

EM&V Support  
of:

Critical Trends in  
Program  
Implementation

NEEP EM&V  
Forum

March 31<sup>st</sup>, 2016

# About VEIC

- Over 25 years of reducing economic and environmental costs of energy use
- Comprehensive approaches, high-impact results
- Energy efficiency, renewable energy, and transportation
- National and international clients
- Program design and evaluation
- Transformative policy, advocacy, and research
- Clients: government agencies, regulators, utilities, foundations, and advocates

Efficiency  
Vermont

 EFFICIENCY**SMART**

 DC  
SUSTAINABLE ENERGY  
UTILITY



[veic.org](http://veic.org)

# Trends Influencing Efficiency Programs

- **Increasingly dynamic T&D load shapes**
- **Cheap energy**
- **Clean Power Plan / focus on Carbon**
- **More unregulated competition**
- **Proliferation of data, technology, and analytics**
- **Societal expectations for mass personalization**
- **Political pushback on efficiency**
- **Communities taking action where state and federal support lag**
- **Connecting non-energy benefits to our work**



# Where does that take Us?

Imperative to create  
new  
**VALUE**

## ***CUSTOMERS & COMMUNITIES***

Creating **alignment** and  
capturing new **benefits**  
from **actionable**  
information



## ***ENERGY INFRASTRUCTURE***

Making efficiency a more  
**active resource** solving  
specific T&D and  
emissions issues



## ***PROGRAM IMPLEMENTERS***

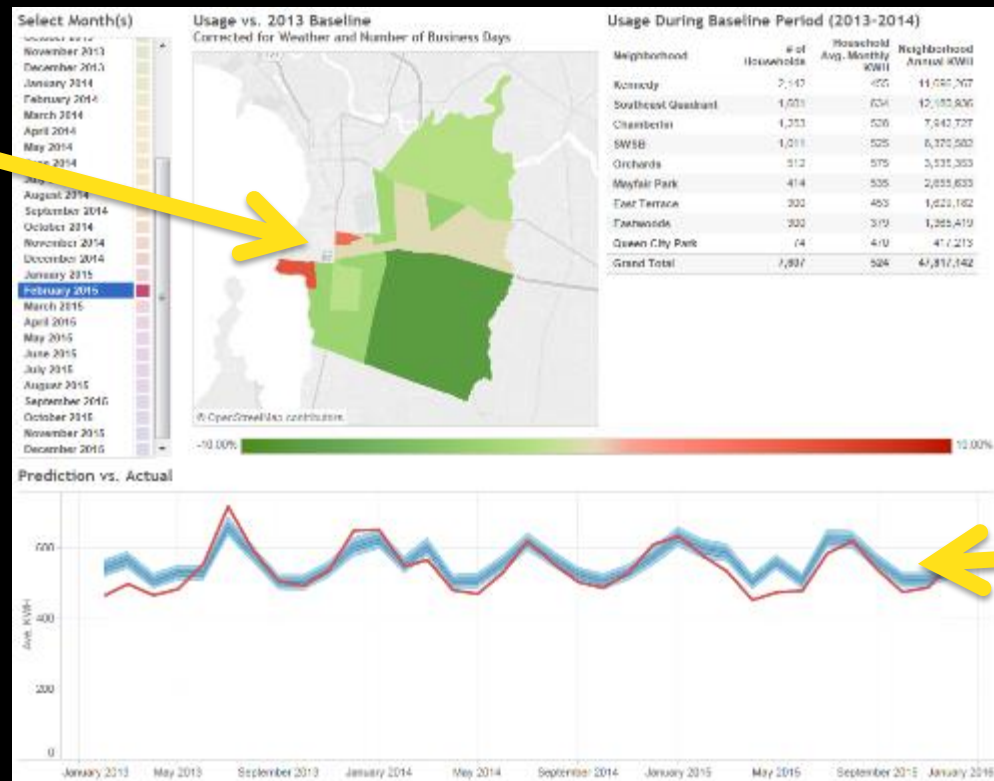
Higher **performance** and  
greater **return**



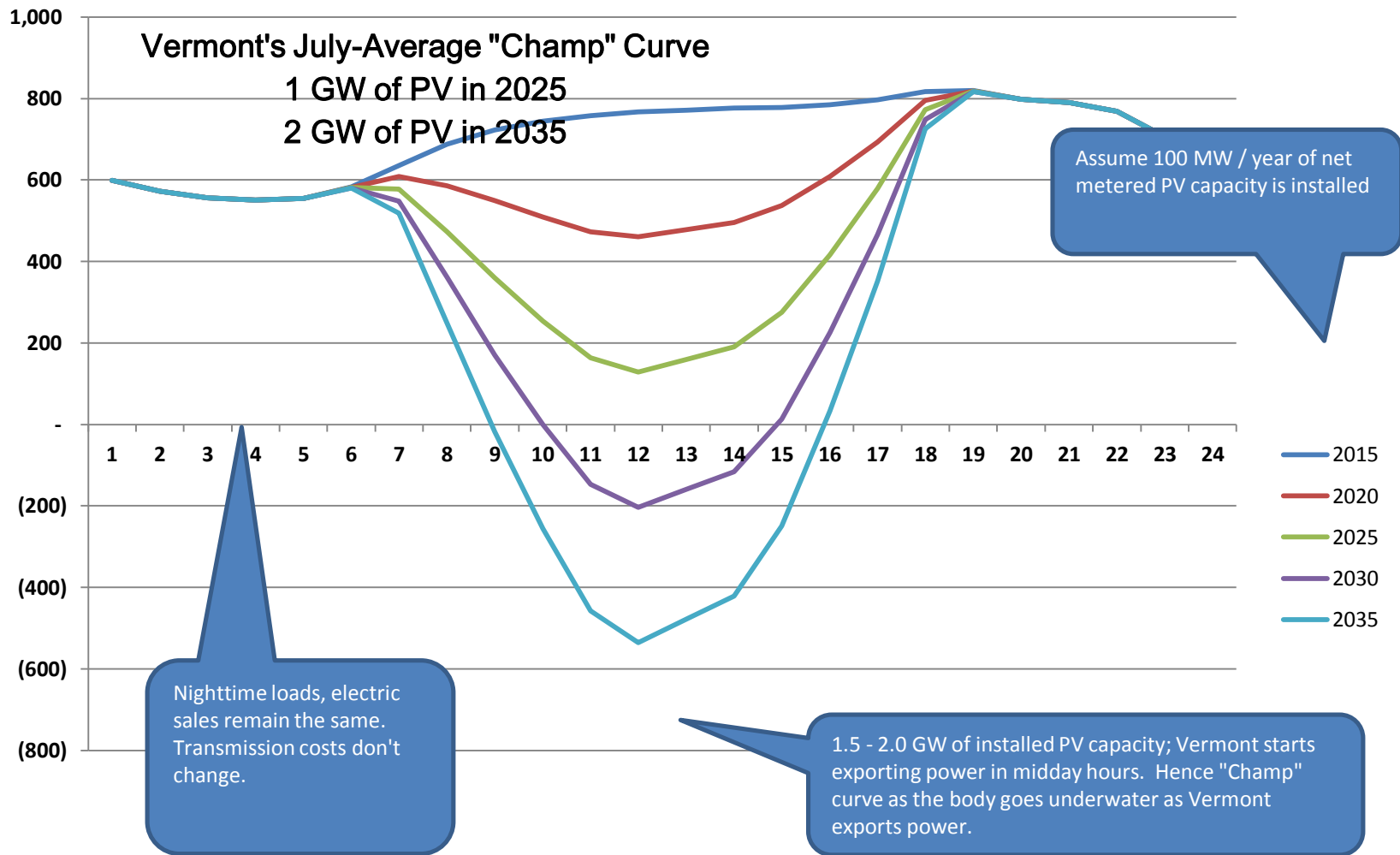
# Example 1: Community Performance

Ability to drill down to neighborhoods and use AMI data to model weather-dependent neighborhood energy usage relative to a baseline.

Better than baseline  
Worse than baseline



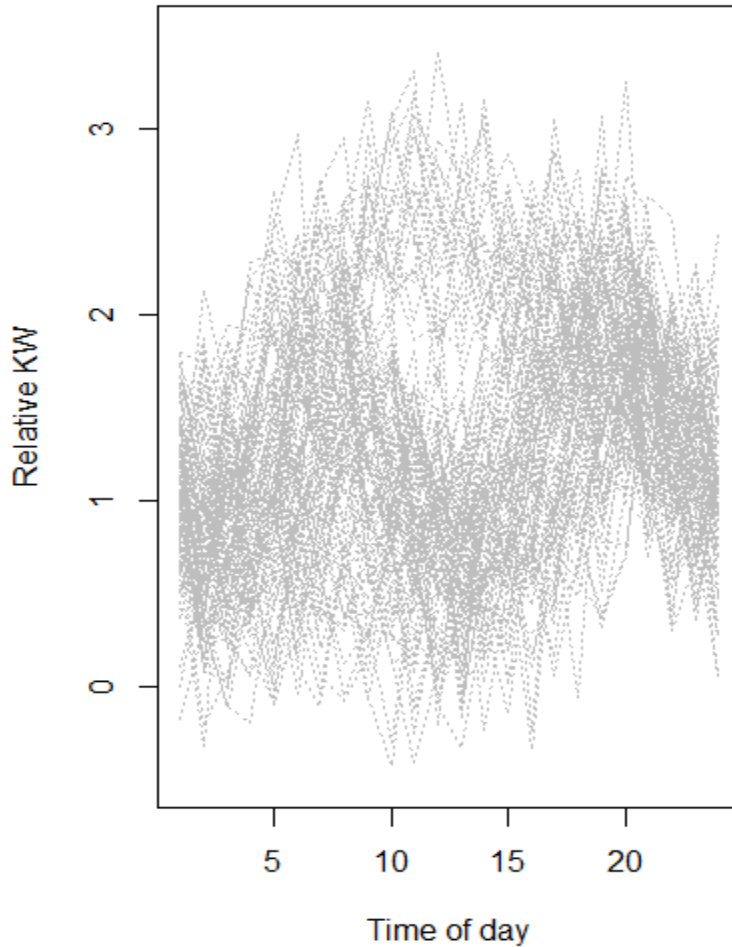
# Example 2: New Load Curves and Solutions



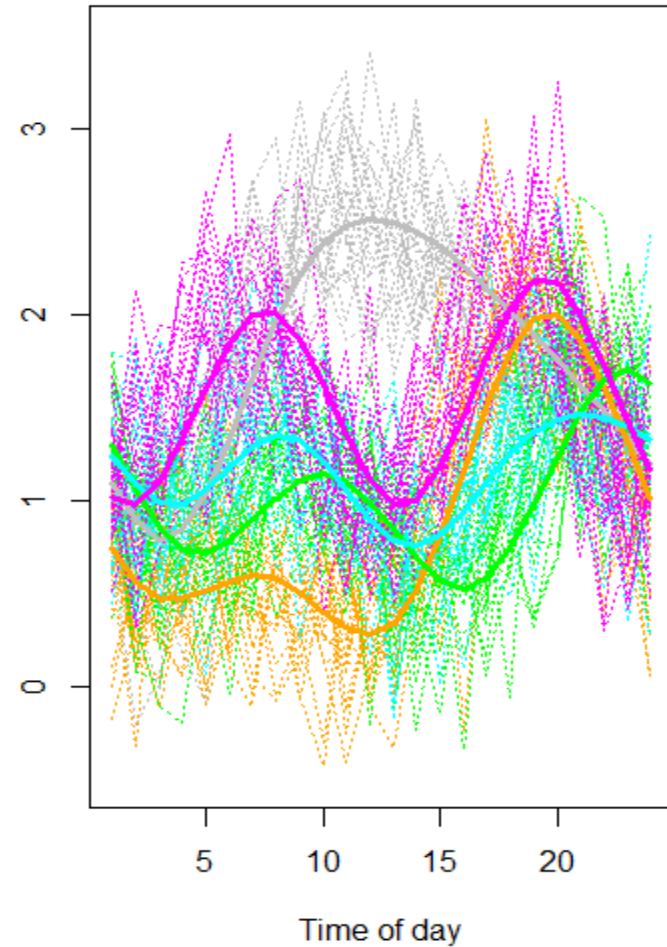
Credit: Shawn Enterline, Power Supply Project Manager at Green Mountain Power

# Example 3 : Driving Efficiency and Savings

Loadshapes...



Loadshape Discovery



# Moving Toward “Mass” Personalization

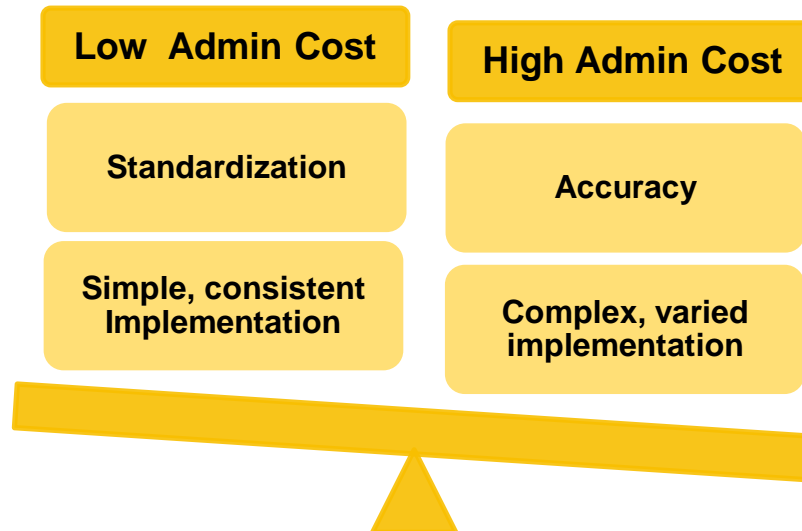
100%  
Prescriptive



100%  
Custom

## TRM

<b>Algorithm</b>	Deemed	Deemed	Deemed	Deemed	Custom
<b>Variables</b>	Deemed	Deemed with multiple options	One or more custom	Many/all custom	Custom
<b>Output</b>	Single deemed	Multiple deemed	Custom	Custom	Custom



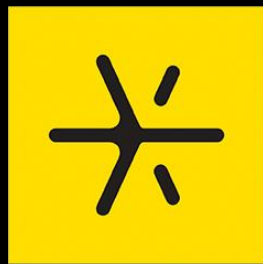


# EM&V 2.0 – Designing for Efficiency Future State

## Design with the outcome in mind – EM&V that is:

- Supportive of efficiency's future direction
- Supporting different attribution models
- Faster / Cheaper
- More accurate
- More transparent
- More connected to the programs
  - help us understand customers, improve realization and in-service rates, ID maintenance needs, etc.
- What can we change right away?
- What will it take (regulatory, skills, resources)?
- When is it evolution versus revolution?

# Thank You



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