

The Role of Energy Analytics in Driving Commercial Energy Efficiency

Rich Huntley

Vice President of Sales

richard.huntley@retroficiency.com

Phone: 617-909-1600

Energy data (especially interval) provides unmatched insight into efficiency potential

Potential to Understand Individual Customers



Retail

Moderate: Many purchases

unknown



Insurance

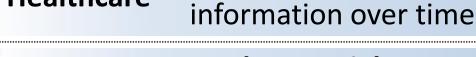
Low: Reliant on crude

indicators for performance



Healthcare

Low: Difficulty in tracking





Telecom

Moderate-High: Detailed usage view for multi-service users

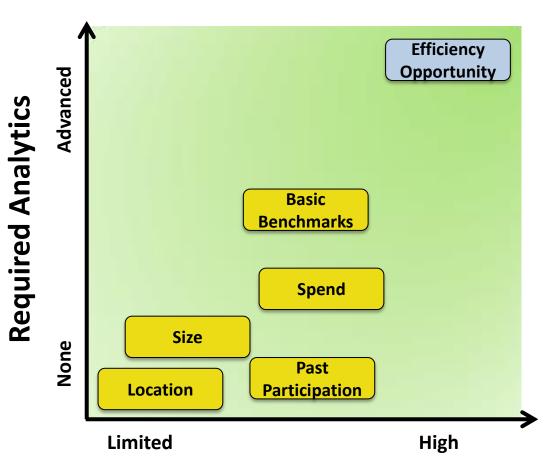


Energy Efficiency Very High: Granular consumption data can identify specific needs



Analytics can help us target customers by their potential and engage them with opportunities

Energy Efficiency Segmentation Approaches



- Savings potential and specific program opportunities is optimal way to approach customers
- Traditional ways to segment / prioritize are less effective

Effectiveness

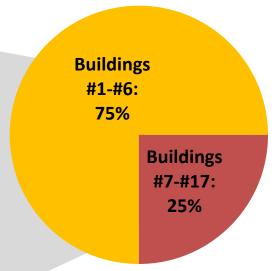


Prioritizing the buildings with the largest potential greatly optimizes efficiency targeting

Portfolio Savings Distribution Potential

	Current	Potential	Cumulative
	Spending (\$)	Savings (\$)	Portfolio Savings (%)
Building #1	\$671,973	\$250,626	17%
Building #2	\$939,946	\$250,461	34%
Building #3	\$650,101	\$220,326	50%
Building #4	\$1,146,006	\$205,087	64%
Building #5	\$2,270,114	\$104,701	71%
Building #6	\$308,458	\$61,706	75%
Building #7	\$986,329	\$59,251	79%
Building #8	\$225,025	\$57,031	83%
Building #9	\$418,305	\$55,640	87%
Building #10	\$421,414	\$54,266	91%
Building #11	\$275,883	\$38,989	93%
Building #12	\$334,848	\$33,405	96%
Building #13	\$187,604	\$28,243	98%
Building #14	\$2,743,762	\$24,411	99%
Building #15	\$112,285	\$9,394	100%
Building #16	\$248,664	\$0	100%
Building #17	\$217,591	\$0	100%
Total	\$12,158,308	\$1,453,537	

% of Savings Potential



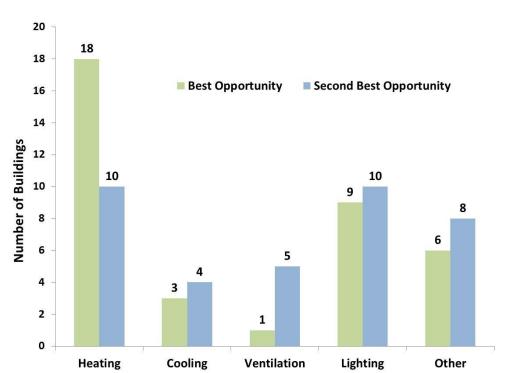
The top 6 of 17 buildings (35%) in the portfolio have 75% of the savings potential.

Note: Building sample set from single utility portfolio.



High-potential measures vary in each building; engage customers with the right opp. for them

<u>Top Opportunities by End Use</u> (Sample Building Portfolio in Northeast)



* - Sample set of buildings located in either New York, Massachusetts or Connecticut. Assessment is based on data for real-world energy audits conducted in commercial buildings on Retroficiency's Automated Energy Audit platform

- Highest potential operational and retrofit opportunities vary greatly by building
- Targeting real
 opportunities in their
 building increases
 engagement and reduces
 implementation time and
 cost



Analytics for targeting + engagement is the first step; can also be used through the process

Commercial Efficiency Program Lifecycle

Status Quo

Analytics

Based

Approach

 Limited analysis and segmentation

Target

- Reactive to inbound requests leads
- One 'pitch' for all

Engage

- Difficult for customer to see EE value
- Slow and expensive
- Not standardized or comprehensive

Evaluate

- Focus on the buildings that matter the most
- Deep insights at the first point of contact
- Unique for each customer
- Reduce audit time and cost by 50%-80% by focusing audits

Verify

 Difficult to accurately track

Implement

- No mechanism to spot new opportunities
- Accurate M&V for all customers
- Dynamic evaluation to drive new opportunities

This approach can support utility-led or customer-led efficiency models



Many options are available today without waiting for a smarter grid

- Utilities already have (and make available) interval data for larger buildings (thresholds vary by jurisdiction)
 - Huge opportunity to engage small/medium commercial customers through data analytics
 - Unfortunately many utilities are rolling out small/medium commercial interval data last, not first
- The process can be much easier with initiatives like Green Button
 - Green Button's full value will be realized when data is delivered automatically to authorized agents – not just to the customer
- Utilities can deliver analytics directly to the customer or deliver consumption data so the customers and their agents can conduct analysis
- Utilities and customers benefit from the change to a proactive utility rather than a reactive utility



Thank you





Utility Technology Challenge 2012 – Pilot Program Winner



'Represents an innovative new entrant in the energy efficiency space'

Bloomberg Businessweek

One of America's Most Promising Social Entrepreneurs

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Won Innovative Technology of the Year in Energy



American Technology Awards - Clean Tech / Green Tech Product of the Year



'Analogous to giving a miner a GPS and the coordinates of a gold vein'

