

# Growing Pains: Lessons from the Edge of SEM Program Evaluation

Bonneville  
POWER ADMINISTRATION



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A person wearing a red and white jacket is sitting on the edge of a rocky cliff, looking out over a vast, hazy landscape. The scene is captured in a soft, blue-tinted light, suggesting a misty or overcast day. The person is positioned on the left side of the frame, with their back to the camera, looking towards the right. The landscape below is a wide, flat expanse that fades into the distance, with some faint outlines of structures or terrain visible. The overall mood is contemplative and serene.

First Evaluation -  
2012

# The Edge

A woman with blonde hair, wearing a yellow shirt, is lying on her stomach on the edge of a rocky cliff. She is looking over the edge with a surprised or concerned expression. The background is a vast, deep canyon with layered rock formations under a hazy sky. The entire image has a semi-transparent grey overlay.

## Multi-year Evaluation 2014 - 2017

# Background

# BPA's Industrial Energy Management (EM) Program



Began in 2010

Training and Technical Support,  
low/no cost O&M Efficiencies

Works closely with facilities,  
collecting data

Program savings estimates MT&R  
guidelines

# Evaluation Objectives

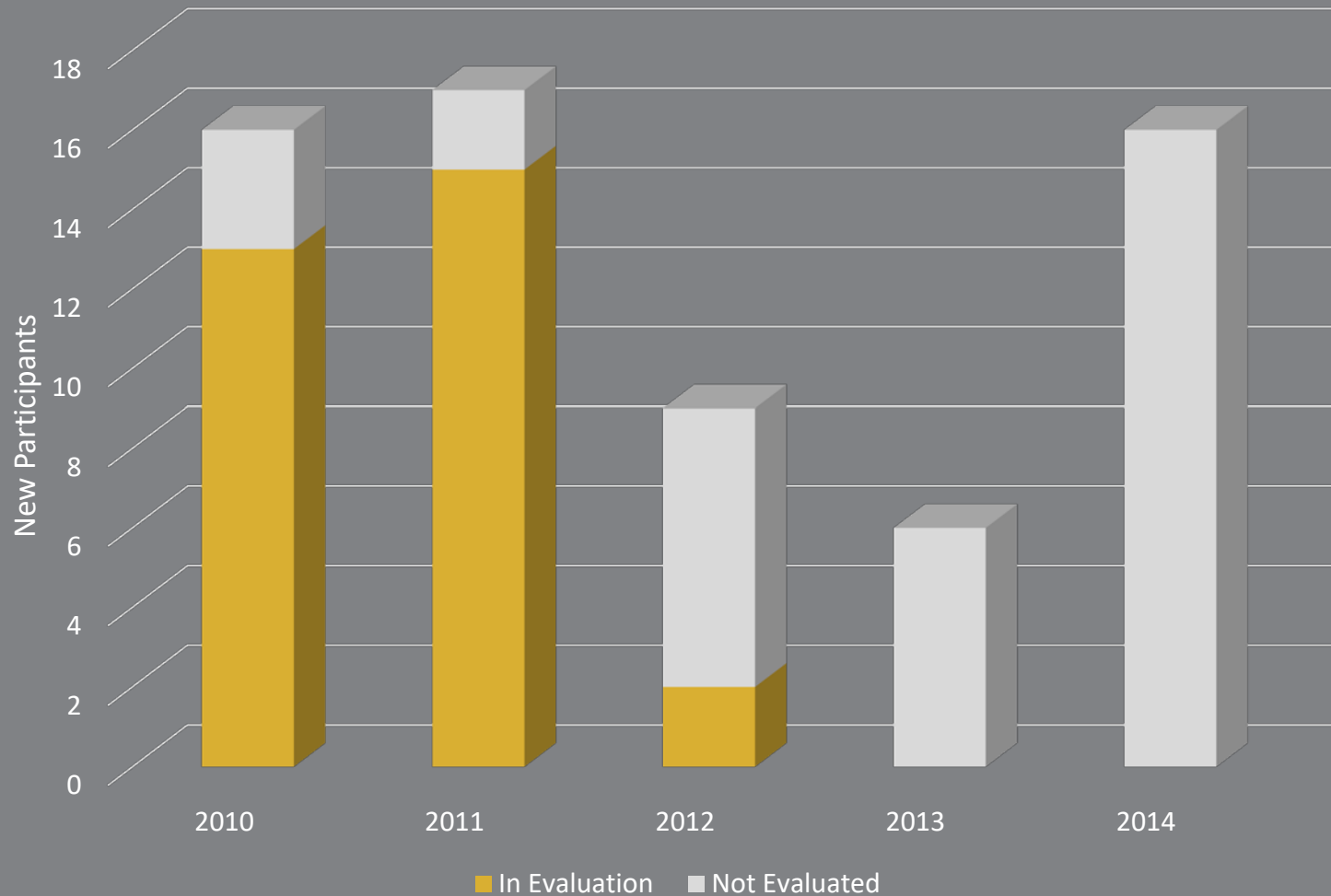


Independently estimate  
facility and SEM savings

Assess Savings Trends

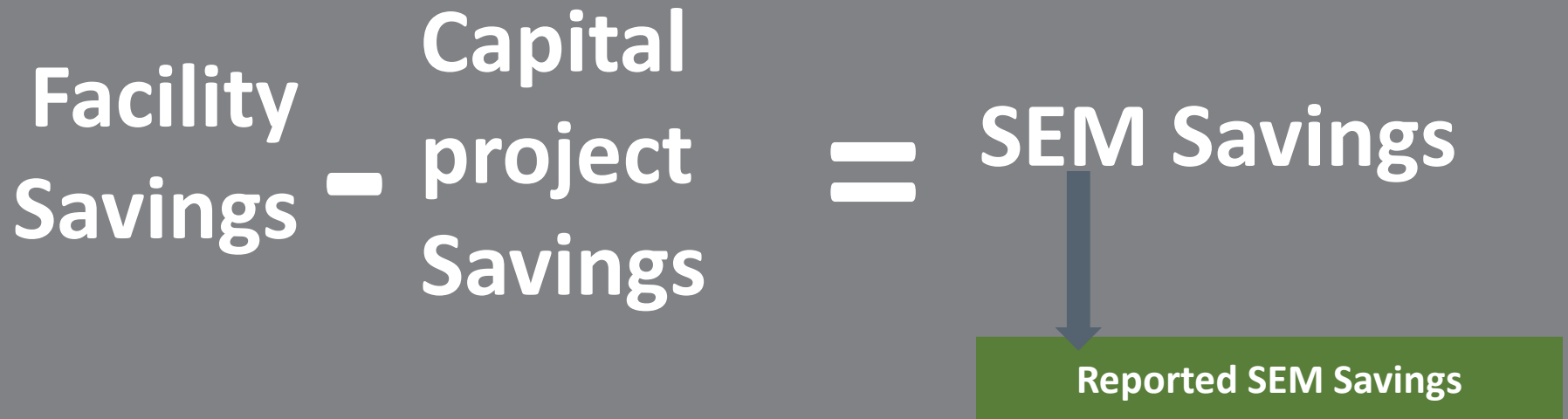
Survey participants on  
adoption of SEM practices

# Evaluation Sample



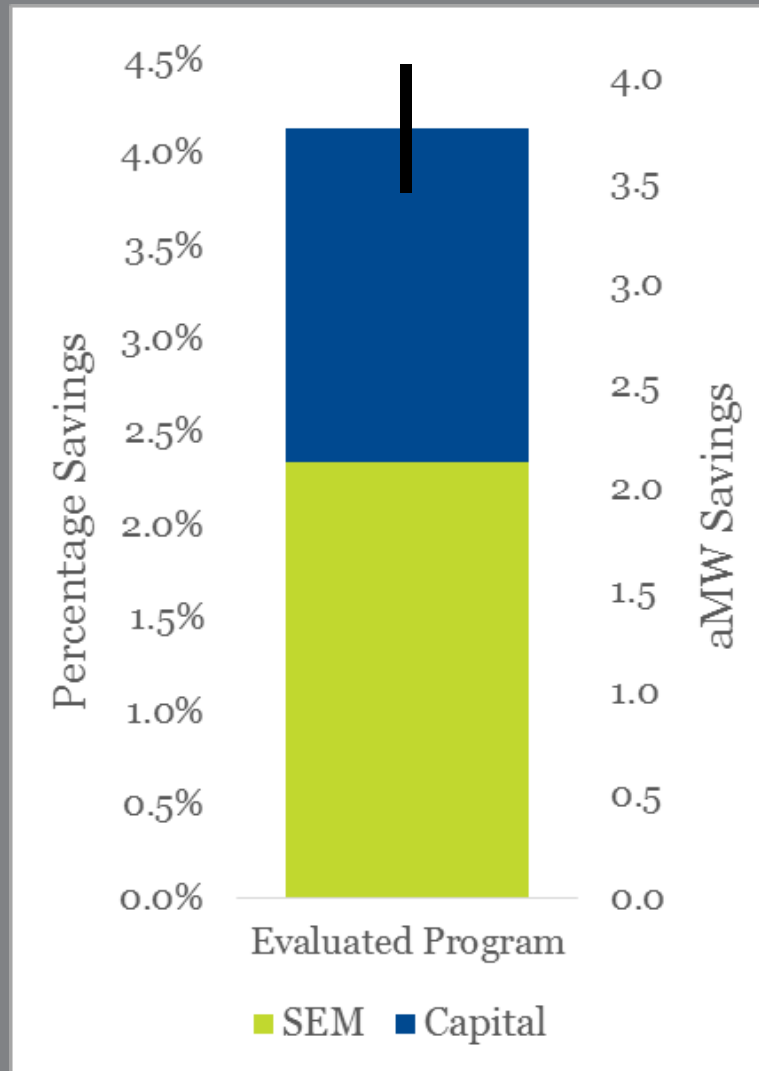


# Electric Savings Types

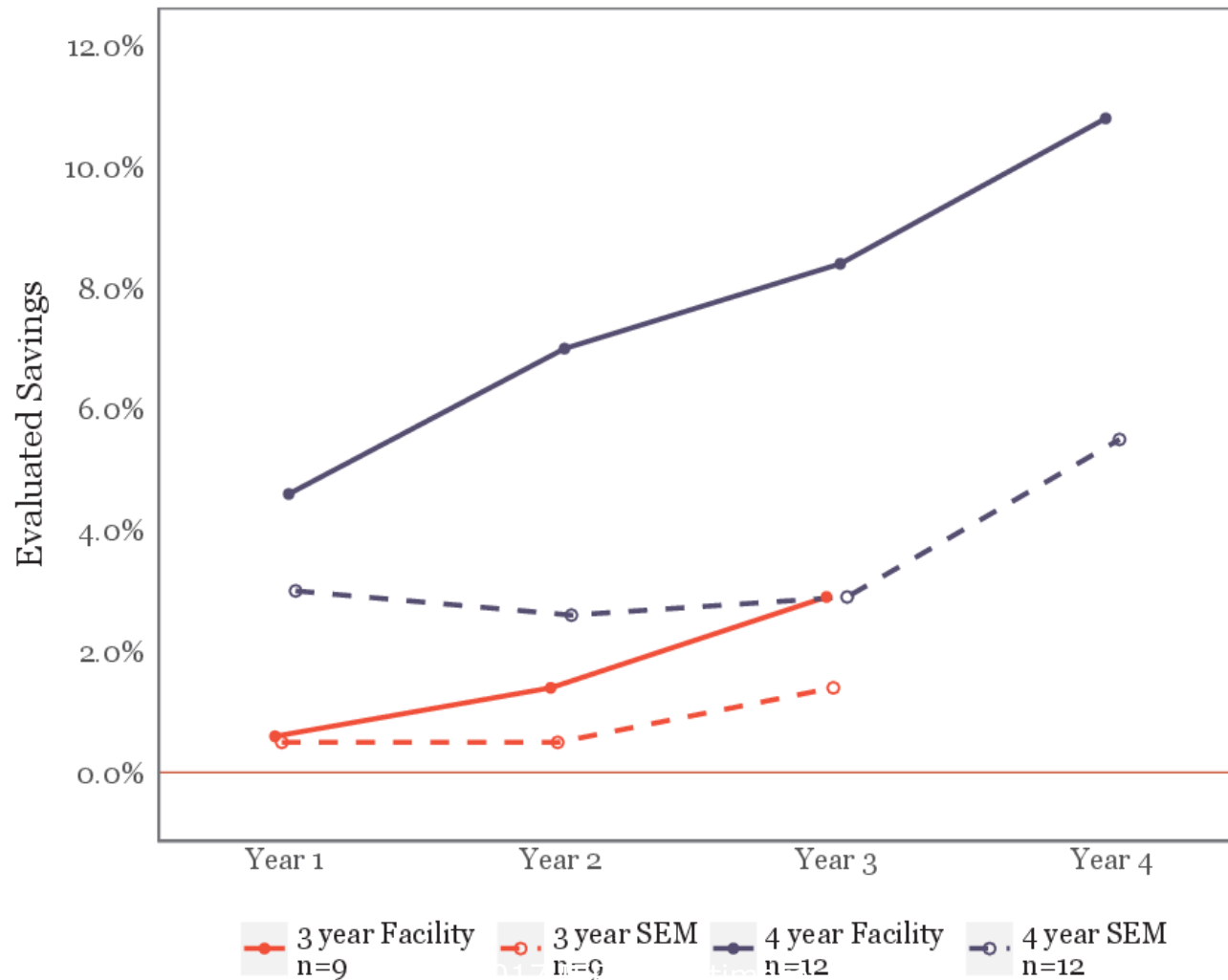


# High-level Findings

# *SEM Saved 2.3% of Consumption*

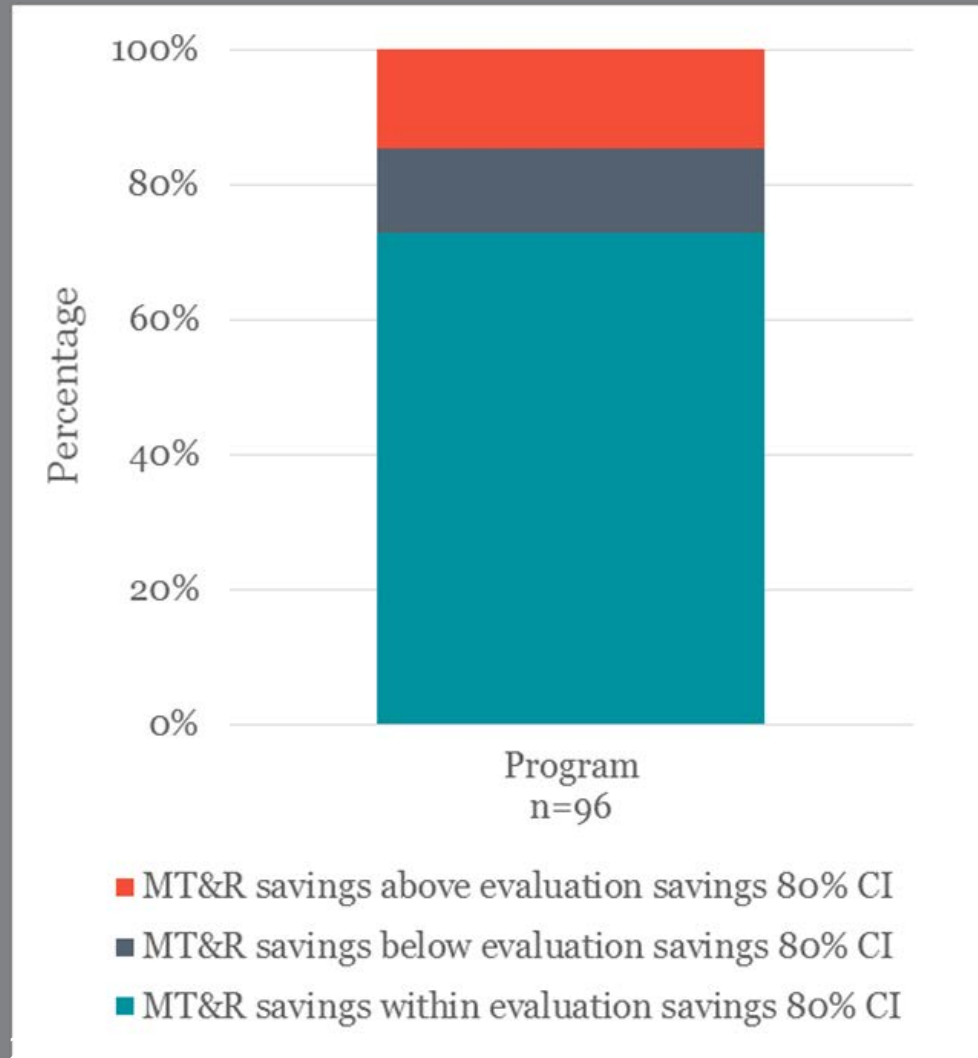


# SEM Savings Persisted



# Evaluation Verified Program's MT&R Result

Realization rate for MT&R was 106%



# *SEM Elements Adoption Survey*



- Customer Commitment

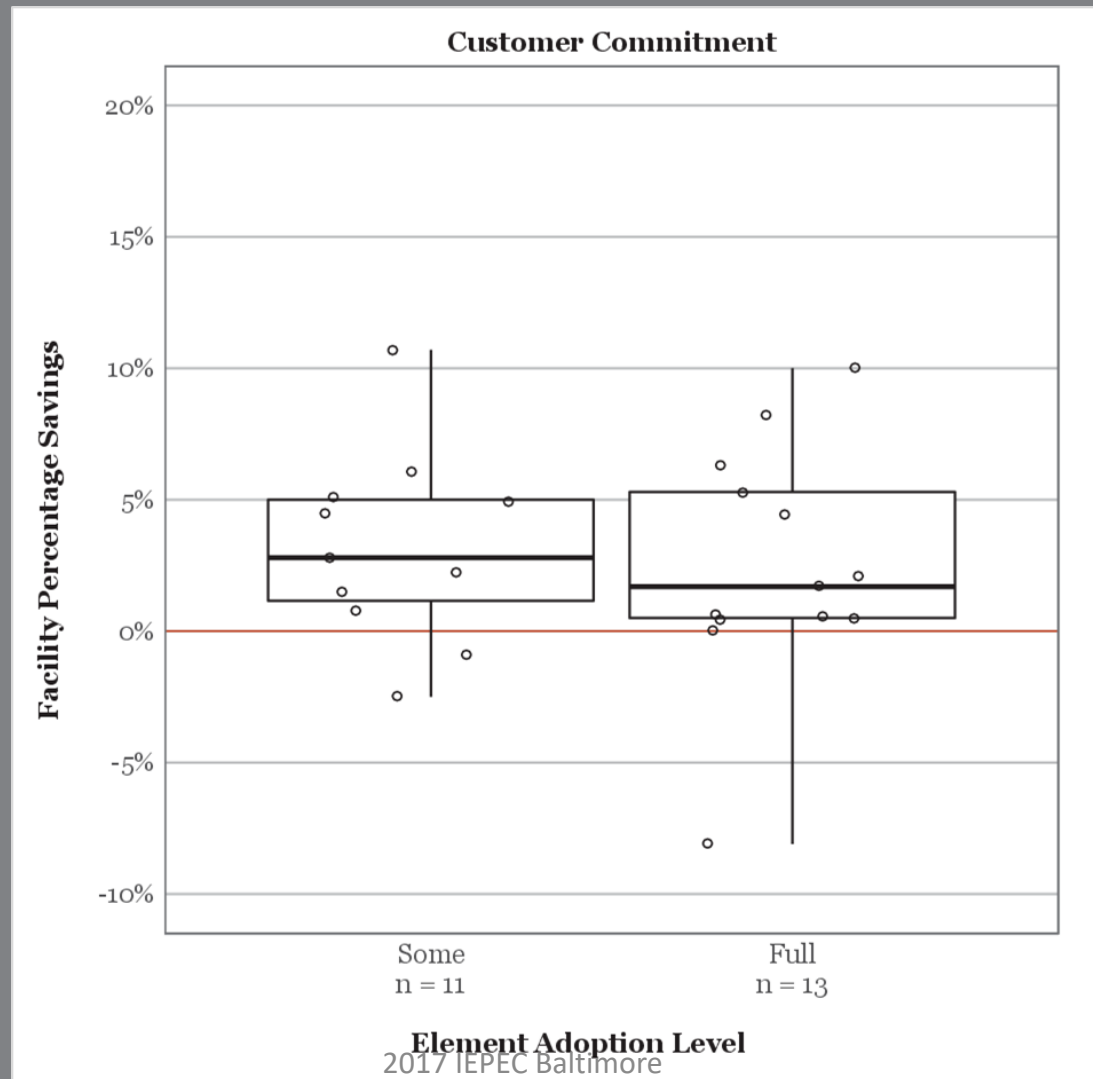


- Planning and Implementation



- Measuring and Reporting

# Adoption of SEM elements not correlated with SEM savings



# Lessons Learned



# *Engaged Programs, Effective Evaluation*

Ongoing  
communication  
with facilities

High quality,  
thorough facility  
and activity data

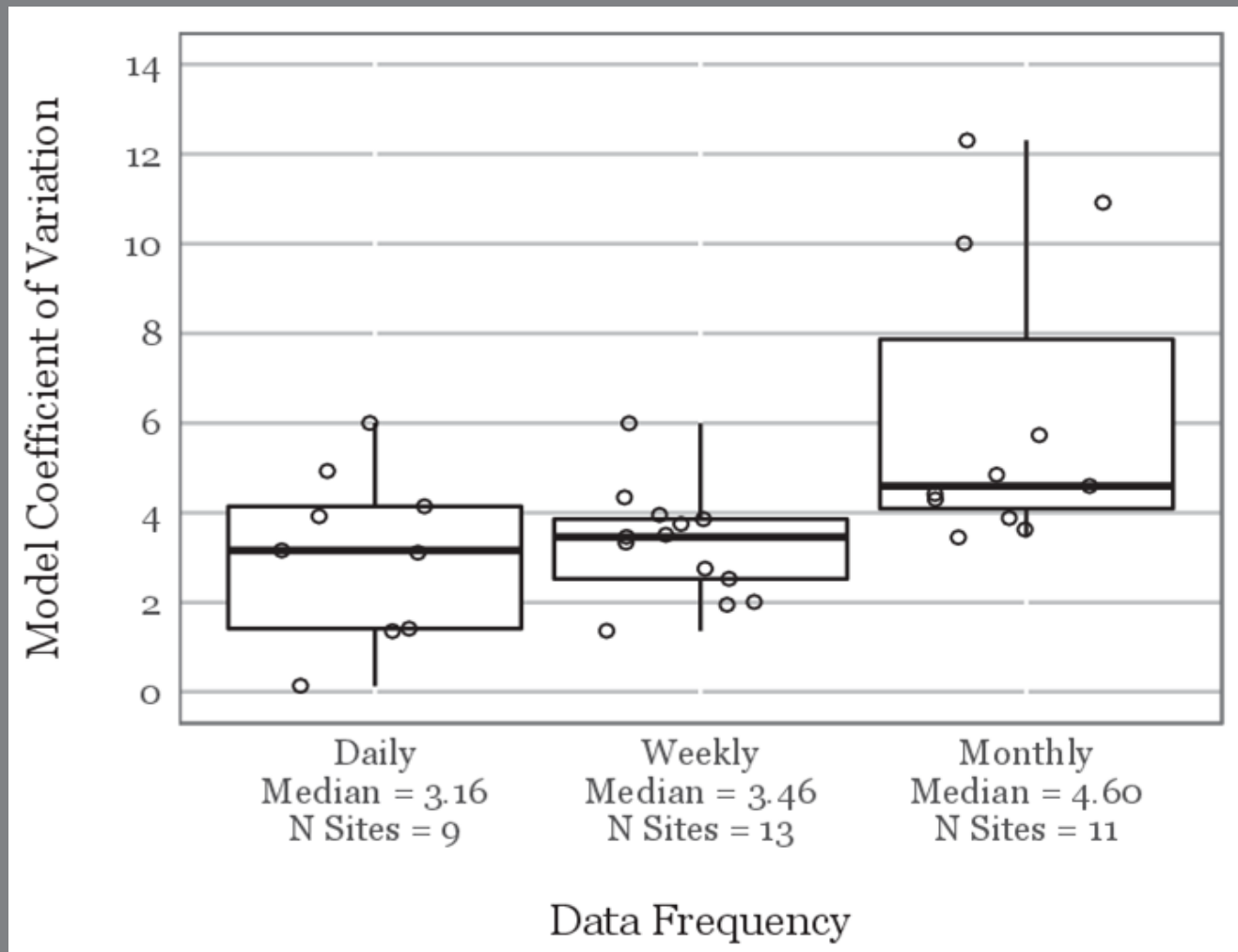
Can serve as industry  
standard for SEM  
programs

# Best Program Model

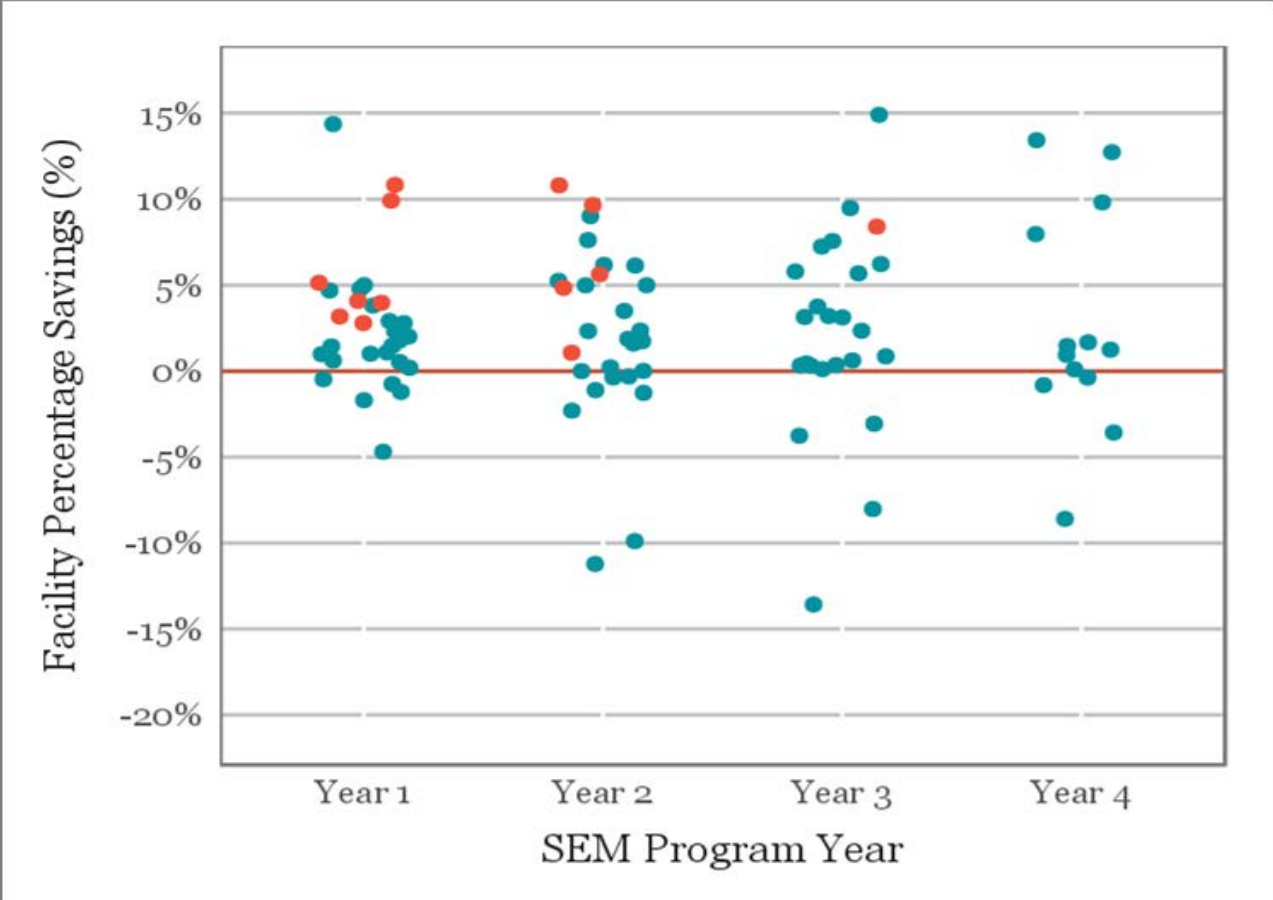


# Best Evaluation Model

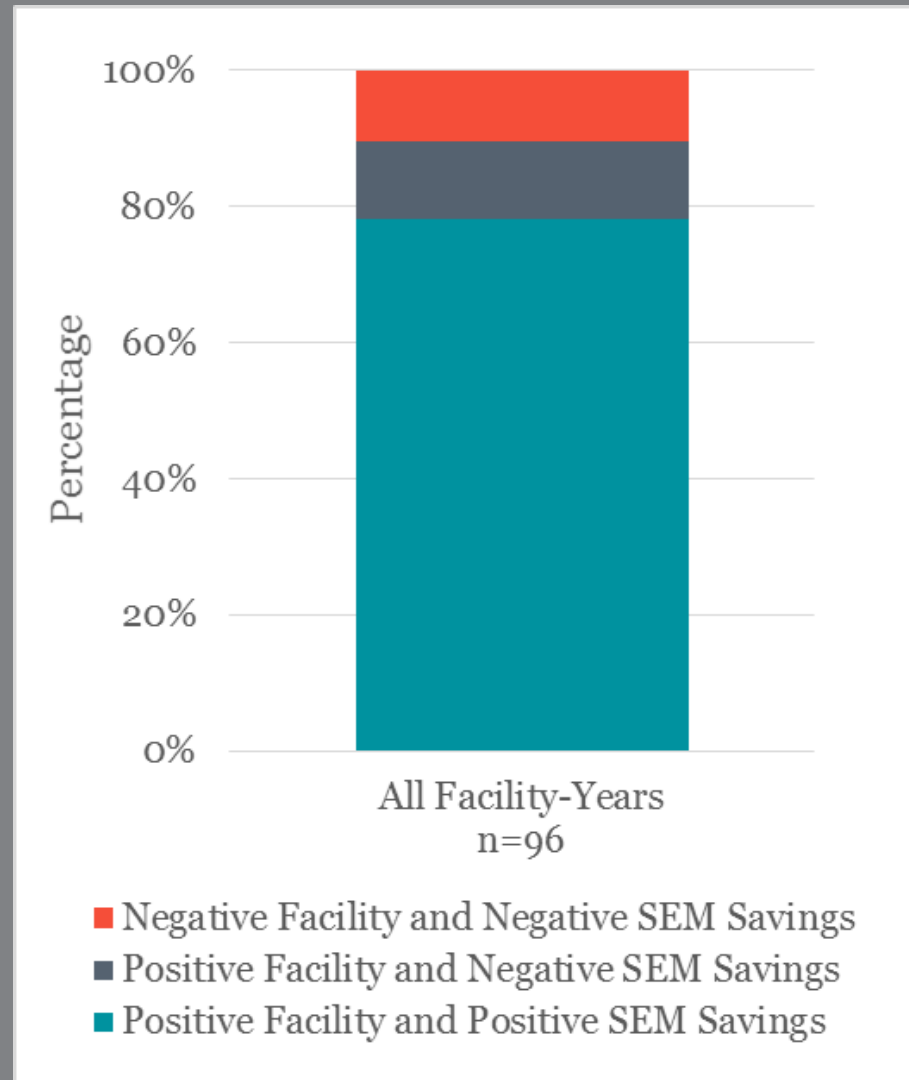
# More Granular is Better, but Monthly isn't a Deal Breaker



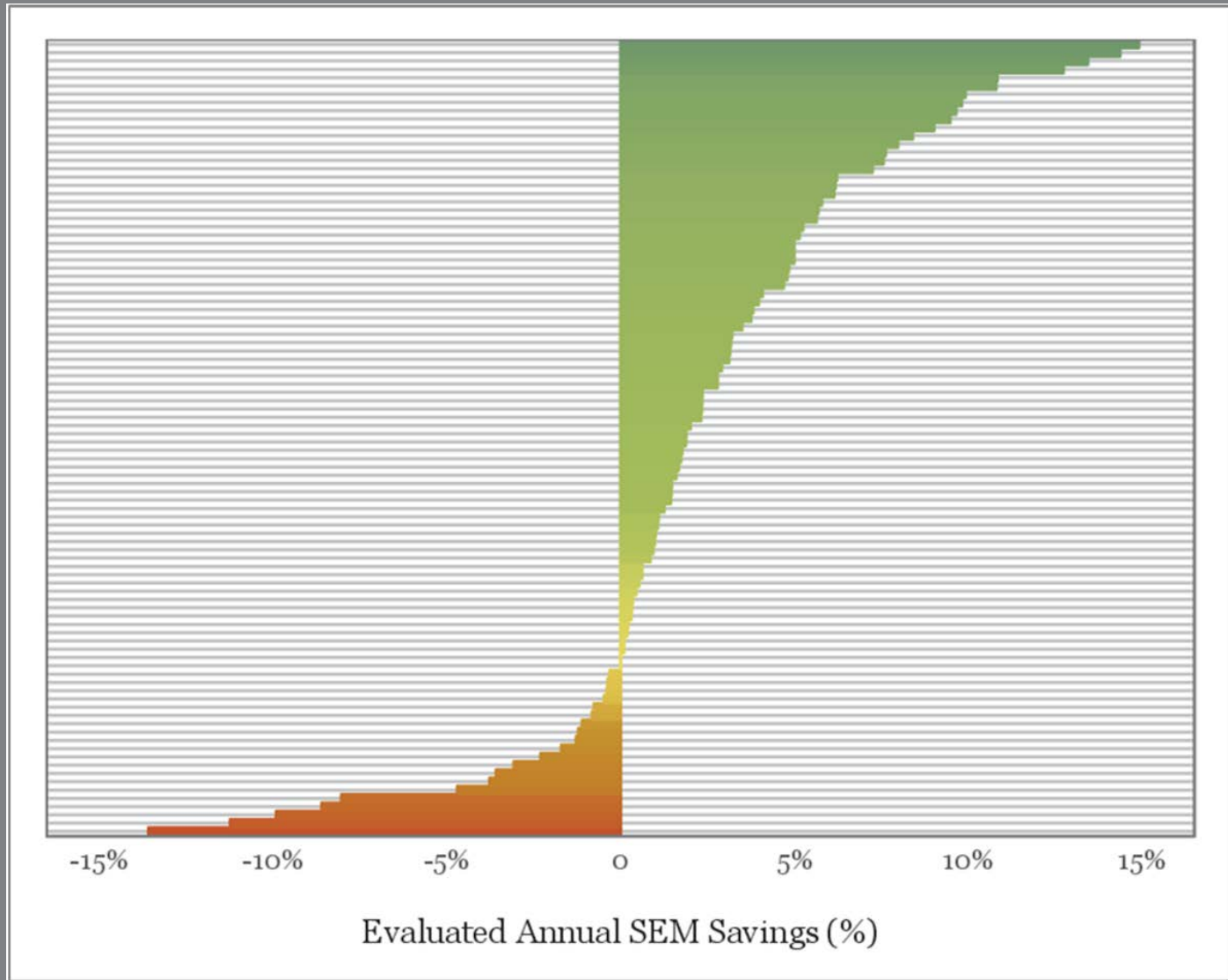
# Be Comfortable with Variation



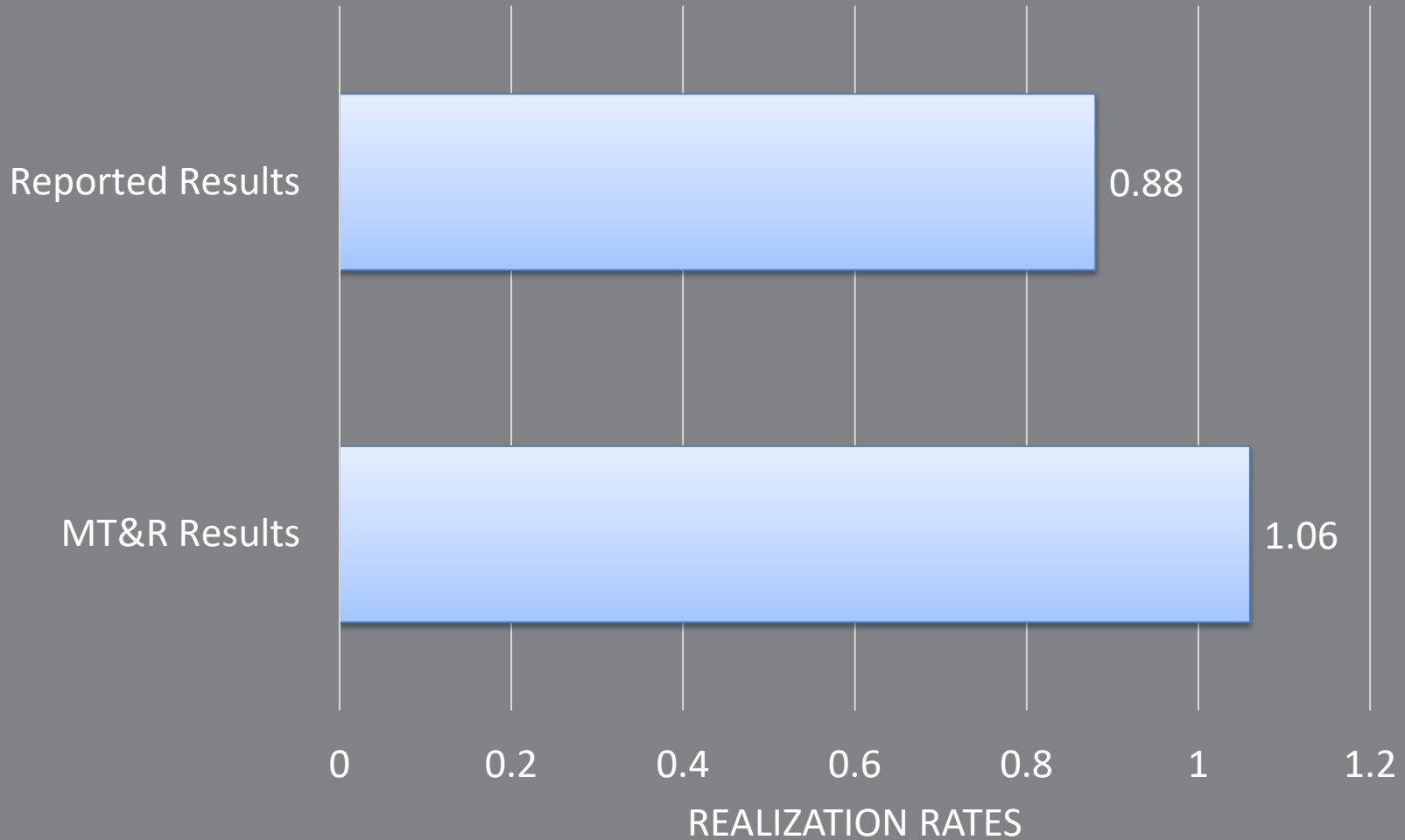
# Be Prepared for Negative Savings Estimates



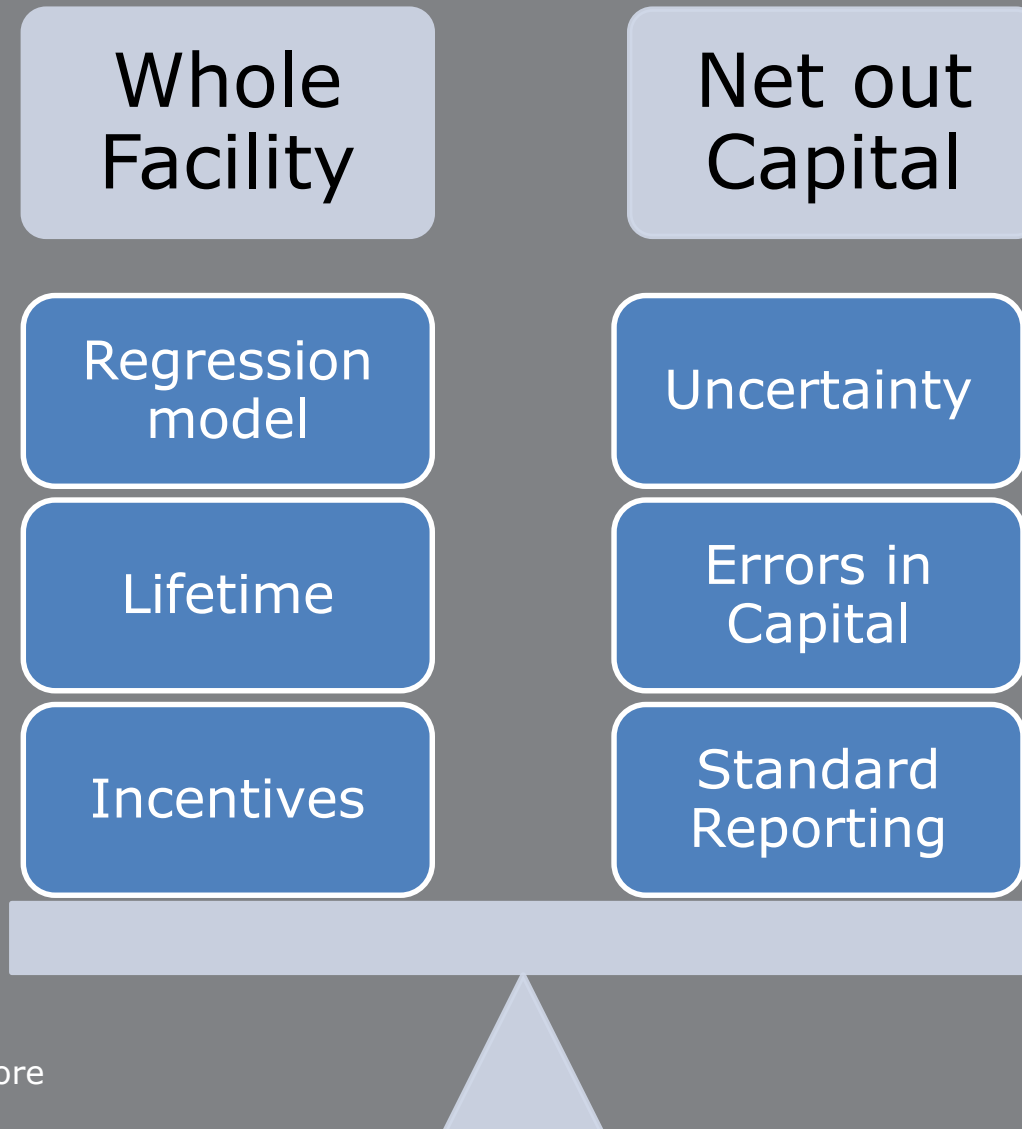
# Another way...



# *Reporting Practices of Negative Savings Affected Realization Rates*

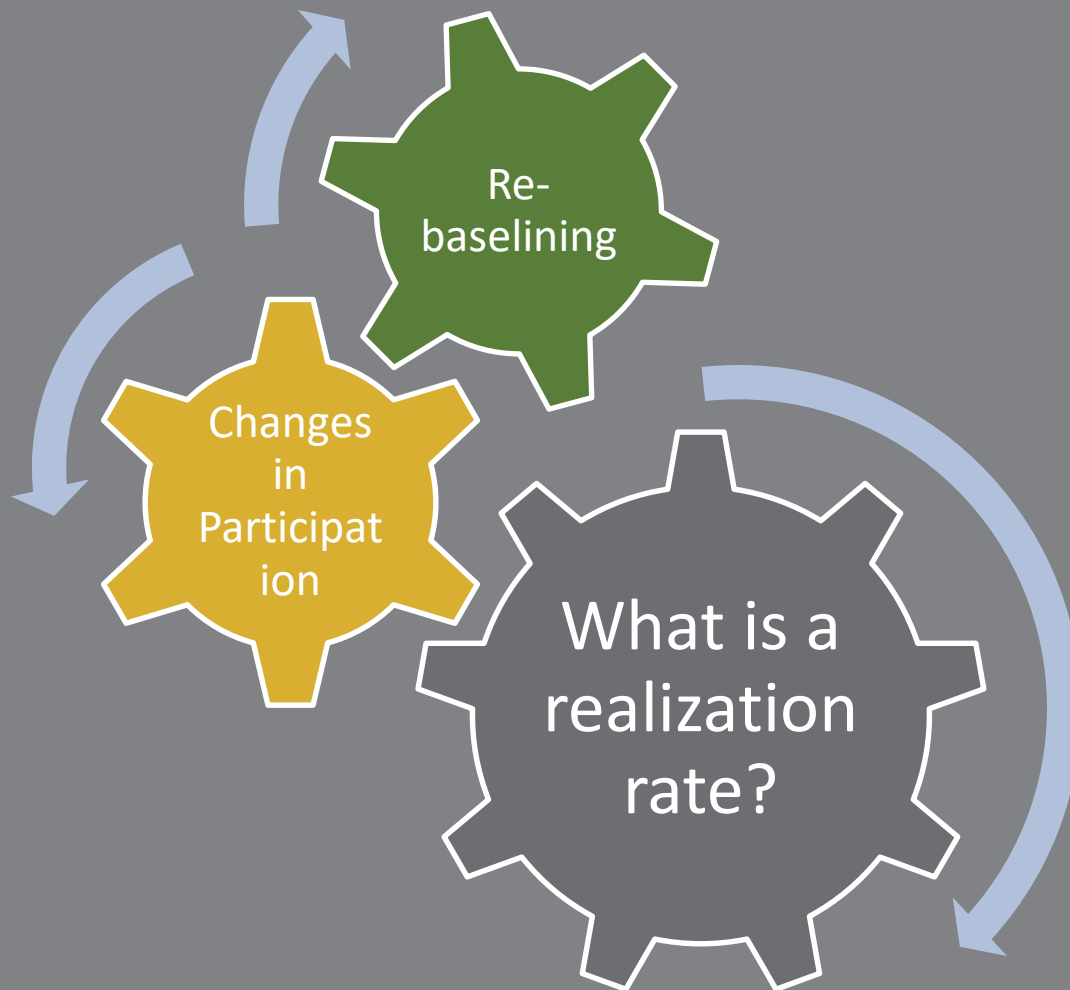


# Accounting for Capital Projects has Tradeoffs





# More Complexity: Multi-year and Reporting Policies



# Conclusions

A background image showing two people shaking hands over a desk. The desk has a water bottle with a striped paper sleeve, a jar of snacks, and a pen holder. The text is overlaid on this image.

Interesting: Methods,  
uncertainty, negative savings,  
reporting policies

Recommend early coordination  
between evaluators and programs

# Lots of Research Opportunities

Feasibility of sampling

Impact of uncertainty in capital projects

When use pre-post models

Persistence of SEM savings

Program design impacts on persistence

How to ensure no bias in savings reporting

Cost-effectiveness

# Questions?