

# EM&V 2.0

## Modern Measurement for Energy Efficiency

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Director of EM&V Solutions  
June 9<sup>st</sup>, 2015



*New England Conference of Public Utilities Commissioners*  
**necpuc**

# EnergySavvy at a glance

Cloud software company bringing DSM into the 21st century



optix ENGAGE

CUSTOMER  
ENGAGEMENT



optix MANAGE

PROGRAM AUTOMATION  
& PORTFOLIO TRACKING



optix QUANTIFY

MEASURE ACTUAL  
SAVINGS

# Energy Efficiency Program Management

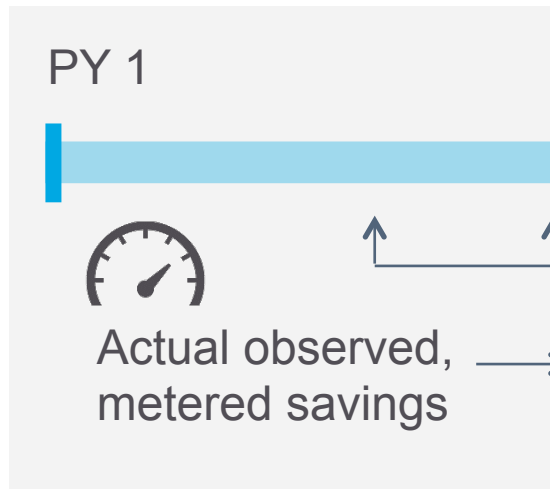
Like Cruising Down the Highway without a Speedometer



# DSM Measurement - \$25B Problem



Deemed savings



# Measurement Challenges



## Data Lag

Slows utilities, regulators, and market



## Cost- and Effort-Intensive

EM&V costs can consume 3-5% of program budgets



## Retroactive

Backwards looking analysis doesn't allow for optimization



## Contentious

Lack of transparency and consistency across jurisdictions



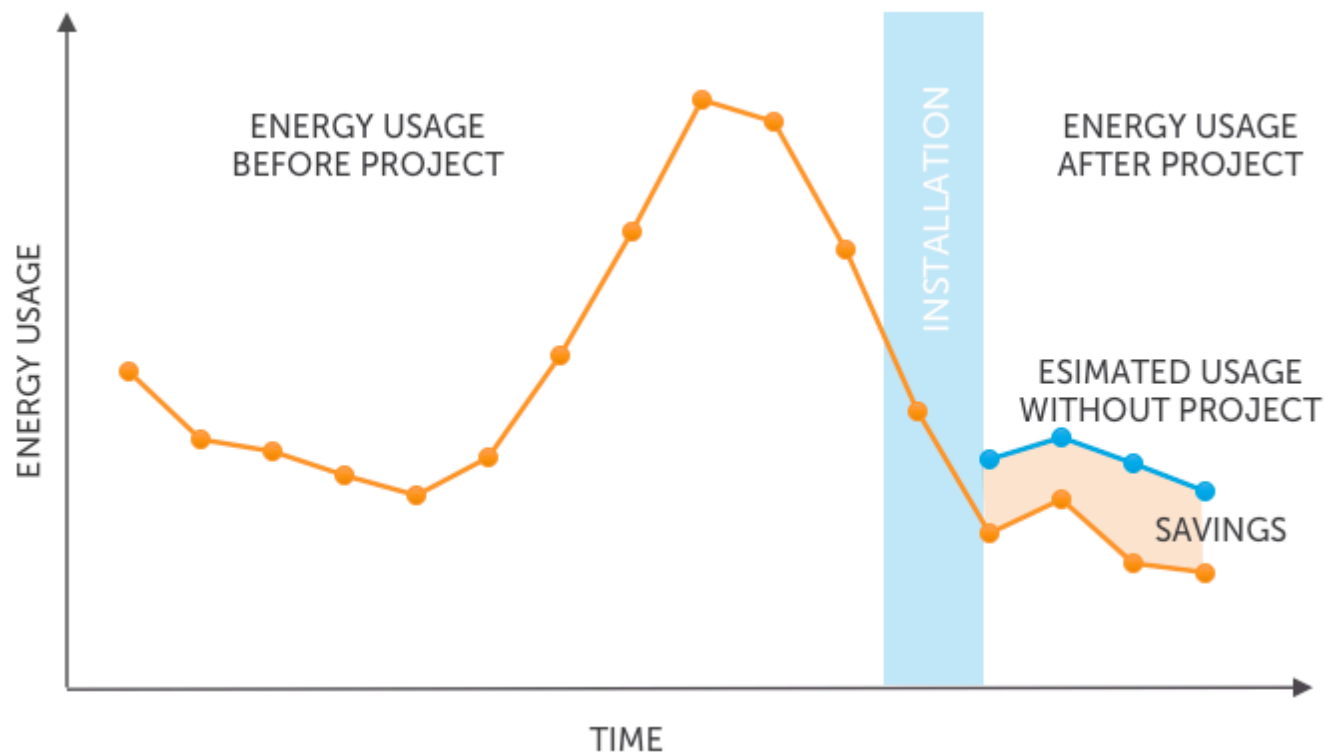
## Imprecise

Sampling, data insufficient for granular analysis

# Continuous Savings Measurement: How It Works

Billing analysis for all projects in a program, in an on-going manner, utilizing accepted M&V protocols

optix **QUANTIFY**



# Quantify Demo

# What you just saw...



**Metered Savings**



**Measure real-world impact of programs**



**Census Approach**



**Assess every project instead of sampling**



**Actionable Insights**



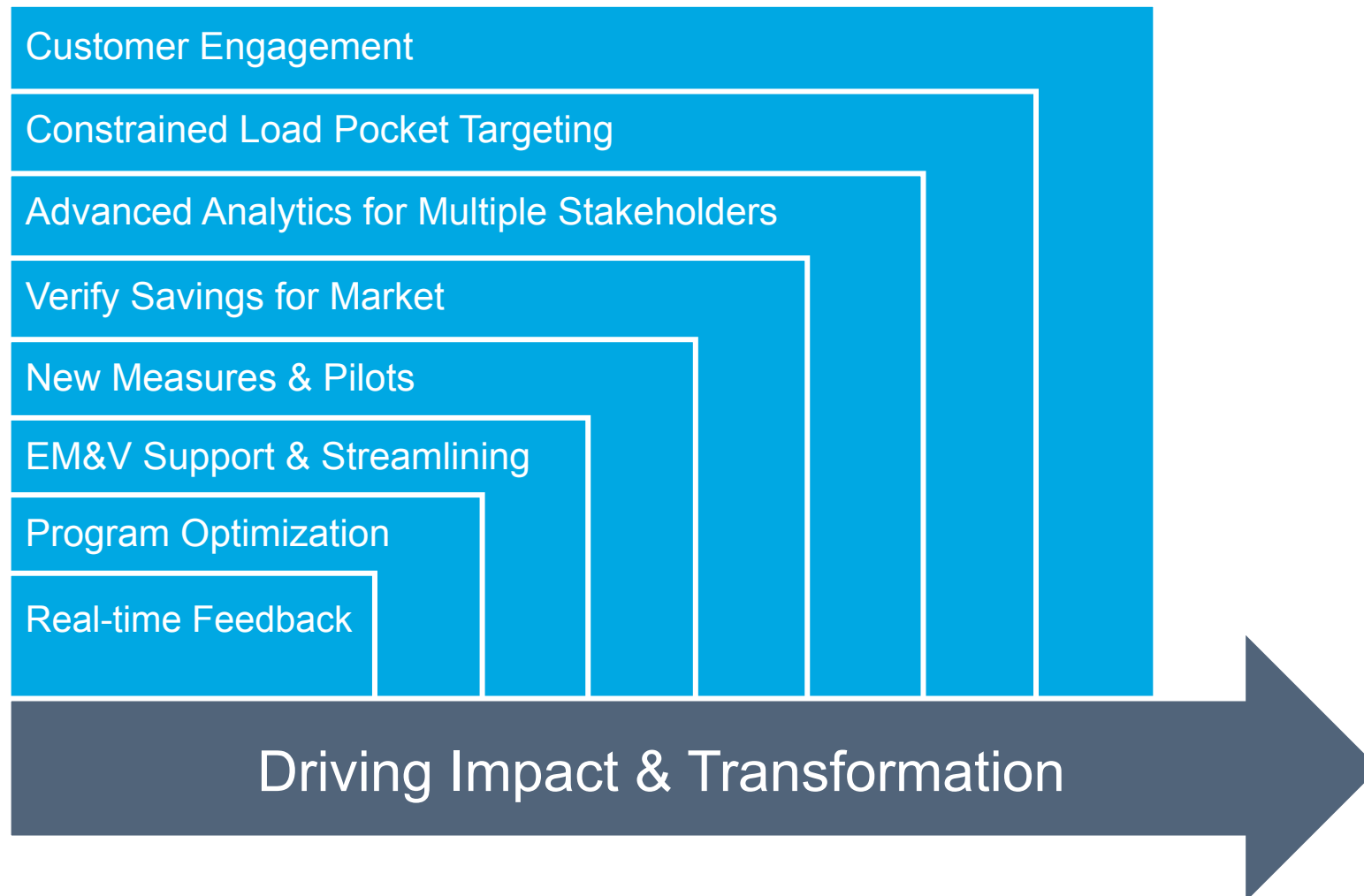
**Turn data to useful information & support decisions**

Measurement

Program Optimization



# How can continuous savings measurement help?



# EM&V 2.0 Emerging Nearby

**NY – REV Track 1 Order Pages 307-308,  
Released February 26, 2015:**

“As REV recognizes the pace of technology and its ability to redefine our electric system, so too can advances in technology be used to challenge and enhance our traditional approach to EM&V”

# Building a Bridge



**Commissions can provide encouragement, freedom and room for innovation**

Thank You

**ENERGYSAVVY**



METERED SAVINGS

2,064 MWh ± 270



84% Realization ± 11%

✓ 876,373 PREMISES ANALYZED

PROGRAM PROGRESS

2,845 Projects



\$801,270 Spent



COST EFFECTIVENESS

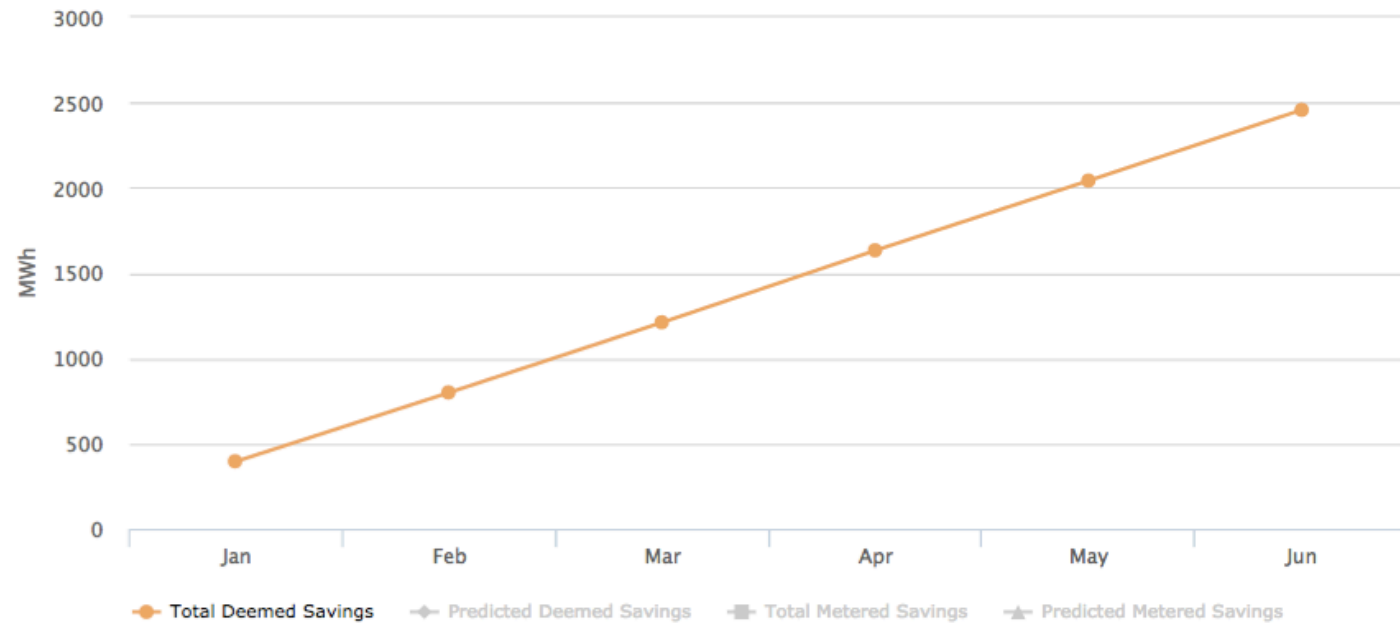
TRC 1.01

3.8¢/kWh

Avg Savings: 724kWh ± 95

Avg Project Cost: \$1,254

Program Savings



Whole Home

Dashboard

Savings

Explore

Program To Date

**METERED SAVINGS**

2,064 MWh ± 270

5,000 MWh

84% Realization ± 11%

876,373 PREMISES ANALYZED

**PROGRAM PROGRESS**

2,845 Projects

5,500

\$801,270 Spent

\$1,537,500

**COST EFFECTIVENESS**

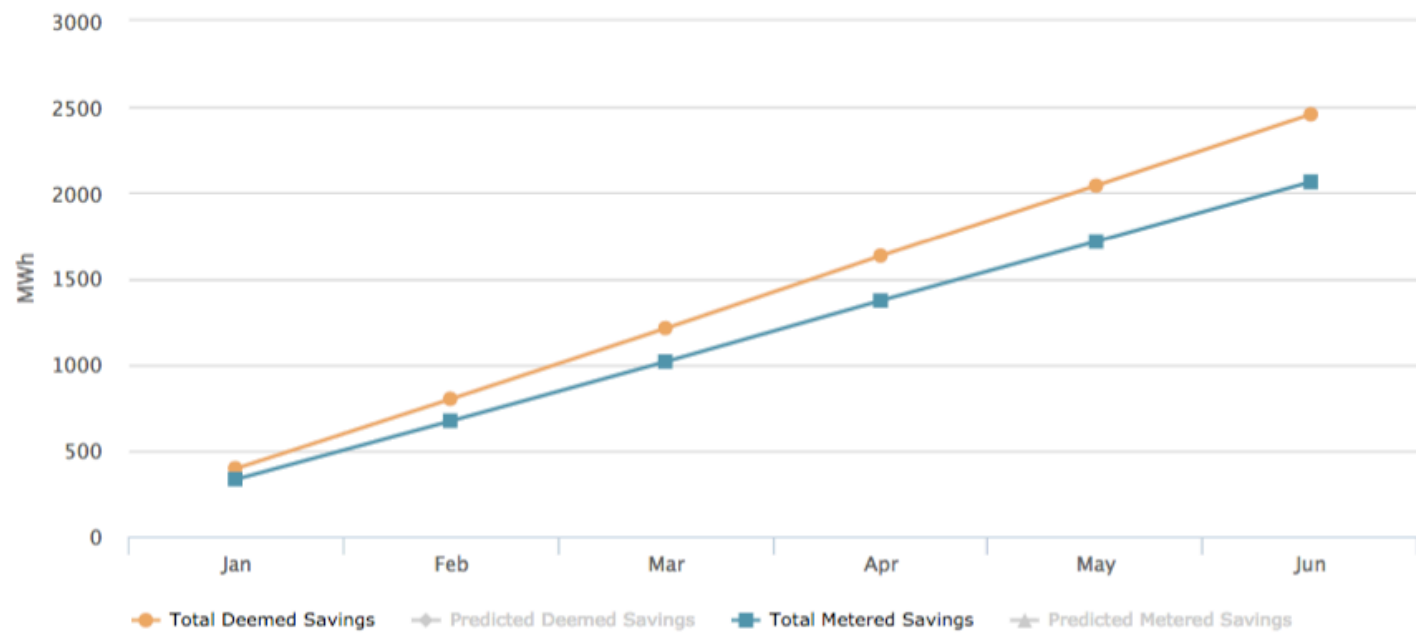
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### Program Savings





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COST EFFECTIVENESS

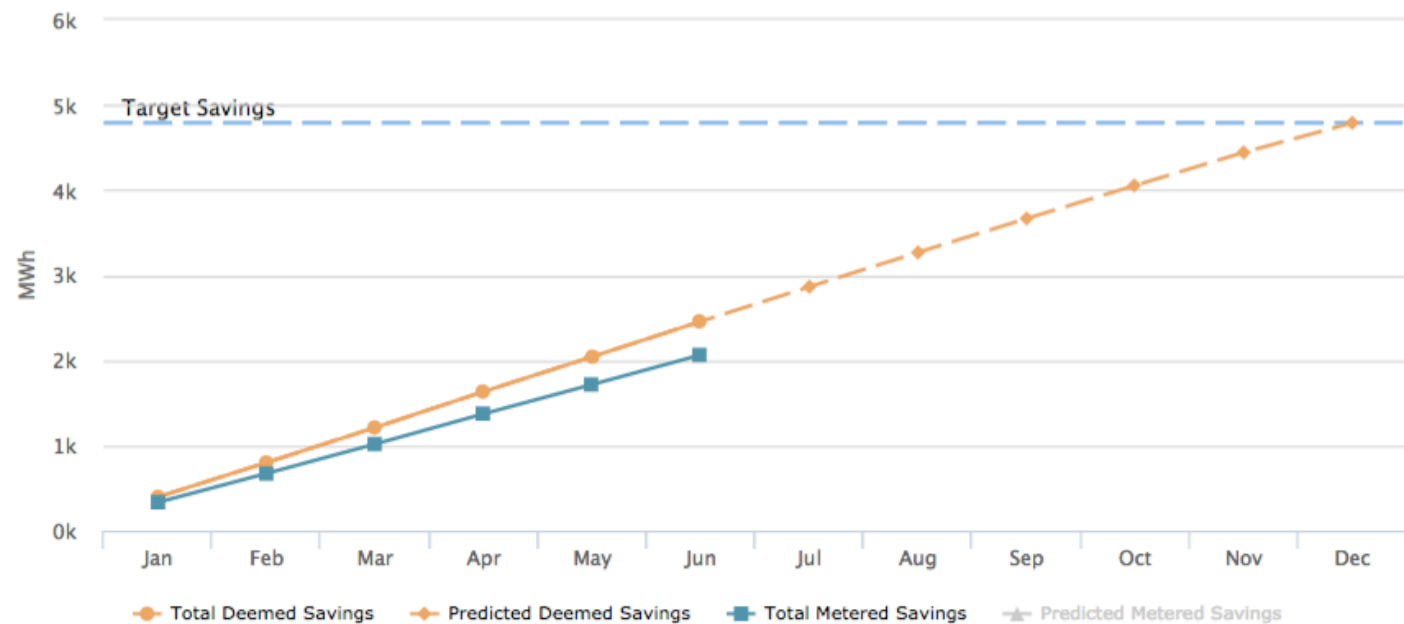
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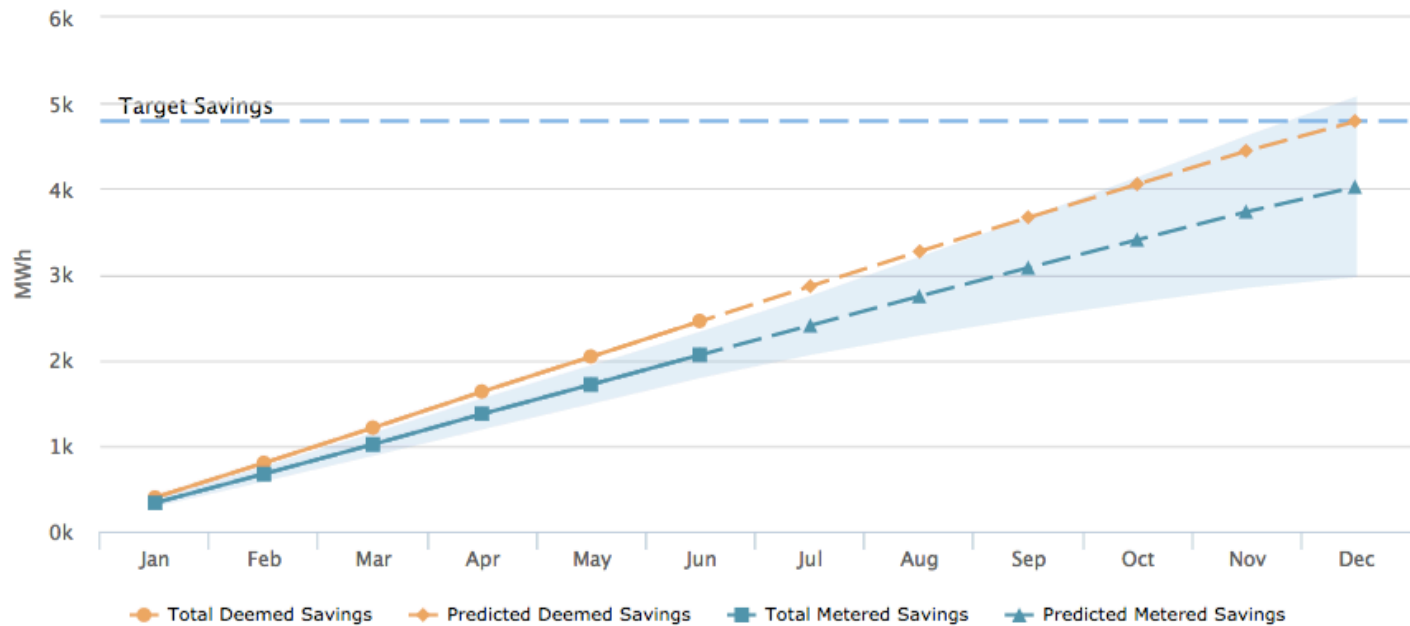
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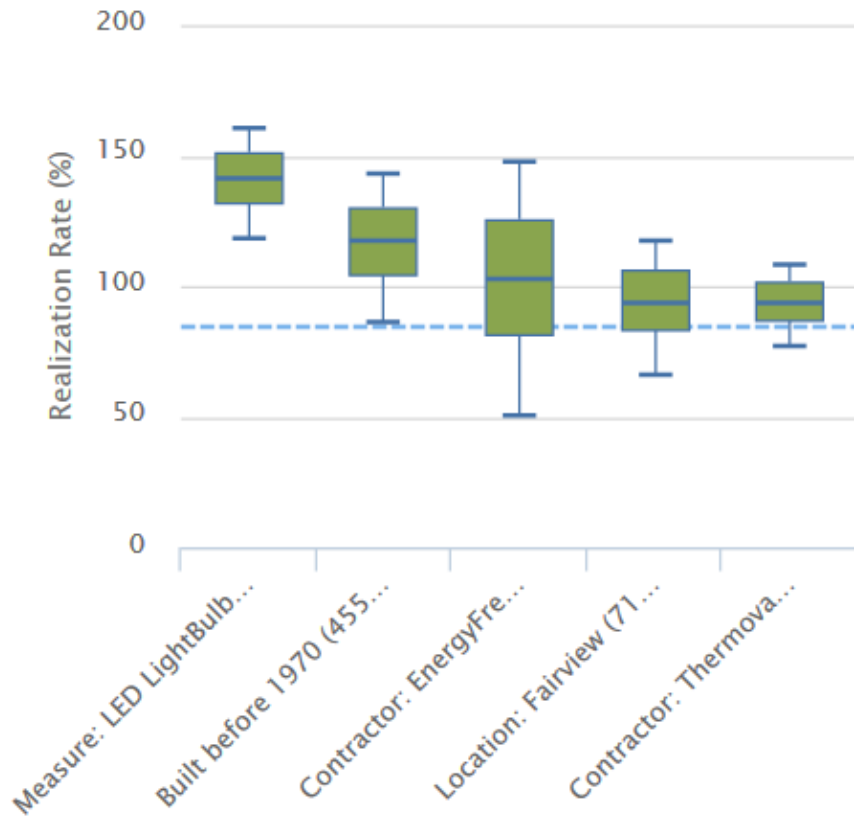
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Program Savings

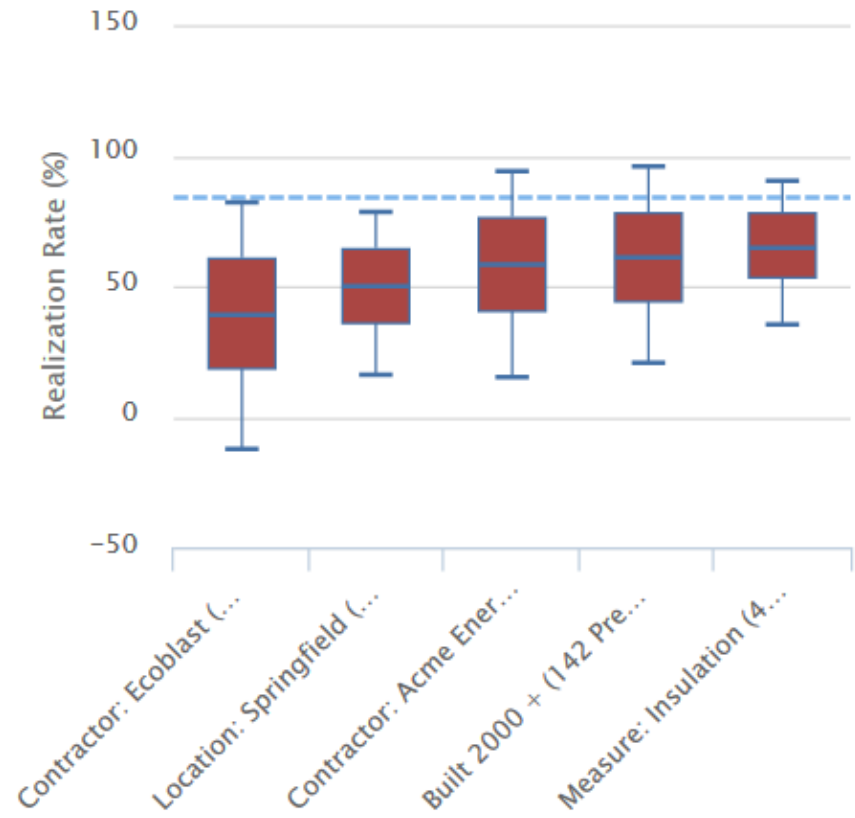




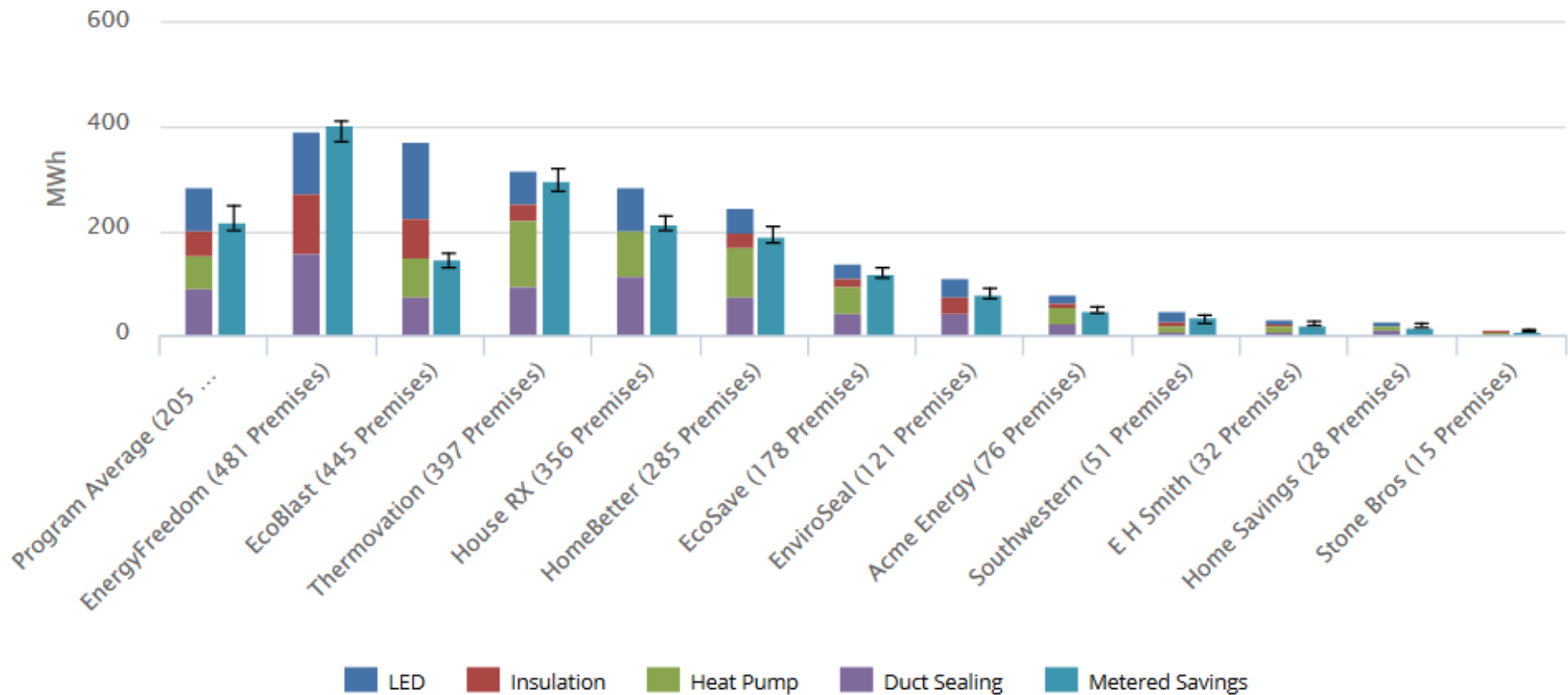
## Top Factors of Increased Savings



## Top Factors of Decreased Savings



## Savings by Contractors



Whole Home

Dashboard

Savings

Explore

Year Built

- 2000+ 22
- 1990-1999 93
- 1980-1989 138
- 1970-1979 120
- Before 1970 71

Weather Station

- Greenville 377
- Madison 427
- Springfield 534
- Fairview 711
- Auburn 797

Measure

- Duct Sealing 114
- Heat Pump 28

Program To Date

REALIZATION RATE

39% ± 43%

Overall: 84% ± 11%

NUMBER OF PREMISES

445 / 2845

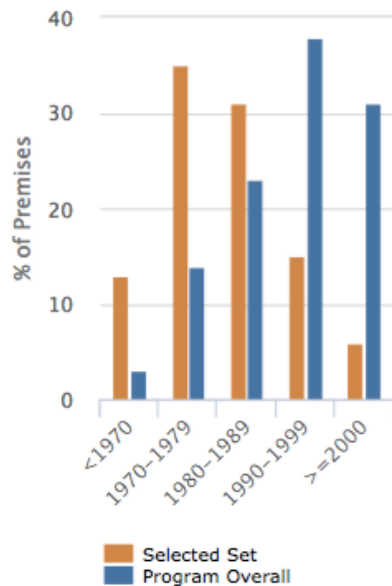
16%

METERED SAVINGS

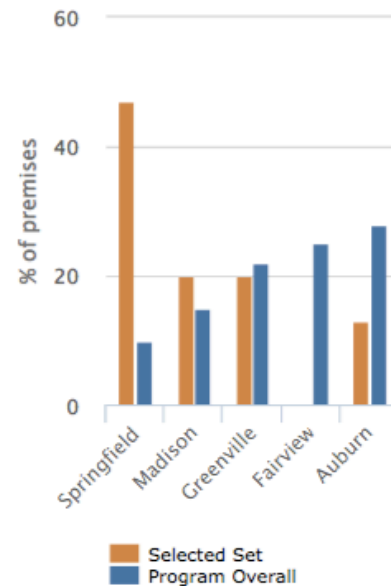
145 MWh ± 160

7% ± 8%

Premises by Year Built



Premises by Weather Station



Measure Mix

