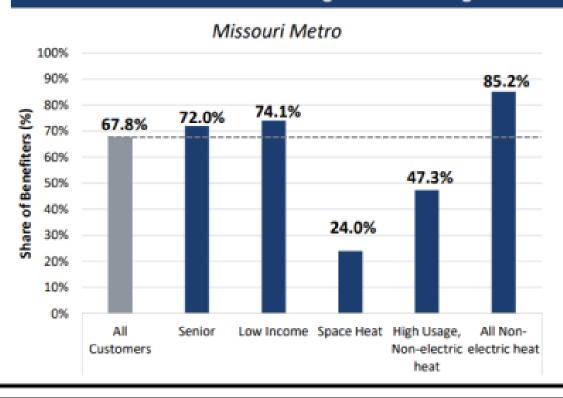


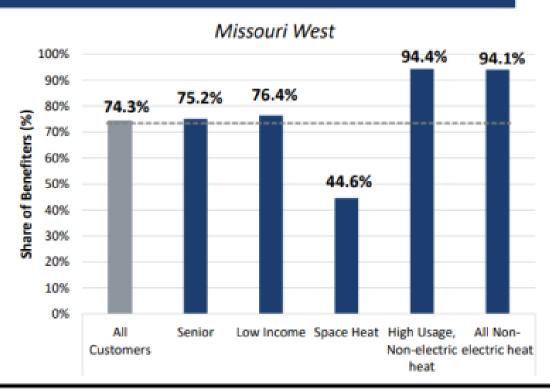
## What about "X" customers?

### Default TOU bill impacts by customer segment

Senior and low income customers are more likely to benefit on the 2-period rate than other customers. Electric heating customers often experience bill increases on the new TOU rate.

#### Share of Customers Benefiting when Moving from Standard Non-TOU Rate to Default 2-Period TOU Rate





### To recap:

#### PAST

- Sunk Costs: Ratepayers invested hundreds of millions of dollars with a return on.
- Customers currently exposed to an increasingly volatile wholesale market

#### PRESENT

• 3 out of 4 customers save without any change in behavior

#### • FUTURE

Estimated peak shavings exceed 200MW (combined) in the first year

## How did the roll-out go?

• "The main difficulty with responsive pricing is likely to be not just mechanical or economic but political." (1971, on responsive pricing)

William Vickery, 1996 Nobel Prize winner in Economics

## Winter is coming...



## Ownership?



## **Online Tool Kit** Rate Education Reports

- On-the-record discussion:
- https://www.youtube.com/watc h?v=eqfM2Ngp5O4&t=2264s



Manage Account Outages Ways to Save Smart Energy

Home | Manage Account | Rate Information | Plan Options

#### Rate Plan Options

Every person has different energy needs, which is why we offer flexible rate plan options to fit your lifestyle.

Look through our flexible rate plan options to help save money and align with your personal budget, lifestyle and energy usage. You can view our bill definitions as well if there are any terms you'd like more clarity on.



#### Default Time Based Plan

This plan has the lowest difference in price between peak hours and offpeak hours.



#### Summer Peak Time Based Plan

Shift energy usage to off-peak times on weekdays in the summer to get off-peak prices.

Learn More



#### Nights & Weekends Plan

Pay a lower price for energy during year-round off-peak times and on weekends.



#### Nights & Weekends Max Plan

Save on overnight EV charging on this whole-home plan with the lowest nighttime rates.



#### EV Only

This plan is created specifically for electric vehicle (EV) drivers who want to save more. You get big discounts when you charge at home outside of high demand times (when electricity is more costly to produce).

## How did the press frame it?

### MISSOURI INDEPENDENT

CANNABIS

CRIMINAL JUSTICE

**ELECTIONS** 

**ENERGY + ENVIRONMENT** 

**HEALTH CARE** 

EDUCATION

**ENERGY + ENVIRONMENT** 

GOVERNMENT + POLITICS

## Missouri utility regulators plan for peak pricing prompts pushback from top Republican

Senate Majority Leader O'Laughlin accuses PSC of pushing 'woke' policies that will gouge customers with top summer rates four times higher than off-peak costs













- Time-of-use pricing "has nothing to do with wokeness has nothing to do with price gouging," Rupp said. "It's actually very free market consumer driven. Hey, here's the price signals. The prices are super sky high because everybody's cranking up their air conditioner all at the same time. And if you want to save money, you know you have this opportunity."
- The opportunity, O'Laughlin said, is a chimera. There is one Evergy plan, called the "Nights & Weekends Max Saver" rate, where electricity used between midnight and 6 a.m. is less than 10% of the cost of energy used at peak times.
- That plan actually offers little to working people, O'Laughlin said.
- "Who in the hell is going to be up doing laundry from 12 a.m. to 6 a.m. and get up for work the next day?" O'Laughlin said. "G-d-n. And you can quote me on that."







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Morning Edition

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# Peak electricity rates will nearly quadruple under default Evergy plans in Missouri









Some Missouri Evergy customers, on the other hand, will see rates fluctuate dramatically. Under the default plan, customers will be charged 9 cents a kilowatt hour most of the time. But the rate vaults up to 38 cents between 4 p.m. and 8 p.m. on summer evenings. That's a 322% spike.

"That is a huge increase," said Daniel Zimny-Schmitt at the National Renewable Energy Laboratory. "There's no way around that."

He said 38 cents a kilowatt hour, the top rate under Evergy's default plan, would mark one of the most expensive residential electricity rates in the country outside of California.

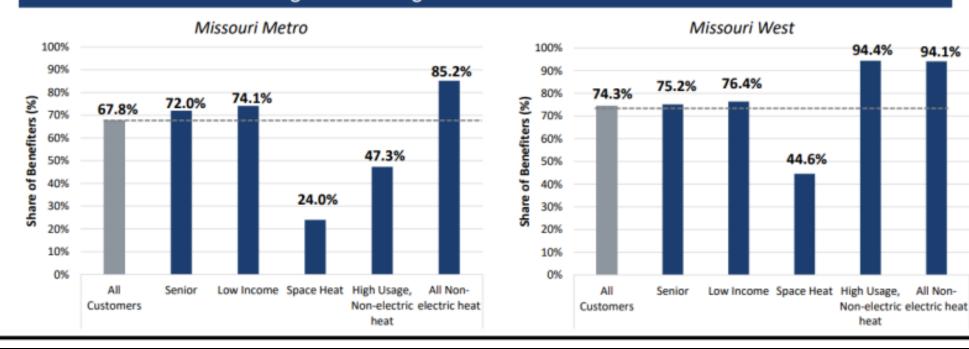
## Just a reminder

#### Default TOU bill impacts by customer segment

Senior and low income customers are more likely to benefit on the 2-period rate than other customers. Electric heating customers often experience bill increases on the new TOU rate.

#### Share of Customers Benefiting when Moving from Standard Non-TOU Rate to Default 2-Period TOU Rate

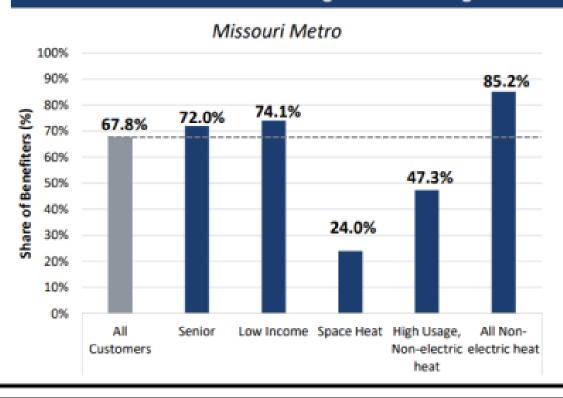
94.1%

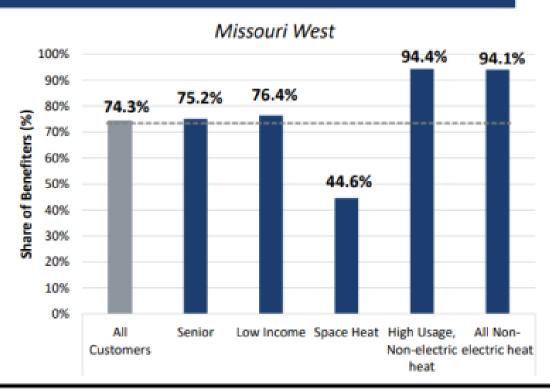


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## So what happened?

## After 10 months of back-and-forth the Commission walked back on order days before its implementation

- Since then, Evergy West has been in for a rate case where no party offered a change in differentials.
- Ameren Missouri is currently in for a rate case—no party has offered a change in differentials.
- Liberty Utility has filed for a rate case—the Company has not offered a change in differentials.
- Legislation passed to make an opt-out option always available.

## Lessons learned?

### **Unsolicited Advice**

- Model usage from the previous year with TOU rates (who wins/loses?)
- Website information
- Consider "what not to do" education and/or high usage alerts (or tying roll-out with DSM promotions)
- Target marketing and education
- Regulatory access to customer portal (dummy accounts)
- Customer Service Reps need to be trained
- Spend time on the names of the rate plans
- Get ahead of the press and have consistent messaging

- Shadow billing information before and during
- Frame it w/ anchors either/or (dumb down how markets work)
- Consider performance metrics
- Deliverable dates and goals (short and long-term)
- Get stakeholder buy-in (strength in numbers)
- Expect the unexpected "We the People of Johnson County" example
- Take comfort in the principles of cost-causation and recognize that utility regulation is economic regulation – all of "this" is supposed to be a proxy for the market.

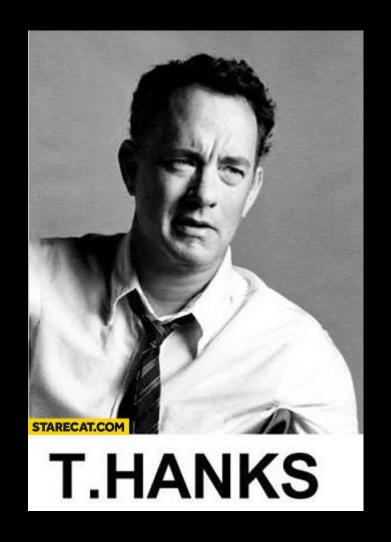
# **Relevant Dockets**

- EO-2021-0349: In the Matter of the Rate Design Case of Evergy Metro, Inc. d/b/a Evergy Missouri Metro
- ER-2022-0130/0129: In the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Request for Authority to Implement A General Rate Increase for Electric Service
- **EW-2023-0199**: In the Matter of a Collaborative Workshop for Customer Education and Outreach Regarding the Introduction of Default Time-of-Use Rates by Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West
- **ET-2024-0061**: In the Matter of the Joint Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of Tariff Revisions to TOU Program

# OPC memorandum includes responses to frequently cited retorts:

- Customers do not want to be told what to do
- This is not fair to customers
- Customers do not believe Evergy when they say they will save money
- This is government mandated behavioral modification.
- Evergy's approval ratings are dropping as a result of TOU rates
- Certain space heating customers are going to run the risk of larger than normal bills.
- Vulnerable populations will be negatively impacted by TOU rates
- Adopting a low differential as the default accomplishes the same policy objectives as a high differential
- The rest of the US regulatory community is watching Missouri.

# Questions?





Chief Economist

Missouri Office of the
Public Counsel

**Geoff Marke** 

Geoff.marke@opc.mo.gov
1/16/2025

Marketing, Education & Outreach (ME&O) for Time Varying Rate Programs – Best Practices Across the U.S.





#### GridX

Presentation to Massachusetts Department of Energy Resources

August 4,2025

### Agenda



- 01 GridX Introduction
- 02 Best Practices and Common Challenges implementing TVR
- 03 TVR Case Study review focusing on Customer Experience and Education

GridX is the world leader in software solutions for managing the complex lifecycle of utility rates & programs.

GridX is the leading provider of Complex Rate & Data Analytics technology for the new energy economy. Our technology enables utilities to better design, promote, operationalize, and drive adoption of emerging energy products and programs.

We're enabling the clean energy transition, empowering energy suppliers to swiftly design & deploy new rates & business models, and accelerating the adoption of renewables with billing-grade conversion tools.





**UNMATCHED SCALE** 

32M

1T

49M+

>500

Meters Under Contract Intervals Under Management Bills Calculated Each Day Tariffs Modeled & Validated **COMPANY** 

25+

Large Utility

Customers

e

Backed by EIP

**150** 

2010

Employees

Founded

# GridX Enterprise Rates Platform manages the entire utility rate/product lifecycle

#### **RATE DESIGN & ANALYTICS**

Build and optimize products that benefit customers and support revenue goals

#### **RATE MARKETING & CUSTOMER CONVERSION APIS**

Upgrade current customer experience with real-time, billing-grade conversion tools

#### **KEY ACCOUNT MANAGEMENT & SELF SERVICE**

Quickly access deep analysis and insights, and find best rates for most valuable customers

#### **ADVANCED BILLING ENGINE**

Augment billing systems with add-on billing engine for complex billing and calculation capabilities



#### Our Customers – Across the US





















































# Rate design effectiveness depends on customer awareness, engagement, and responsiveness







**The problem**: Changes in new rates, programs, pricing incentives and business models create challenges for utilities and consumers alike.

- Most people struggle to understand their utility bill.
- Lack of understanding of rate options and household-level impact dissuade customers from engaging.
- Often difficult to ascertain resulting financial impacts to utilities and consumers.
- Complex rates mean complex billing.

**The solution**: Identify potential barriers to participation and tailor MEO efforts to mitigate and remove those barriers to create customer-centric solutions.

- Tailor efforts to meet customers where they are.
- Target individual households based on their needs and risks.
- Use meter energy usage data to communicate opportunities for electrification and reduction of financial burdens to these households.

# Time-varying rates help reduce peak demand and support long-term rate reform



Advance customer understanding of rate structures

**Encourage load shifting and peak** reduction

**Promote equitable participation** 

Support decarbonization and electrification goals

Offer personalized bill simulation and analytics tools to show impacts of different rate plans

Simulate savings scenarios and provide timely feedback on peak usage

Perform full-population analysis to segment customers and tailor messaging

Show how new technologies interact with rates and energy usage

### Best practices to ensure a successful time-varying rates program



# **Customer Acceptance**

1. Pre-enrollment: Provide customers with shadow bills based on their actual usage to clarify how they can save with a TVR



2. Post-enrollment: Make rate comparison tools available to customers so they can quickly determine that they are on the "right" rate



#### Impacts to Sensitive Groups

1. Utilize actual customer AMI data to measure rate design outcomes



- 2. Add bill protections for sensitive customers
- 3. Communicate the upside customers can shift usage and lower bills



 Consider multiple TOU rate designs to maximize adoption and system benefits



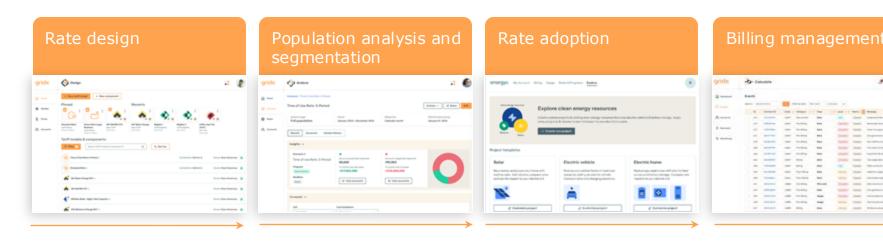
2. Support customers with the purchase of load flexible technologies (e.g. smart thermostats)



### Time-varying rate journey



Better tools enable utilities to implement TVR in a customer-friendly, cost-effective, and equitable manner



Design new rates that support the program and system goals

Make the most of utility data, gain insights, improve decision making, consolidate access Work with end customers to prepare and enroll them in new programs

Augment legacy systems and processes and prepare for the future

# Time Varying Rate Rollout



3 distinct, but overlapping and intertwined phases Activities driven by TOD goals and objectives



### Targeted ME&O (Marketing Education and Outreach)



Use insights to move and measure your audience



#### Pre-Launch

- Broad program awareness onpeak/off peak period marketing
- Segment analysis and creation
- Personalized and ubiquitous rate comparisons & analysis

#### Transition

- Marketing and education materials (rate education letters) across the customers' channels of choice
- Prepare customers for the coming summer months with behavioral tips and program incentives

#### Next

- Bill forecasts and bill-to-date
- Deepen understanding of audience/customer for potential new rate structures and programs through rigorous measurement

# Customer & Key Account Management



Provide information and toolsets to create a connection



#### Pre-Launch

- Train and arm the call center to answer questions
- Personalized and ubiquitous rate comparisons & analysis
- Targeted account analysis

#### Transition

- Make sure customers understand they have more control over their bills
- Help customers see the long-term value of TVR in dollars and cents

#### Next

 Offer easy to find, intuitive customer self-serve tools to customers and enterprise accounts

# Billing/Customer Interval Data Management



Prepare billing systems and use interval data to measure transition



#### Pre-Default

Prepare systems for TOD transition

#### **Transition**

 Rigorous QA processes to ensure initial customers experiences are positive

#### Next

 Use AMI data to monitor whether customers are changing their behaviors.

## Rate Design & Analytics



#### Gain a holistic understanding of TVR impact



#### Pre-Default

- Whole population bill impact analysis
- Utility revenue impact analysis
- Rate configuration & calibration

#### **Transition**

 Monitor and measure transition to TVR and rate performance

#### Next

- Project grouping to allow development of new rates and sharing across teams
- Quickly build new tariffs and programs

# **Case Studies**

### SCE: Rate comparison tool





Leverage existing customer portal with tailored rate plan comparison

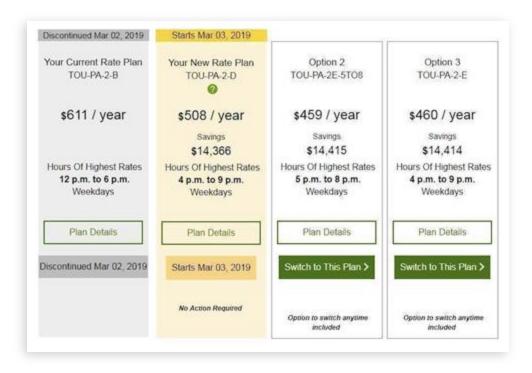


API embeds customer specific rate plan information within existing customer portal

**400%** increase in rate tool logins

**82%** of customers believe they are on the right rate

75 MW of peak load reduction

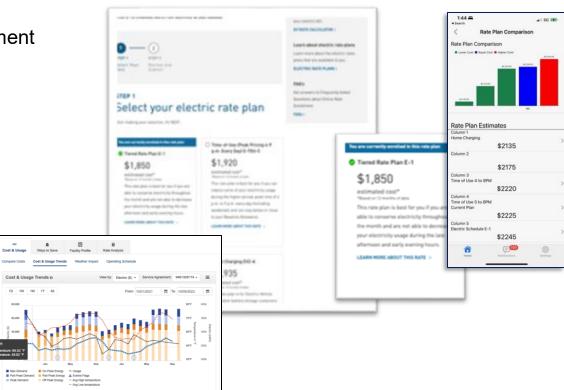


### Meeting customers where they are

My Account (+ CSR Screens) for On-line Rate Enrollment

Business Customer Engagement

Mobile App and Apple Watch Notifications

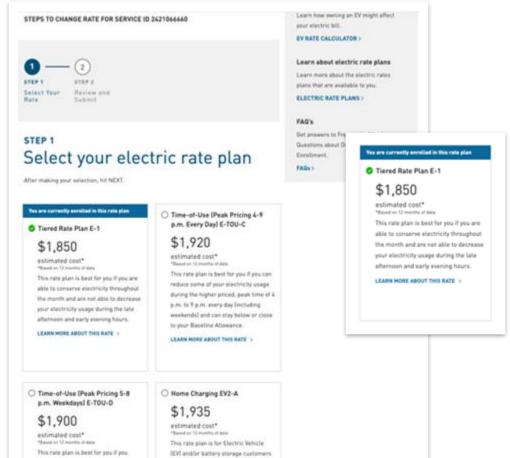






#### Online Rate Enrollment with PG&E

- Quick summary of eligible rates
- Easy enrollment (at bottom of webpage – not shown)
- Same calculations, provided by GridX Empower (APIs) are available on CSR's CIS screens to guide customers when they call in



who can charie distinct off make house

fanically use a high amount of





# Mobile App + Apple Watch Notifications

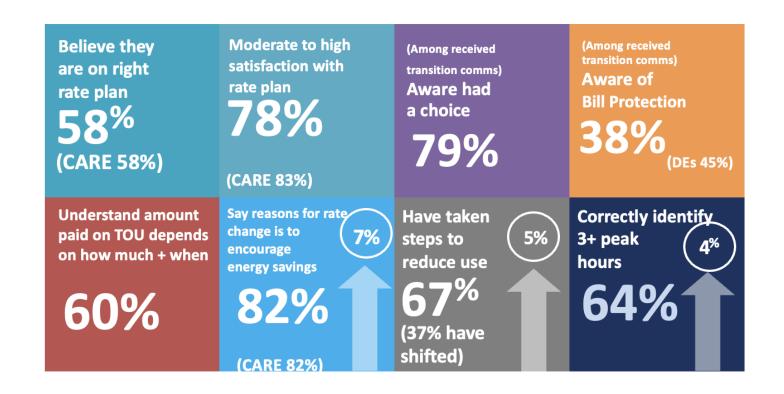
- ✓ Meet customers where they are
- Consistent information across engagement platforms







#### Customers understand TOU details



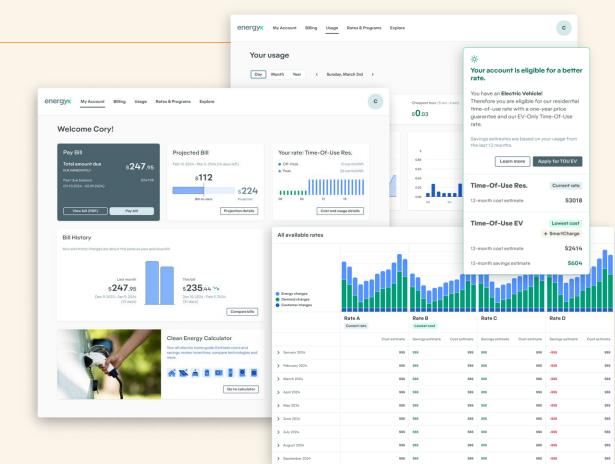
gridx



# Meeting the need to provide multi-channel engagement & education



- Customers are using many different channels to find utility information that is useful to them:
  - Utility bills
  - MyAccount.com
  - Mobile Apps
  - ♦ IVR
  - AI Chatbots
  - Voice Enabled (Alexa)
- The utility needs to make sure the same, consistently accurate, data is presented to customers across all these channels
- Personalized analysis, using customers' Smart Meter data, makes it easy for customers to discover and enroll in the best program/rates.

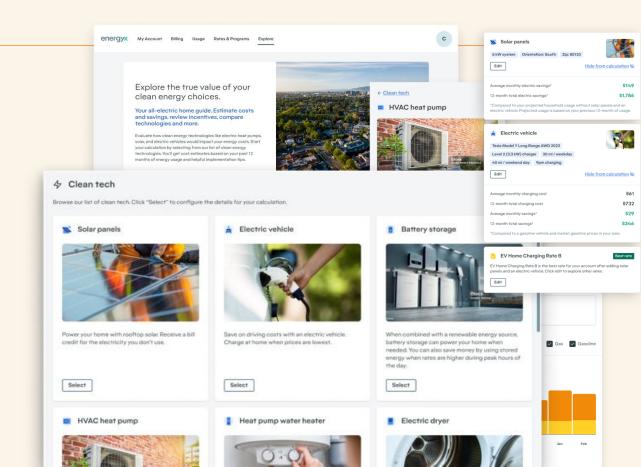




## **Explore** Drive DER adoption to meet Commonwealth Goals



- Increase adoption of clean energy technology by allowing customers to easily configure options and immediately see the bill impact.
- Give customers peace of mind by allowing them to assess whether other rate offerings can save them money.
- Total cost of ownership metrics enables customers to understand the full economics of their potential purchases.



Thank you!



**Michael Pirro** 

Michael.Pirro@gridx.com

#### ORACLE

# Dynamic Rates Engagement

Leveraging AMI for Customer Engagement and Empowerment

#### Samantha Caputo

Senior Manager, Regulatory Affairs and Market Development

August 4, 2025



# Agenda

1. Leveraging AMI for Customer Engagement

2. Rates Engagement

3. Case Study - Evergy

4. Creating a balanced portfolio



# Agenda

1. Leveraging AMI for Customer Engagement

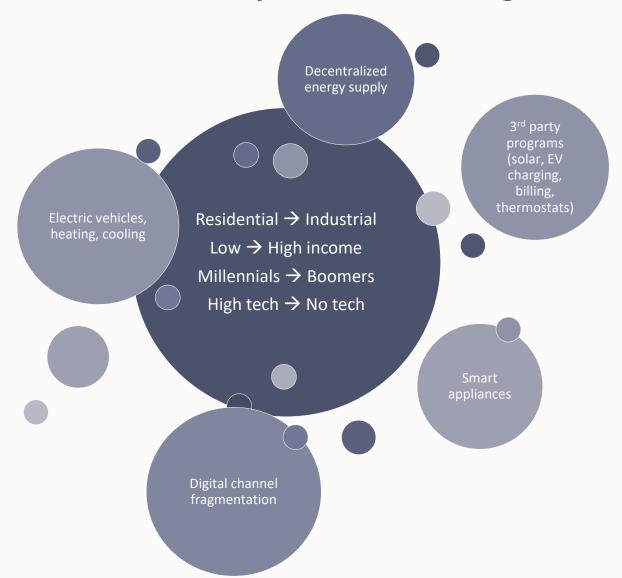
2. Rates Engagement

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# The customer ecosystem for rate design is becoming more complex



There's an app for everything, but disparate apps give different answers and customers end up with disjointed experiences

Not all customers are at the same level of engagement and understanding about energy

# Customers need tools to put data in context at high impact moments

Utilities are in a unique position to offer:

- Equitable access to AMI data
- Whole home view
- Rate and cost information
- Pre-qualified, targeted programs
- Historical perspective
- Proactive alerts and updates



# Before AMI, all information is in aggregate and after-the-fact

The Bill **Customer Self-service Customer Support** 0 0 . Maria Villa ₹ 00.49 Compare bills 555-222-3333 PREVIOUS BILL | LAST YEAR Budget Billing Electricity \*\*\*\*5473 Email maria@mymail.com Auto-pay Essenti Account No: **ENERGY STATEMENT** Your electricity charges are about \$19 higher than your previous bill. Statement Date: 08/09/2023 PCEE www.pge.com/MyEnergy That's about \$19 higher than this time last year. See comparison. Due Date: 08/30/2023 Your Account Summary Service For: Amount Due on Previous Statement \$261.71 Payment(s) Received Since Last Statement -261.71 Please see details page. Previous bill -\*\*\*\*9387 Previous Unpaid Balance \$0.00 Current PG&E Electric Delivery Charges \$110.77 Questions about your bill? 84.74 East Bay Community Energy Electric Generation Charges Mon-Fri 7 a.m.-7 p.m. Current Gas Charges 26.84 Saturday 8 a.m.-5 p.m. Jun 5, 2023 – Jul 4, 2023 Jul 5, 2023 - Aug 2, 2023 Phone: 1-800-743-5000 \$222.35 Total Amount Due by 08/30/2023 www.pge.com/MyEnergy 800 kWh Ways To Pay www.pge.com/waystopay Cannot see what is Monthly Billing History \$1000 happening on a daily or \$750 \$500 hourly basis ■ Electric □ Gas No visibility before the bill ■ Weather (°F) ■ Electricity Usage from Grid Was this graph helpful? is created



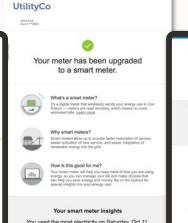
Green Button

Download my data

# AMI data enables analytics for personalization and targeting of utility communications and for deeper understanding of energy use

Frequent collection of interval data drives forecasting and intra-bill period analysis













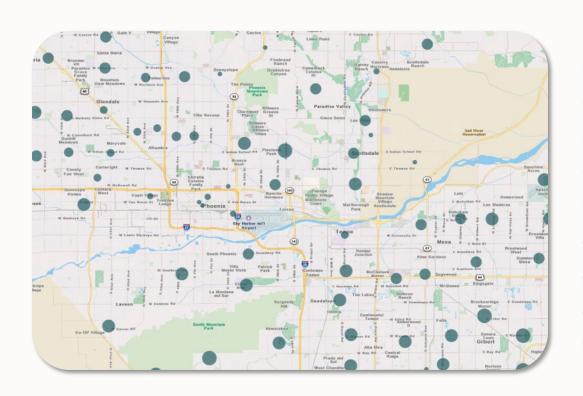


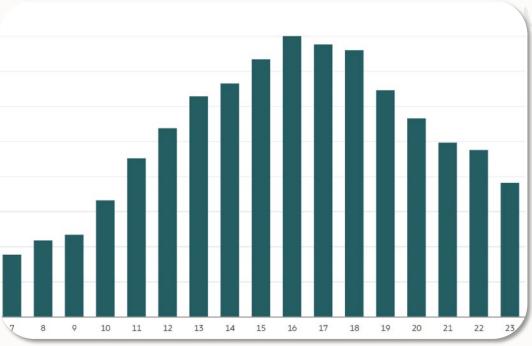
**SEGMENTATION** 

**TARGETING** 



# What does Oracle need to know to provide compelling end-use-specific insights?





**DETECT** where specific end-uses exist

**DISAGGREGATE** their usage



# Impactful disaggregation insights are embedded across Opower platform solutions to help drive important outcomes



Customer Satisfaction Customer Engagement Product & Program Adoption

Energy Efficiency Load Shifting



# Agenda

1. Leveraging AMI for Customer Engagement

2. Rates Engagement

3. Case Study - Evergy

4. Creating a balanced portfolio



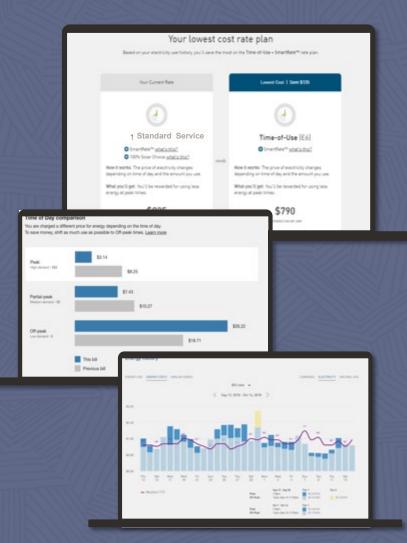
# **Educate**

### **Rate Education Reports**



# Enroll

### Rate Analysis and Insights



# **Engage & Empower**

Rate Coach





## **Educate**

#### **Rate Education Reports**



### Enroll

#### Rate Analysis and Insights

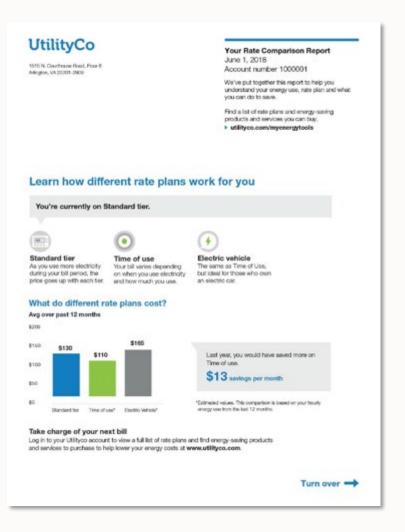


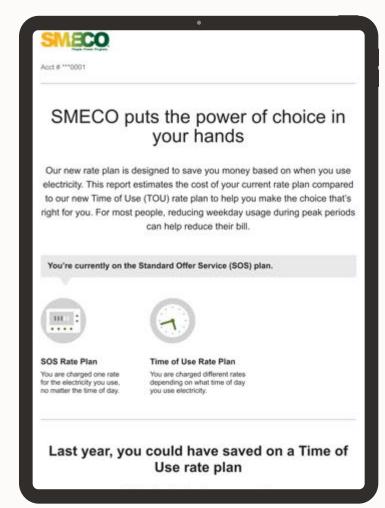
# Engage & Empower

Behavioral Load Shaping



# Rate Education Reports can help customers understand if a different rate is right for them



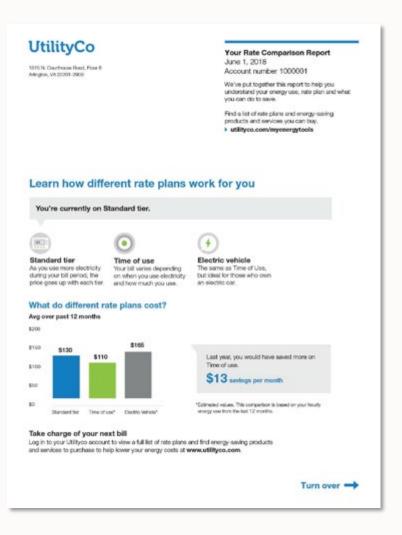


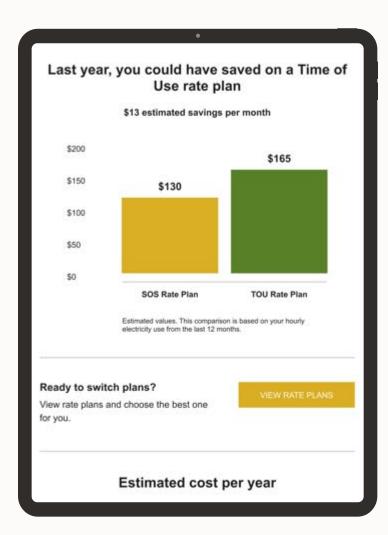
When TVR options are available, it is important to educate customers about their options in a simple way that helps them understand their options.

Rate education reports are a proactive way to engage customers in a personalized way.



## Rate Education Reports can help customers understand if a different rate is right for them

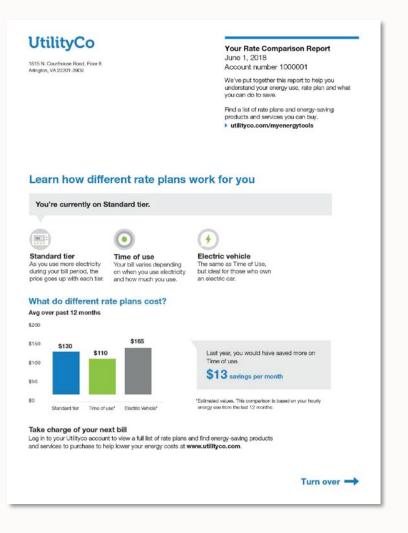


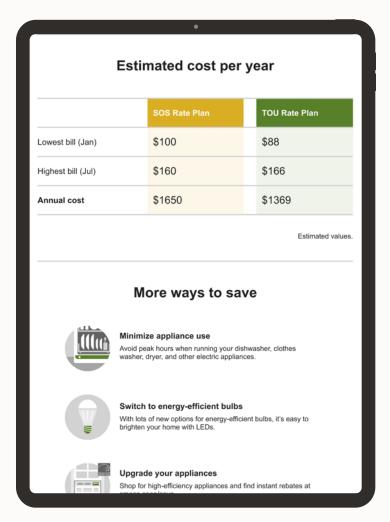


Leveraging tools such as a Rate Comparison in the Report can show customers what their bill would have looked like on the TVR and the \$ savings potential.



# Rate Education Reports can help customers understand if a different rate is right for them





Monthly comparison shows the seasonal fluctuations based on their use

Tips module shows how to save even more



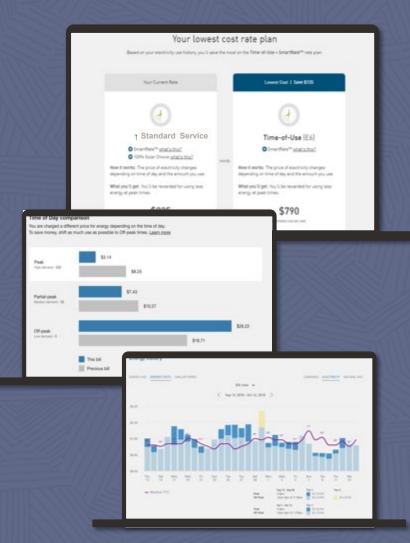
# Educate

#### Rate Education Reports



# Enroll

### Rate Analysis and Insights



# **Engage & Empower**

Rate Coach



# Tools that provide rates analysis can help customers navigate which rate they should choose and encourage enrollment

#### Make it simple

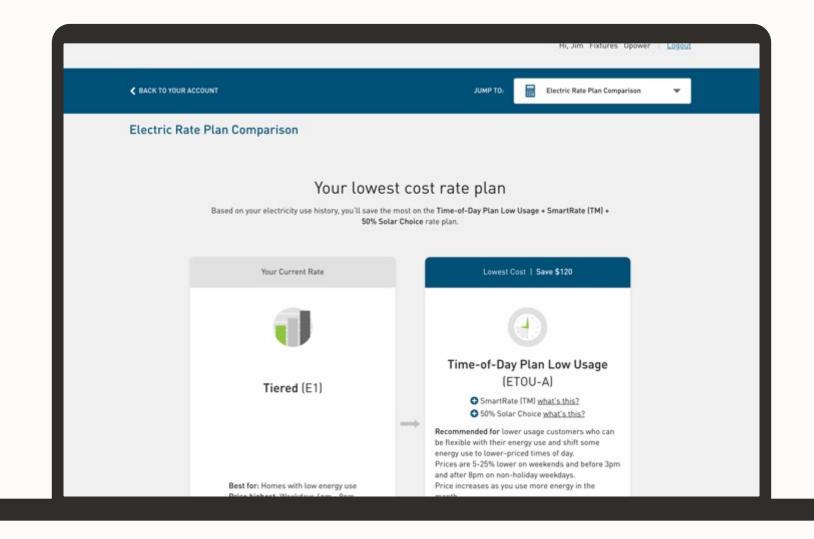
Data analytics can help households find the right rate

#### Help them explore

How their energy use impacts the right rate

#### Remove all uncertainty

Show all their rate options and why the one you recommended is best for them



# Tools that provide rates analysis can help customers navigate which rate they should choose and encourage enrollment

#### Make it simple

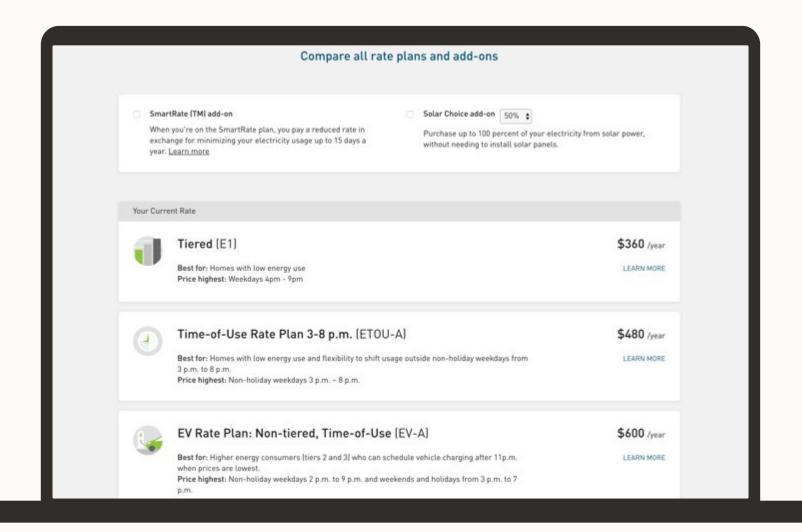
Data analytics can help households find the right rate

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# Educate





# Engage & Empower

Rate Coach



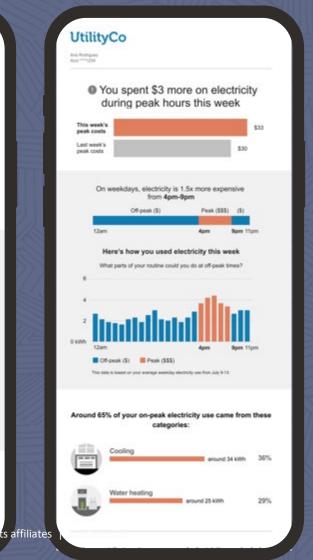
#### **Rates Coach**

Welcome

### UtilityCo Ann Rindrigues Aust \*\*\*\*1234 Welcome to your Rate Coach, a weekly email designed to help you save money by avoiding high-cost times You're currently on a summer rate plan that charges different prices throughout the day, and lasts from April 25-September 30. By using less electricity when it's most expensive, others have saved on average \$5 to \$30 a month. On weekdays, electricity is 1.5x more expensive from 4pm-9pm Off-peak (S) Penk (\$55) (5) Here's how you used electricity this week What parts of your routine could you do at off-peak times? Off-peak (\$) Peak (\$55) This data is based on your average weekday emotivity use from July 9-13. How can you save big during peak hours? Appliances like these use a lot of energy. By using them at lower-priced, off-peak times, you'll see more savings.

Distriction

#### Weekly Progress



#### Post-Bill Report



#### Seasonal Changes





# Enhancing the TOU experience with appliance-level peak usage insights

But what was I **doing** in those hours?"



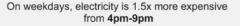
Sam, user testing participant

#### **UtilityCo**

Ana Rodriguez Acct \*\*\*\*1234

> You spent \$3 more on electricity during peak hours this week

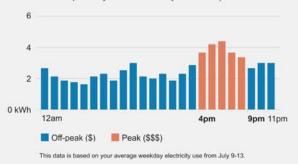






#### Here's how you used electricity this week

What parts of your routine could you do at off-peak times?



Around 65% of your on-peak electricity use came from these categories:

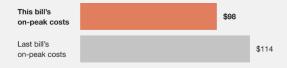
#### **UtilityCo**

Ana Rodriguez Acct \*\*\*\*1234

# Take a look at your on-peak electricity use for your most recent bill

Jun. 1 - Jul. 1, 2023

You spent \$16 less on electricity during on-peak hours compared to your last bill



On-peak hours are from 4pm-9pm. Electricity is 2.2x more expensive during this time.

Around \$43 of your on-peak electricity costs came from these categories:



Peak Period Disaggregation tells customers what appliances they were using during peak hours

And a breakdown of how they used electricity during peak hours this bill period

At the end of each bill period, customers get a summary of this bill's peak costs compared to the previous



## **UtilityCo**

Ana Rodriguez Acct \*\*\*\*1234

Jane, here's your Rate Coach summary for this bill period

Dec 1 - 30



Your **on-peak** use wasn't completely covered by your solar panels this bill period

You spent \$5 more during on-peak hours compared to last bill period.

This bill's on-peak costs: \$10

Last bill's on-peak costs: -\$5

Rate coach can be tailored to meet complex customer needs, such as customers who have solar and EVs

And a breakdown of how they used electricity during peak hours this bill period

At the end of each bill period, customers get a breakdown of how much of their peak period usage was covered by solar panels



# Your community thanks you for having solar panels and driving an EV



You are doing your part by contributing to a healthier environment, while saving on energy, fuel, and maintenance costs!

#### Good EV charging habits

✓ Avoid charging during on-peak hours

Charge your EV during off-peak hours when savings are greater.

✓ Set an automated charging schedule

No more going into the garage to plug in when off-peak hours start. With an automated schedule, you can plug in anytime, adding convenience to your routine!



Can you go the extra mile?

One way is to delay your scheduled start time: help avoid

Rate coach can be tailored to meet complex customer needs, such as customers who have solar and EVs

Reenforcing the positive impact of owning an EV and solar while suggesting good EV charging habits



# Agenda

1. Leveraging AMI for Customer Engagement

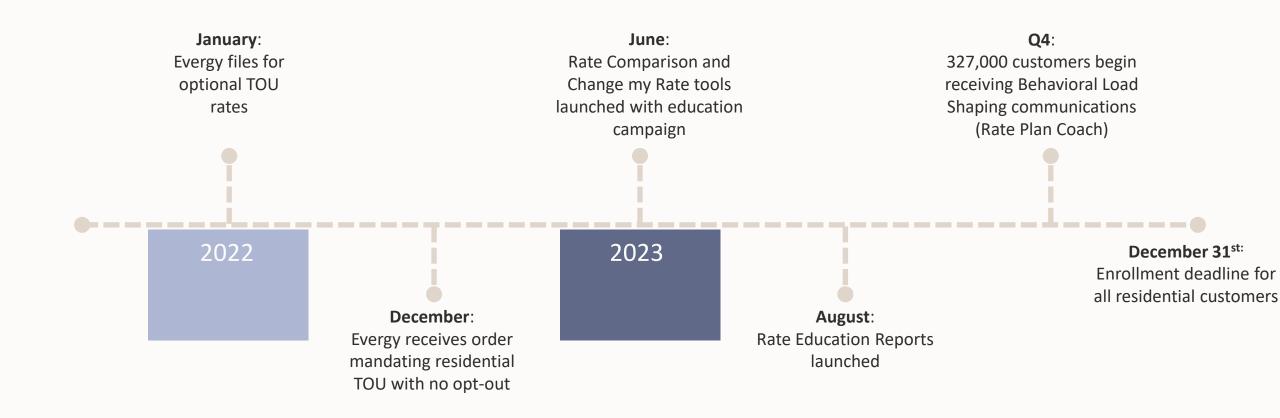
2. Rates Engagement

3. Case Study - Evergy

4. Creating a balanced portfolio



# Evergy launched a multi-pronged effort in just six months



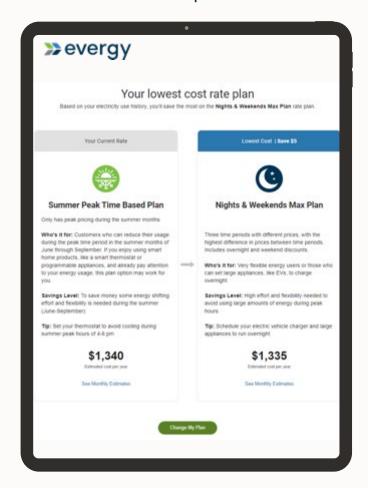


# Customers were engaged throughout their TOU journey... before, during, and after enrollment

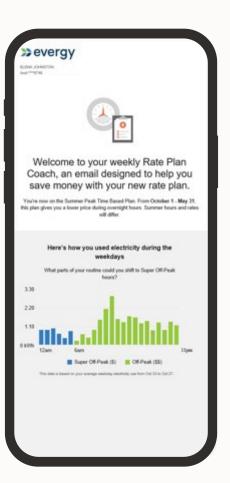
#### **Rate Education Reports**



#### **Rate Comparison**



#### Rate Plan Coach Reports





# Evergy saw that engaging with customers throughout the journey had significant impacts

30%

160k customers

pre-enrolled in their

chosen time-based plan

80%

Customers

pre-enrolled through selfservice

50%

Customers used the Rate
Analysis tool to make
their decision

\$2M+

Savings from calls avoided as a result of digital strategy



# Agenda

1. Leveraging AMI for Customer Engagement

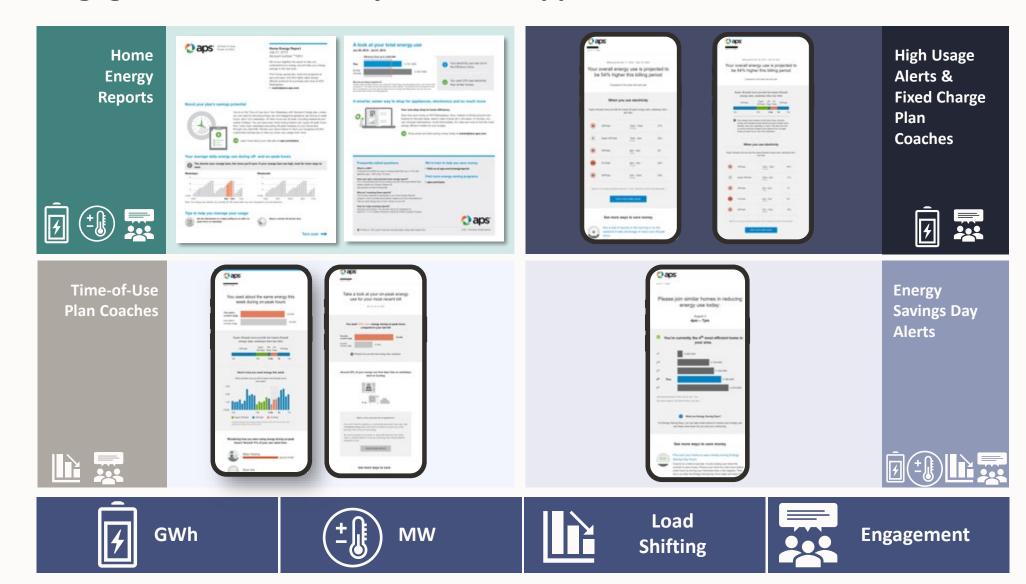
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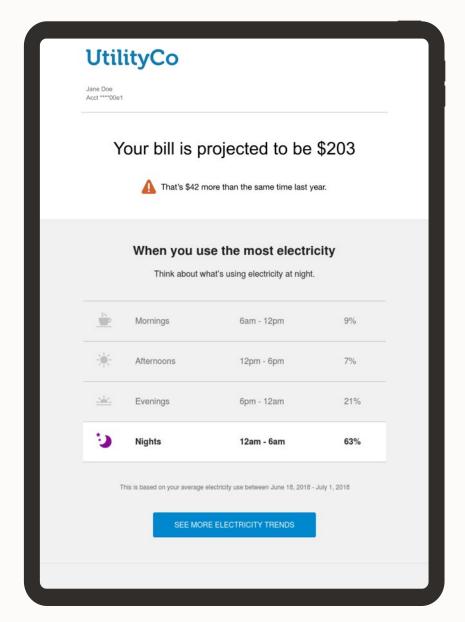
4. Creating a balanced portfolio

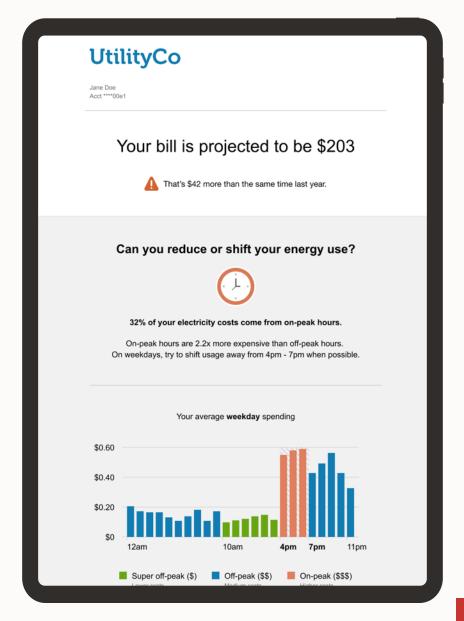


## Rates engagement fits into a layered DSM approach to drive reliable outcomes



## Bill Alerts can provide peak insights







## Bill Alerts can provide peak insights

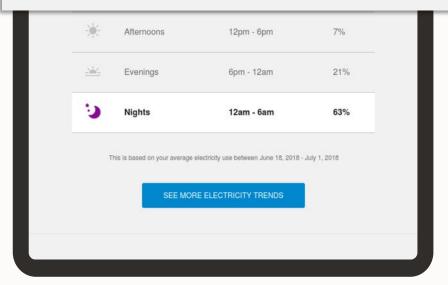


#### Can you reduce or shift your energy use?



32% of your electricity costs come from on-peak hours.

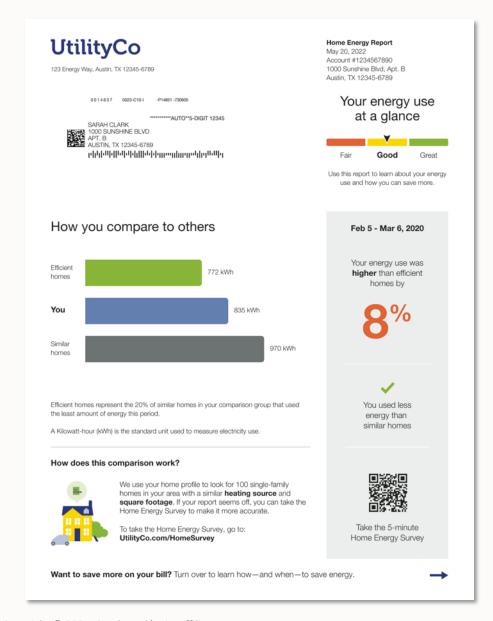
On-peak hours are 2.2x more expensive than off-peak hours. On weekdays, try to shift usage away from 4pm - 7pm when possible.

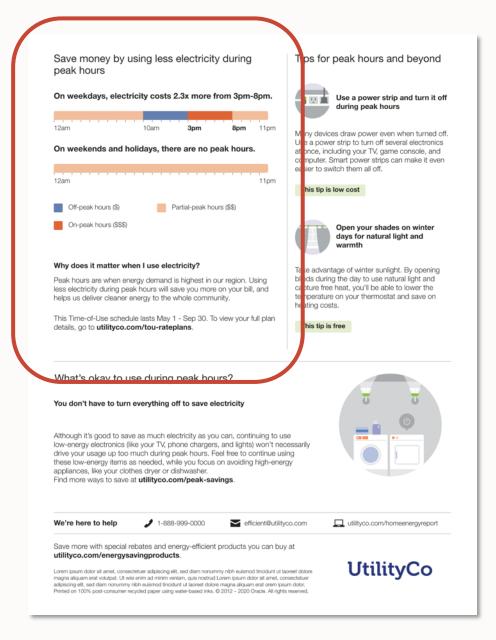






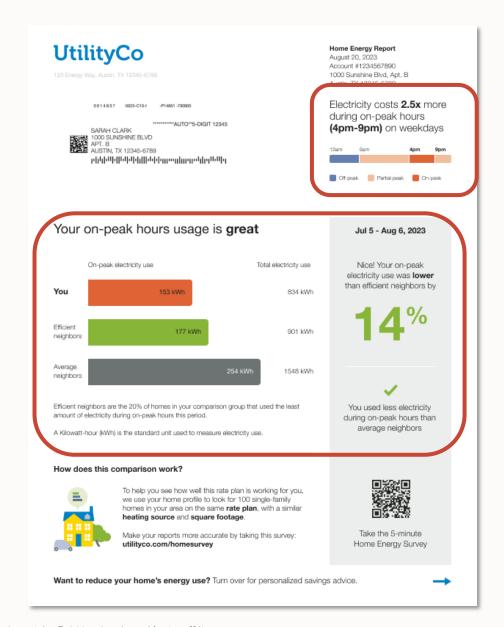
### **HER Evolution: Time Of Use Rate Education**

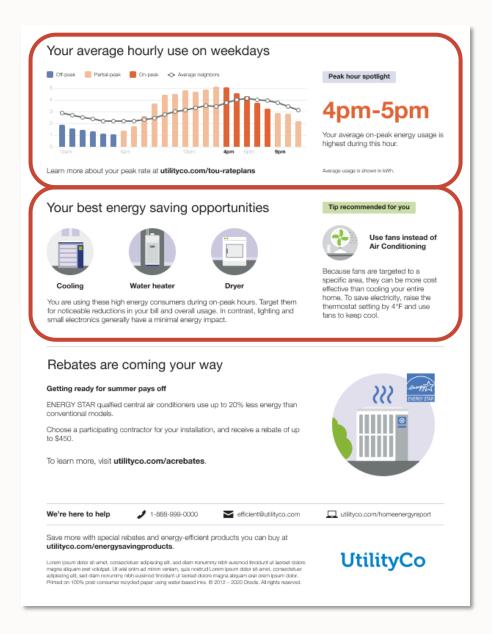






#### **HER Evolution: the Peak-Focused HER**







# ORACLE



# Sense Embedded Intelligence

# Sense Embedded Intelligence in the Electric Grid



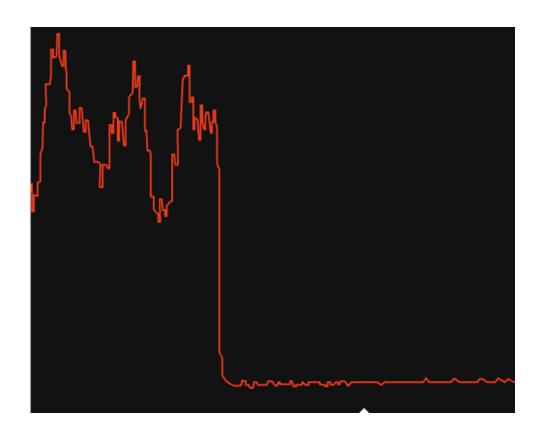


# How does Sense work?



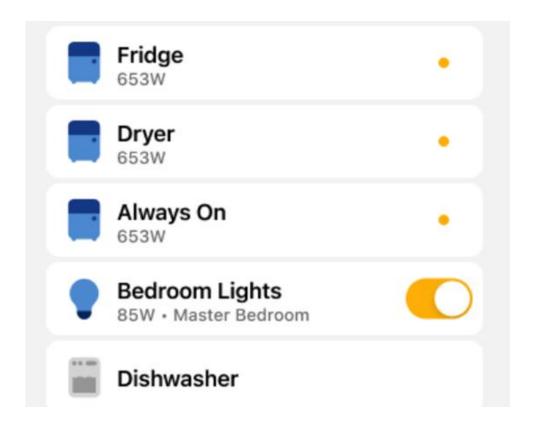
# Embedded intelligence

Edge computing and low latency networking embedded in next generation AMI meters.



Machine Learning

Sense uses machine learning to identify the unique signature of each electrical device, determine its state and energy usage, tracks performance and failure signals

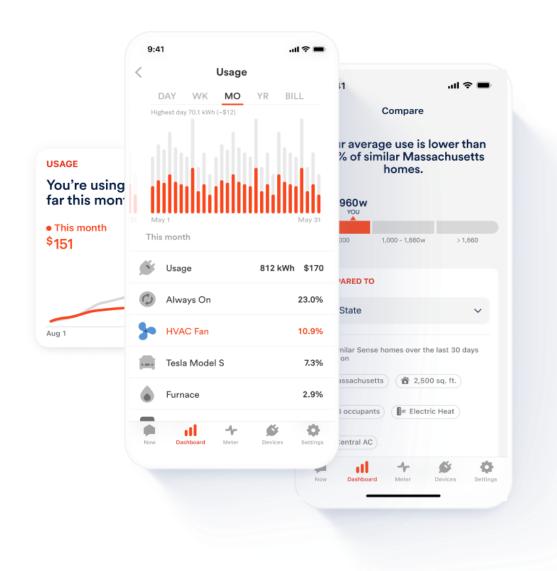


# Network effect

Sense continues to build a library of device signatures. As Sense collects data in more homes, and samples a diversity of devices and appliances, the library grows.



# With Real-time Applications, Residential Customers Can...

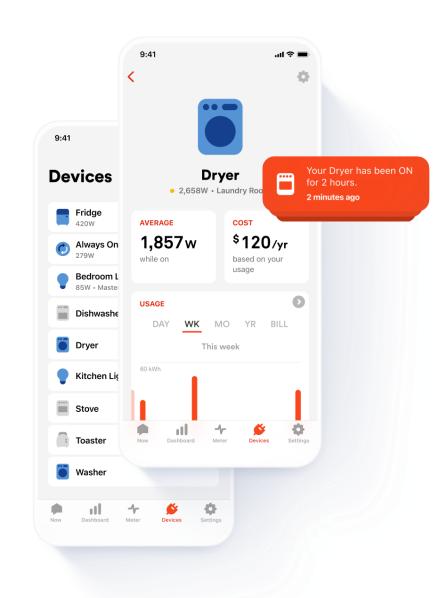


ııl ≎ 🖃 9:41 \* **3,975**<sub>₩</sub> NEWS Sense found a new device and named it 'Fridge'. It just turned on! on at 9:54 am for 5s, now off

2

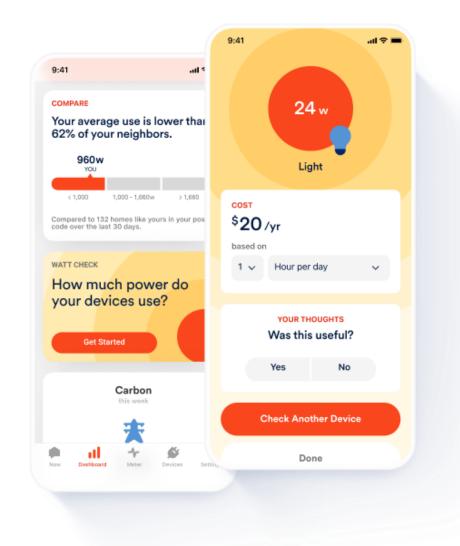
Compare and track energy use over time.

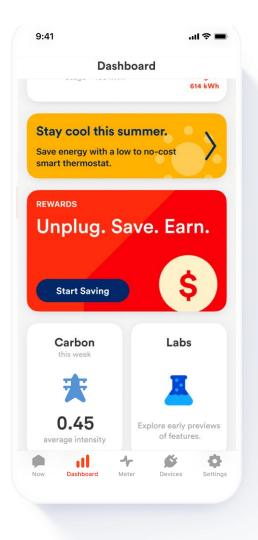
Keep an eye on real time power use throughout the home.



Detailed view of the home and its devices.

# Real-time Experiences Keeps Customers Engaged

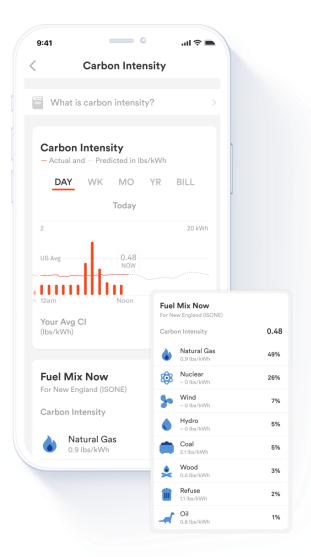




2

Check how much power devices consume and how much it'll cost.

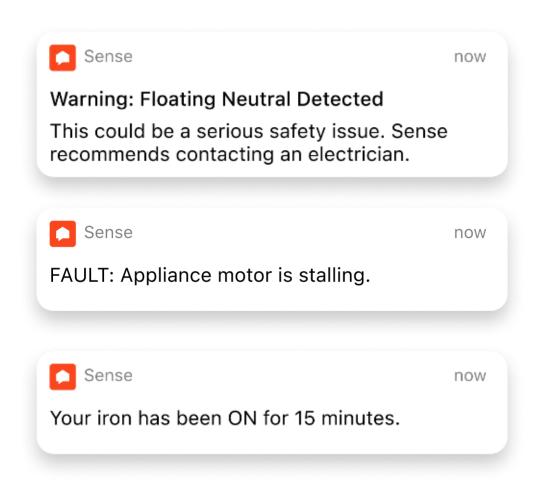
Personalized offers to help customers save energy and money.

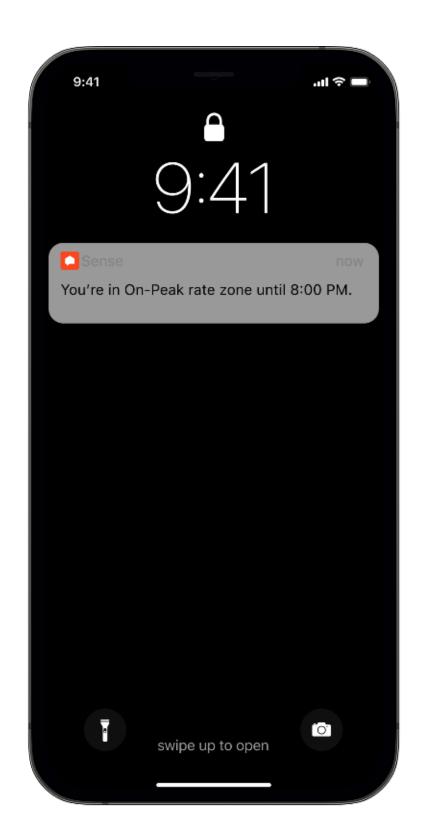


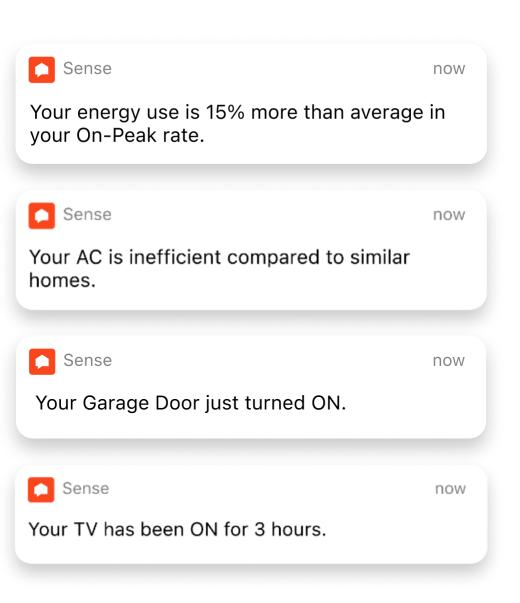
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Tools to help customers reduce their carbon footprint.

# **Use of Real-time Customized Alerts**









# Real-Time Energy Insights Create Lasting Change in Wisconsin

Alliant Energy customers reduced electric use by 4% on average with Sense

In 2024, Sense wrapped a multi-year program with Alliant Energy to explore how real-time home energy insights could help Wisconsin households use less energy - and spend less doing. The program used a multi-phased approach to recruit & deploy Sense's technology to over 900 participants.

2.5%

**GAS SAVINGS** 

**ELECTRIC SAVINGS** 

**DEMAND REDUCTION** 

10%

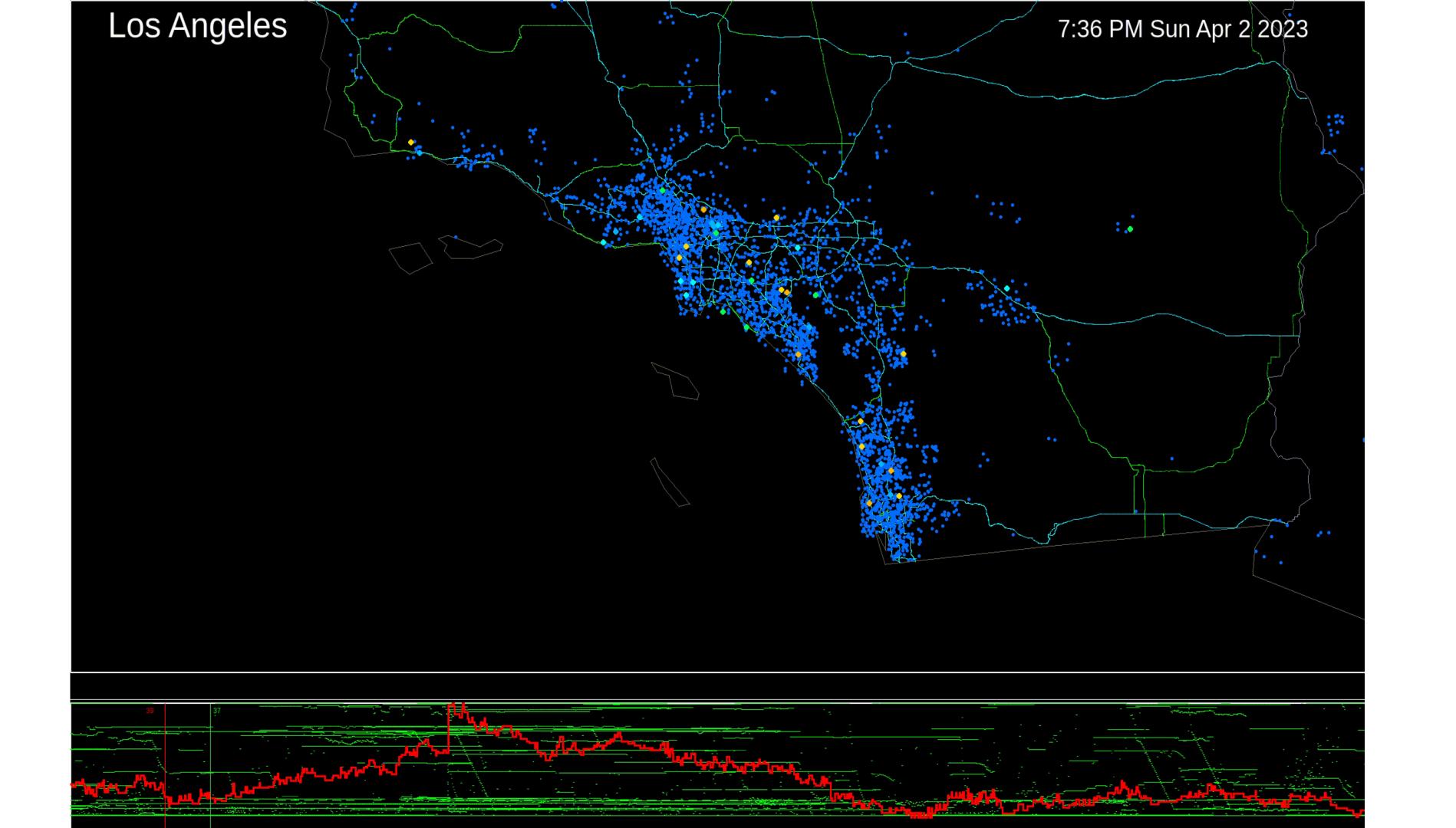
During summer events, participants achieved peak demand reductions averaging 10%, outperforming typical results from standard behavioral demand response programs.

**ENGAGEMENT** 

Most participants said the Sense app helped them build better energy habits—and 85% reported they intended to maintain those habits long term.

On average, participants reduced their electricity use by 3.9% annually and annual therm use by 2.5%. Savings not only persisted but increased year over year.

# Moving Beyond Behavioral Control



# Software at edge of the grid



Safety + Resilience Capacity



# Modern Distributed Architecture



High Resolution Data Edge computing Real-time networking

Interaction between home/grid
Localized, real-time load flexibility
Service Upgrade Avoidance
Planning/forecasting
Outage management



Efficiency
Load Flexibility
Electrification
Health and safety of home



# Able to control devices through software



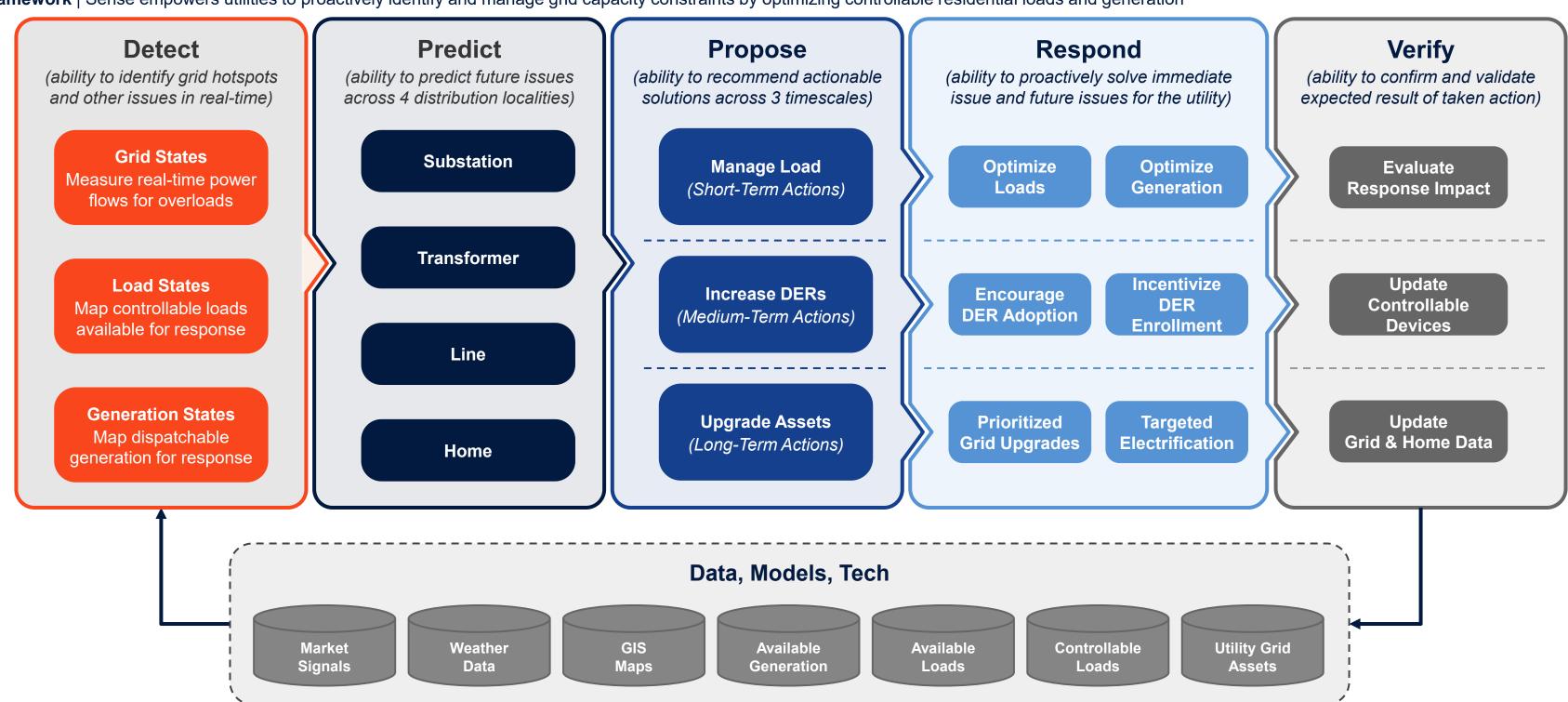
Next Generation Utility Meter





# Full view of home and grid allows optimization of energy use

Framework | Sense empowers utilities to proactively identify and manage grid capacity constraints by optimizing controllable residential loads and generation





Sense.com

# **Next Steps**

#### **Targeted Conversation**

#### August 13, 2025, 2-4pm

 Will serve as a deliberative space following related expert presentations to prompt informed discussion on policy questions and priorities

#### **Illustrative Presentation**



#### **Optional Office Hours**

#### August 6, 2025, 2-4pm

- Optional office hours for further conversation, serving as a structured opportunity to work towards common understandings and positions. We also encourage participants to have discussions amongst each other beside formal Task Force sessions
- Please reach out to <a href="mailto:chris.connolly2@mass.gov">chris.connolly2@mass.gov</a> to request an invitation.