U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

Thermal Energy Storage Webinar Series

Hot Water Energy Storage

Building Technologies Office

https://www.energy.gov/eere/buildings/building-technologies-office

David Nemtzow, Karma Sawyer, Sven Mumme, Nelson James

March 19, 2020

This Webinar is being recorded.

If you do not wish to participate, please exit now.

This is our first webinar in the age of quarantines, please bear with us.

BTO's Approach

R&D (Emerging Technologies Program)
Pre-competitive, early-stage investment in next-gen technology

Integration (Commercial and Residential Programs)
Technology validation, field & lab testing, decision tools, market integration

Codes & Standards Programs
Codes & standards development and technical analysis, standards promulgation

We lead R&D on technologies that make our homes and buildings more affordable and comfortable, and make America more sustainable, secure, and prosperous.

Our investments strengthen America's $68 billion building energy efficiency marketplace.

Without a catalyst like BTO, the housing industry would take 10 to 25 years to adopt new technologies and techniques.

FY20 Budget: $285M

Source: AEE Advanced Energy Now 2017 Market Report, Wolfe, Raymond M. (2016). Business Research and Development and Innovation: 2013 Detailed Statistical Tables.

Energy Storage Grand Challenge

Vision: By 2030, the U.S. will be the world leader in energy storage utilization and exports, with a secure domestic manufacturing supply chain independent of foreign sources of critical materials.

Area 1: Near-Term Acceleration

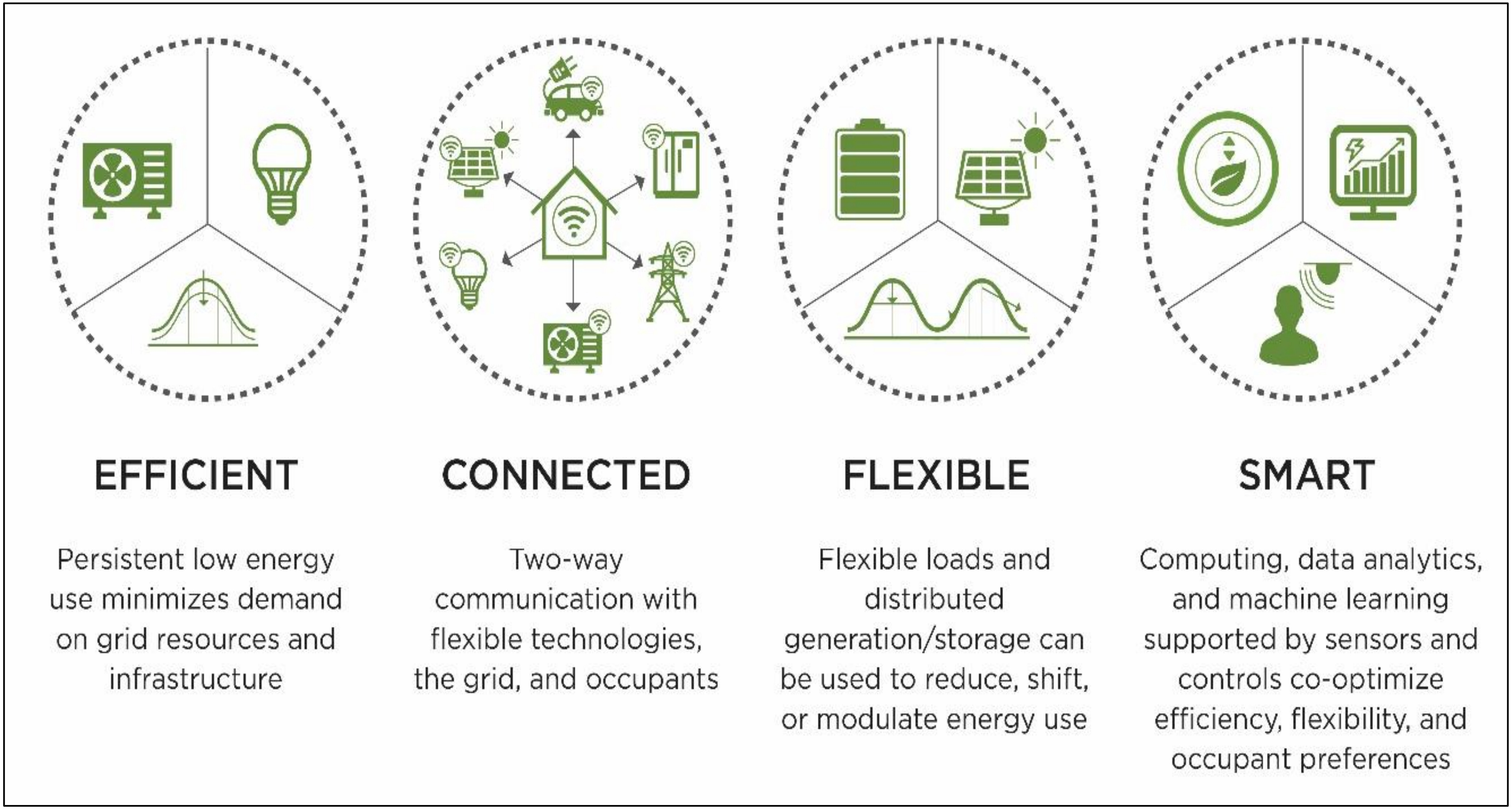
- Enhance the diversity of storage and enabling technologies to meet aggressive cost reductions and performance improvements.

Area 2: Long-Term Leadership

- Strengthen the R&D ecosystem to maintain and grow US storage leadership through constant innovation.

BTO ESGC Activities: thermal storage and flexible loads

Characteristics of Grid-interactive Efficient Bldgs.



www.energy.gov/eere/buildings/GEB

DOE Intends to Invest $42 Million into *Connected Communities*

Connected Community - a group of grid-interactive efficient buildings (GEBs) with diverse, flexible end use equipment that collectively work to maximize building and grid efficiency without compromising occupant needs and comfort.

Funding opportunity would enable regional GEB communities to share research results and lessons learned on projects that increase grid reliability, resilience, security and energy/renew-ables integration well into the future.

- **Demonstrate and evaluate** the capacity of buildings as grid assets by **flexing load** in both **new developments and existing communities** across diverse climates, geography, building types and grid/regulatory structures
- **Share research results** and lessons-learned on projects that improve energy affordability, increase grid reliability, resilience, security and energy/renewables integration

Photo Courtesy of Patrick Schreiber via Unsplash

What We're Looking For When the FOA is Released

- ✓ Teams of strategic stakeholders
- ✓ Sets of multiple buildings
- ✓ Multiple DER integration
- ✓ Ability and willingness to share data
- ✓ Diversity of projects (geography, building type, vintage, regulatory)

What We Hope to Achieve

- Measured impact of building as grid assets
- Solutions that address diverse grid needs that can be scaled in size and in other communities
- Input from occupants on impact and comfort level
- Demonstrated new business models for demand flexibility and DER coordination and optimization
- Online solutions center on best practices

Request for Information on Connected Communities is on its way, too, so stay tuned!

SCAN ME

We Look Forward to Your Feedback

Visit eere-exchange.energy.gov or Scan the QR Code to read the Notice of Intent:

"DE-FOA-0002249: Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0002206 Connected Communities"

For more information:

www.energy.gov/eere/buildings/geb

David Nemtzow David.Nemtzow@ee.doe.gov

Thermal Energy Storage Webinar Series

- **Ice Thermal Energy Storage**
  - January 16th 2020
  - https://www.energy.gov/sites/prod/files/2020/02/f71/bto-IceStorageWebinar-011620.pdf

- **Hot Water Thermal Energy Storage**
  - March 19th 2020

- **Novel Materials**
  - Expected May 2020

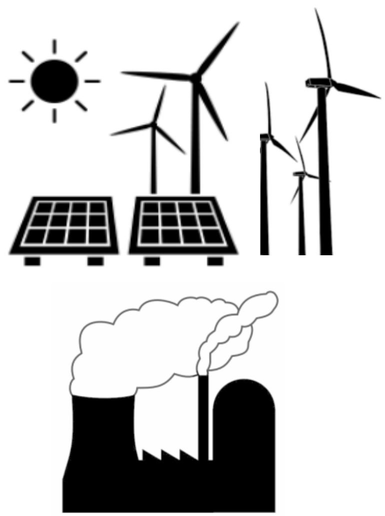
Hot Water Energy Storage Implementation Considerations

Economic and environmental benefits of water heater based thermal energy storage programs can vary depending on a number of factors including:

Utility rate structures

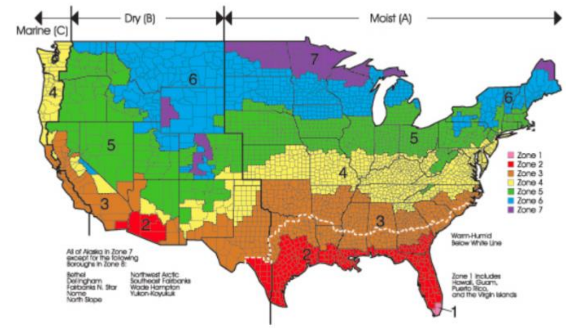
$$

Generation mixes



Building/Equipment type and usage

Climate zones



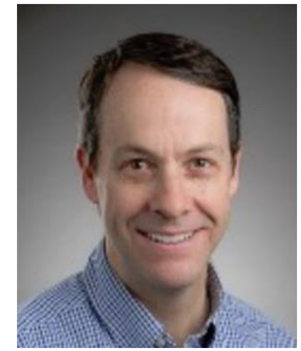
The following speakers each bring experience on hot water thermal energy storage in their respective regions

The view presented by the speakers are their own and **DO NOT** represent the official position of the Department of Energy

Today's Webinar

Conrad Eustis
Portland General Electric (retired)

Randall Fish
Shifted Energy



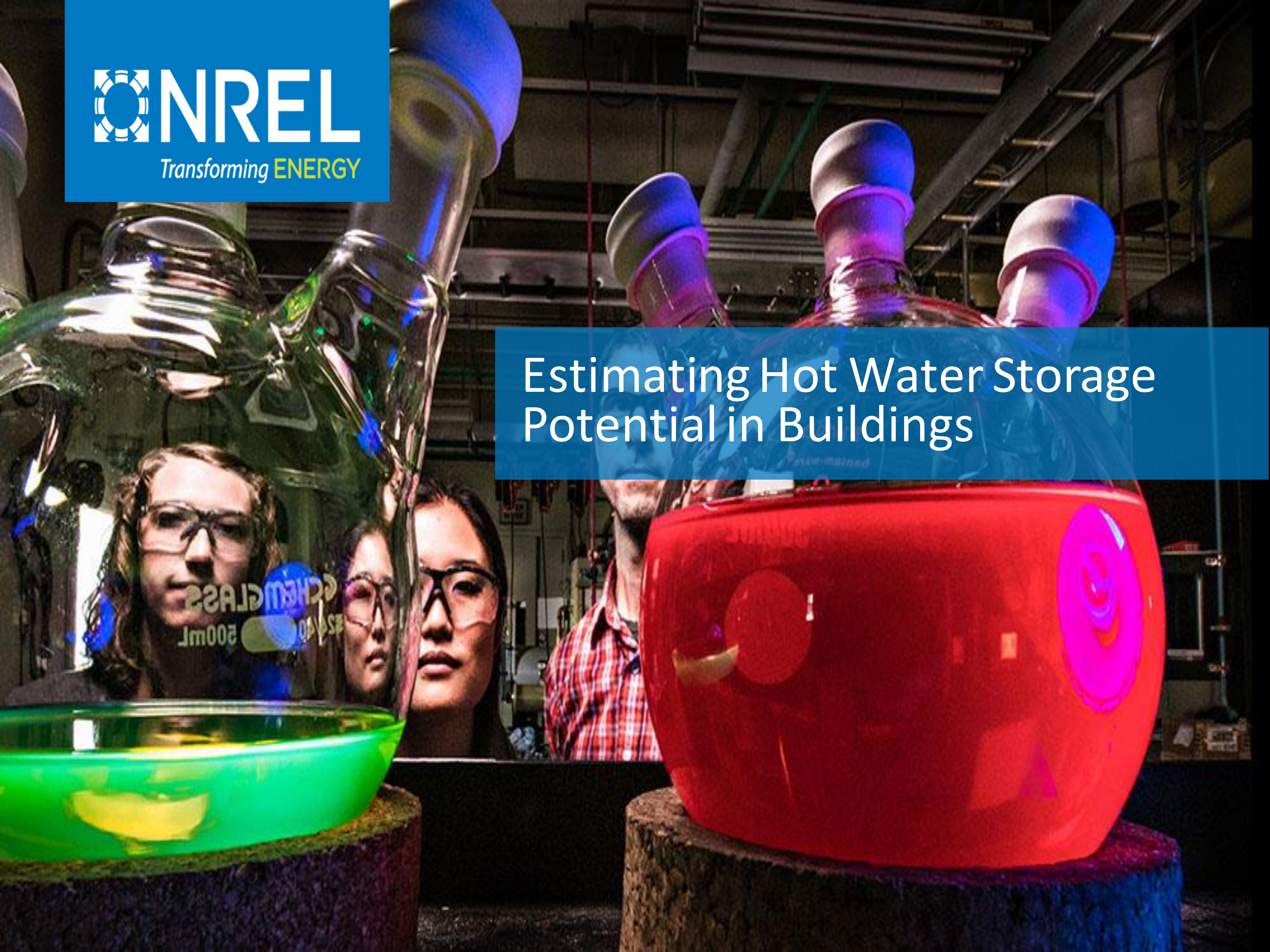
Brian Branecky
A.O. Smith

Bill Livingood
National Renewable Energy Laboratory

Matt Leach
National Renewable Energy Laboratory

NREL
Transforming ENERGY

Estimating Hot Water Storage Potential in Buildings



DHW and Load Flexibility

Active storage opportunity

- Controllability increases effective flexibility
- Passive storage comparison: building thermal mass

Potential to Decouple from System Performance

- Combine higher storage temperatures with tempering valves
- Stored energy at 160 °F vs 125 °F
- Higher storage temperature creates “bonus” flexibility

Control Approaches

- Direct Load Control (DLC) – temporary on/off
- Specification for communication protocol and physical port to change temperature setpoint
- Utility price signals, or utility rate structures
- Provided by water heater manufacturer, or separately through an add-on kit provider
- Utility, or aggregator communication to:
  - Water heater
  - Building Automation System (BAS) to water heater

Credit: BC Hydro

Potential Use Cases for Hot Water Storage

Possible Electrification of DHW Loads

- Multifamily, hospitality, healthcare, and food service have high DHW loads and are also high growth building types
- Increased penetration of renewables and emission restrictions could drive electrification

Hydronic Space Heating

- Combining heat pump technology with tank storage has broad potential for space heating applications
- Reheat is a key end use in cooling-dominated climates
- Radiant systems provide increased storage potential due to lower supply temperatures
- Radiant systems have significant efficiency benefits

Renewable generation could drive electrification

Possible Electrification of DHW Load – Potential Impacts

- 34% of residential water heating is electric
- 4% of commercial water heating is electric
- 1% or less of electric water heaters are HPWH

Residential Water Heating Summary

Building Type	Water Heating (Quads)	Total Energy (Quads)	Water Heating Fraction (%)	Electric Fraction of Water Heating (%)
Multifamily	0.36	1.23	29%	36%
All Homes	1.76	9.16	19%	34%

Source: RECS 2015

Commercial Water Heating Summary

Building Type	Water Heating (Quads)	Total Energy (Quads)	Water Heating Fraction (%)	Electric Fraction of Water Heating (%)
Lodging	0.14	0.56	24%	2%
Healthcare	0.08	0.72	11%	1%
Education	0.07	0.84	8%	4%
Food Service	0.04	0.51	8%	7%
All Commercial	0.51	6.96	7%	4%

Source: CBECS 2013

Benefits, Challenges and Opportunities of Thermal Storage

Conrad Eustis

March 19, 2020

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BPA's Pacific NW Regional CTA-2045 Pilot

www.BPA.gov/goto/smartwaterheaterreport

Objectives (p.7)

- Quantify 24x7 load shifts
- Events at least twice per day…every day
  - ~600 DR events in 220 days
  - ~300 customers from 8 utilities
  - Test both resistance & HP WHs
- Create CTA-2045 market transformation plan
- Measure customer satisfaction
- Determine cost effectiveness
- Create awareness of CTA-2045 benefits
- Quantify conservative benefits (p.16)
  - I.e. benefits will increase over time, e.g. by adding internal mixing valve

Results

- B/C of 2.6 compared to peaking plant with all costs included (program, hardware, & market transformation) (p.51 & errata sheet)
- Conservative present value, if extrapolated to US, $4.3 billion
- Customer satisfaction very high; low lifestyle impact because of CTA-2045 (p.24)
- Washington State Dept. of Commerce successfully pursued law so that all new electric tanks enabled with CTA-2045 by 2022
- Load shed: 0.4 kW RWH; 0.2 kW HPWH (p.15)
- Storage: 1.1 kWh RWH; 0.5 kWh HPWH (p.18)

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What is CTA-2045 ?

- A communication port standard like USB
- Like USB, port enables flexibility and prevents obsolescence
- Customer “plugs in” communication device
  - Sent by utility or aggregator
- Communication device can support any type of communication link: e.g. Wi-Fi, 4G LTE, utility AMI network, HomePlug, ZigBee, etc., or any FUTURE communication protocol
- CTA-2045 supports any standard DR control language: e.g. OpenADR, SEP, BACNet
- OEM devices can “speak” one standard language, and the aggregator a different one
- **Enables common customer experience across all products!** (This is critical for high adoption.)

DR = demand response

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Electric WH Storage Potential (w/o fuel switch)

- 50 million electric water heaters in US
- ~1 kWh flexible load, twice daily
- Implies potential of **50 GWh of storage**
  (i.e. ten times EIA 2021 forecast of installed storage)
- Marginal cost, at-scale:
  - $10 for additional OEM cost per tank
  - $20 for communication module
  - ☞Equivalent battery cost at LESS than $15/kWh!
    - Bonus: No in/out losses, or degradation of storage quantity over the years of operation.

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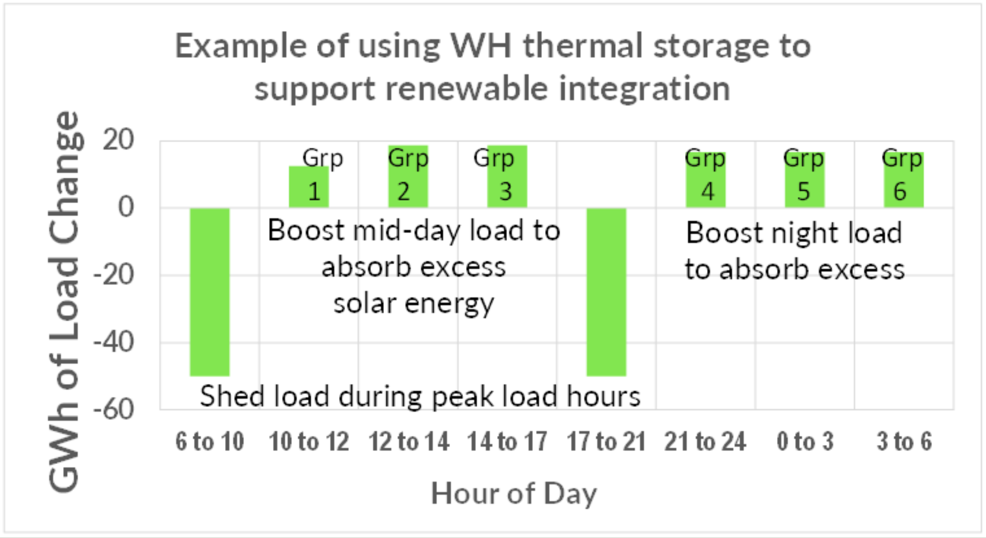
Example of a Daily Use Scenario

- Assignment of tanks to multiple groups simplifies communication and enables broadcast communication methods
- Group control allows operator to accommodate customers with high hot water usage
- Group control allows custom control of load shape and duration of storage benefits



Barriers to Flexible Loads at Scale

- Most government policy makers resist setting digital standards
- But in the case of residential-scale appliance loads, this is exactly what is needed: i.e. require CTA-2045 on all major load devices
- Government has a role to fund "public goods." Government funds many network infrastructure projects in transportation; e.g. a new bridge, a new highway, etc.
- In the digital world, most digital standards arrive because major international players benefit from spending $100s of millions to create, and implement, standards: E.g. Google created the android platform, Sony created Blue-ray, Intel defined motherboard sockets
- In the energy management world there are no major players: 100 major utilities, 40+ distinct international OEMs of electric load devices: i.e. HVAC, EVs, water heaters, classic "white" goods, pool pumps, thermostats, etc.
    - None of these players have the market power to set de facto standards. This means cost-efficient control of mass market loads will suffer; this is why we need government to require the right standards
    - Digital standards are complex, so government will need to hire consultants and convene working groups to advise them– but now is the time to do this!

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The Ultimate Flexible Load:
All of a Home's Electric Use

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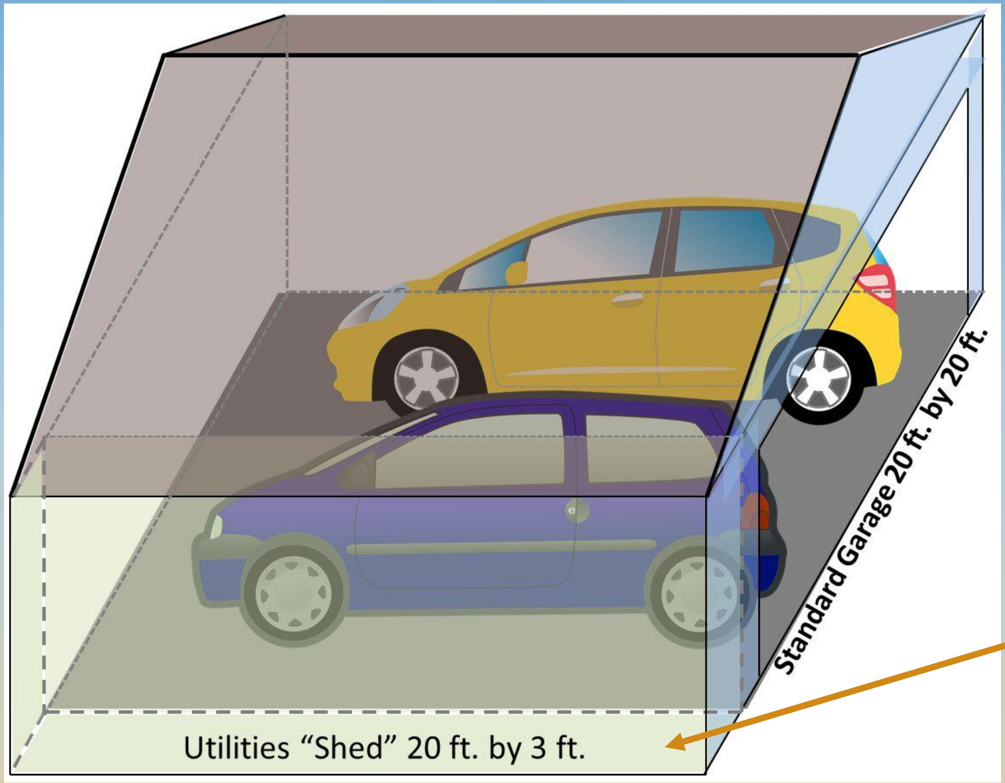
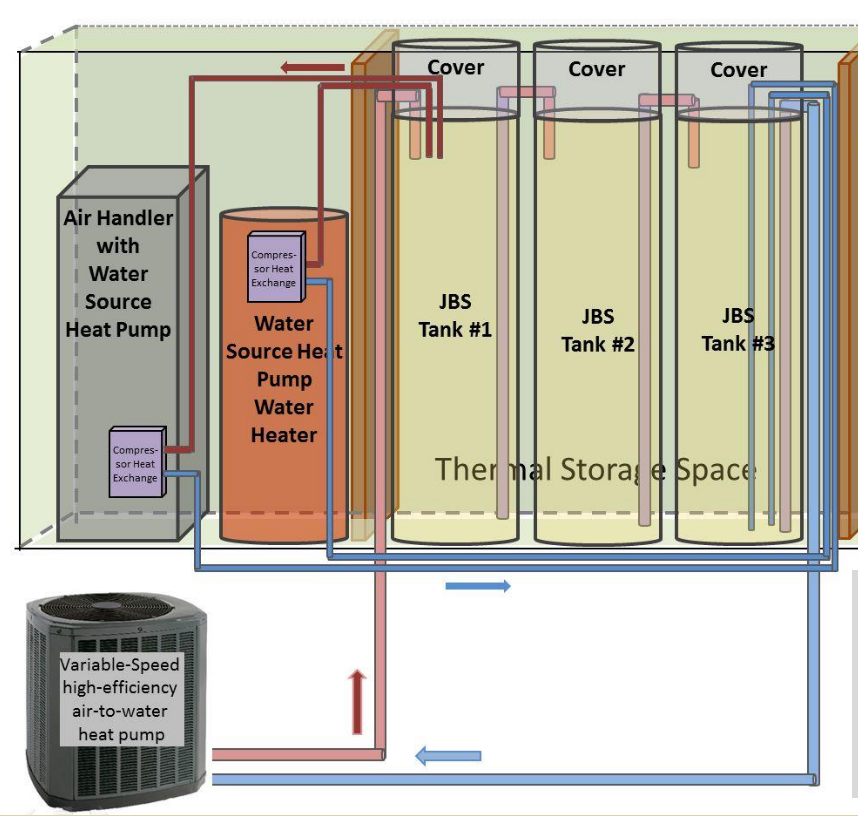
Home of the Future:

It took decades to develop recycling infrastructure; we can do the same for storage infrastructure but we need to start today.



Easy access to shed interior by removing 4' by 8' panels on outside wall

Inside the Shed:



Did you know residential space conditioning & water heating uses 10% of <u>all energy</u> consumed in US?

Joule Bank System & Whole-Home Battery Backup

The Ultimate Storage System

- Outside Heat Pump owned and operated by Utility to heat (& cool)
- Nominal design: three, 200-gallon water tanks = 5000 lb.
- Customer's heat pumps use tank as heat source (sink)
- On most days, together with thermal storage, a 30 kWh battery can power 100% of home's electricity need (except EV)

$Q = C_p * m * \Delta T$
Thermal store ≈ 3 therms
kWh_{stored} = Q/(COP*3413)
≈ 30 kWh

- Benefits
  - Thermal storage tank allows utility to deliver ~90% of heating and cooling energy when optimal
  - Energy savings for heating and cooling is 10 to 15%
  - On-peak load reduction 55 to 85%
- Bottom line: >90% of all energy, in an all-electric home, can be served during any 8-hours per day; operator will choose hours with excess wind & solar generation

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Thermal Storage Details

Slide 9:

- Think of this as a district heating system for one home; inspiration, thermal storage systems in Denmark.
- System operates in many optimization modes
- Site operates autonomous with only occasion inputs from utility for temp forecast, prices forecast, op mode, etc.
- Variable speed heat pump means 4 kW compressor load can be changed in real-time for inc/dec services without compressor cycling problems
- With a CO_2 refrigerant heat pump, this system can operate in temperatures to – 5 deg F
- At scale, after EE and DR credits, storage cost is about $100/kWh; no in/out losses
- Business model: Utility sells therms delivered to tank. Price based on wholesale energy (~3¢) price plus retail distribution costs (4¢) ☞ $0.70/therm (wholesale energy can drop to zero during periods of excess wind and solar

Slide 10

- Outside heat pump operates per optimization routine set by utility. That is, under a minimize utility cost mode, the outside heat pump will operate primarily during periods of excess wind or solar, or at night. Customer heat pumps in home operate autonomously to meet customer needs. Since tank is pre-heated in winter (pre cooled in summer) customer heat pumps operate with very high COP: 5 to 8. Thus the customer heat pumps use relatively little energy that can be supplied by the battery inverter system. For more information: http://resourcecenter.ieee-pes.org/pes/product/technical-publications/PES_TP_PETSJ-00066-2017_6-18

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Questions?

Conrad Eustis

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503 381 1164

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SHIFTED ENERGY.

Agenda

1 About Shifted Energy

2 “GIWH” Solution

3 Hawaiian Electric Project

4 Summary

Mission

Shifted Energy accelerates the integration of renewable energy by developing and deploying software and controllers that retrofit electric water heaters into fleets of thermal energy storage assets.

Shifted Energy

Kanu Hawaii

Spun out from Kanu Hawai'i in 2016
- HI's Largest sustainability non-profit
- 1,500-resident energy efficiency survey for Hawaii Energy

Founded by Experts
- Software, utility, government, and distributed energy expertise
- Bridging community service and technology
- Consumer-first approach

Utility Customers Across the Globe
- Canada, Australia, New Zealand, Spain, Portugal, and USA

2.5 MW under contract for Hawaiian Electric
- 2,800+ units online in 2020

SHIFTED ENERGY

“Grid Interactive Water Heating” Solution

Key Components

Controls: OEM Retrofit or tank-integrated by WH manufacturer

Active Management: Software- and/or firmware-based control strategies capable of receiving external commands

"Grid Interactive Water Heating" Solution

Key Components

Controls: OEM Retrofit or tank-integrated by WH manufacturer

Active Management: Software- and/or firmware-based control strategies capable of receiving external commands

Shifted Energy Controller

- **Off-tank Retrofit**
- **Revenue Grade Relay**
- **Cellular IoT Chip**

“Grid Interactive Water Heating” Solution

Key Components

Controls: OEM Retrofit or tank-integrated by WH manufacturer

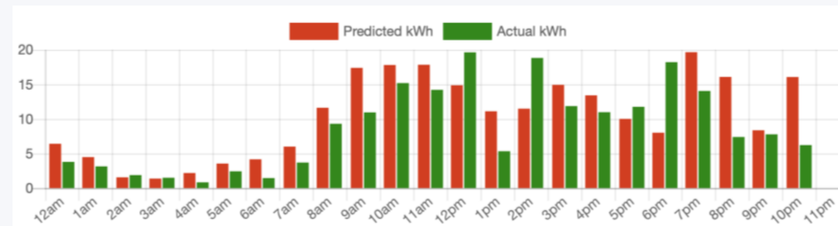
Active Management: Software- and/or firmware-based control strategies capable of receiving external commands

“Tempo” Controller

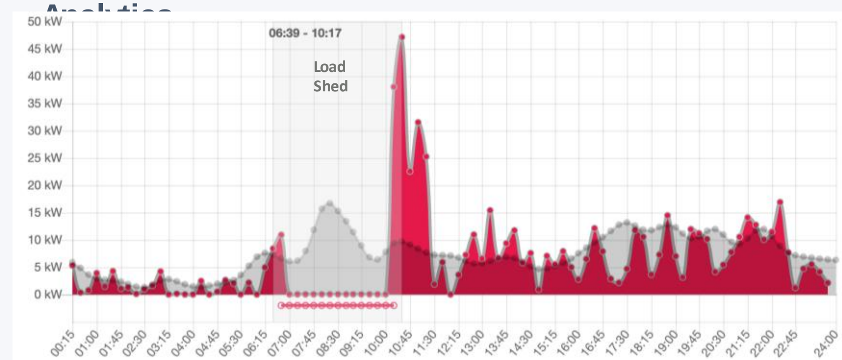
- **Off-tank Retrofit**
- **Revenue Grade Relay**
- **Cellular IoT Chip**

“Grid Maestro” Software

Monitoring & Forecasting



Aggregated Fleet Dispatch & Event Analytics



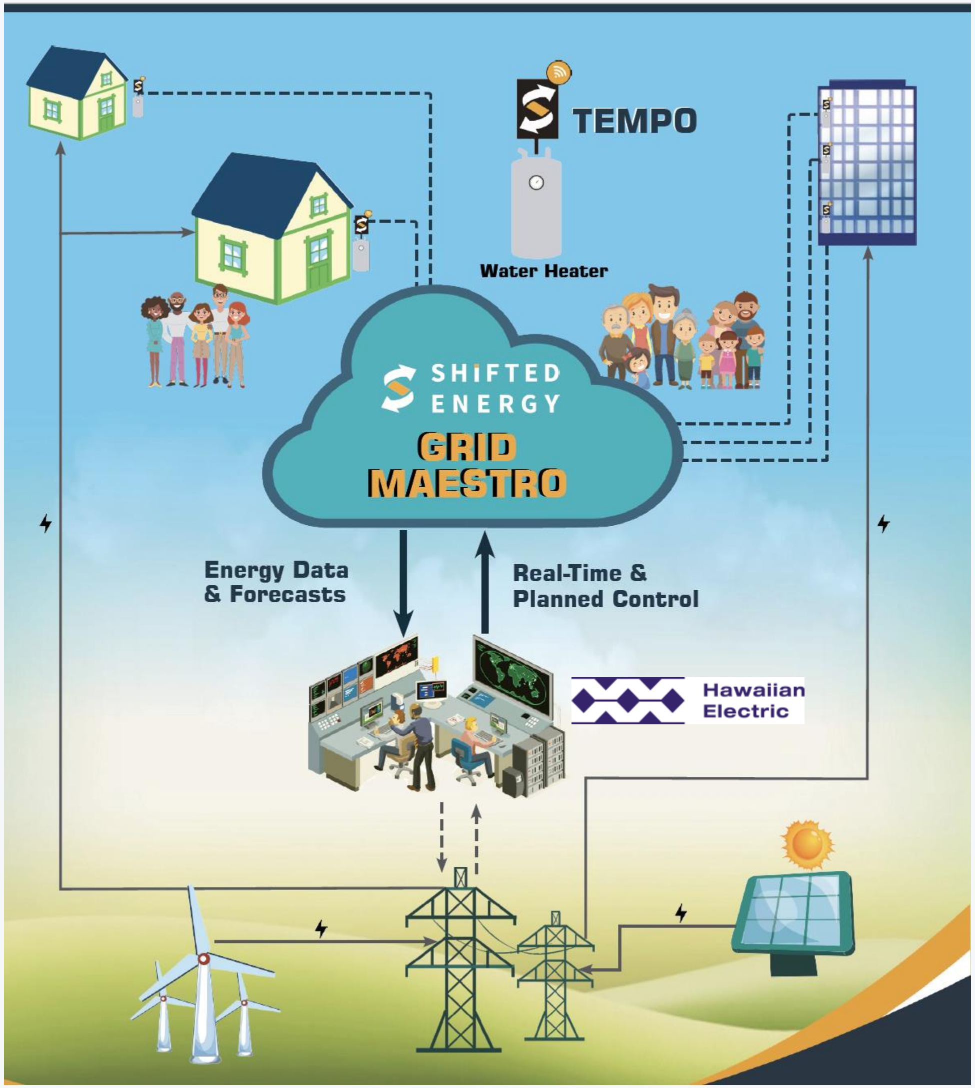
Case Study: Hawaiian Electric

"Grid Services Purchase Agreement"

- 14.5 MW of flexible distributed energy resources
- Includes batteries, solar inverters, and water heaters
- Multiple vendors aggregated through OATI
- 5-year capacity and performance contract

2.5 MW "Virtual Power Plant" of GIWH

- Shifted is deploying 2,400+ controllers across Oahu and Maui islands
- 10+ multi-family complexes, with specific emphasis on low income households and renters
- Aggregating GIWH to provide 3 grid services to Hawaiian Electric
- Consumer (or electric bill payer) receives between $36-60/year for participating



Grid Services for Hawaiian Electric

Peak Load Reduction

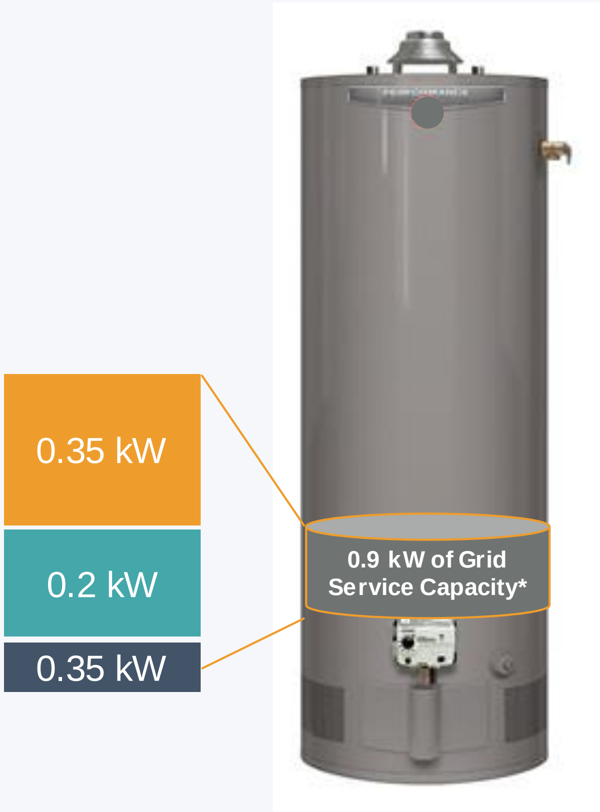
- Schedule one-time or recurring peak load reduction events of any length that incorporate customer comfort
- Accurate forecasts ensure precise operations and dispatch

Thermal Energy Storage

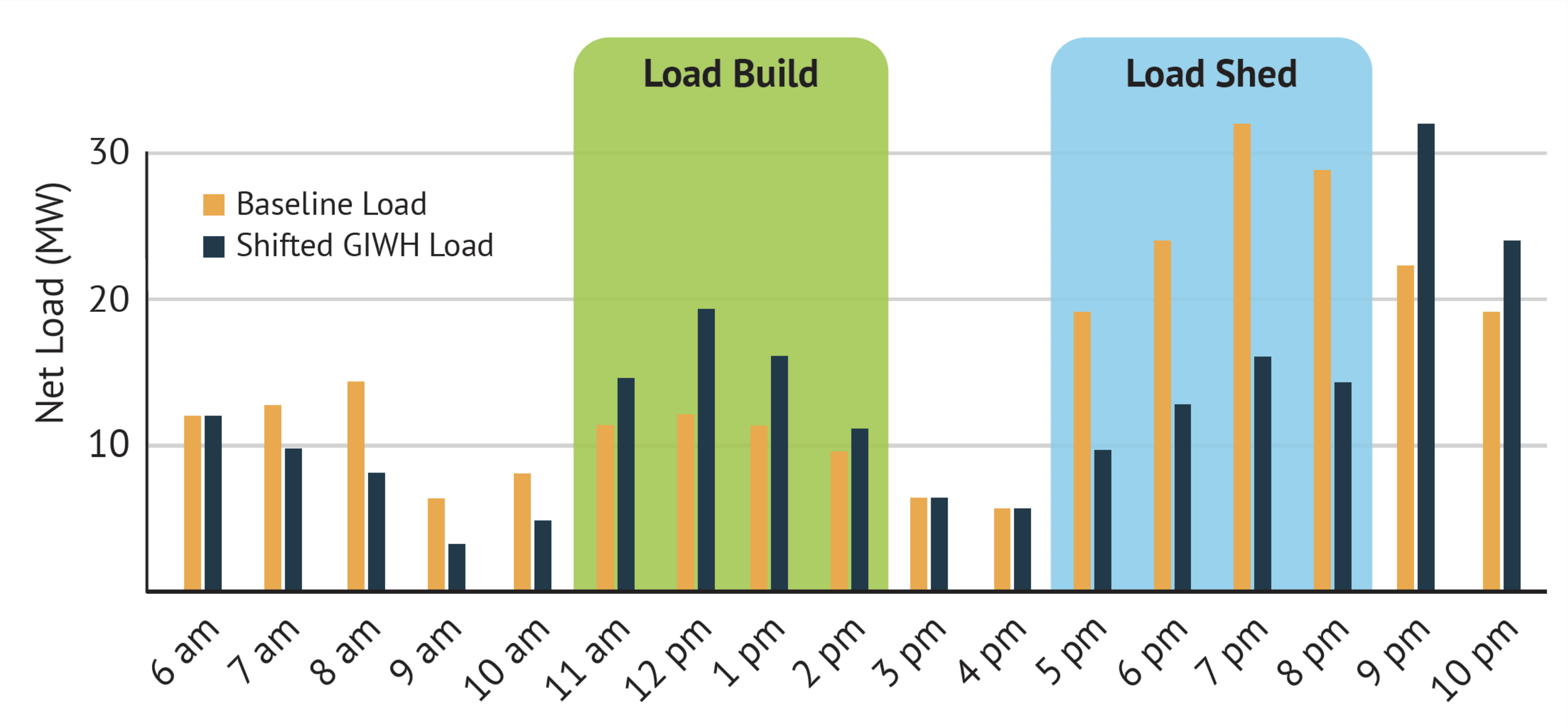
- Store excess solar or wind as thermal energy storage
- No super heating or mixing valve required

Fast Frequency Response

- Firmware enabled frequency setpoints per utility specification
- 12-cycle response time
- Randomized return to load per utility specifications



Values are examples only. Actual grid service capability varies by family.



Load Build
Load Shed
Net Load (MW)
30
20
10
Baseline Load
Shifted GIWH Load
6 am
7 am
8 am
9 am
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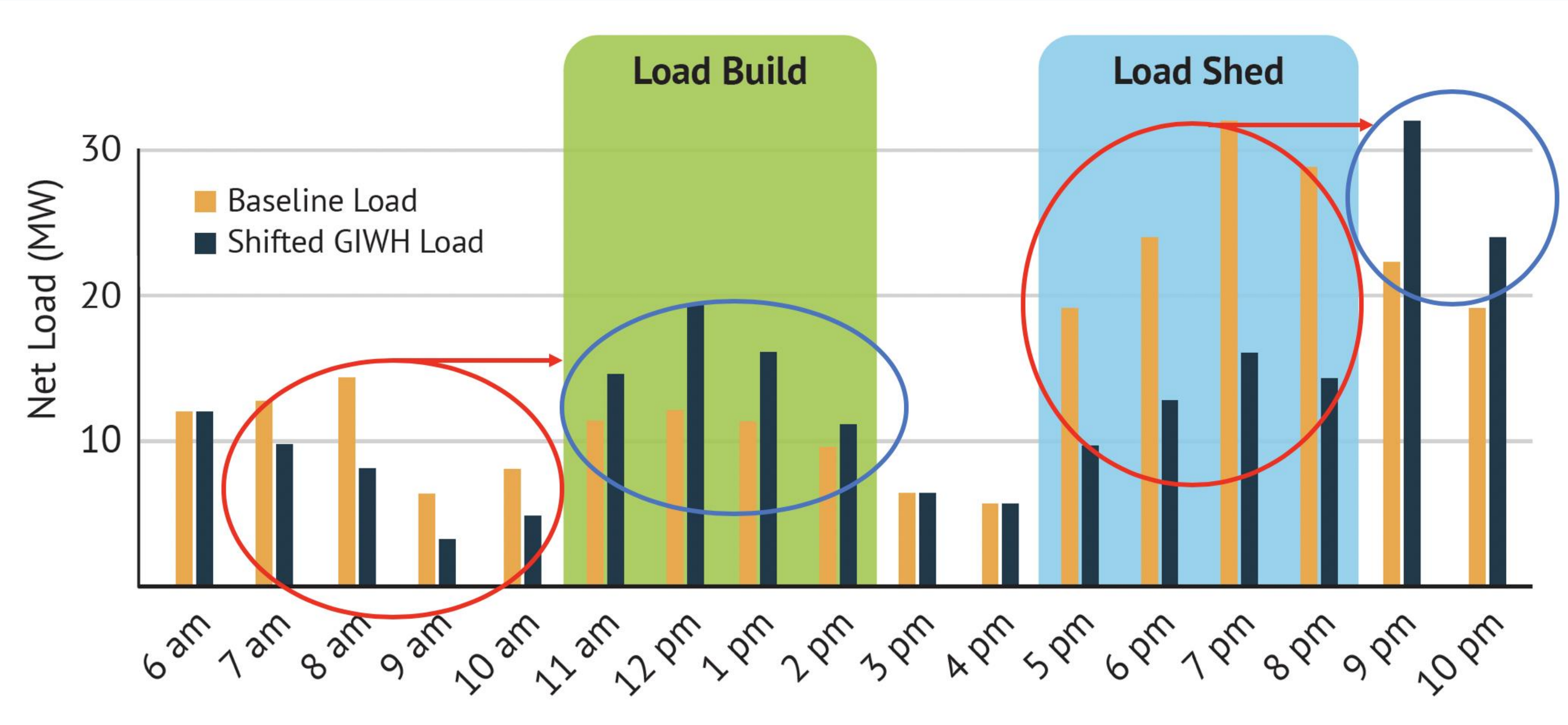
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10 pm

Property Manager Value Propositions

- Support Clean Energy Goals
- Leak & Maintenance Alerts
- TOU/Demand Charge Management
- Monthly Energy Reports
- Bill Credits for Grid Services (master metered buildings)
- Online WH Tracking Dashboard

Mahalo!

Randall Fish

Director of Business Development

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Learn more at www.shiftedenergy.com

A.O. Smith
Innovation has a name.

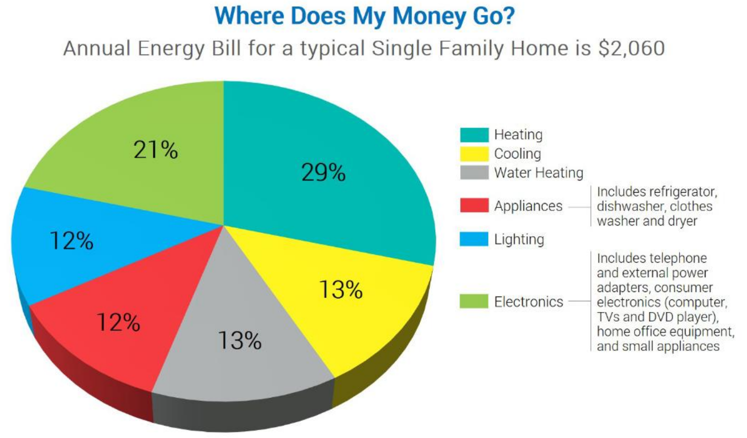
Grid Connected Water Heaters

Hot Water Thermal Energy Storage Webinar
March 19, 2020

Brian Branecky

The Water Heater Advantage

- Low Interruption Annoyance
  - In comparison to most other appliances, lower likelihood that consumer will notice water heater is turned off
- Time Adjustable Power Usage
  - Re-heating of a tank can be done in off peak time
  - Load balancing
  - Reduces the need for spinning reserves
- Energy Storage Device
  - Possibility of loading up the tank (with the addition of a temperature limiting device)
  - Accommodates alternate power generation (renewables)



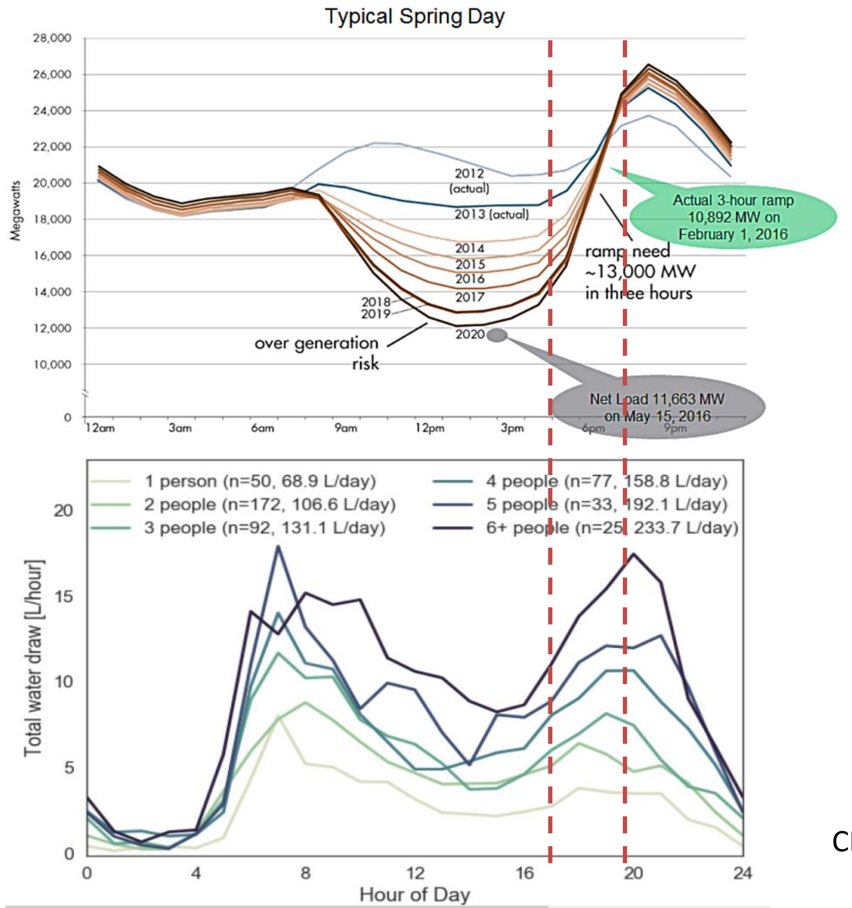
Source: Typical House Factoid Memo. Lawrence Berkeley National Laboratory. April 2013.

The Water Heater Advantage

- Grid Connected Heat Pump Water Heater (HPWH)
  - High efficiency
  - Scheduled heat from renewable energy
  - Can provide grid flexibility
- Expected Peak Demand Benefits
  - HPWH
    - 0.18 kW load reduction;
    - 1.5 kWh as storage (twice a day)
  - Electric Resistance
    - 0.35 kW load reduction;
    - 3 kWh as storage (twice a day)

Source: ACEEE March 2018-Portland General Electric

The Need to Shift Load



CAISO – Duck Curve

CBECC-Res – Draw Profiles

Water Heating Features

- Convenience Features
  - Remote Control
  - Alerts
    - Element Failure
    - Optional leak detect
- Energy Features
  - Vacation mode
  - Energy Smart algorithm
  - Grid connectivity ready

HPWH Controls

- Unlike battery, water storage needs to balance
  - Hot water demand
    - Customer use (draw profile)
  - Energy generation
    - Low cost energy
    - Low GHG emission

Grid Connection

- Mechanical Connection
  - Physical layout of connector
- Hardware Layers
  - What electronics are needed to send DR signals
- Software Protocol
  - CTA-2045 commands
  - OpenADR in the cloud

Mechanical Connection - Smart Port

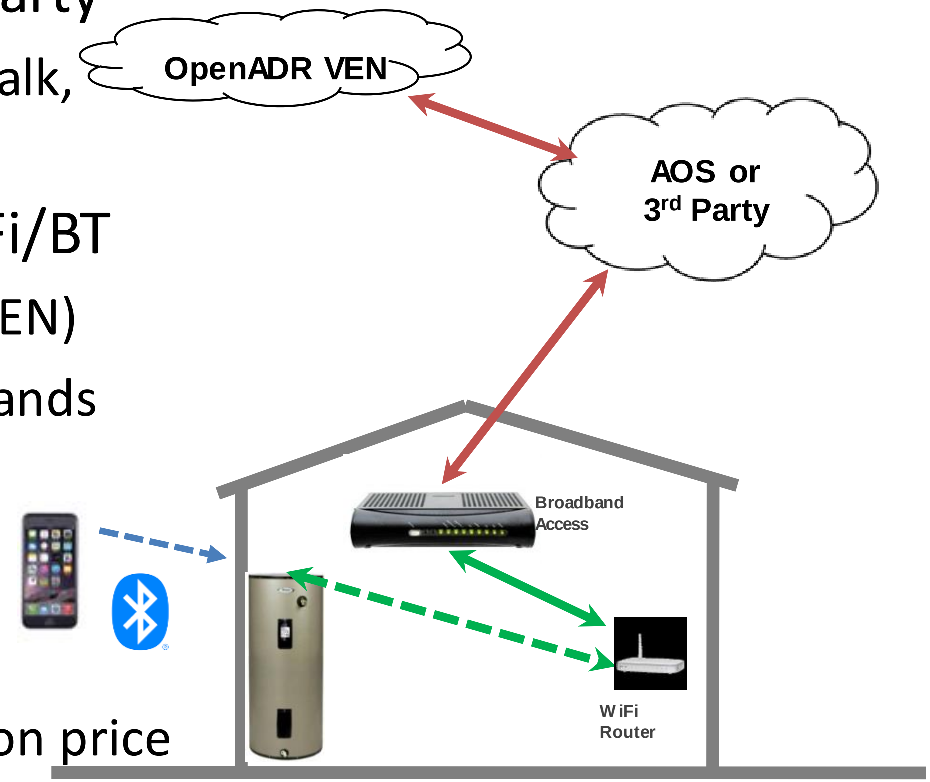
- Smart port provides connectivity for
  - CTA-2045
  - AO Smith Wi-Fi
- Grid Smart connectivity
  - Easy to install
  - Power is present and pre-wired at the connector
  - Meets agency requirements unique to HVAC

Wi-Fi

CTA-2045

HW/SW Layers for Connectivity

- CTA-2045 Connection to 3rd Party
  - Supports OpenADR, Climate Talk, Smart Energy Profile
- OpenADR via A.O. Smith Wi-Fi/BT
  - AO Smith Virtual End Node (VEN)
  - OpenADR to CTA-2045 commands
- Time-of-Use Pricing
  - Local pricing schedule
  - No connectivity required
  - Thermal management based on price



Basic Demand Response Control

- Shed Load / Critical Peak
  - Turn off until energy in tank too low to satisfy customer
- Load-up
  - Top-off heater to set temperature
- Grid Emergency
  - Heater off
- Autonomous Cycling
  - 1 hour duty cycle
  - Time synchronization

Query Heater Commands

- Customer Override
- Present State (curtailed or running normal)
- Maximum Energy Capacity
- Present Energy Level
- Estimated Instantaneous Watts
- Device Info: Make, Model …

LESSONS LEARNED
&
PRODUCT OFFERINGS

Lessons Learned

- Wi-Fi Connectivity Issues
  - Wi-Fi password and network changes problematic
  - Customer needs reminder to reconnect
  - 10% of US adults don’t use the Internet*
- Loss or No Connectivity
  - Devices must be capable of local load shifting based on TOU price schedule
  - Ultimate goal is grid-connectivity
    - Local TOU load shifting is stepping stone

* The Jones Ganz Cooney Center at Sesame Workshop - 2016

Source: ACEEE March 2018-Portland General Electric

Lessons Learned, cont.

- Electric Water Heating with Load management
  - Temperature limiting device required when increasing internal water temperature to 140 F or higher
- Local load management
  - On-premise TOU rate schedule
- AND remote capability
  - Such as OpenADR, CTA-2045-A or equivalent

AOSmith

BPA Technology Innovation Project 336

	Winter – AM		Winter – PM	
WH Type	ER	HP	ER	HP
Power Shaved (W)	325	200	320	150
Energy Shifted (Wh)	650 (2hr)	400 (2hr)	640 (2hr)	300 (2hr)

	Summer – AM		Summer – PM	
WH Type	ER	HP	ER	HP
Power Shaved (W)	330	125	325	85
Energy Shifted (Wh)	1325 (4hr)	450 (3.6hr)	1310 (4hr)	341 (4hr)

"Load Shifting Using Storage Water Heaters in the Pacific Northwest" – PNNL & BPA

Traditional DR vs. SMART Load Management

Options

- ON
- OFF

Shed Load

Shift Load

Add Load

Renewable Integration

Price Controlled

More…..

Grid-Enabled Resistive Electric

AOSmith.

Grid-Enabled HPWH

50 Gallon

66 Gallon

80 Gallon

Summary - Load Management Benefits

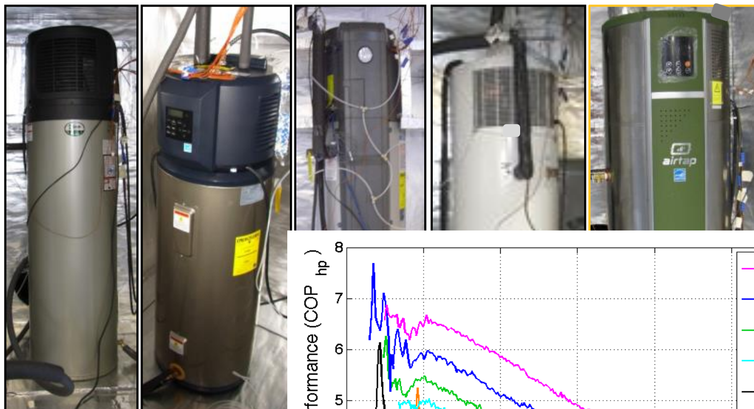
- Potential for $9B per year in avoided utility costs – RMI Aug, 2015
- Up to $172 per water heater per year utility benefit – Brattle Jan, 2016
- When combined with Battery storage ROI is improved as smaller batteries are requires – NREL Dec, 2017
- High level of consumer acceptance and grid benefits – BPA Pilot Nov, 2018

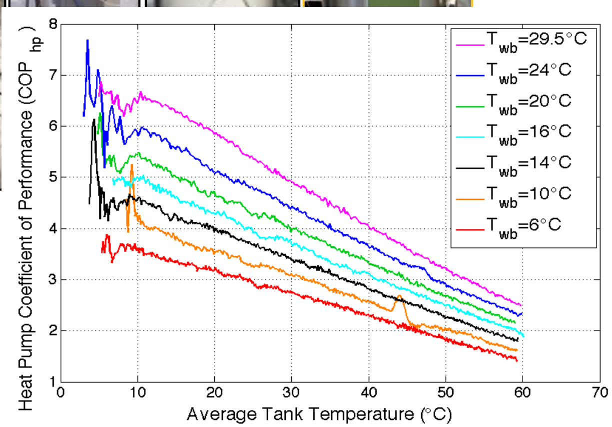
Questions

NREL
Transforming ENERGY

Analyzing Commercial Water Heater Load Flexibility

Domain Expertise: HPWH Laboratory Characterization

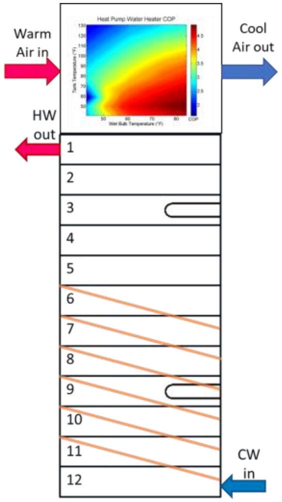


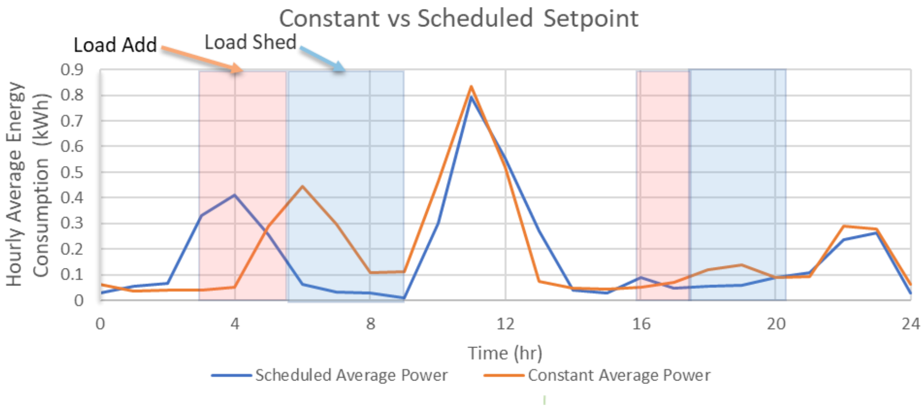


More recent projects have focused on grid-responsive controls – using existing controllers (such as CTA-2045 modules, below) or custom controls using a modified water heater control board (right) to more fully explore the demand response potential of HPWHs.

Early HPWH experience included first performance maps for all commercially available integrated HPWHs. Used to develop EnergyPlus models.

Domain Expertise: HPWH Modeling





Recent projects have focused on modeling control algorithms that respond to price signals, upgrading the EnergyPlus stratified tank model for increased speed and accuracy, and a battery equivalent water heater model

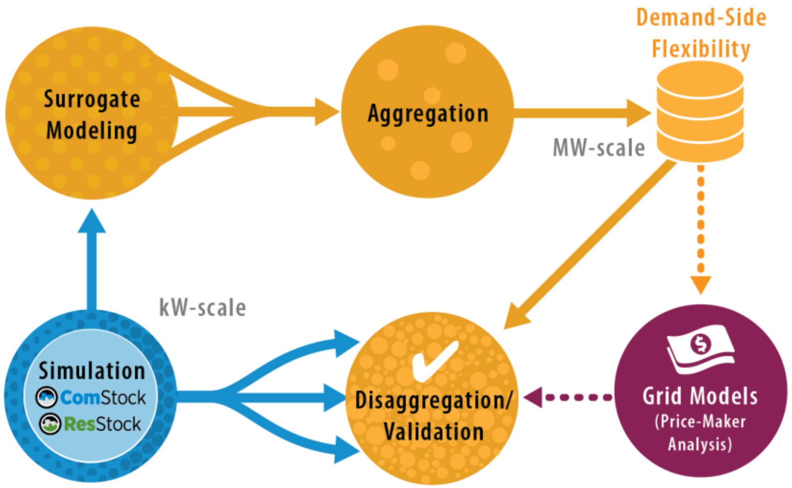
Project Overview

The Relationship Between Energy Efficiency and Demand Response

- Explore balance between efficiency and demand response from a grid infrastructure perspective
- Combination of input validation, large-scale building energy modeling, load flexibility aggregation, and grid modeling

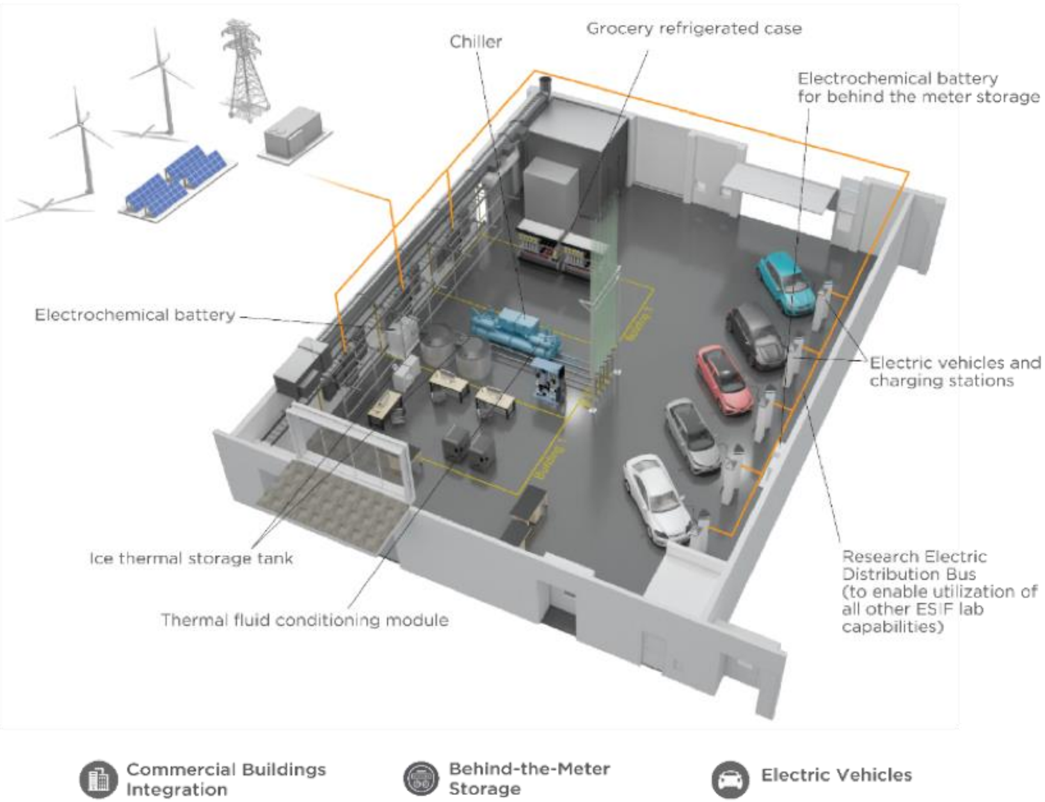
Laboratory Characterization to Valid BEM Inputs

- Validation of BEM inputs is critical to project success
- Focus on demand response mode characterization
- Collection of load flexibility 'power signatures'



EE/DR Project flow diagram

known knowns; known unknowns; unknown unknowns



- Value to the:
  - grid operator
  - building owner/tenant
  - manufacturer
- Maintain, or enhance building occupant comfort and productivity
- Electricity rate structure dependencies
- Acceptance, adoption and participation rates
- Evolving business models
- Other influential factors

Commercial HPWH Laboratory Characterization

Target Multifamily and Lodging DHW Loads

- High-capacity integrated HPWH systems can serve multiple units
- Commercial equipment has larger storage volume and faster recovery rate
- Selected AO Smith unit can serve 20 2-bedroom units when installed as a two-unit centralized system

Commercial vs Residential HPWH Equipment

Application	Tank Volume (gal)	Maximum Heat Pump Temperature (°F)	Maximum Storage Temperature (°F)	Heating Capacity (kW)	First Hour Delivery (gal)
Residential	50	120	140	4.5	66
Commercial	120	150	180	22	150

Hotel Installation of Integrated Water Heaters
Credit: Pires Plumbing

Laboratory Characterization Plan

Control Strategies

- General curtailment (shed and shift)
- Emergency curtailment (relax performance constraints)
- Load add (to avoid renewable curtailment)

Tank Setpoint Adjustment

- Up to 180 °F for preload/load add
- Reduce by 10 °F from baseline before control bypass during curtailment scenario

Span Operational Modes

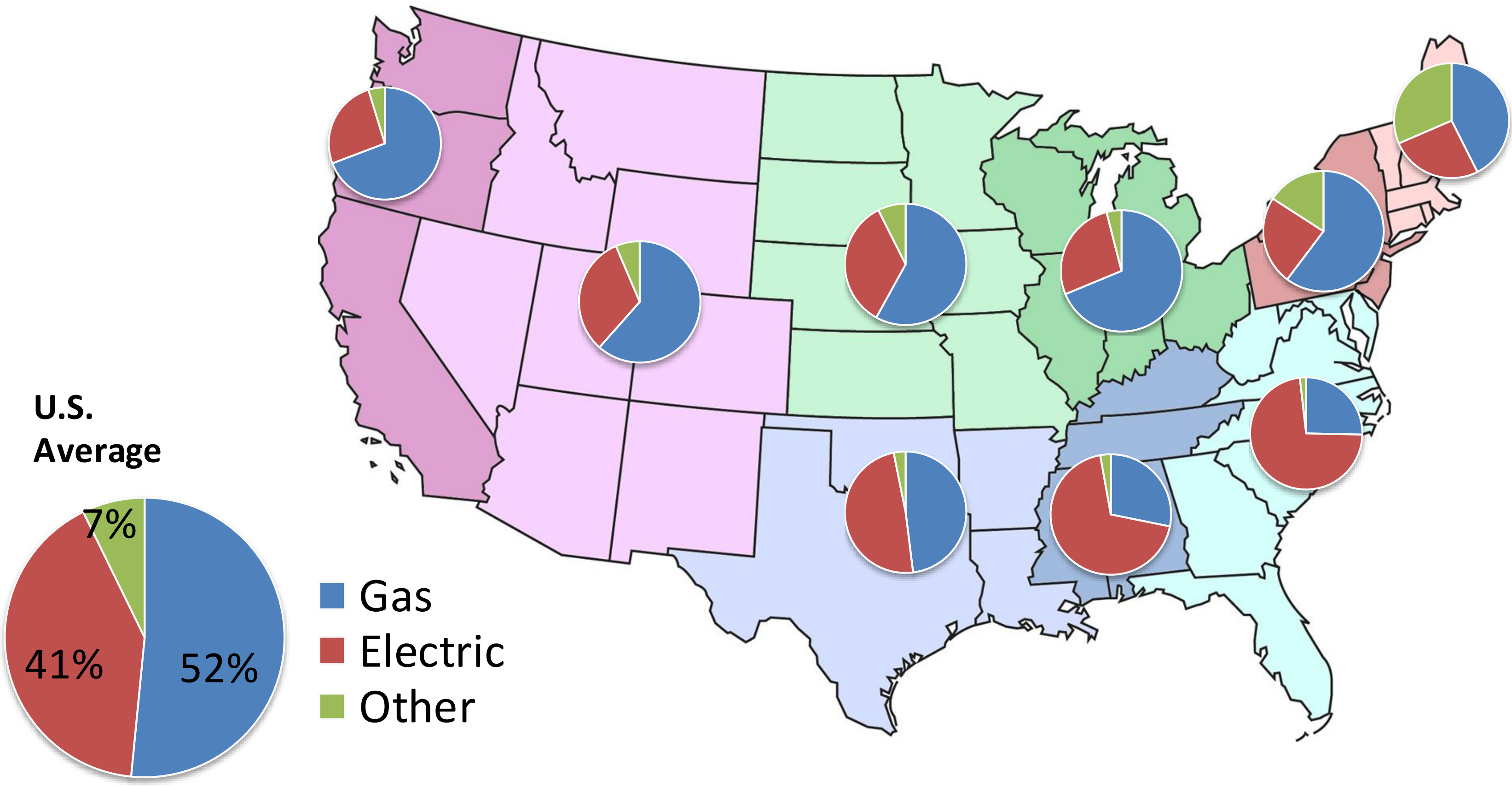
- Heat pump only
- Hybrid mode (heat pump and electric resistance)
- Electric resistance only (outside heat pump range)

AO Smith CHP-120 HPWH

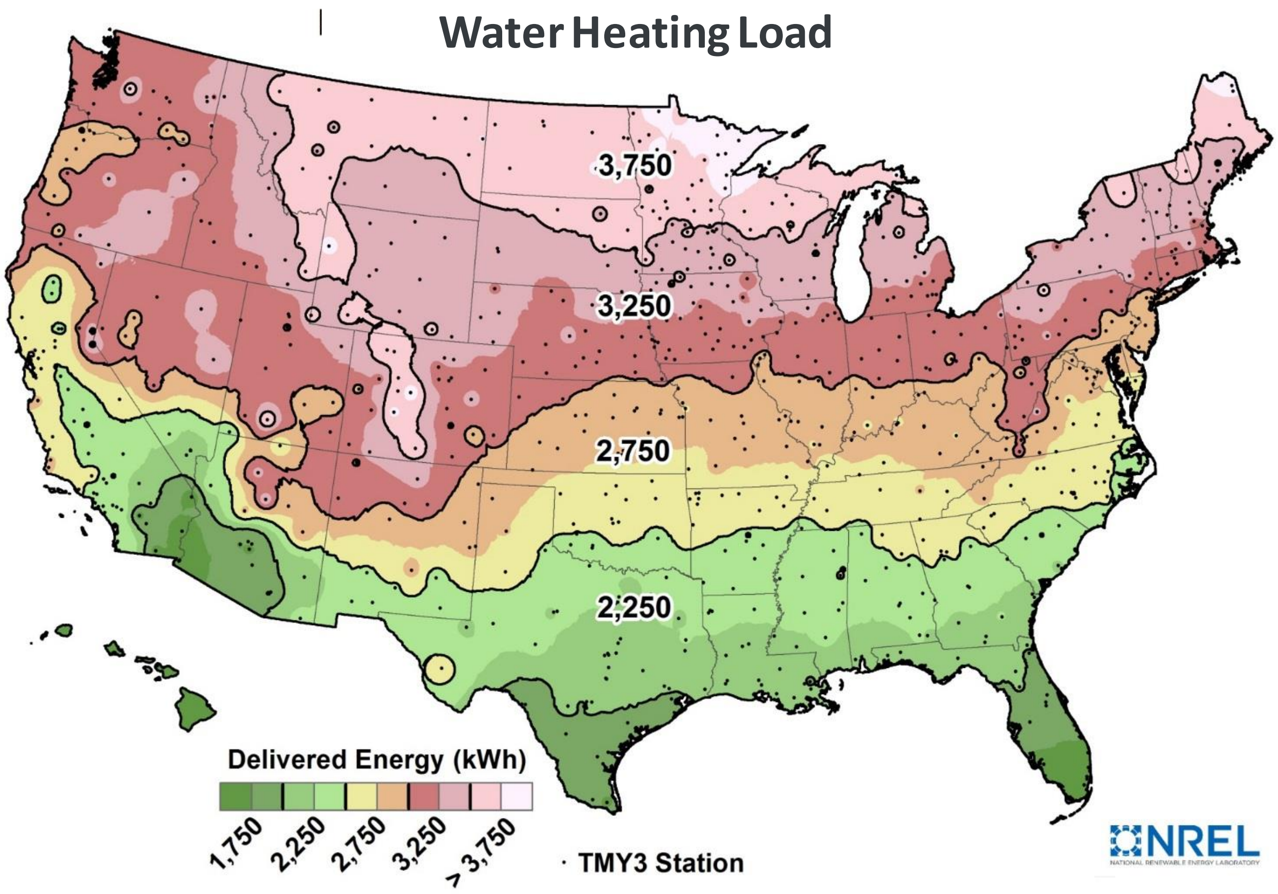
NREL
Transforming ENERGY

Supplemental Materials

Residential U.S. Water Heating Market by Region



Residential U.S. Water Heating Load



Open Q&A

Submit questions via the chat box

Thermal Energy Storage Webinar Series

Stay tuned for the next installment

Connected Communities FOA Request-for-Information Coming soon!