Making Sense of 1,000 Program Results

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2015 IEPEC Conference—Long Beach, California
Why Our Industry Is Like... Raising Little Children
A Whole New Perspective
It Can Be a Little Messy... 
...and Unpredictable
We Keep Doing the Same Things Over and Over
And Missing the Targets
Our industry is spending a significant share of ratepayer dollars on programs that don’t achieve stated performance goals.
But Why?

Louis C.K. "Why?" - YouTube
www.youtube.com/watch?v=4u2ZsoYWwJA
Study Background

- Source: E Source DSM Insights
- 2010–2013
- 1,481 programs from 103 program administrators accounting for $10 billion in ratepayer dollars spent
Questions We Know You’ll Ponder For the Next 15 Minutes

How to make goals more attainable?

How can we forecast better?

Should we leave out certain categories of programs?

Are they right?
Our Analysis of Program Performance

Goals
Region
Market Sector
Program Category
DSM Program Performance: Plan Versus Actual

>40% of $ toward programs that failed to achieve targeted savings goal
DSM Program Performance: Plan Versus Actual (Electric)

Source: E Source, DSM Insights 2015
DSM Program Performance: Plan Versus Actual (Gas)

Source: E Source, DSM Insights 2015
It’s Getting Harder Over Time...
Things Aren’t Going in the Right Direction
Percentage of Program Spend for Programs Falling Short of Goals

Source: E Source, DSM Insights, 2015
Change in Regional Performance
Proportion of Spending on Programs Reporting Savings Less Than Goal, by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Overall</th>
<th>Electric (kWh)</th>
<th>Gas (therms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>38%</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Midwest</td>
<td>25%</td>
<td>42%</td>
<td>26%</td>
</tr>
<tr>
<td>Northeast</td>
<td>50%</td>
<td>50%</td>
<td>47%</td>
</tr>
<tr>
<td>South</td>
<td>50%</td>
<td>48%</td>
<td>55%</td>
</tr>
<tr>
<td>West</td>
<td>48%</td>
<td>44%</td>
<td>51%</td>
</tr>
<tr>
<td>Total</td>
<td>42%</td>
<td>47%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Source: E Source, DSM Insights, 2015
Electric DSM Goals by State (MWh)

Source: E Source, DSM Insights, 2015
Tipping Point: Impacts of State Program Spending on Underperforming Programs

Achieved savings as a % of plan

40%

% spending on underperforming programs
# State-Level Results

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage of funds spent on underperforming programs</th>
<th>Achieved kWh savings as percentage of plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania</td>
<td>22%</td>
<td>141%</td>
</tr>
<tr>
<td>Washington</td>
<td>24%</td>
<td>114%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>26%</td>
<td>126%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>26%</td>
<td>120%</td>
</tr>
<tr>
<td>Utah</td>
<td>26%</td>
<td>115%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>28%</td>
<td>110%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>30%</td>
<td>121%</td>
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<tr>
<td>Nevada</td>
<td>32%</td>
<td>111%</td>
</tr>
<tr>
<td>Ohio</td>
<td>32%</td>
<td>108%</td>
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<tr>
<td>Connecticut</td>
<td>32%</td>
<td>127%</td>
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<tr>
<td>Georgia</td>
<td>34%</td>
<td>99%</td>
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<tr>
<td>Rhode Island</td>
<td>35%</td>
<td>100%</td>
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<tr>
<td>Arizona</td>
<td>36%</td>
<td>100%</td>
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<tr>
<td>Missouri</td>
<td>39%</td>
<td>135%</td>
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<tr>
<td>Massachusetts</td>
<td>40%</td>
<td>93%</td>
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<tr>
<td>Texas</td>
<td>41%</td>
<td>100%</td>
</tr>
<tr>
<td>Michigan</td>
<td>42%</td>
<td>111%</td>
</tr>
<tr>
<td>Colorado</td>
<td>42%</td>
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<td>Indiana</td>
<td>43%</td>
<td>78%</td>
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<tr>
<td>Iowa</td>
<td>44%</td>
<td>99%</td>
</tr>
<tr>
<td>Illinois</td>
<td>47%</td>
<td>114%</td>
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<tr>
<td>California</td>
<td>47%</td>
<td>95%</td>
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<tr>
<td>Kentucky</td>
<td>49%</td>
<td>107%</td>
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<tr>
<td>Maryland</td>
<td>50%</td>
<td>84%</td>
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<tr>
<td>Ontario</td>
<td>52%</td>
<td>101%</td>
</tr>
<tr>
<td>British Columbia</td>
<td>58%</td>
<td>74%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>66%</td>
<td>55%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>66%</td>
<td>93%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>66%</td>
<td>61%</td>
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<tr>
<td>New York</td>
<td>77%</td>
<td>100%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>82%</td>
<td>100%</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

>50% of states below overall portfolio goal

Source: E Source, DSM Insights, 2015
Some Program Models Aren’t Superheroes…

...Tend to Fall Short of Goals More Often
Non-Res Program Categories That Consistently Underperform

- AC tune-up
- Appliance recycling
- Project management
- Building performance
Residential Program Categories That Consistently Underperform

- Custom incentives
- Energy analysis
- Education and awareness
- Home performance (gas)
Performance by Program Category (Electric)

Non-residential

Residential

Source: E Source, DSM Insights, 2015
Performance by Program Category (Gas)

Non-residential

- Appliance Recycling
- Behavior Change/Feedback
- Building/Home Performance
- Custom Rebate
- Design Assistance
- Direct Install
- Education and Awareness
- Energy Management Assistance
- On-site Audit/Assessment
- Prescriptive Rebate
- Project Management
- Retro-Commissioning
- School Education Kits
- Third-Party Programs

Residential

- Appliance Recycling
- Behavior Change/Feedback
- Building/Home Performance
- Conservation Kits
- Custom Rebate
- Design Assistance
- Direct Install
- Education and Awareness
- ENERGY STAR New Homes
- On-site Audit/Assessment
- Prescriptive Rebate
- School Education Kits

Source: E Source, DSM Insights, 2015
What’s the Common Thread?

Source: iStockphoto
Are We Asking Too Much?
What’s Next?
What’s Next? Questions You Pondered For Past 15 Minutes

How to make goals more attainable?

How can we forecast better?

Should we leave out certain categories of programs?

Are they right?
Future Research Considerations

Insights on goals, goal-setting

% change in goals over time vs. performance

What % of savings come from underperforming programs?

Percentage of portfolios with these types of programs

Be more positive! Look at overachievers. Who is best overall performer? How do we understand their success?
Discussion and More Information

www.esource.com/about-dsminsights
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