

Members Meeting & FALL WORKSHOP 2022

Oct. 25-26 | St. Louis

Hosted by Ameren Missouri
and Ameren Illinois



SMART ENERGY
CONSUMER COLLABORATIVE

GET SMART.

**Revolutionizing Customer Engagement for
Decarbonization & Beneficial Electrification**

Pauline Marcou
Strategy & Growth Lead, Bidgely

Decarb Insights: Where We Are Headed

A new **mandate** is emerging

50% by 2030

Greenhouse gas reduction goal by the U.S. government, based on 2005 levels

Building decarb is foundational to emissions goals

29%

Of U.S. GHG emissions result from buildings

Electric Vehicles can unlock a big decarb potential

17%

Of U.S. GHG emissions result from light-duty vehicles only



Decarb Insights: Where We Need to Focus

**Home electrification
is booming**

+90%

Increase in home
electrification
programs between
2020 and 2022

**Space heating
is the most
incentivized measure**

90%

Programs offering
incentives for space
heating via heat
pumps of various
types

**EV owners will soon
be the majority
of your **customers**.**

100%

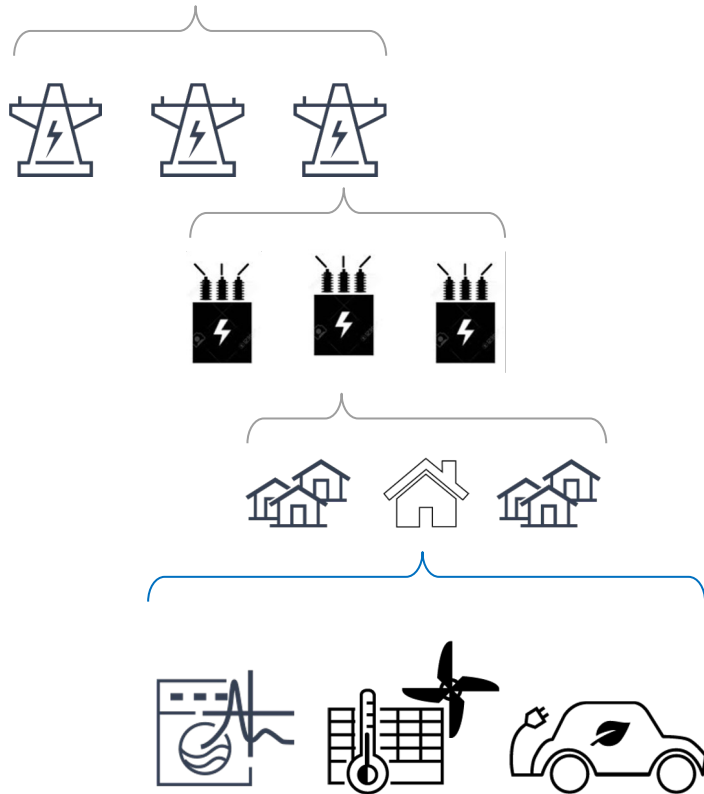
Of automakers have
plans for electric-only
or electric-majority
sales



Behind-the-Meter Intelligence Enables New Opportunities



Traditional
Grid Visibility




Behind the
Meter Visibility



Identify all **EVs on your grid**
(location + charging size + behavior)



Identify all high-use gas users for
heat pump electrification



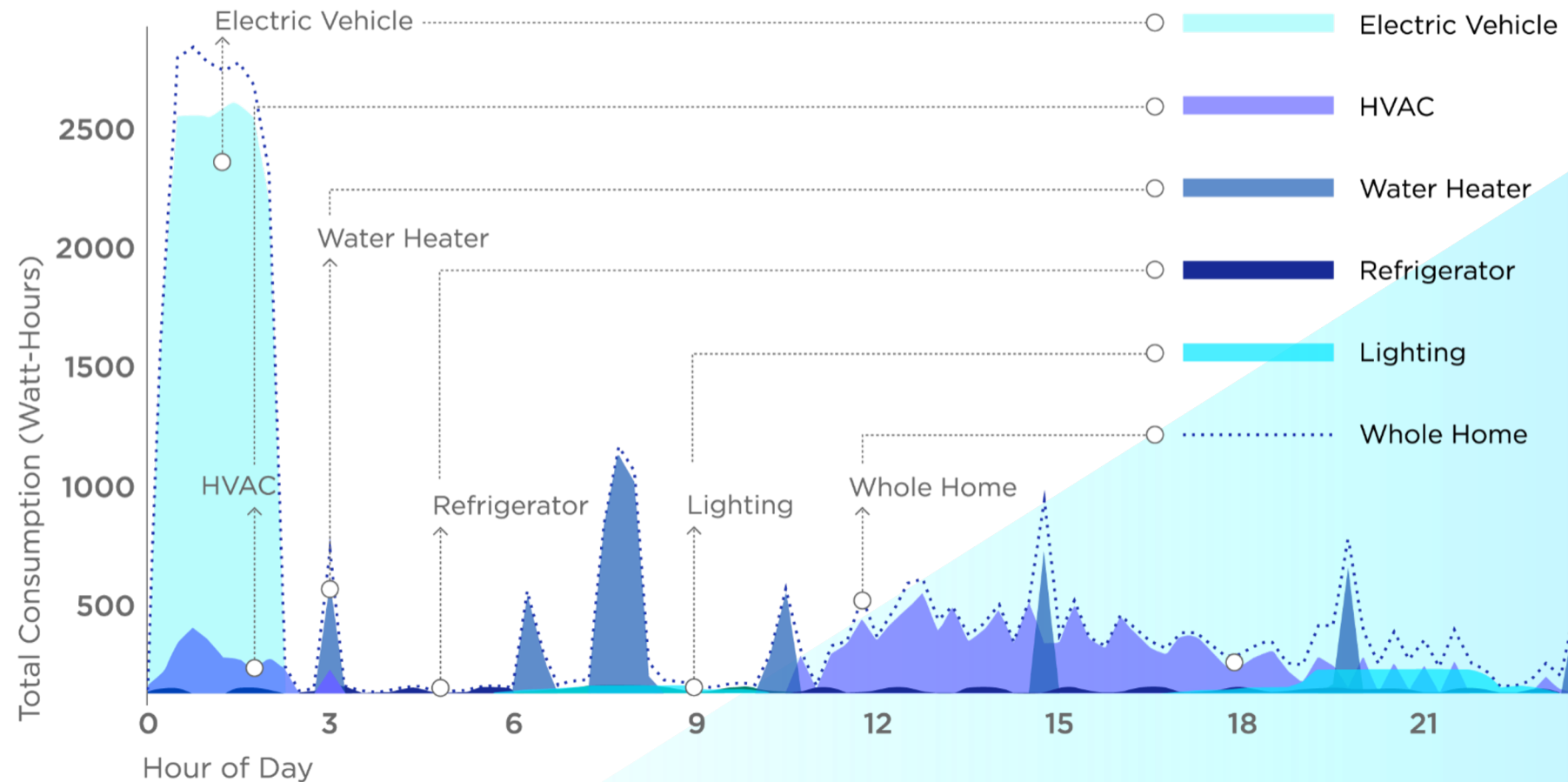
Identify all single-speed pool pumps
for **DSM programs**



Identify all high-use and peak-hour
HVAC use for **DR targeting**



Enhance The Understanding Of Each Unique Customer



17 Patents | No Hardware Required | Electric & Gas | Zero Customer Inputs Required

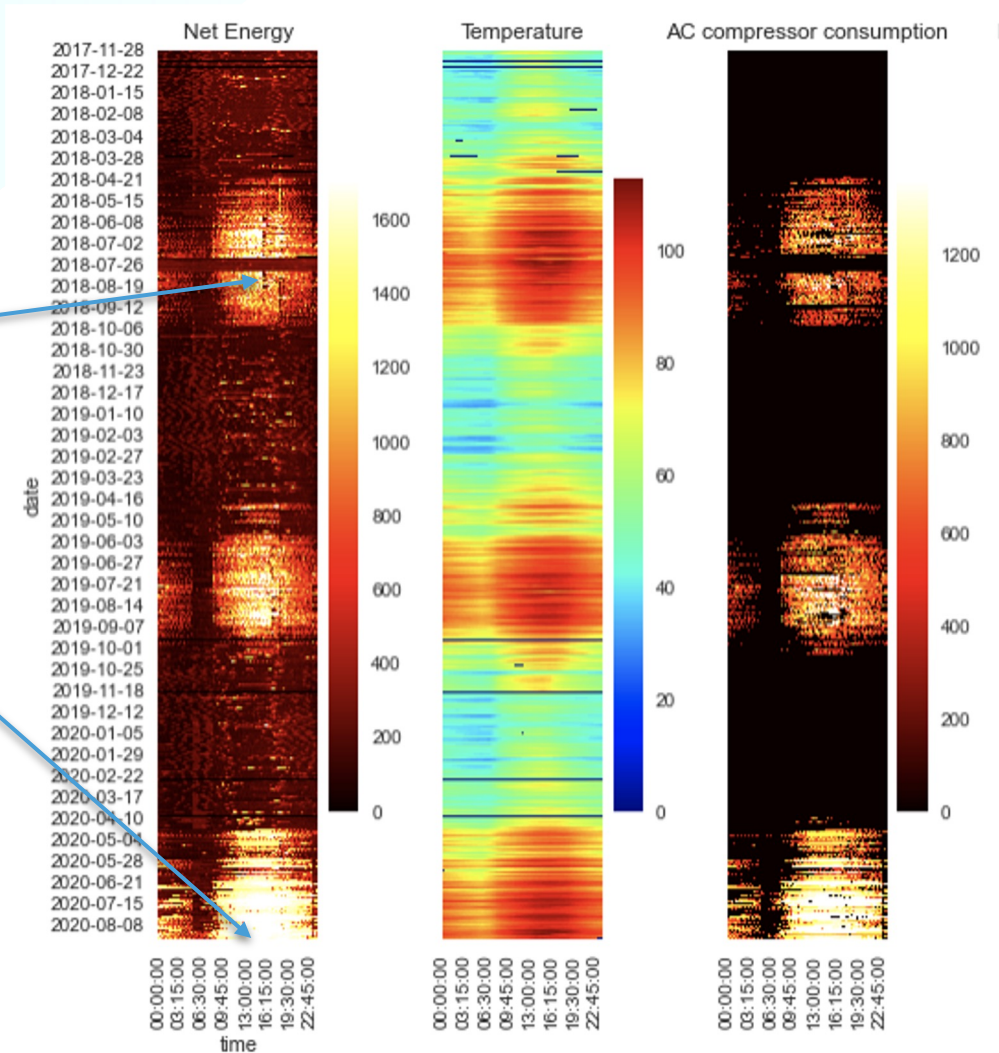


Leverage Appliance Insights for Electrification

AC degradation over 3 years

Low consumption levels
AC shows cycling

High consumption levels
AC loses cycling





Right Customers, Right Message, Right Context

Gas Furnace: 120 Therms / Month (high bill)

Personalize: Cluster with appropriate similar households for heat pump incentive campaign and home energy audit.

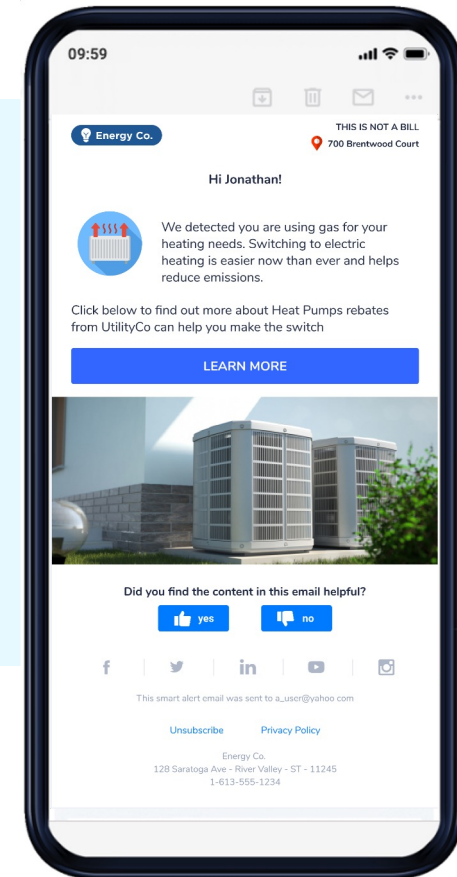
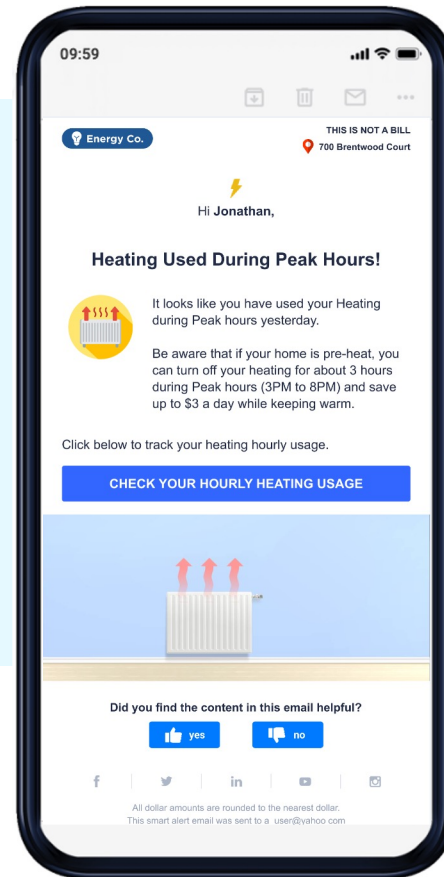
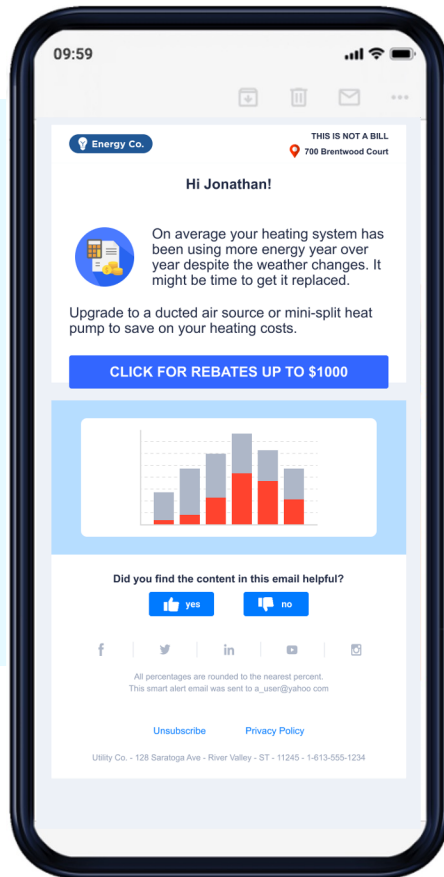
Potential X-Offer: Heat Pump incentive program: \$500 per unit 16-SEER or higher.

HVAC Degradation: Short cycling has increased in recent months.

Personalize: Notify customer about performance decrease and related costs.

Potential X-Offer: Upgrade to newer, more efficient Heat Pump incentive program: \$500 per unit 16-SEER or higher.

Smart Decarbonization Journeys

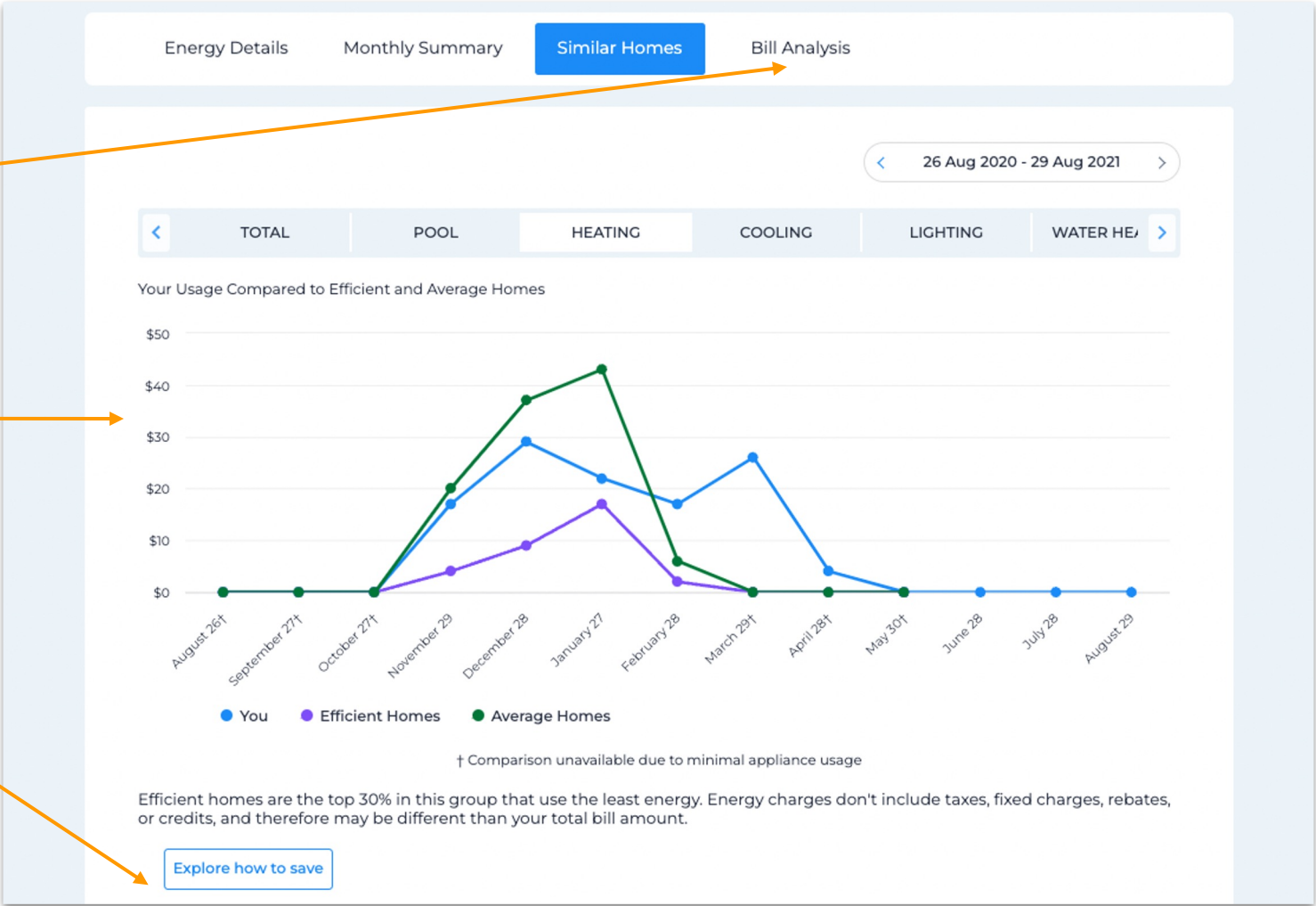


Customer Portal Insights → Multichannel Engagement

How their heating systems are impacting energy costs

Appliance-based similar home comparison

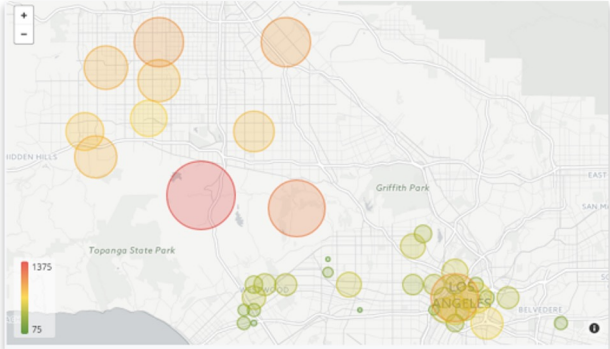
How to make changes for the better



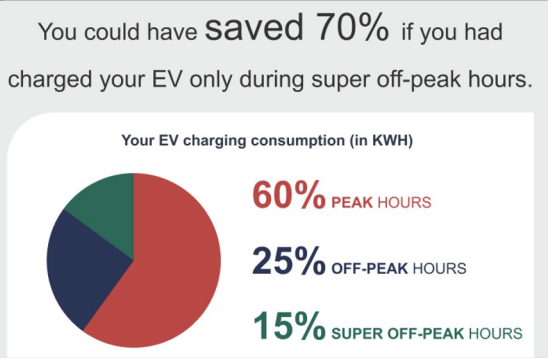
Full Lifecycle EV Solution for Decarbonization



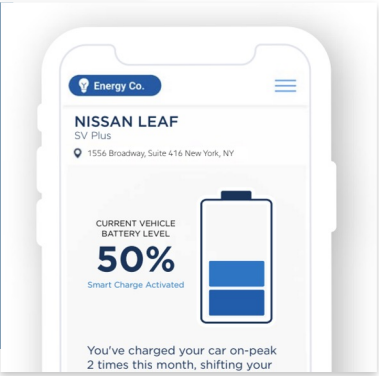
EV Detection



Behavioral Load Shifting (TOU rates or gamification)



EV Managed Charging



Time of Use Coaching for EV Owners

⚡
Hello, Jonathan!

YOUR MONTHLY EV TRACKER

June 1, 2022 - June 30, 2022
[Why & how is my EV charging monitored?](#)




You spent **\$150**
on EV home charging last month

LAST MONTH **\$150**

PREVIOUS MONTH

💡 You're averaging \$100 per month on EV home charging in the last 12 months.

Register your EV to **save more!**



You are currently on the standard time of use rate. Register your EV on My Account to receive a 1.5¢ discount on all electric usage between midnight and 6 AM

Sign up for your Time-Of Use Rate and charge your EV during super off peak hours to start saving now.

REGISTER YOUR EV NOW


Monthly Tracking to provide the best experience for drivers

Peak Period Details
A breakdown the percentage and cost of charging within each rate window


Enrollment into the EV discounted period of the TOU for EV drivers

You could have **saved 70%** if you had charged your EV only during super off-peak hours.

Your EV charging consumption (in KWH)



60% PEAK HOURS
25% MID-PEAK HOURS
15% OFF-PEAK HOURS



Your Time-Of-Use (TOU) Rate

💡 Always charge during **super off-peak hours** to minimize the EV charging cost.

Check out when you charged your EV in the last few months and plan your future charges at best times.

CHECK MY HOURLY EV CHARGING




Time of Use Coaching for EV Owners

⚡

Hello, Jonathan!


⚠️ EV Charged During Peak Hours

 You charged your EV during **peak hours** (4pm - 8pm) on Tuesday, January 19. You spent \$3 on EV charging.

You can **save 70%** by charging your EV during super off-peak hours.

Did you know, electric vehicles and EV chargers come with a timer that lets you charge your EV at a specific time? Set your EV charging start & end time within super off-peak hours to charge **at the lowest rate.**

[CHECK YOUR HOURLY EV USAGE](#)



***TIME OF USE RATE PLAN**

Peak: 4PM - 8PM; on weekdays except federal holidays (€16 per kWh)
Off-Peak: 7AM - 11PM; on weekends and federal holidays
and 7AM - 4PM, 8PM - 11PM; on weekdays (€10 per kWh)
Super Off-Peak: 11PM - 7AM; everyday (€6 per kWh)

Peak Charge

- After a customer charges during their peak window they are notified

Activity Map



Case Study: Utility Marketplace Lead Generation

THIS IS NOT A BILL
700 Brentwood Court

Hi Jonathan,

You used {Value}% more energy in Always On devices, in the last billing cycle, compared to the same period last year

Advanced powerstrips can automatically shut down devices that aren't currently in use, saving you energy and money. Learn more about other advanced features they can offer.

[LEARN MORE AND EXPLORE DISCOUNTS](#)



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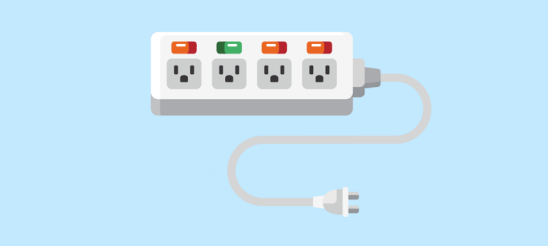
THIS IS NOT A BILL
700 Brentwood Court

Hi Jonathan,

We noticed an increase in your consumption from Always On devices: a {Value}% increase this billing cycle over the last.

Making a one-time purchase of a smart powerstrip for only a small fraction of that cost can help eliminate this recurring and avoidable portion of your energy usage by automatically turning off idle devices!

[LEARN MORE AND EXPLORE DISCOUNTS](#)



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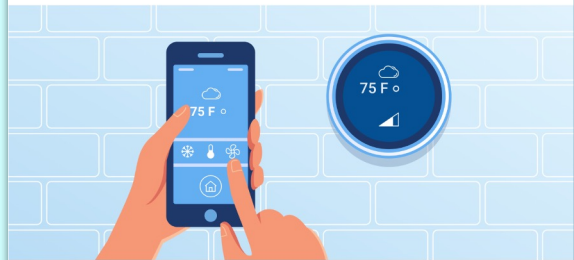
THIS IS NOT A BILL
700 Brentwood Court

Hi Jonathan,

You spent {Value}% of your bill on heating, during the last billing cycle.

A smart thermostat can help you save in a variety of ways including learning your living habits to adjust temperature for maximum comfort with minimum energy usage throughout the day. Explore the different options available to you and make an informed purchase decision or learn about how to use optimize performance of your existing one.

[LEARN MORE AND EXPLORE DISCOUNTS](#)



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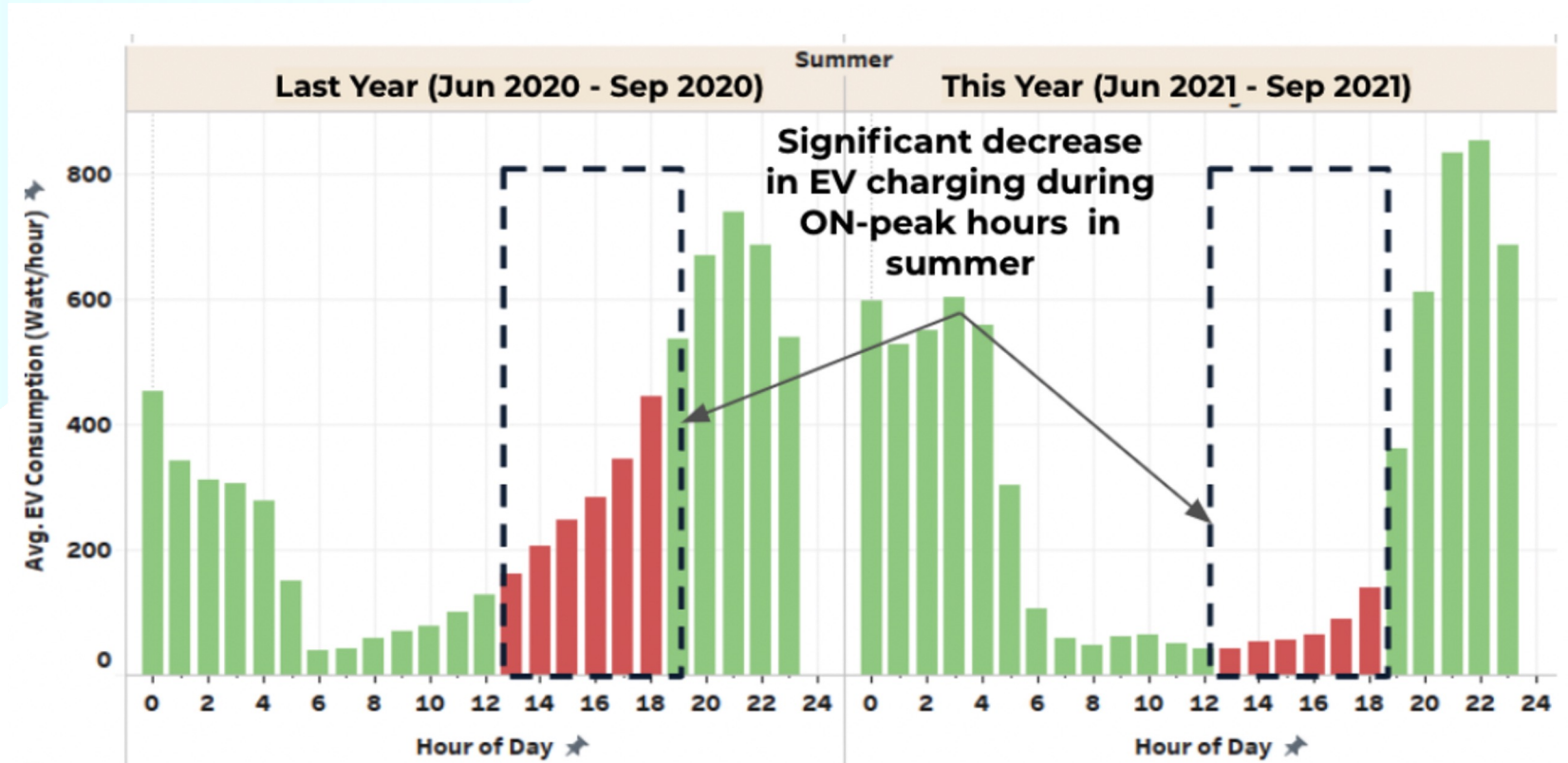
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Case Study: AI-Powered Peak Load Shift

50% engagement overall with emails

100% thumbs-up rating



THANK YOU.

Pauline Marcou
Strategy & Growth Lead, Bidgely

Carbon Free Loans (CFLs) *Equitable 0% Financing*

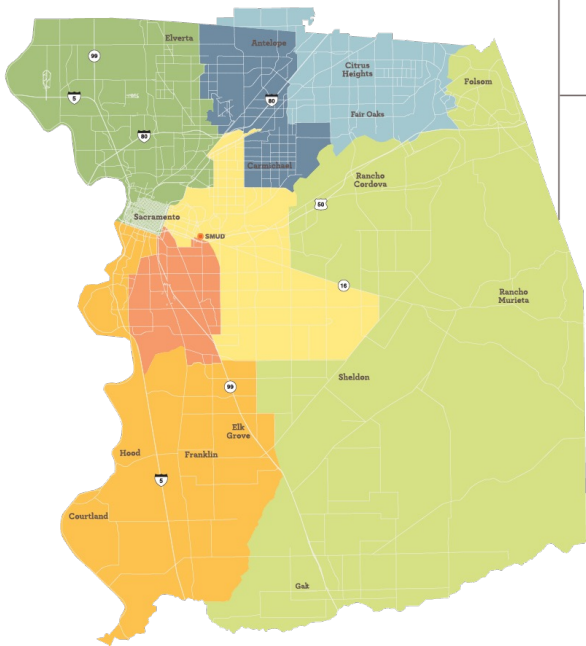
Scott Blunk

October 2022



SMUD is your community-owned, not-for-profit electric service.

6th largest
community-owned
in the U.S.



75+
Years
Est. 1946

Power mix
that's more than
60%
carbon-free*



The most
ambitious goal
of any large
utility in the
United States

~**645,000** Customers

~**2,300** Employees



7 member
Elected
Board of Directors

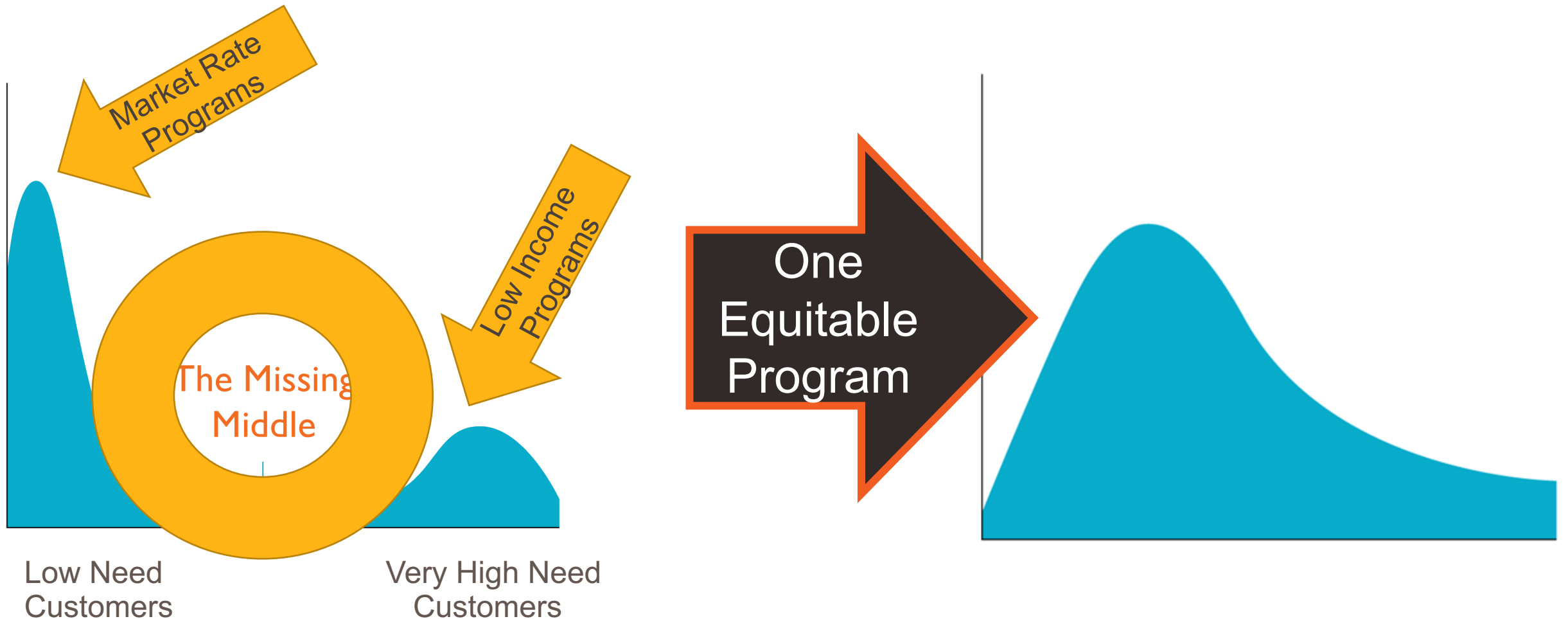
Rates among the lowest in CA. On average **45%** lower than PG&E

CleanPowerCity.org



* In 2020, SMUD's power supply was more than 60% carbon free. SMUD has a goal to reach zero carbon in its electricity production by 2030.

The Problem: Equitable access to the clean energy future



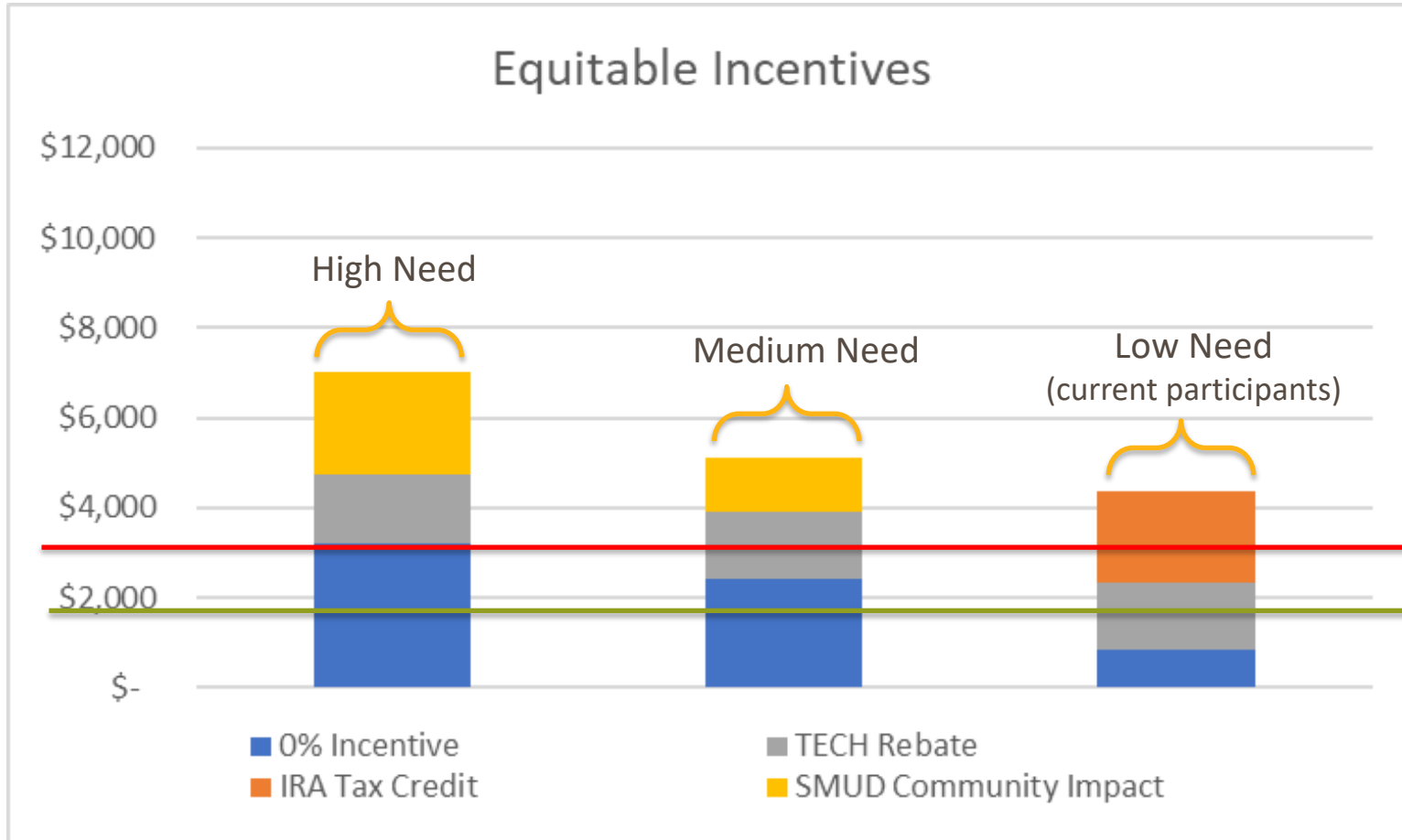
Concept: 0% Financing for all Customers

10-year loans for HVAC electrification

- **High Need** customers: 0% interest for **10 years**
 - “Low-Income” qualified customer receive free electrification
- **Medium Need** customers: 0% interest for **5 years**
- **Low Need** customers: 0% interest for **1 year**
- SMUD will guarantee the loans for customers who do not qualify for traditional financing
- Loan will not be on the utility bill
- Loan is secured on the property
- No customer can be declined



Demo Program - 2023 HVAC Example



IRA Rebates & Incentives

- > 150% AMI = \$2,000 (shown)
- 80-150% AMI = \$4,000 (not shown)
- <80% AMI = \$8,000 (not shown)

2022 Rebate Amount \$3,000

Average 0% interest incentive \$1,600

Total Cost of Ownership

- 56% of customers can't cover an unexpected expense of \$1,000
(<https://www.cnbc.com/2022/01/19/56percent-of-americans-cant-cover-a-1000-emergency-expense-with-savings.html>)
- ~90% of our customers are interested in financing their HVAC
([Electrification Financing Research Results_08252021_DRAFT_HHI Group Analysis_2022-08-30.pptx](#))
- Loan cost minus utility bill savings → Cost of ownership

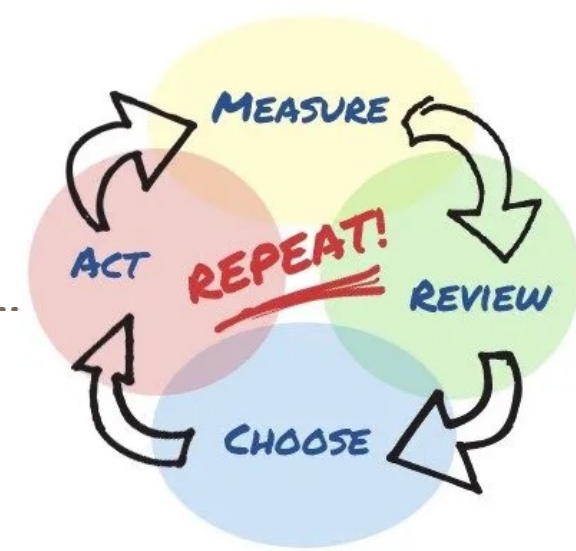
Customer choice lowers total cost to the customer and would save SMUD \$2.3M over the next 3 years

	Customer, Monthly Net Cost		
SEER	Low Need	Medium Need	High Need
14,15	\$ 147	\$ 121	\$ 106
16,17	\$ 200	\$ 181	\$ 127
18+	\$ 208	\$ 203	\$ 128

It is less expensive to not save energy

Loan Defaults

- \$120M in new loans (\$1 billion by 2030)
- Expected default of 3-5%, <\$2M (*on guaranteed loans*)
- Default Process
 - At 90 days past due loan become delinquent
 - SMUD reimburses bank for the loss, bank maintains lien
 - At property sale or refinance, SMUD is repaid, and the lien is resolved
- Ultimately, the customer's need is met, the gas appliance is eliminated, customer's utility bills have decreased, home is healthier, and SMUD is made whole from the default



Modern Efficiency (hint: it's *about carbon*)

- Need to increase program volume 50% every year for the next 10 years
- Tinkering with rebates and efficiencies won't get us there
- We must think holistically and take bold action
 - And be prepared to fail and repeat



Questions

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Powering forward.
Together.



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