

Are Savings from Behavior Programs Ready for TRM Prime Time?

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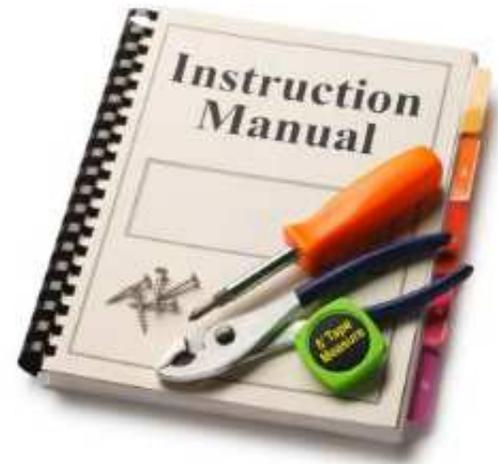
Behavior Programs and TRMs?

- Background on TRMs
- Current treatment of behavior programs in TRMs
- Examine behavior program evaluations
 - Variation in savings
 - Variation in methods
- Back to the original question...

Purpose of a TRM

“Serve as a common reference document ...to provide **transparency [and consistency]** to all parties regarding savings assumptions and calculations...”

Source: State of IL TRM, June 2013



How TRMs Define Savings

- Deemed values vs. algorithms
- Use of default values



Which States are Impacted by TRMs?



Behavior Programs

- Home Energy Reports
- Opt-in programs

The logo for OP@WER is displayed on a blue rectangular background. It features the text "OP@WER" in white, uppercase letters. The "@" symbol is stylized as a smiley face with a wide, open mouth.The logo for Energy is displayed on a blue banner with a wavy bottom edge. It features a stylized white icon of a plug or a power symbol to the left of the word "Energy" in white, sans-serif font.The logo for myenergy is displayed on a dark grey rectangular background. It features a white circular icon on the left containing a stylized house with a bar chart inside. To the right of the icon, the text "myenergy" is written in a white, lowercase, sans-serif font, and below it, "A Nest company" is written in a smaller, white, uppercase, sans-serif font.

Behavior Programs in TRMs

- Most states don't address behavioral programs
- MA deems a value
 - Based on prior evaluation
- AR and PA have protocols
 - AR Based largely on SEE/LBNL protocols



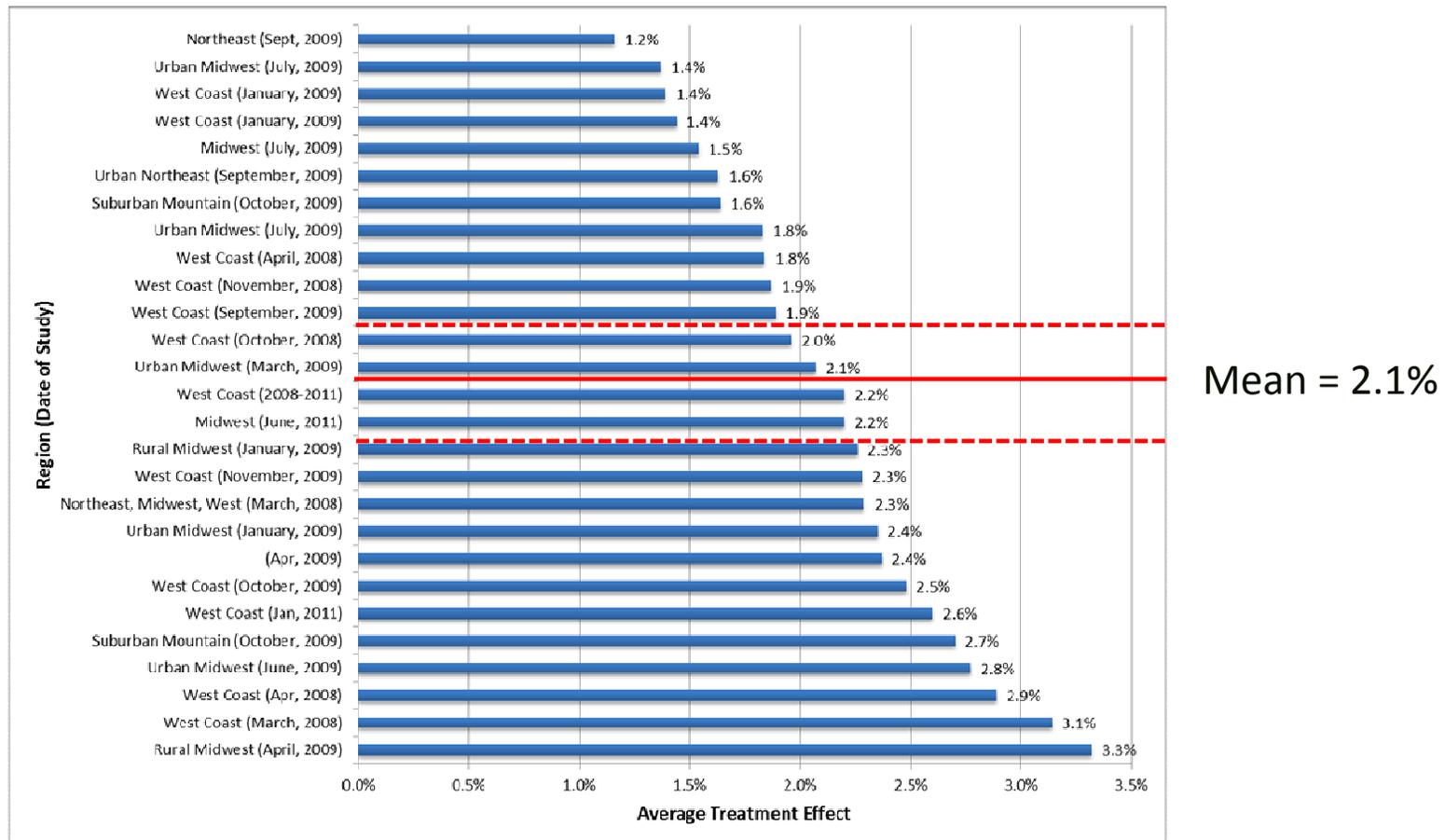
Variations in Savings and Methods

- Do savings vary?
- Do methods vary?

**Examine 27 electric deployments of OPower
to answer these questions**

Stability of Behavior Savings

- Range from 1.2% to 3.3%



Methodological Differences

- Length of study and baseline
- Annualized savings
- Panel vs. aggregated
- Equivalency check
- Treatment of opt-out
- Others?

Importance of Methodology Differences

- Are methodological differences potentially causing the savings differences?
 - Highly probable
- What direction do the methodological differences drive savings
 - Good question for future research



The Original Question: To Include or Not Include?

- Option 1: Deem Savings Percent
 - Precision of +/- 15% is wider than preferred
 - Cannot capture differences by climate zone, targeted strategies, etc..
 - Small difference in sample → Big in population

The Original Question: To Include or Not Include?

- Option 2: Prescribe Protocols
 - Ensure best practices
 - Minimize methodological differences
 - Allow for ***transparency and consistency***
- Take “baby steps” towards deeming values
 - Deem based on specific programs/design



Will Deeming Methodology Stifle Innovation?

- Wouldn't this same argument apply to any measure in a TRM?
- TRMs are iterative: encourage research to improve future estimates
 - “Build a better model”
- Allow flexibility in application
 - Similar to the Uniform Methods Project

Recommendation

- TRMs should include behavior evaluation protocols
- Can also include deemed savings
 - But need to be carefully applied in prescriptive manor

Questions?

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