Introduction
Objective

Demonstrate the prediction error of baseline models for individual sites:

1. Advanced Metering Infrastructure Customer Segmentation (AMICS)
2. Temperature and Time of Week (TTOW)
## Background

### Comparison of Modeling Approaches

<table>
<thead>
<tr>
<th>Developer</th>
<th>AMICS</th>
<th>TTOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evergreen Economics</td>
<td>Lawrence Berkeley National Laboratory</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Time-of-day adjustments. Separating weekdays vs. weekends.</td>
<td>Time-of-week adjustments.</td>
</tr>
<tr>
<td>For each...</td>
<td>Customer segment or individual</td>
<td>Individual</td>
</tr>
</tbody>
</table>
Methods
Methods

Holdout Test #1
Methods

Holdout Test #1
Methods

Holdout Test #2
Methods

Holdout Test #3
Normalized Mean Bias Error

Holdout Test Comparisons

-0.15
-0.10
-0.05
0.00
0.05

Holdout Test NMBE

Entire holdout (n=60)
On-peak hours (n=60)
Mid-peak hours (n=60)
Days with max temp of 85+ (n=56)
Days with 20+ CDD (n=21)

AMICS
TTOW
Normalized Mean Bias Error

Heat Table of NMBE by Customer
Holdout Test Comparisons

- Entire holdout (n=60)
- On-peak hours (n=60)
- Mid-peak hours (n=60)
- Days with max temp of 85+ (n=56)
- Days with 20+ CDD (n=21)
Heat Table of NMBE by Customer

CV(RMSE)
What did we learn?

- No significant differences in error between AMICS and TTO W
- A single approach may not be the best fit for everyone
- AMICS pinpoints the conditions that produce savings
Where do we go from here?

- Define reasonable NMEC guidelines
- Select a model that fits your customers with useful outputs
- Validate modeling approach
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