Agenda and Acknowledge Co-authors

Co-authors

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Evaluating net savings

What happens when you add ISP

Root cause

What you can do about it

Testing some alternatives
Evaluating Net Savings

Net savings

- The savings that occurred because of the program
- Consumption difference between what participants would have installed and program efficiency

Often calculated, *not* measured directly

- Net savings = Gross savings * net-to-gross ratio (NTGR)
Measuring NTGR

What efficiency level would you have installed without the program?

What you installed (NTGR=0)

Standard (NTGR=1)

Something in between (NTGR=0.5)
Changing the Baseline

Baselines in some states moving to Industry Standard Practice (ISP)

ISP could be “standard” or “something in between”

When there is an ISP, does the survey approach to estimating net savings still work?
Net Savings – Basic Situation

Minimum/Code Efficiency

Participant average sans program

Program Efficiency

NTGR = 0.33
Net savings = Gross * NTGR = 1
Net Savings – ISP Situation

Minimum/Code Efficiency

ISP Baseline

Participant average sans program

Program Efficiency

NTGR = 0.33

Net savings = Gross * NTGR = 0.67
Net savings = Gross Savings * NTGR

General intermediate efficiency wording
## Alternative Approaches

<table>
<thead>
<tr>
<th>Net Savings Approach</th>
<th>Description of the Efficiency Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic survey</td>
<td>Status quo</td>
</tr>
<tr>
<td>Simple</td>
<td>No intermediate efficiency</td>
</tr>
<tr>
<td>Improved Generic Intermediate Efficiency</td>
<td>Retains intermediate efficiency, Generic but less ambiguous wording</td>
</tr>
<tr>
<td>Participant Alternative Technology</td>
<td>Measure-specific alternative efficiency levels</td>
</tr>
<tr>
<td>Integrated Gross-Net</td>
<td>Measure net savings directly</td>
</tr>
</tbody>
</table>
Method

Added questions to recent Massachusetts NTG survey to test:

- Understanding of general intermediate efficiency wording
- Test alternative, specific intermediate efficiency wording
- Measure effect of eliminating intermediate efficiency question
Simple Approach

Condensing Boiler
- Classic: 6%
- Simple: 8%

Air Compressor
- Classic: 18%
- Simple: 23%

LED Fixture
- Classic: 43%
- Simple: 54%

Attribution
## Suggested Approaches

<table>
<thead>
<tr>
<th>Situation</th>
<th>Net Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure is very complex</td>
<td>Integrated Gross-Net</td>
</tr>
<tr>
<td>Only 2 efficiencies or no efficiency between program and baseline</td>
<td>Simple</td>
</tr>
<tr>
<td>&gt;2 efficiency levels, Lower rigor ok</td>
<td>Simple -or- Modified Generic Intermediate Alternative</td>
</tr>
<tr>
<td>&gt;2 efficiency levels, Higher rigor needed</td>
<td>Participant Alternative Technology</td>
</tr>
</tbody>
</table>
Thank you

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