

# Innovation Showcase: Focus on Virtual Peaker

## E Source Utility Innovation Partners Program



**E Source**

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**E Source**



# E Source Utility Innovation Partners Program

# What's the Innovation Showcase?

- Monthly web conference series to:
  - Highlight privately owned companies with innovative products, services, or business models
  - Help utilities understand how entrepreneurs and investors view markets
  - Stimulate new utility thinking, fresh ideas, and different points of view
  - Explore market-driven approaches and expose potential opportunities
- **Note:** This is not a company endorsement and we've received no compensation

# EnerTech Capital



- **Longest continuously** operating venture capital (VC) firm with a sector focus on the energy and technology industries
- **Origins in a US-based power company**
- **EnerTech Capital has:**
  - Made VC investments in **71 companies**
  - **36** investment exits
  - Assessed more than **12,000 business plans**
  - Approximately **\$500 million in capital under management**

# Innovation Showcase format

25-minute company presentation, covering:

- Company description
- What problem(s) does the company solve
- Target market
- Quantitative value proposition and experience to date
- Competition
- Unique attributes
- Go-to-market strategy
- Business model
- Technology or product roadmap



# Virtual Peaker Introduction

EUIP Innovation Showcase – June 19, 2018



Virtual Peaker

# Virtual Peaker Provides a Platform That Helps Utilities



Engage their residential customers



Reduce operational costs



Find new business models





# Virtual Peaker

Founded: 2014

Located: Louisville, KY

Customer: Utilities

Business Model: SaaS

Team:

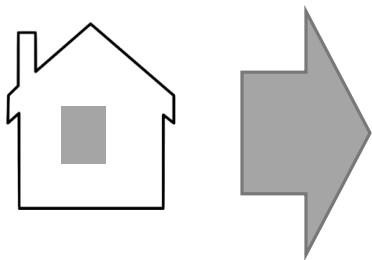
- ✓ 10+ Years Residential Energy Management
- ✓ 15+ Years Software Development / Design
- ✓ 10+ Years Consulting in Energy Industry





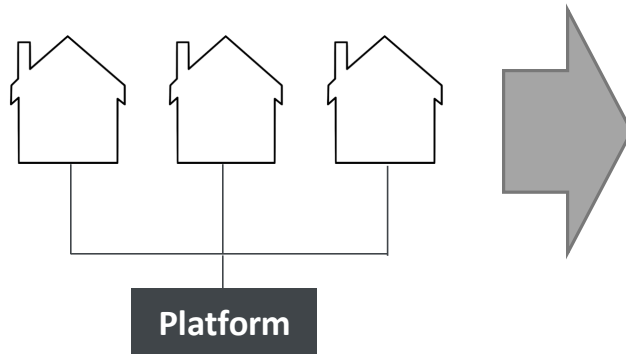
# The Next Evolution of DSM

## Direct Load Control



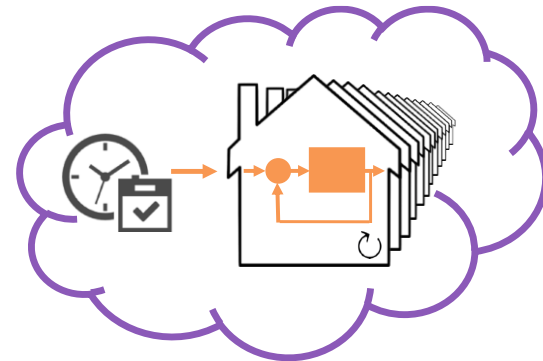
- One-way communication
- High cost
- Load shed only
- Zero touch with customer

## Basic DR



- Two-way communication
- Manage events in aggregate
- Limited device flexibility
- Low touch with customer

## Real-Time Control



- **Device-optimized**
- **Manage events at household level**
- **Infinite device types**
- **High touch with customer**

# The World's Most Advanced Distributed Energy Management Platform

Bring-Your-Own Anything

DR Event Scheduling Across All Devices

Easy Integration with Existing Systems

Real-Time Streaming Data on All Devices

Household Optimization

Arbitrage Devices Based on Market Signals



# How We Do It

## ENERGY DEMAND



## INTEGRATION

Real-Time Device  
Control

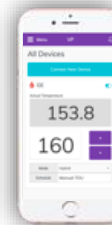


Virtual Peaker



Utility API

## ACTION



Consumer Interface



Utility Interface

# Our Partners



# Demand Response Use Cases

## Bring Your Own Device

- Enroll existing smart devices, e.g., residential batteries, thermostats, water heaters
- Multiple device vendors in one platform



## Integrated Device Control

- Reduce demand during peak periods
- Save money for both the utility and the customer



# Advanced Control Use Cases

## Time-of-Use Water Heater Optimization

- Read time-varying retail price
- Learn users' behavior
- Adjust schedule based on behavior



**SMUD<sup>®</sup>**

Sacramento Municipal  
Utility District

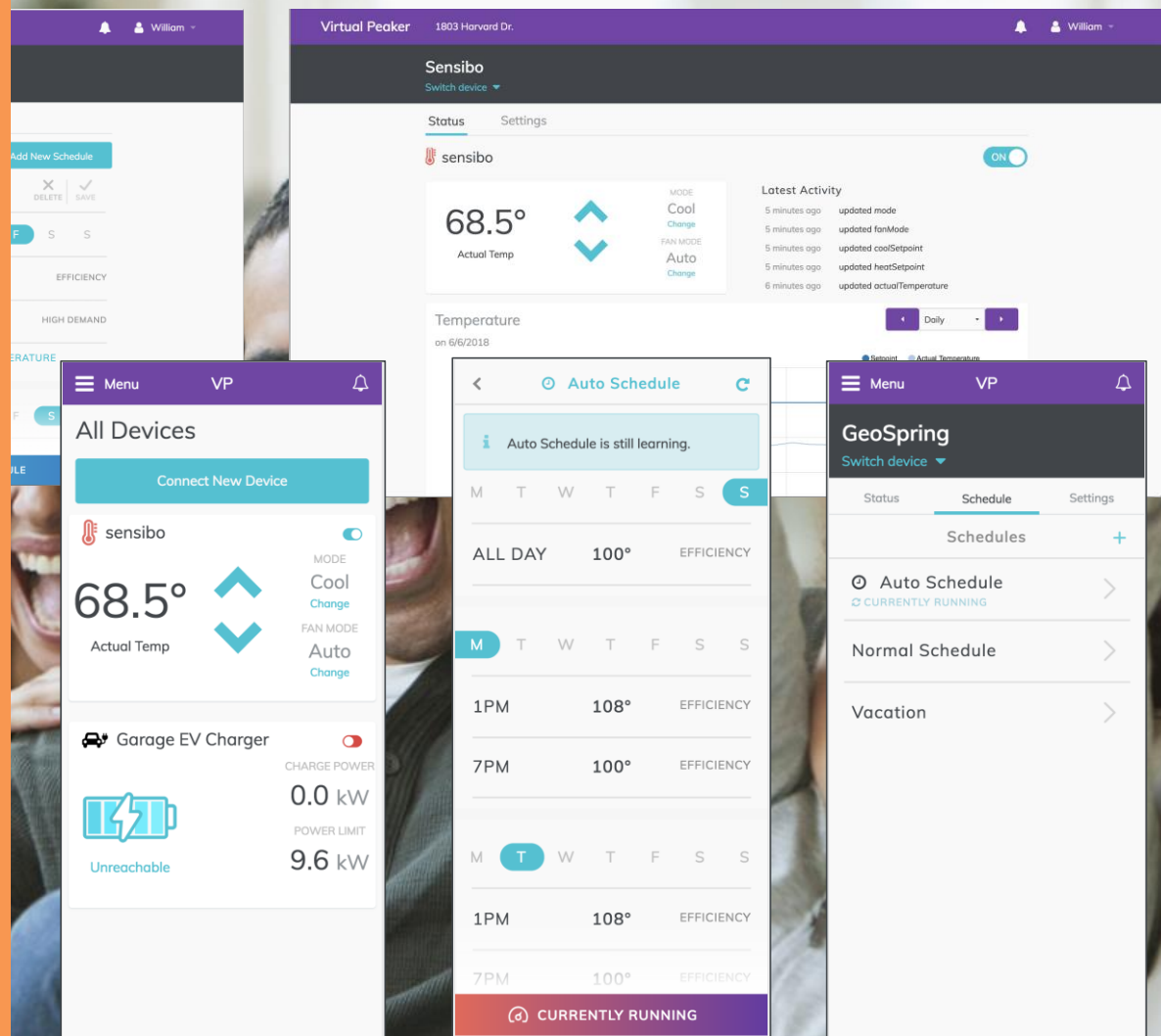
## Real-Time Market Price Energy Arbitrage

- Read real-time market price
- Charge when price is low
- Discharge when price is high



# Customer Engagement

- All Devices in One App
- Utility Branding
- Messaging
- AMI and Billing data
- **A fully integrated customer experience**





# Customer is King Once Again

## Engagement

- Smart Home support / saving customers money
- Increased touch points and transparency
- Become “trusted energy advisor” to residential customers

## Cost Reduction

- Reducing residential peak demand with minimal infrastructure costs
- More effective load balancing and management of intermittent sources
- Device Integration – being able to bring devices with different load profiles into the same platform

## Alternative Models

- Energy Arbitrage – specifically in disintegrated markets where distributed resources can be charged/deployed based on Locational Marginal Pricing
- Distributed System Support Services – helping customers with device financing, installation, aggregation, etc.
- Energy services and program design to smaller utilities

# Questions?



# Virtual Peaker

[www.virtualpeaker.io](http://www.virtualpeaker.io)



# Next Innovation Showcase

Learn more and register at [www.esource.com/events](http://www.esource.com/events)

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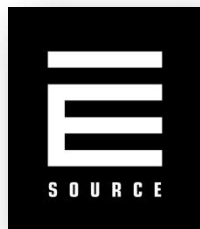
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# Utility Innovation Partners Program goal

To **enable** utility **innovation**, through:

- Unmatched **emerging market intelligence and insight**
- **Cost-efficient access** to emerging company deal flow
- **Networking** with those who are driving energy innovation today



# What's the Utility Innovation Partners Program?

- Unique strategic partnership between E Source and EnerTech Capital
- Provides utility partners with specialized access to:
  - Competitive market intelligence from North America's most experienced energy venture capitalists and market analysts
  - Best practices and leading research around utility strategic innovation program design, development, and execution
  - Exclusive networks of utility, entrepreneurial, investment, banking, and corporate leaders
  - Top-tier energy venture deal flow and early-stage company and market insights

# The right fit?

## **This program is ideal for utilities that are:**

- Considering development of a direct investment, innovation, or strategic partner development program
- Wanting visibility into emerging energy technologies and services
- Needing insight into evolving competitive business models
- Desiring a better understanding of the utility commercial customer landscape
- Looking to understand energy company and investor perspectives

**We provide immediate and in-depth exposure to  
emerging trends from the inside**

# Thank you!

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