

Committee on Energy Resources and the Environment

Winter Policy Summit

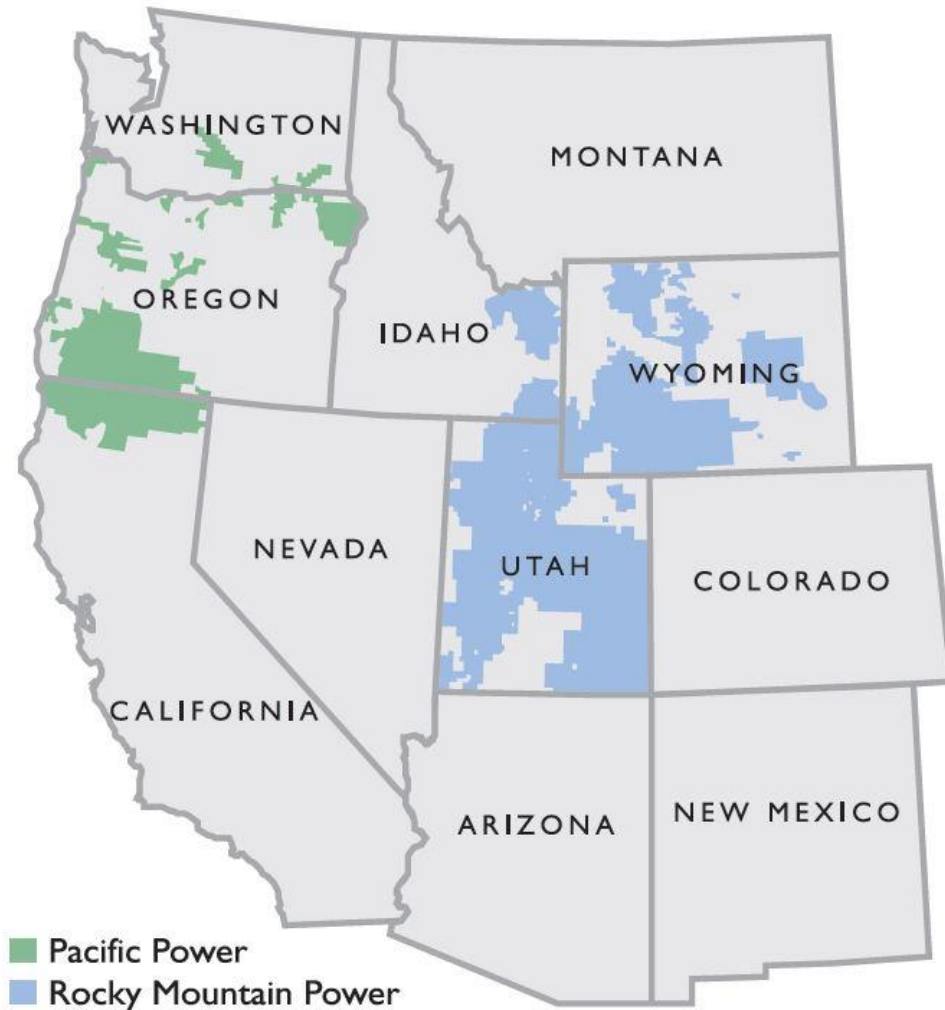
Reducing Supply Peaks with Integrated and
Targeted Energy Efficiency

Cory Scott

Director, Customer Solutions



PacifiCorp



At a Glance

- 1.8 million customers in 6 states
- 143,000 square mile service territory
- 16,500 miles of transmission lines
- 63,000 miles of distribution lines
- 900 substations
- 74 generating plants

Energy Efficiency

- In the 2017 IRP, energy efficiency is projected to offset 88% of projected load growth over ten years.

Unique Challenges of Targeted Energy Efficiency



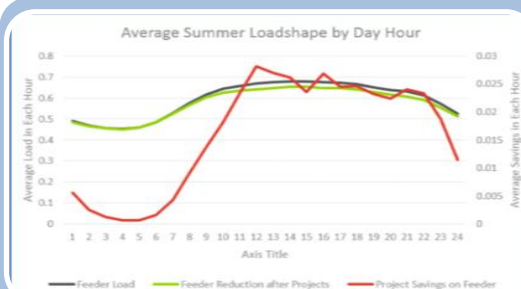
Planning

- Target area selection requires increased collaboration
- Timeframe for EE solutions may be longer than traditional solutions
- “Local” energy efficiency potential has to match the local system need



Implementation

- Implementation efforts may need to be “localized”
- Program efforts can influence but don't control customer actions
- Measures may not be a “perfect fit”



Impact Evaluation

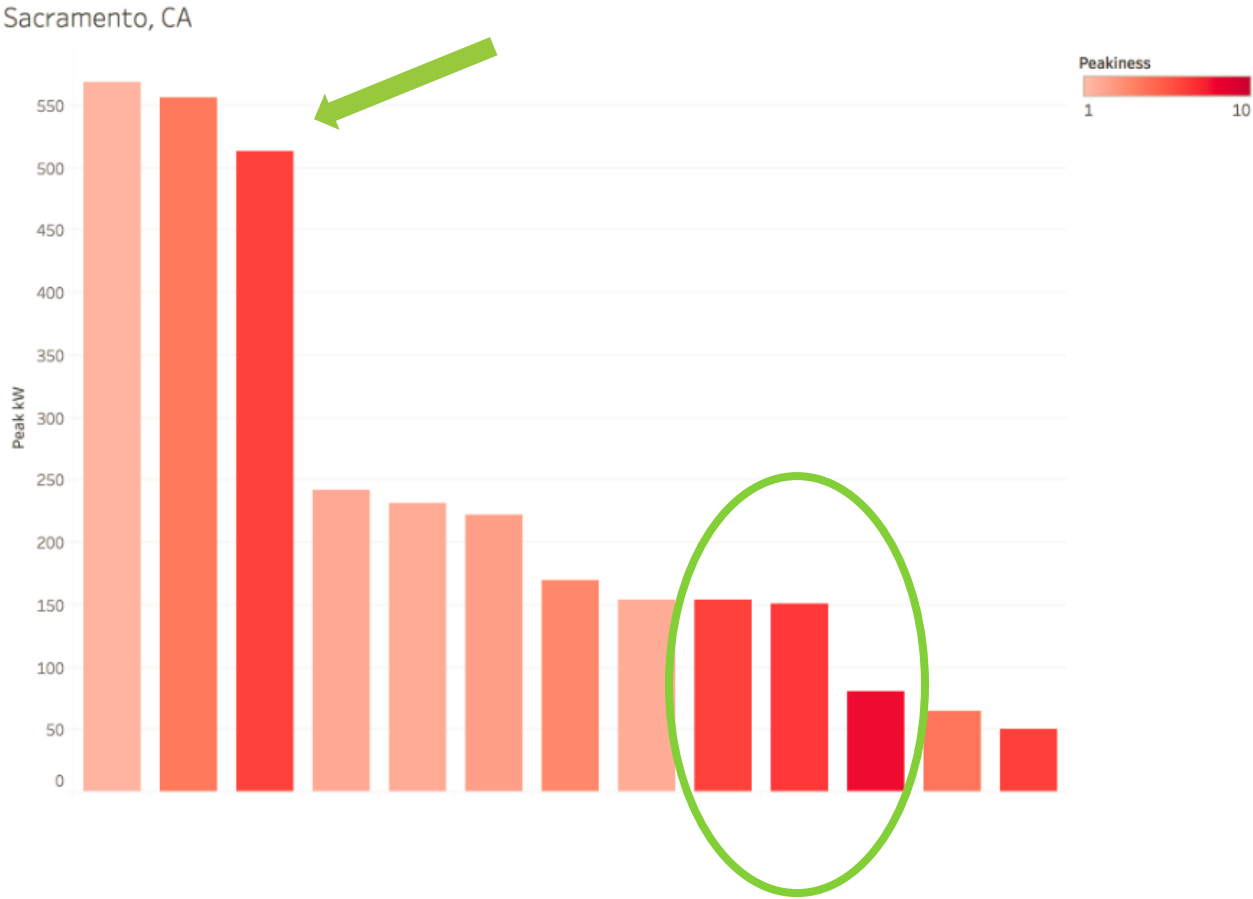
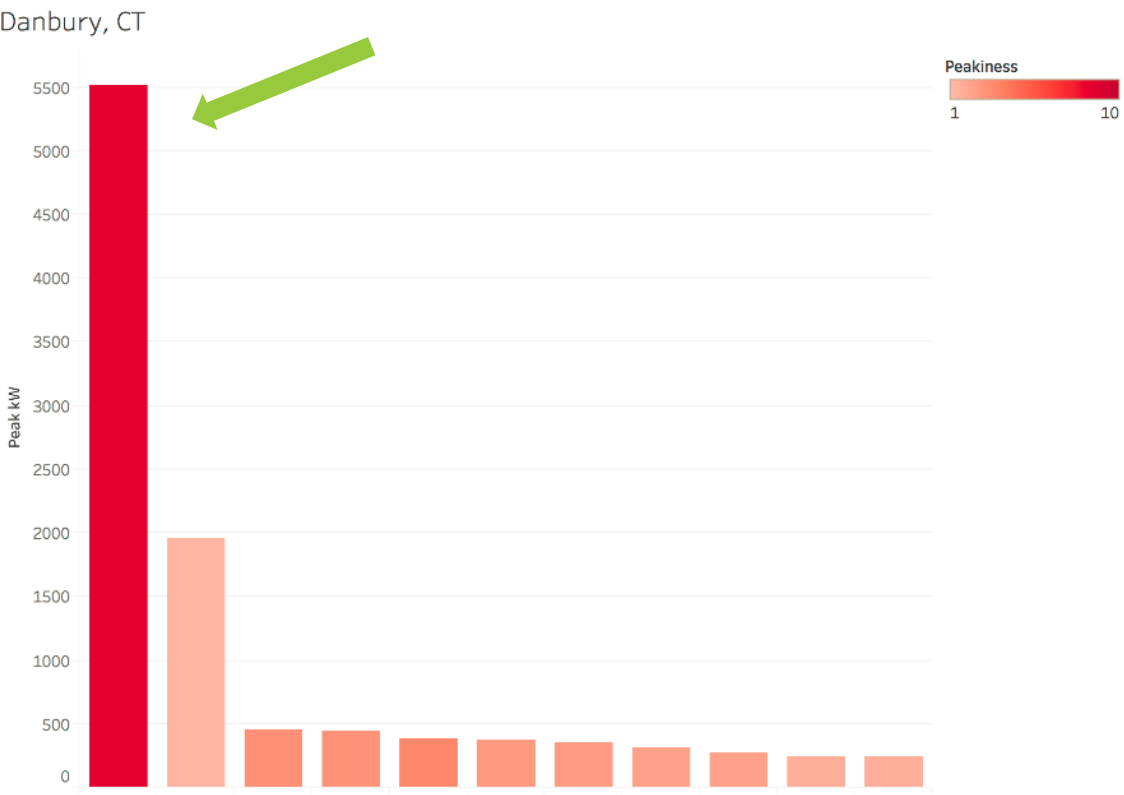
- “Typical” system changes can have significant local impact
- The “Baseline” requires a counter-factual estimate
- Data gathering requires localized precision

USING ANALYTICS TO TARGET PEAKINESS

Reducing Supply Peaks with Integrated and Targeted EE
NARUC Winter Policy Summit, Feb 11-14, 2018

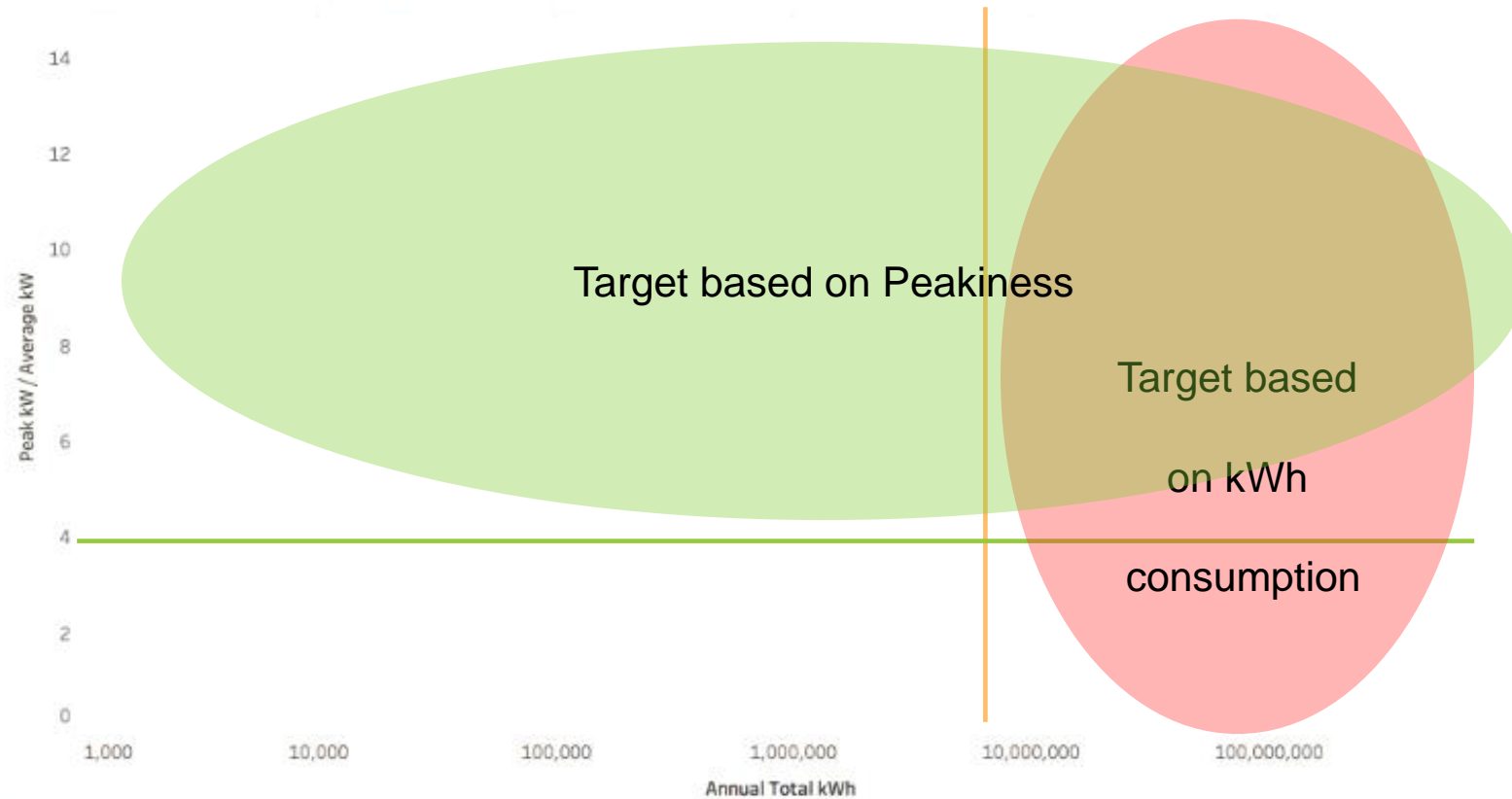
Sam Krasnow, VP Customer Engagement
FirstFuel Software

WHAT YOU MEASURE, MATTERS: PEAK KW VS. PEAKINESS



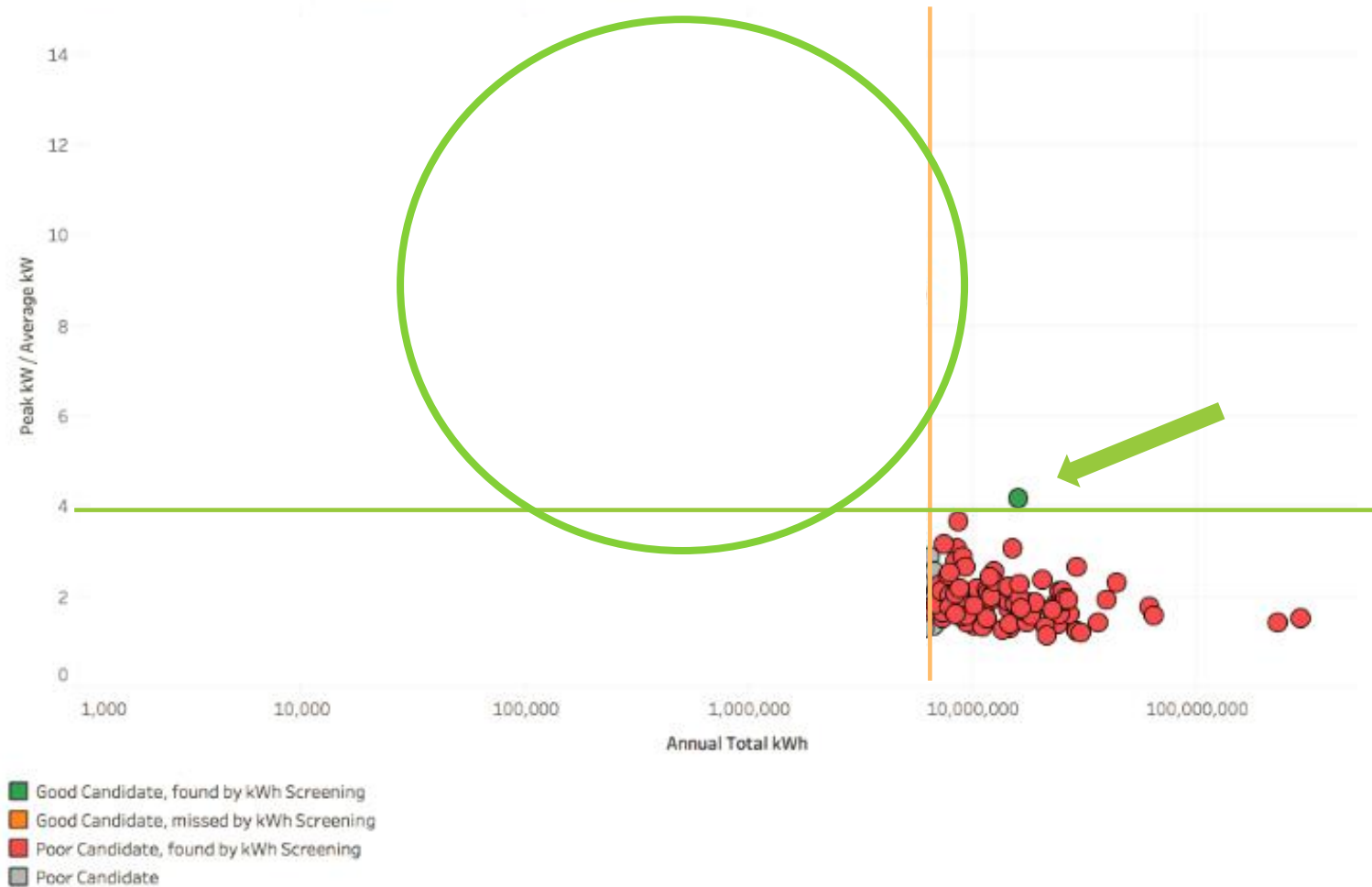
WHAT YOU MEASURE, MATTERS: TARGETING PEAKINESS VIA ANALYTICS

Screening by Peak-to-Average versus Screening by Total kWh



WHAT YOU MEASURE, MATTERS: TARGETING PEAKINESS VIA ANALYTICS

Screening by Peak-to-Average versus Screening by Total kWh



Blended Cost of Energy: A new metric for valuing supply demand-side investments

Kate Desrochers
Vermont Energy Investment
Corporation

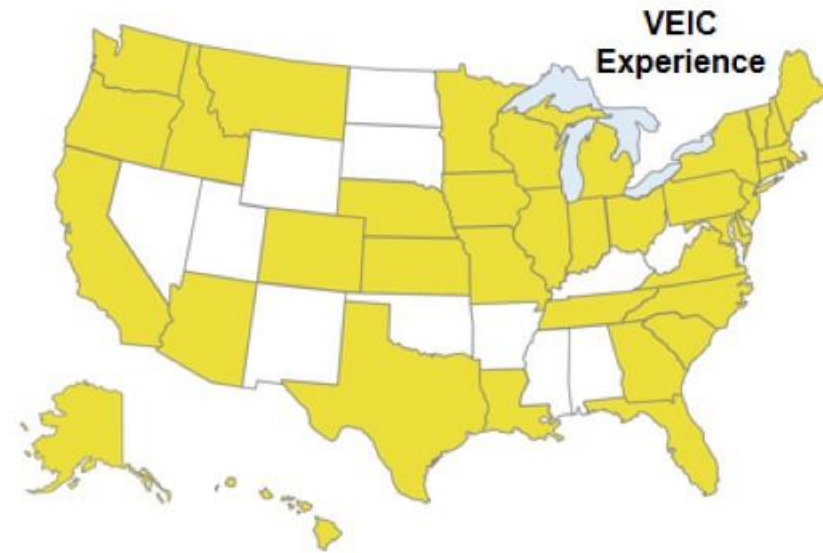
NARUC Winter
Policy Summit
February 13,
2018



About VEIC

veic.org

- Mission-driven nonprofit
- 30 years reducing economic & environmental costs of energy (specific focus on low income)
- Over 300 staff; offices in Vermont, Ohio, & Washington DC
- Services - scope is electric & thermal; buildings & transportation:
 - Implementation of energy efficiency, renewable energy, and transportation efficiency programs
 - Program design, review, evaluation
 - Policy, planning, regulatory support



Efficiency
Vermont

EFFICIENCY\$MART



DC
SUSTAINABLE ENERGY
UTILITY



Blended Cost of Energy

$$\frac{\textit{All Procurement and Delivery Costs}}{\textit{Amount of Energy Procured and Delivered}}$$

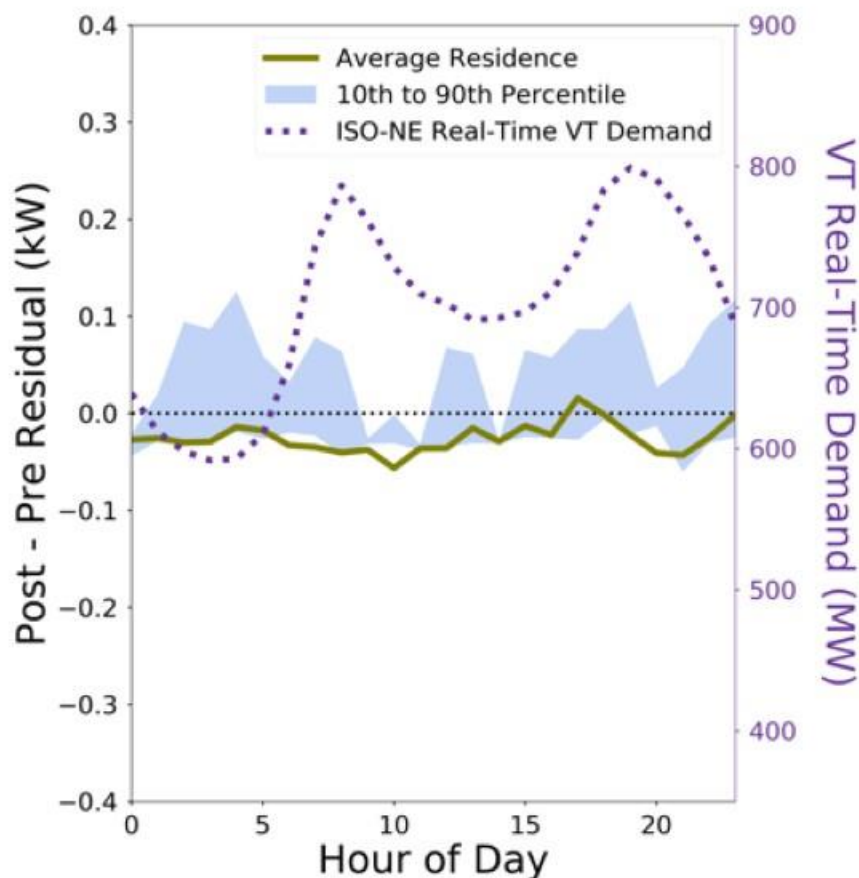


Blended Cost of Energy

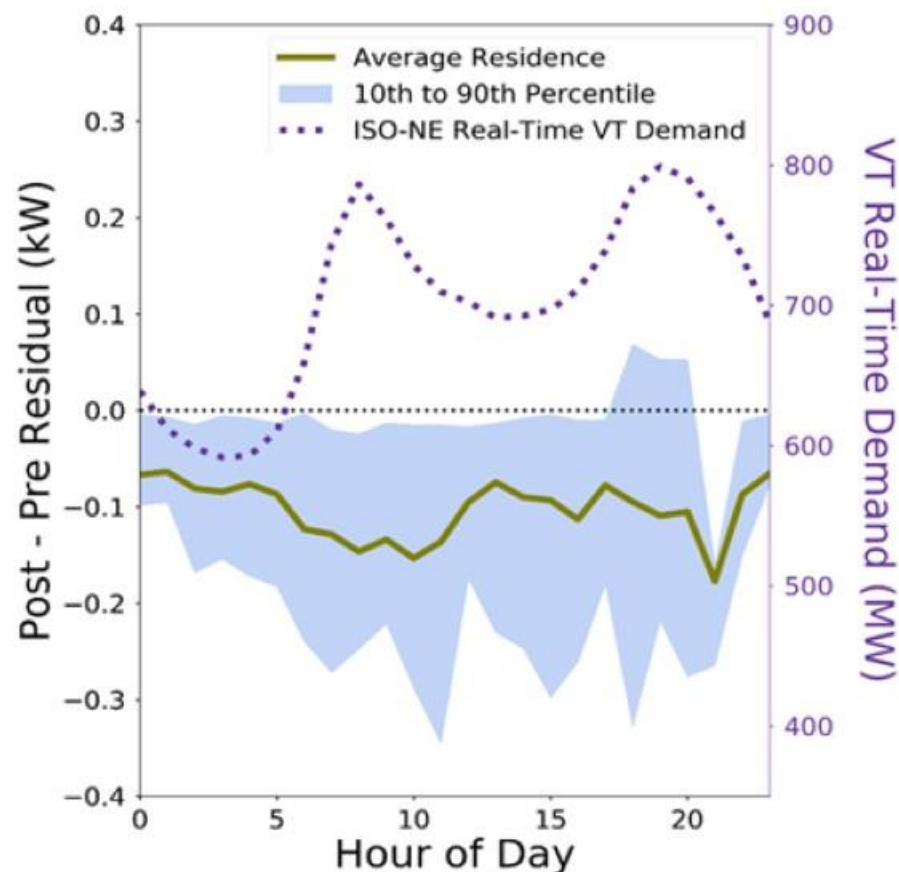
$$\frac{\text{Costs of: Supply side and demand side resource} + \text{customer generation} + T\&D}{\text{Delivered energy} + \text{saved energy} + \text{site produced energy}}$$



Different investments provide different value to the system



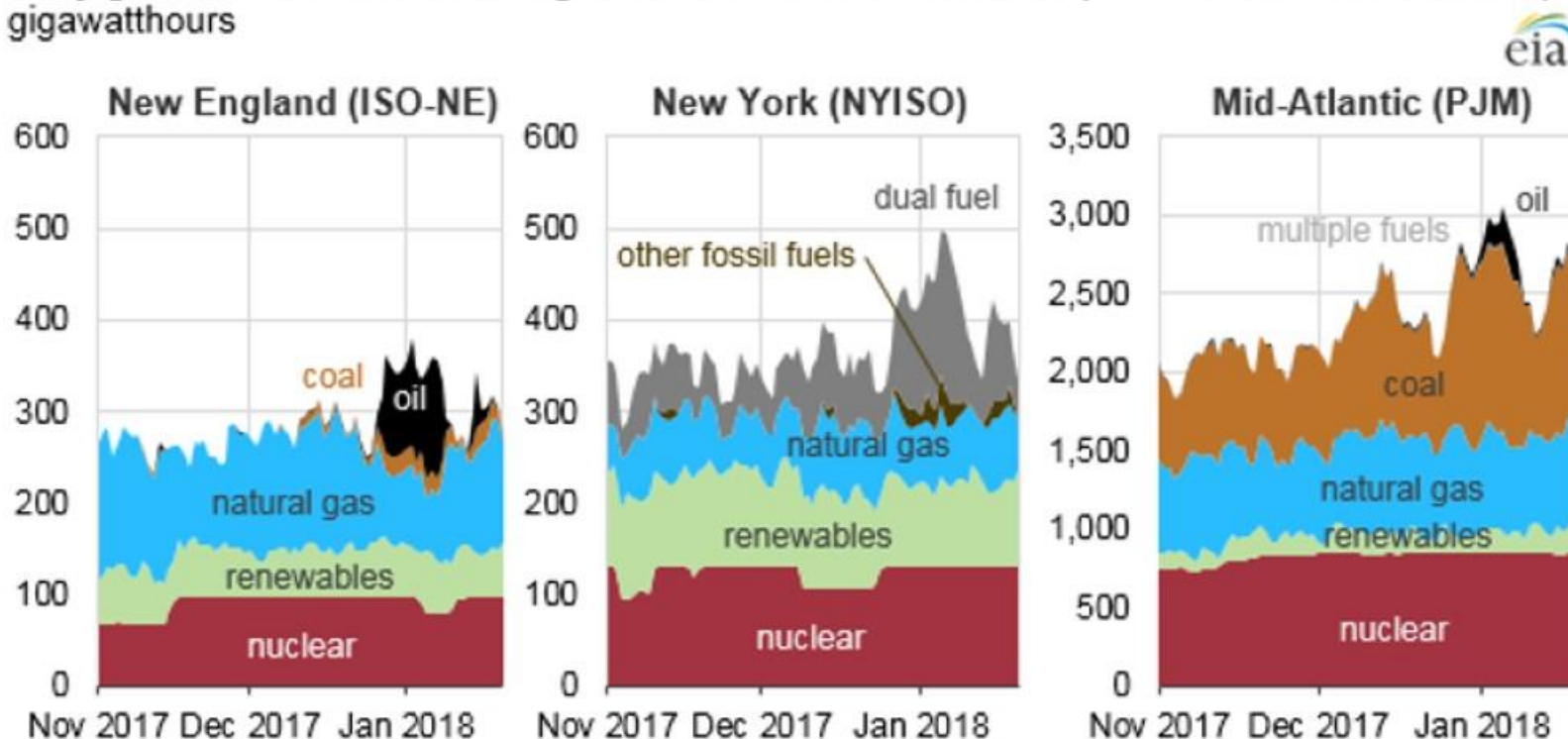
Green Line: Average efficiency shape for
Efficient Refrigerators



Green Line: Average efficiency shape for
LEDs

The electric system can be supply-constrained *without* capacity constraints

Daily generation mix in New England, New York, Mid-Atlantic (Nov 1, 2017 - Jan 20, 2018)
gigawatthours



Source: U.S. Energy Information Administration, based on ISO-NE, NYISO, and PJM

Takeaway message

Blended Cost of Energy helps make more cost-effective and coordinated supply investments

Want to learn more?
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