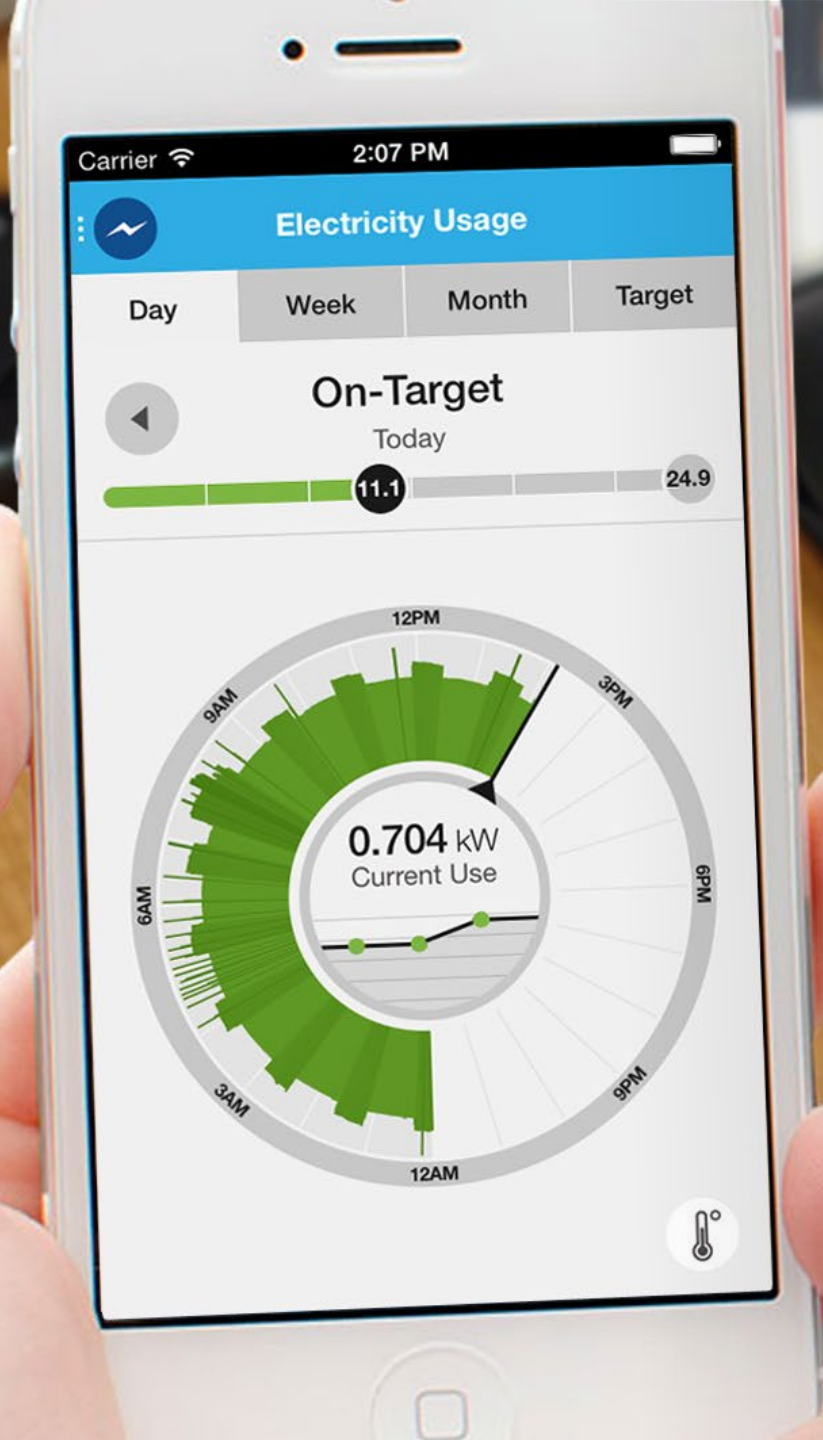# Evolving with Energy Efficiency

February 27, 2020
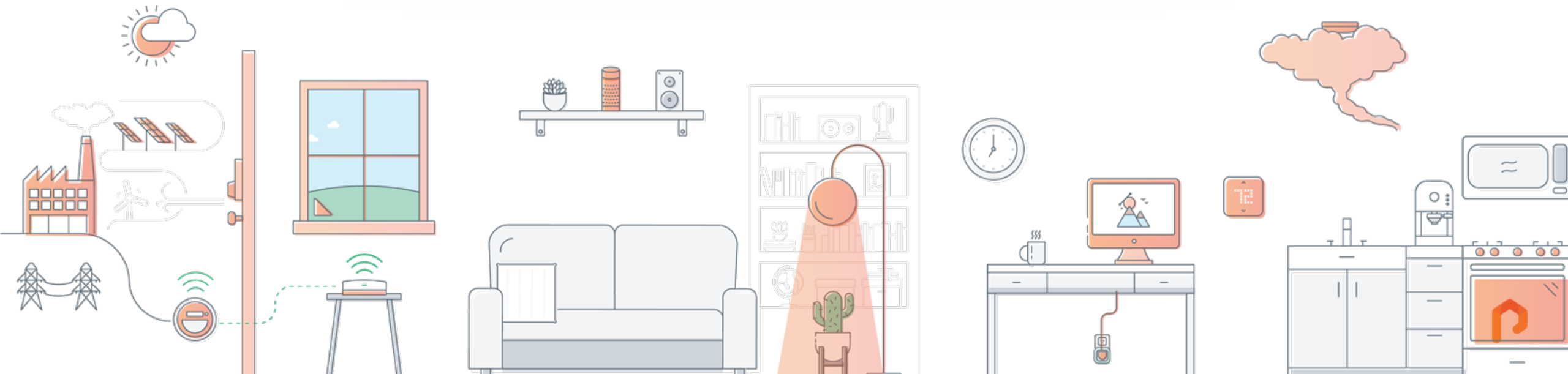
DTE Energy began the journey 7 years ago with a focus on Behavioral Energy Efficiency

Our Mission

To connect the Smart Grid and the Smart Home

Powerley is a Home Energy Management platform that provides a real-time window into energy usage for the home itself, and every connected appliance and device within it
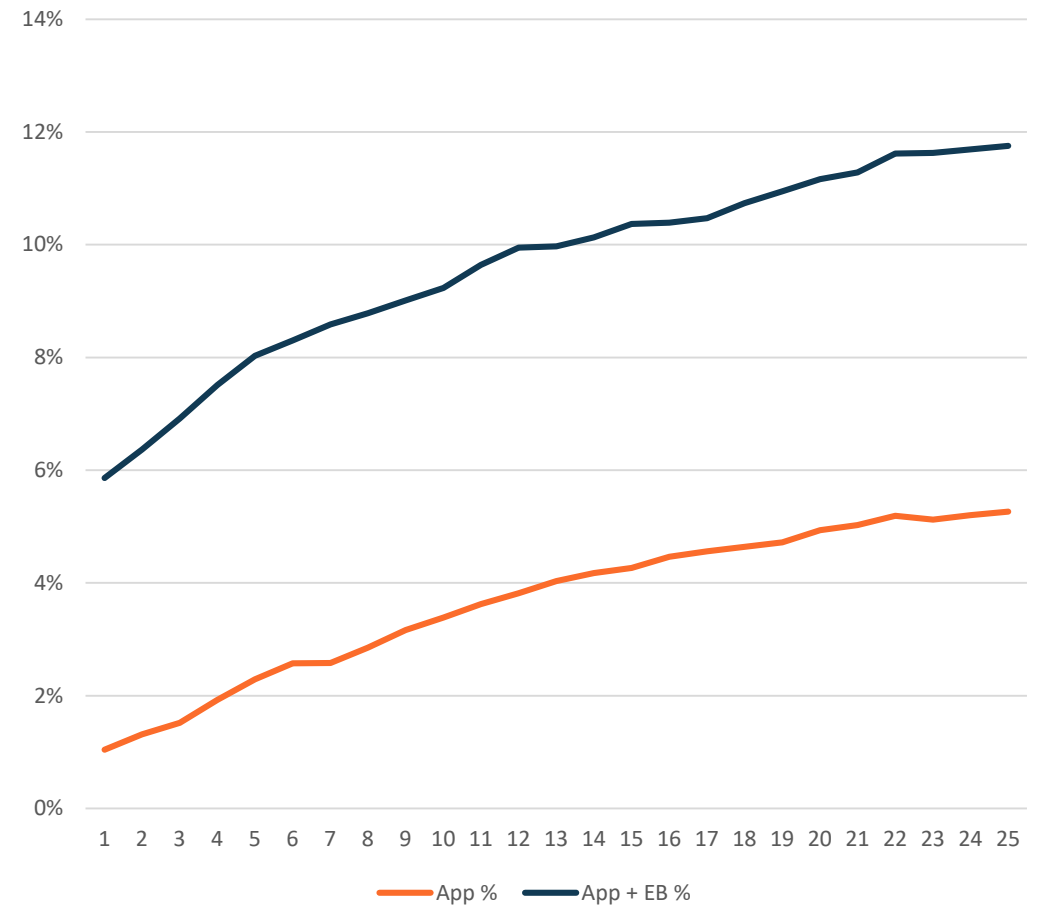
DTE Insight Drives Energy Savings Through Customer Engagement

The DTE Insight app helps customers understand, manage and control the energy that powers their home and life. Using the app more frequently generate more energy reduction for utilities and more savings for themselves.

- Using the app with the Energy Bridge 5X per year **generates an 8% increase in energy efficiency**

- Customers who engage with the app and Energy Bridge 25 times per year have the potential to **save 12% on energy**.

Customer Energy Savings by App Sessions

App %   App + EB %

Utility Customers Want a New Relationship with Energy

56% consumers would like to have automated home energy management services or devices[1]

70% consumers want a bundled solution from their utility[2]

61% would prefer to get home monitoring and control services from their utility[1]

Regulatory Models are Evolving for Utilities

TRADITIONAL MODELS

Energy Efficiency Funded

- Regulatory Model has decades of precedence

- Cost effectiveness difficult as a point solution

DR Funded

- Regulatory Model is established, market differences

- Cost effectiveness difficult as a point solution

EMERGING MODELS

Platform Capitalization

- Emerging approach, accepted by some regulators who press for innovation

- Can help with cost effectiveness issues

Customer Subscriptions/Retail Models

- Emerging approach, requires legislative/ regulatory pathway

- Shared benefits with customers, EaaS Offerings

Creating New Business Models

With a $1.99/month on-bill charge, DTE has created a new business model to monetize smart home energy management. **Already, DTE Insight has over 22k customers engaged in their premium service!**
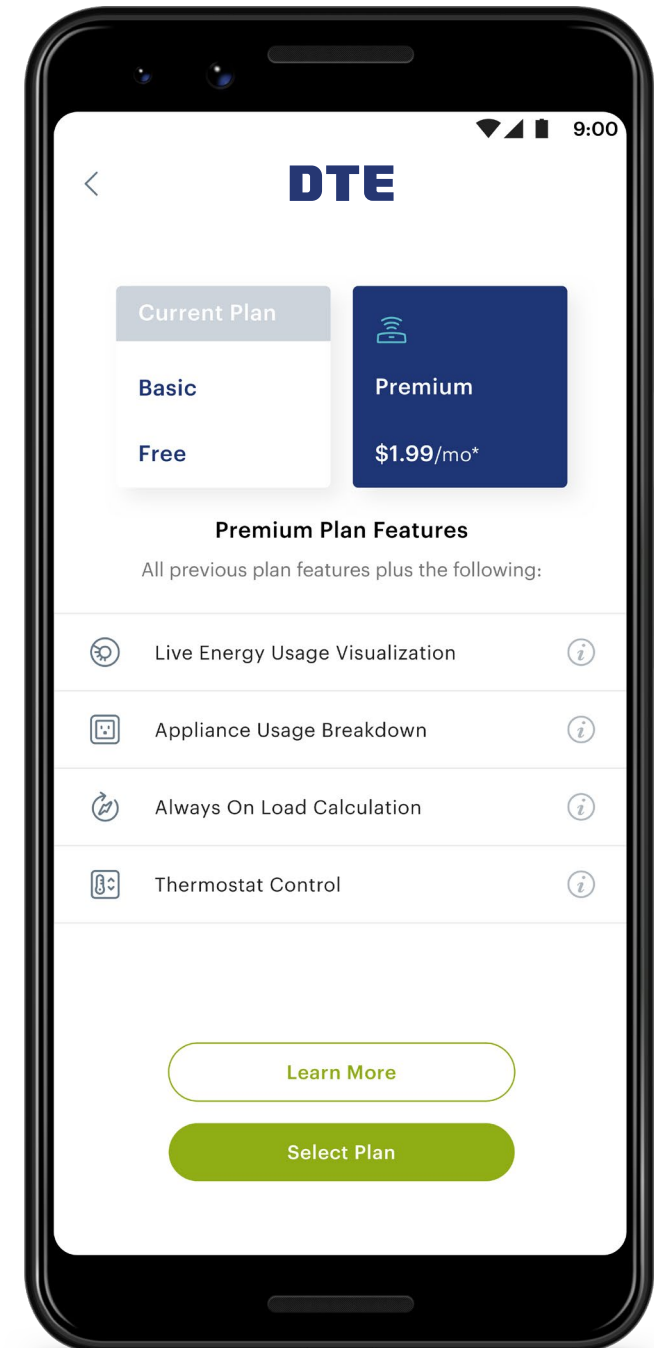
HIGH CUSTOMER ENGAGEMENT

- ~70 million app interactions/events
- Each session ~111 seconds

RAPIDLY RE-SCALING

- 111k DTE Insight app users
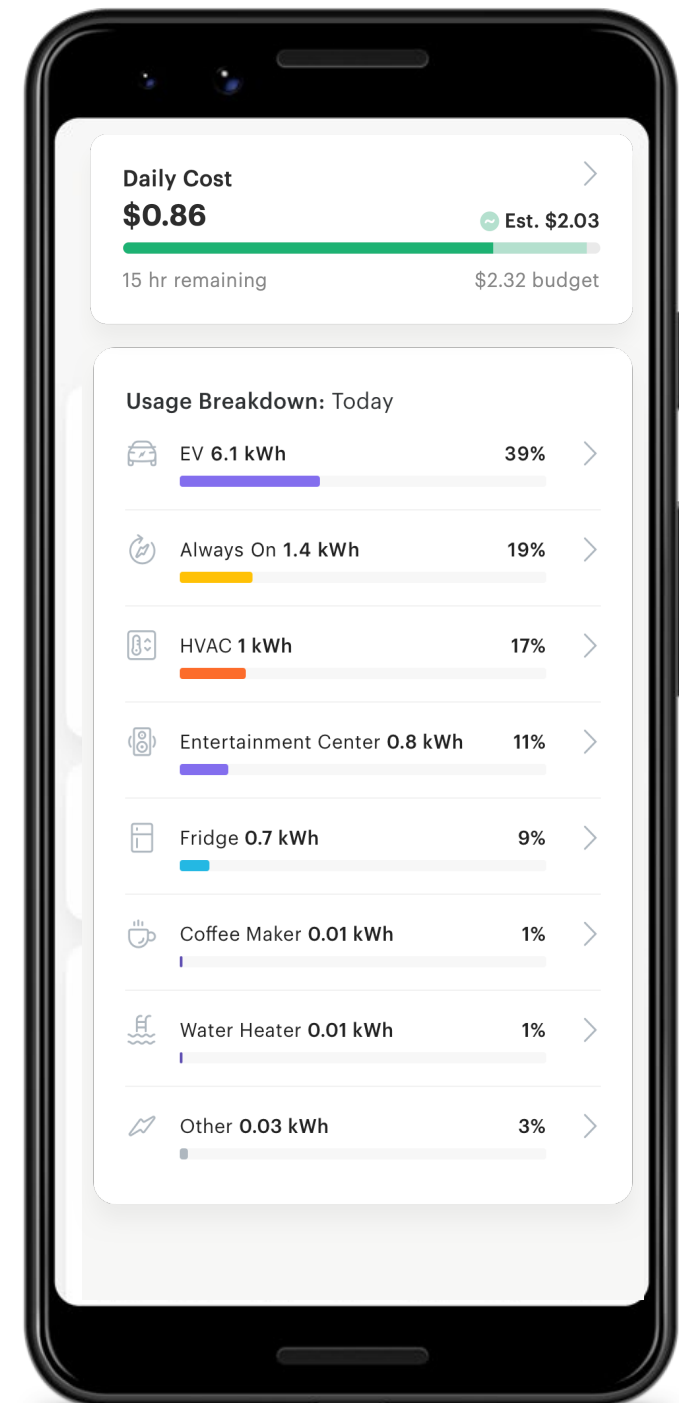- 25k EBs deployed

HIGH ASSET UTILIZATION

- 90%+ successful bind rate

AEP Ohio is Expanding on Efficiency

The It's Your Power app has not only helped customers control the energy that powers their home and life but deliver **customer friendly demand response that goes beyond the thermostat to all the smart devices in the home.**

Daily Cost >
$0.86   🟢 Est. $2.03
15 hr remaining $2.32 budget

Usage Breakdown: Today

🚗 EV **6.1 kWh**	39%	>
🧭 Always On **1.4 kWh**	19%	>
HVAC **1 kWh**	17%	>
🔊 Entertainment Center **0.8 kWh**	11%	>
Fridge **0.7 kWh**	9%	>
☕ Coffee Maker **0.01 kWh**	1%	>
Water Heater **0.01 kWh**	1%	>
📈 Other **0.03 kWh**	3%	>

AEP's Intelligent DR with Smart Devices

Intelligent scheduling and automation of a home's energy consuming devices, harmonized to reduce waste and save money for the customer while limiting stress on the grid when needed.

- Let customers choose the devices they want included

- Pre-heat home during off-peak rate

- Notify customers when a DR event is happening

Intelligent DR with Smart Devices

Intelligent scheduling and automation of a home's energy consuming devices, harmonized to reduce waste and save money for the customer while limiting stress on the grid when needed.

- **Let's customers choose the device they want included**
- Pre-heat home before a DR event occurs
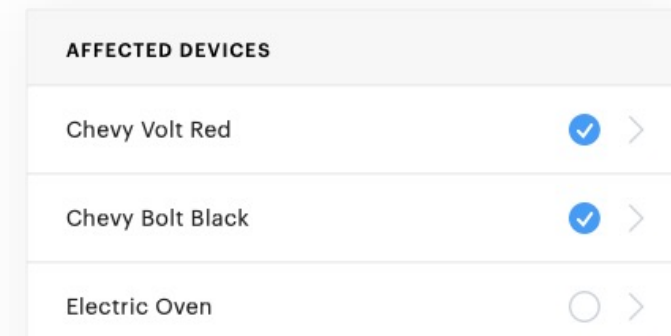- Notify customers when a DR event is happening
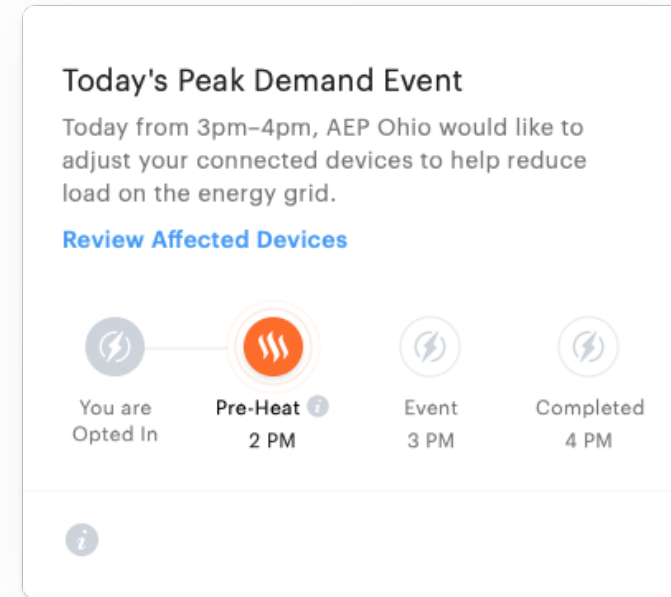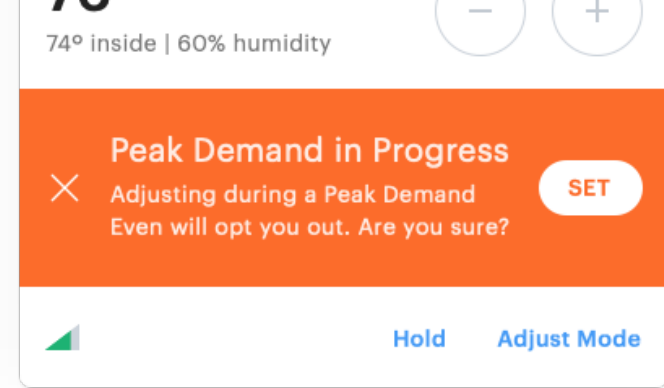
Intelligent DR with Smart Devices

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Intelligent DR with Smart Devices

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Energy Data unlocks the missing value of the Smart Home

Enables Energy as a Service

Real-Time Awareness

Whole-house and appliance-level energy data (HVAC, EV) plus actionable insights to control energy usage and pay as you go

Energy Rates + GridMix

Respond to real-time price signals and manage which sources are generating your electrons

Solar, EV, and Storage

Monitor solar, EV, and storage for net neutral optimization and subscription rate pricing

Appliance Monitoring

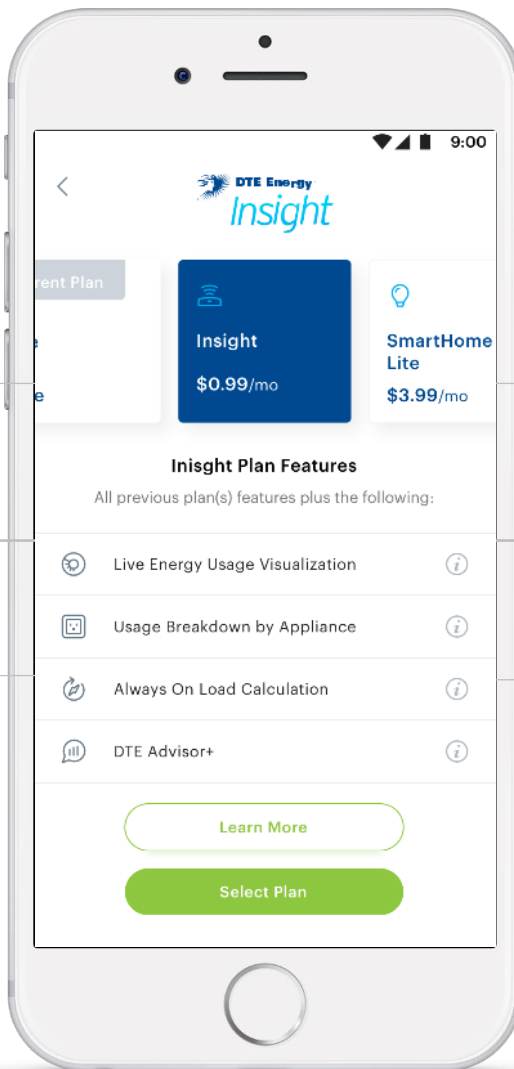Real-time appliance monitoring to notify of current and future failures

Activity Monitoring

Elderly care for safety and child wellness/presence Notify anomalies in behavior patterns via electrical signature

Full-Home Optimization

Complete Smart Home optimization that balances comfort, cost and carbon footprint

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DTE Energy
Insight

Current Plan

Insight
$0.99/mo

SmartHome Lite
$3.99/mo

Inisght Plan Features

All previous plan(s) features plus the following:

Live Energy Usage Visualization ⓘ

Usage Breakdown by Appliance ⓘ

Always On Load Calculation ⓘ

DTE Advisor+ ⓘ

Learn More

Select Plan

Energy-as-a-Service: The Utility Subscription Bundle

APP ONLY

BASIC

FREE
lifetime

Visualize AMI data

Bill Budgets and Estimations

Challenges

Energy Tips and Projects

Home Advisor

SIGN UP

APP + REAL-TIME USAGE

STANDARD

$0.99
MONTH

Real-time Energy & Demand

Appliance Disaggregation

Always On Load Calculation

Real-time chat support

Home Advisor+

SIGN UP

APP + WHOLE HOME CONTROL

SMART HOME

$5.99
MONTH

Control connected devices

Real-time disaggregation

Smart Actions and Notifications

GOLD Support

Home Advisor Premium

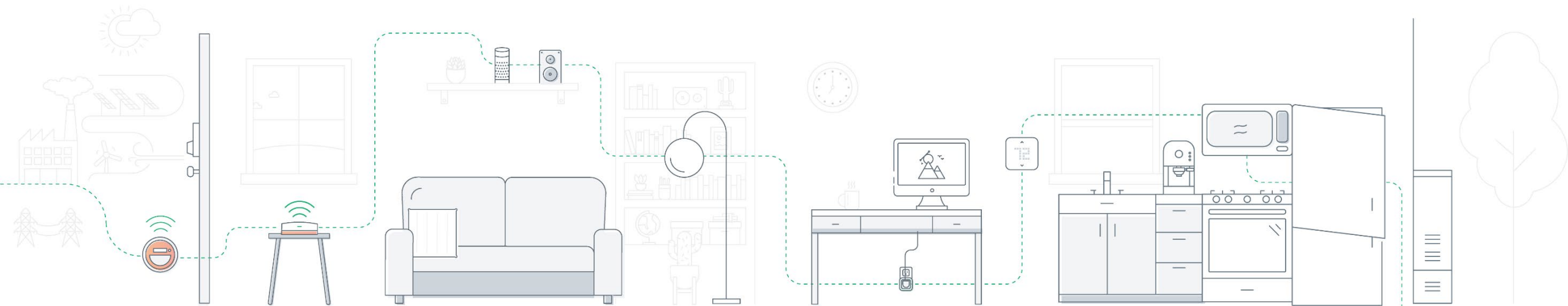**SIGN UP**

So what does the future of EE look like?

- Focused on maximizing customer benefits

- Highly personalized and mobile

- Advanced rates and AMI for real-time price signals

- Bundled with other premium services

Real-time Energy in the Smart Home

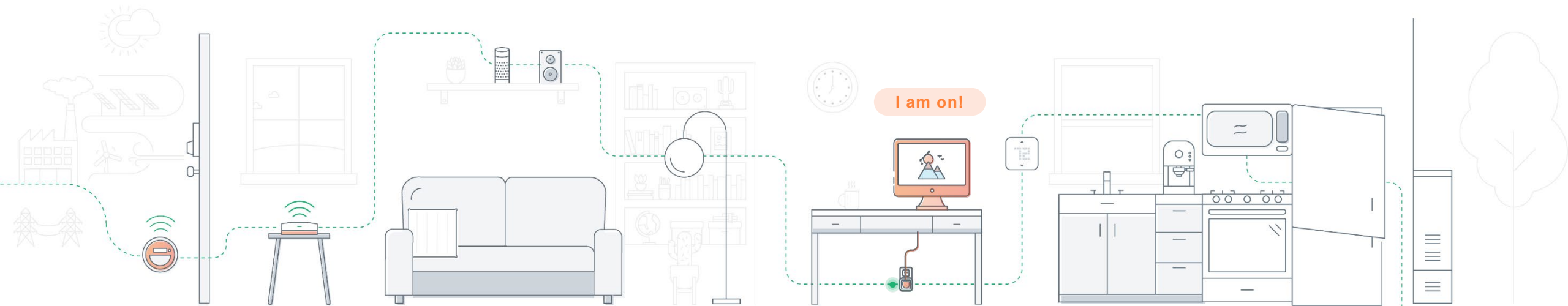# Real-time Energy in the Smart Home

DENOTES APPLIANCE USE

Real-time disaggregation can determine which appliances are currently in use throughout the home
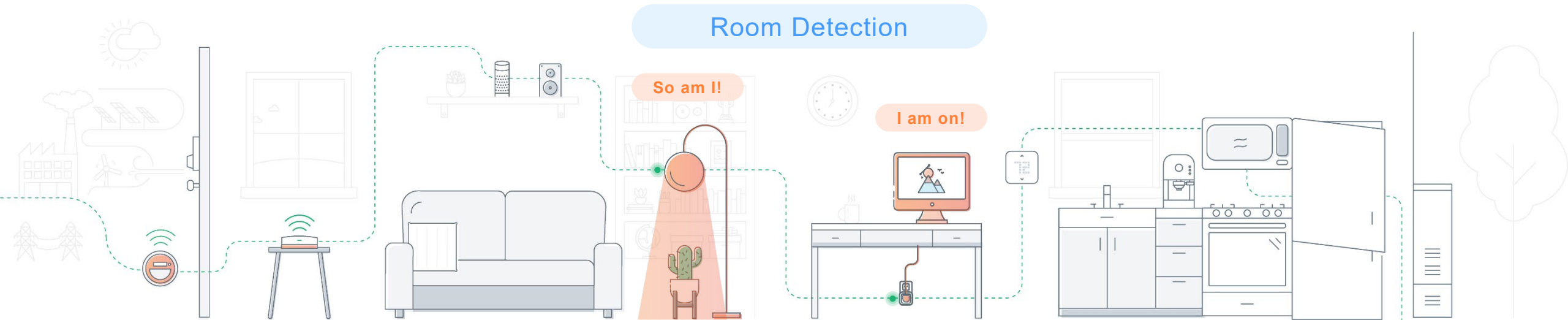

I am on!

Real-time Energy in the Smart Home

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LOCATION AWARENESS

Using appliance + lighting info can provide location awareness within the home to unlock new service opportunities

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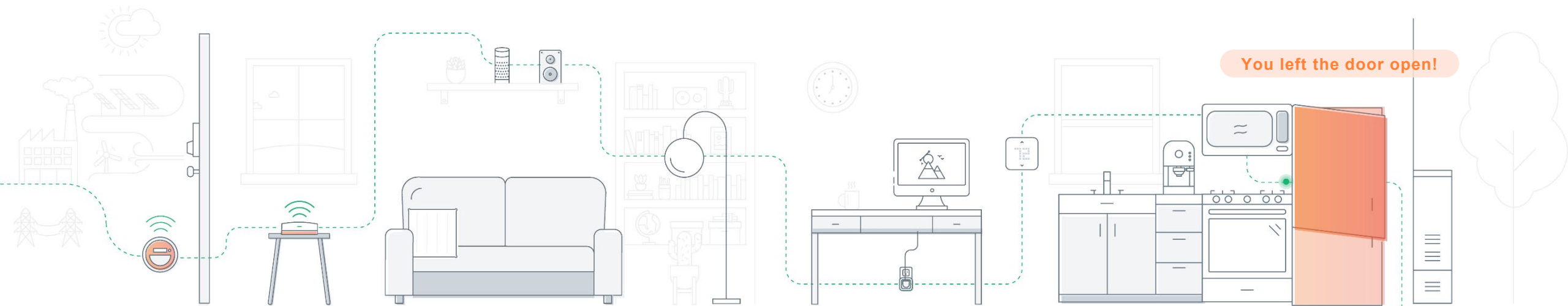
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APP. HEALTH MONITORING

Energy can provide the performance characteristics of appliances and alert on degradation or outliers

You left the door open!

Real-time Energy in the Smart Home

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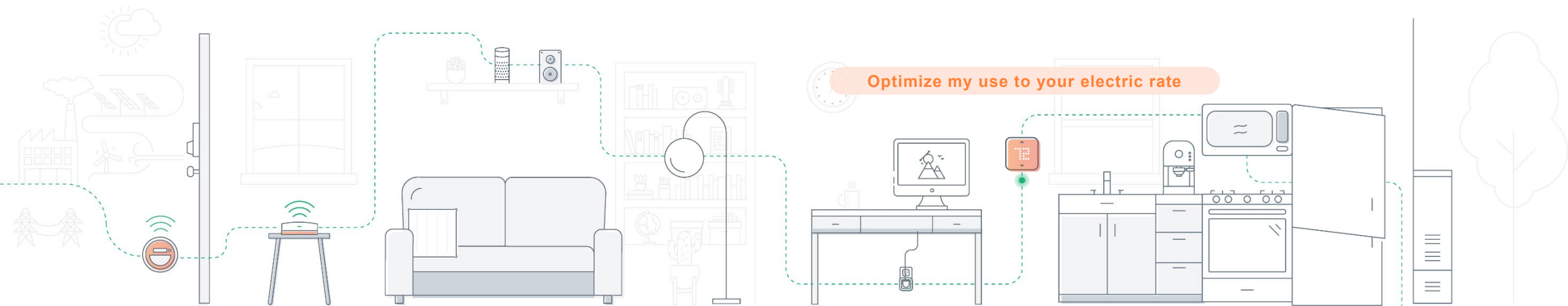
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CUSTOMER BENEFITS

Respond to real-time price signals and inform schedules to optimize for cost with different rate types

Optimize my use to your electric rate

Thank You

248-537-9440 | info@powerley.com

powerley.com