



veic

Advances in Strategic Energy Management (SEM)

Collaborative, Sustainable, Persistent, Impact



NEW YORK
STATE OF
OPPORTUNITY.

NYSERDA
Supported



It's 2050 and you have achieved carbon neutrality and are seen as an institutional leader in sustainability across your business sector.

**How did
YOU do it?**

What do you need to do today to ensure you can reach your goal? What would you invest in? Where would you focus? Who would you engage and why? What's your first step

**What is the
cheapest form
of energy?**

**The cheapest
energy is the
energy you
don't use.**

What will help most?

People or equipment?

Thought experiment



Sam started a competition between 50 people in a dorm building to reduce energy use over the course of a month. By the end of the month, each person saved an average of 14.6 kWh

**How impactful
was this?**

Keeping up this pace for a year would offset ~2 round trip from Vermont to Vancouver

Shifting the Business Mindset

Control operating costs / increase profitability

Reduce energy supply risk & avoid price volatility

Meet energy-related compliance requirements

Improve equipment performance & operations

Improve product quality & process productivity

Improve customer, stakeholder, employee satisfaction

Enhance recognition as a leader and brand identity

Achieve GHG and ESG Goals



Goal of SEM

Help organizations create supportive cultures and systematic processes that help to manage energy and associated GHGs and realize benefits over the long-term

SEM Program Features

Free “how-to knowledge / tools” technical resources, workshops, facilitated on-site treasure hunts, data analysis

Engages across all areas of an organization

Drives accountability by making energy management an organizational priority for all, not one or a few people

Applies the Commit-Plan-Do-Check-Act

Why SEM makes sense for NYSERDA

..... makes continuous energy improvement an integral part of business culture throughout NYS in support of statewide goals to



Reduce greenhouse gas emissions by **40 percent** from 1990 levels



Generate **50 percent** of its energy from renewable energy sources



Increase statewide energy efficiency by **600 trillion Btu**

Pilot goals, delivery, design evolution

2017

Pilot Launched

Objective: Launch SEM across the state of NY. Deliver trainings to 2 industrial facilities as cohorts.

Create marketing materials to increase awareness and adoption of SEM in NYS industrial markets

2018-2021

Pilot Expansion / Pivot

Objective: Expand SEM offering to wastewater facilities. Deliver additional cohorts.

Shift to remove delivery (SEM- On Demand) and virtual site support in response to Pandemic

2021-2023+

Pilot Evolution

Objective: Expand SEM offering to commercial and institutional markets with added focus on sustainability and decarbonization-specific measures.

Deliver training in hybrid virtual and continuous fashion

Results: Verified savings (19 sites)

Gross electrical savings 3,126 MWh (4.4%)

Gross natural gas savings 56,440 MMBtu (3.5%)



If applied same rates to NY largest GHG emitters ~ 770,800 MTCO₂e / decommissioning **two** gas-fired power plants

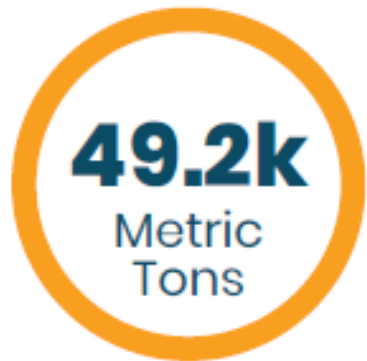


Realization rate

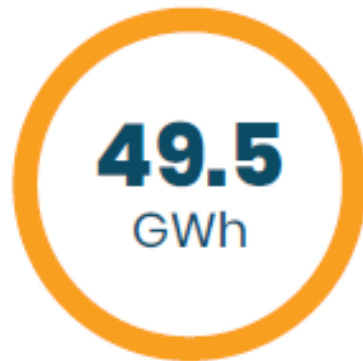


Program cost-effectiveness

RESULTS: Identified savings (~10% calculated)



**GHG
Reduced**



**Electricity
Savings
Identified**



**Gas
Savings
Identified**

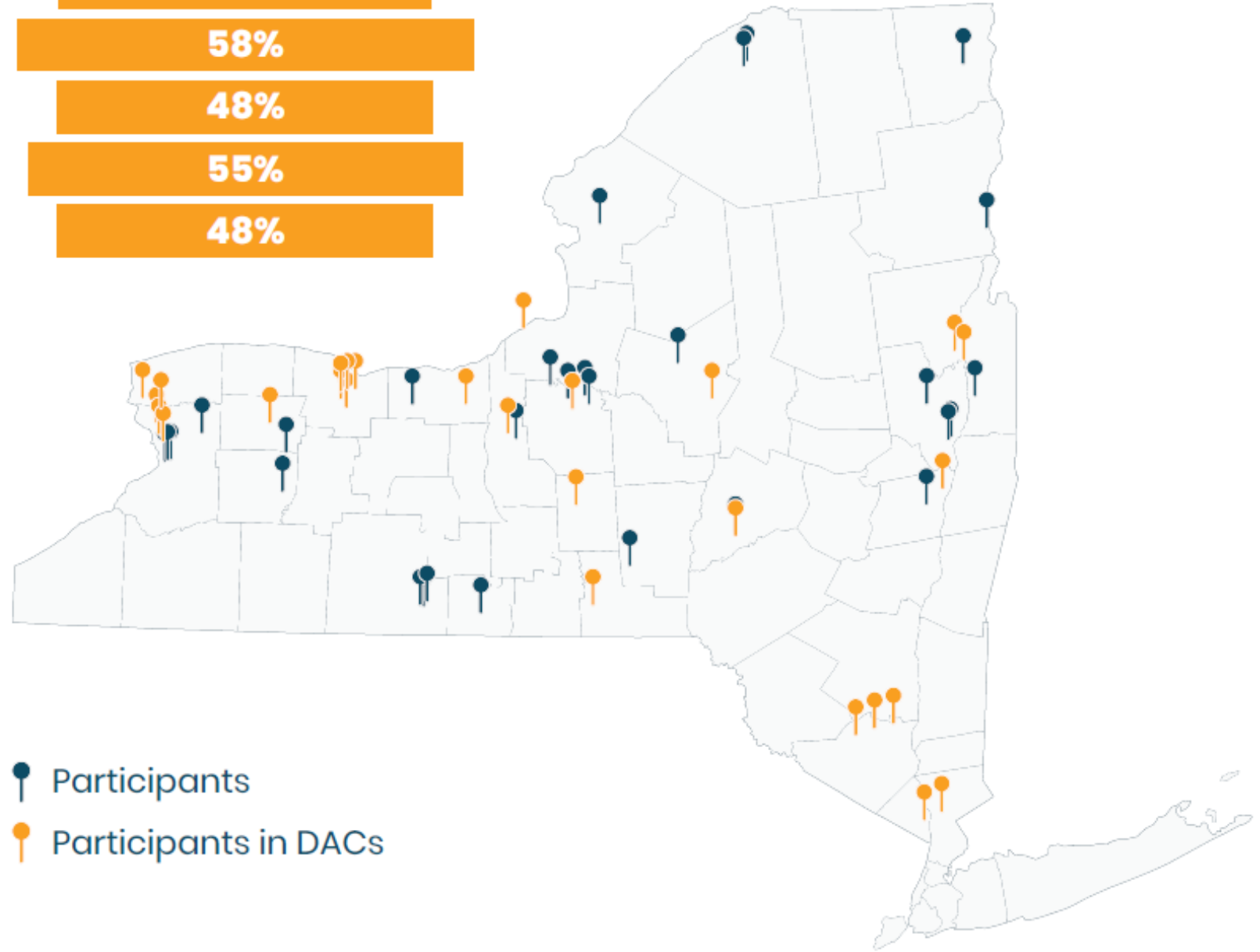
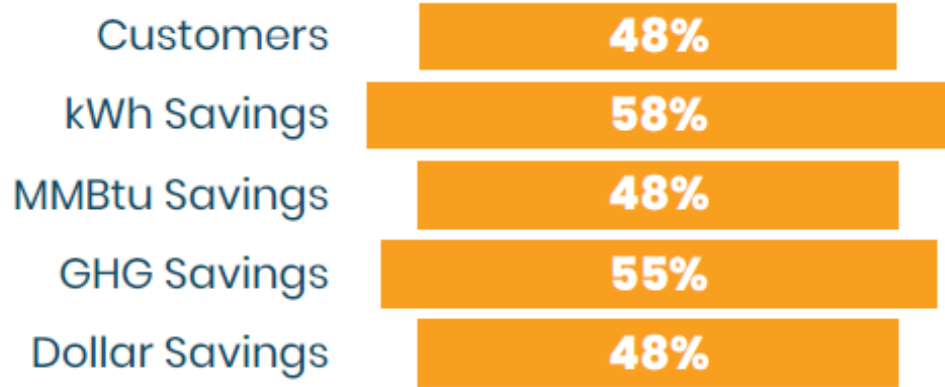


**Customer
Cost
Savings**



**Emissions
savings are
equivalent to
9,573 homes'
electricity use
for one year.**

SEM directly supports disadvantaged communities



Measuring value and impact

“A significant takeaway is that we are looking at energy differently and finding new perspectives to connect with more people. Now people are finally understanding the importance of energy and **feeling empowered to help control costs.**”

100%

All respondents report implementing SEM principals at their organization.

“All can benefit [from energy management] - companywide. We are a small group, and the majority of our people will be impacted by energy management somehow. [In the past] customers don't question energy, but some contracts are starting to mention energy and sustainability. **We are seeing more companies hiring sustainability managers and looking at their products [and suppliers] from a sustainability standpoint.**”

Measuring satisfaction

Consistently **positive** responses throughout!

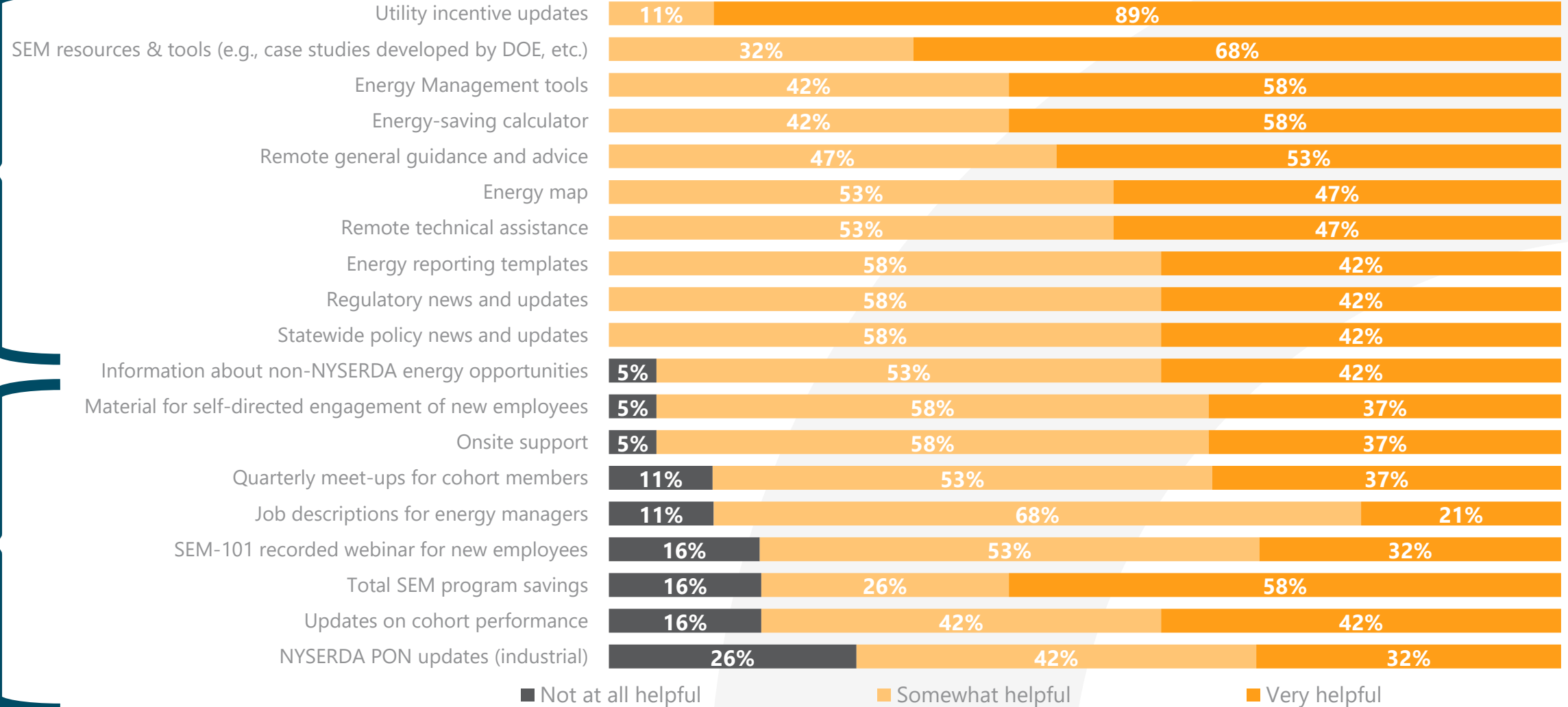
Average likelihood
to recommend

8.9

Net Promoter Score

59

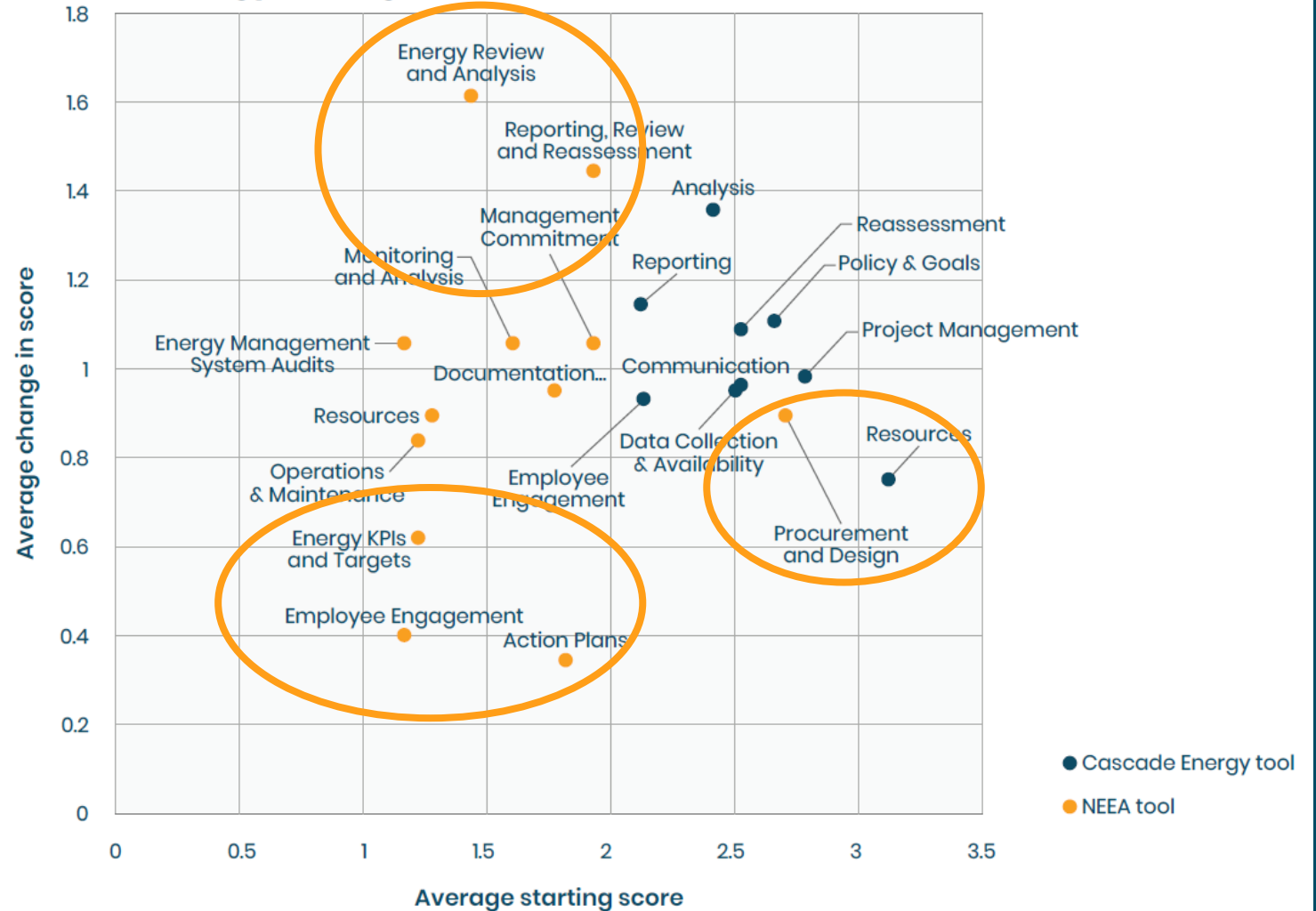
Measuring other non-MMBtu elements



Measuring organizational change

What's the story?

Energy Management Assessment Score Chart



NYSERDA SEM scaling impact

Open to commercial and institutional customers

Designed to support GHG and climate goals

Multi-year self paced, flexible delivery

Catalyzing mindsets “strategic energy management IS business as usual”

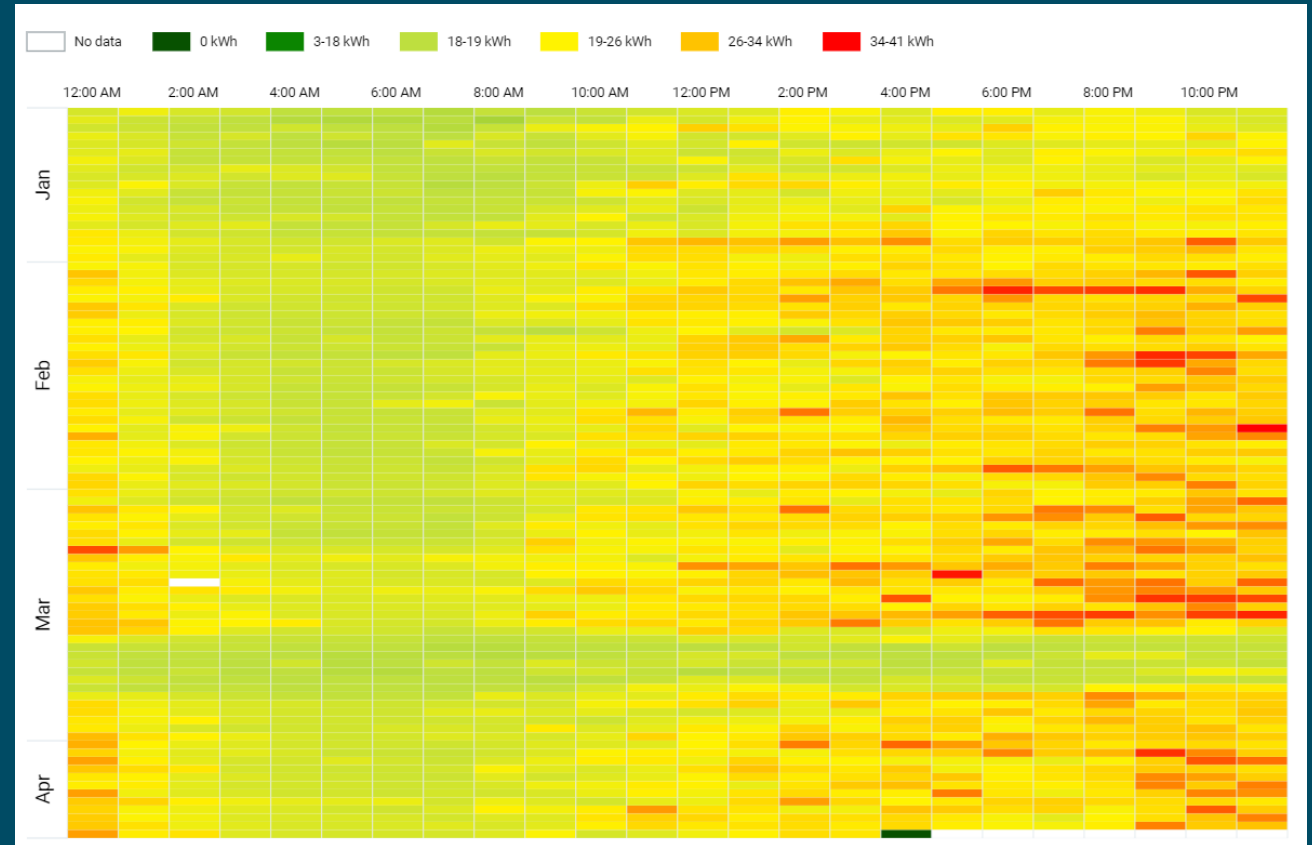


What's the story?

Last slide!

What are we looking at?
What does it tell you?

What are you going to do
with this information? Who
are you going to engage?





Thanks, and stay in touch!

Zoe Dawson zdawson@veic.org

Managing Consultant / SEM Coach / #GoNatRef

 **Vermont**

Kathleen Dooley Kathleen.Dooley@nyserda.ny.gov

SEM Program Manager

 **New York**





“You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.”

- Jane Goodall

Let's talk about creative ways to engage on climate solutions today!