Strategies for Improving Efficiency in Delivering Efficiency: Lightning Round (7 x 7)

Cynthia Adams, LEAP (VA)
Larry Earegood, Consumers Energy (MI)
John Schott, NYSERDA
Gavin Hastings, Arizona Public Service
Emily Salzberg, Washington State University Energy
Adam Buick, Community Power Works (WA)
Bob Knight, BKi
Efficient and Effective Program Marketing: Leveraging the Utility Audit Program

ACI Lightning Round

Cynthia Adams,
Executive Director, LEAP
Home Energy Checkup Fun Facts

- Direct install residential utility audit program *not* connected to HPwES
- 1 – 2 hr home evaluation (no diagnostics)
- Utility pays up to $250 a rebate to LEAP
- Homeowner pays $45 to LEAP
- Entry into HPwES/Lead Gen for Network
- 1000+ since Q4 2013 launch
Issues We Faced

How to generate and handle volume (3 / day / Energy Coach)?

• Marketing
• Scheduling
• Collecting data
• Managing homeowner leads
• Enhancing the offer
How We Overcame Them

Sprint-style staff meetings to optimize process:

• **Marketing:** community partnerships
  (outreach and social media channels, not traditional advertising)

• **Scheduling:** online scheduler and geobatching
  (added 3 coaches and increased checkup volume from 8 to 12/wk)

• **Collecting data:** tablets and writeable pdfs
  (1 FTE + interns managing 2.5 coaches’ packets, to 1 PTE managing 5.5
  coaches’ packets)

• **Managing homeowner leads:** CRM
  (Decentralized customer management for better communications with customers and contractors)

• **Enhancing the offer:** “cherries”
  (15% - 20% purchase CO detectors/filter locks; 7% radon detectors)
Results: $256K in HPwES Support

- $209K in utility rebates
- $37K in homeowner fees
- $10K in sales of cherries/add-on products (phased in Jan-Feb timeframe)
- Ave HO payment: $38
- Ave rebate: $206
- Ave inventory cost / job: $40

- Enrolled 249 homeowners in HPwES
- 991 mWh in projected energy savings
Home Performance with ENERGY STAR®

Improve Efficiencies Through Program Design

Larry Earegood
Energy Efficiency
Programs Manager
Program Lacked Identity and Efficiencies

- HPwES model launched:
  - Included “optional” Home Performance Survey (HPS) – Visual audit performed by contractors
    - DIs left behind contributed to low installation rates
    - Upsell tactics elevated customer concerns, inquiries and complaints
  - Included prescriptive insulation and window measures
  - Large base of contractors to select from became overpowering and confusing

Helping Michigan save energy. That’s our Promise.
Condensed to Basics and Core Services

- Improve customer participation, satisfaction and experience
  - Phased out HPS and instituted utility model – Home Energy Analysis (HEA)
  - Separated prescriptive measures into separate Insulation and Windows program
  - Enhanced list of contractors
    - Reduced list to most active businesses
    - Launched robust Web-based “contractor finder tool”

Helping Michigan save energy. That’s our Promise.
Impact and Results

Helping Michigan save energy. That’s our Promise.

**Number of Jobs Completed**

<table>
<thead>
<tr>
<th>Year</th>
<th>Jobs Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>5,000</td>
</tr>
<tr>
<td>2012</td>
<td>10,000</td>
</tr>
<tr>
<td>2013</td>
<td>15,000</td>
</tr>
</tbody>
</table>

- HPS
- HPwES
- HEA

**Installation Rate Comparison**

- CFL
- Low-flow Showerhead
- Low-flow Faucet Aerator
- Pipe Wrap Insulation

- Contractor Installed
- Utility Installed

**$100 CHA Coupon - HEA Leads**

<table>
<thead>
<tr>
<th>Month</th>
<th>Coupons Received</th>
<th>Jobs Completed</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb</td>
<td>10</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Mar</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Apr</td>
<td>30</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>May</td>
<td>40</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Jun</td>
<td>50</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Jul</td>
<td>60</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>Aug</td>
<td>70</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Sep</td>
<td>80</td>
<td>70</td>
<td>90</td>
</tr>
<tr>
<td>Oct</td>
<td>90</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Nov</td>
<td>100</td>
<td>90</td>
<td>110</td>
</tr>
<tr>
<td>Dec</td>
<td>110</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Jan</td>
<td>120</td>
<td>110</td>
<td>130</td>
</tr>
<tr>
<td>Feb</td>
<td>130</td>
<td>120</td>
<td>140</td>
</tr>
<tr>
<td>Mar</td>
<td>140</td>
<td>130</td>
<td>150</td>
</tr>
</tbody>
</table>

- Forecast

**WHOLE HOUSE APPROACH**

- Bills, Increased Comfort
- Whole House Energy Analysis

**Making the Most of Your Home Energy Analysis:**

- Next Steps

- Contractor Installed
- Utility Installed
Benefits of New Model and Strategy

- Improved DI installation rates through HEA
- Improved customer satisfaction and decreased number of inquiries and complaints
- Increased education on program offerings across portfolio versus program specific
- Separating programs allowed for increased accuracy in forecasting and predictability, fostering program continuity throughout year
- Pathway to participation became clearer, yet didn’t compromise options
Strategies for Improving Efficiency

A look into NYserDA’s software systems and automated approval process

John Schott
Market Transformation

- 5,000,000 1-4 family homes
- 1-2% of building stock retrofitted annually
- 50k-100k annual retrofit goal
57,000 Retrofits Completed to Date

2011 - HPwES successfully grows to almost 7,000 projects per year

Summer 2012 - Contractors request system improvements to increase transparency, decrease effort, and decrease turnaround times

July 2013 - HP Portal goes live
Program Software Enhancements

**Project Approval Timeline**

- **Contract Submission Approval**
- **Financing Approval**
- **Completion Approval**

<table>
<thead>
<tr>
<th>Days</th>
<th>Sep</th>
<th>Nov</th>
<th>Jan</th>
<th>Mar</th>
</tr>
</thead>
</table>

Benefits

- Powerful Analytics
- Automated Workflow
- Increased Transparency
- Online Forms
- Centralized Platform
What’s the Goal? – Reposition the program to achieve 8,500 projects/year in the immediate term with annual growth of 15%

• Savings based incentive structure – deemed vs. modeled?
• Adding new energy modeling software tools
• Automated approval process
  – Validates HPXML
  – Checks for minimum data requirements
  – Validates program requirements
  – Screens for savings reasonableness

Next Steps: Simplify the Process
Deploying HPXML: 
*Building a framework for the future*

Gavin Hastings
Arizona Public Service
Project Goals:

*Drive costs out...*  
... *while driving innovation in.*

- Give contractor’s choice in tools.
- Reduce transactional costs.
- Increase program flexibility.
- Accelerate program transparency, through better data.
New APS Software Environment

Launched in Nov. 2013: over 2,000 HPXML transfers to date.
Result of Our Efforts

Previous Software Environment

New Software Environment

+ reduced administrative time per job by 31%
Things to Remember

*Drive costs out...*

... *while driving innovation in.*

- HPXML is a powerful tool and can be adapted to meet your needs.
- Aggressively pursue simplicity.
- Create systems that can evolve *with* the market.
- Data should not flow only one way.
Strategies for Improving Efficiency in Delivering Efficiency: Lightning Round

Program Delivery Efficiencies Through Automated Data Review

ACI National Conference, April 30, 2014

Emily Salzberg
Program Manager, WSU Energy Program
Phone: 360.956.2109 Email: SalzbergE@energy.wsu.edu
Early Investments Pay Off — Do More with Less

- Invest in data systems early to validate and refine program assumptions
- Make the administrator’s role as easy as possible
- Add value, not burden, to programs delivered
- Replicate successful systems where it makes sense
Multi-Tasking Audit Data

**Challenge:** The RePower program offers services in a community with multiple challenges:
- Housing stock
- Workforce skills
- Quality assurance
- Program goals

**Approach:** Consolidated analysis of program data to identify key patterns:
- Profile of housing stock assessed and upgraded
- Potential for targeted marketing of candidate homes
- High-priority homes for on-site quality assurance
- Trends in auditor “errors” to indicate training needs
Program Efficiency Results

Health and safety:
Combustion safety “flags” were used to:
• Identify workforce training needs
• Indicate high-priority QA homes

Focused delivery:
• Identified candidate homes for targeted marketing and upgrade conversion
• Revised incentive structure to target measure packages

Number and percent of dwellings with each of the seven issues:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number of Dwellings</th>
<th>Percent of total buildings in study</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Leakage</td>
<td>185</td>
<td>6.7%</td>
</tr>
<tr>
<td>Attic Insulation</td>
<td>145</td>
<td>3.2%</td>
</tr>
<tr>
<td>Leaky Ducts</td>
<td>133</td>
<td>4.8%</td>
</tr>
<tr>
<td>Duct Insulation</td>
<td>67</td>
<td>2.4%</td>
</tr>
<tr>
<td>Wall Insulation</td>
<td>37</td>
<td>1.3%</td>
</tr>
<tr>
<td>Foundation Type/Insulation</td>
<td>35</td>
<td>1.3%</td>
</tr>
<tr>
<td>Windows</td>
<td>34</td>
<td>1.2%</td>
</tr>
<tr>
<td>(No issues identified)</td>
<td>20</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Number and frequency of dwellings, grouped by the number of issues present per Dwelling:

<table>
<thead>
<tr>
<th>Number of Issues per Dwelling</th>
<th>Number of Dwellings</th>
<th>Percent of total buildings in study</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>7.8%</td>
</tr>
<tr>
<td>1</td>
<td>76</td>
<td>2.7%</td>
</tr>
<tr>
<td>2</td>
<td>58</td>
<td>2.1%</td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>1.3%</td>
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<tr>
<td>4</td>
<td>15</td>
<td>0.5%</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>0.1%</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Efficiency Across Community-Based Programs in Washington State

• The 10 community-based energy efficiency programs operating in the state focus on delivering high quality, multi-measure upgrades

• Data validation recommendations developed in RePower have been applied to programs statewide, including software audit data

• Efficiency in QA approach as programs move away from 100% site visit

• Audit error analysis used to identify statewide workforce training needs
Partnerships and Economies of Scale

Adam Buick
Presented to ACI National Conference
April 30, 2014
Partnerships are Worth It

Community energy efficiency programs can sustain without ARRA funding by identifying opportunities for collaboration, building strategic partnerships, and creating economies of scale.

CPW pilot phase (2010 – 2013)

CPW 2.0 (starting 2014)
### Post-ARRA Challenges

**Issue:** How can OSE reduce program costs given post-ARRA funding constraints?

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many players, diverse interests</td>
<td>SCL and OSE contract with a single non-profit organization—Clean Energy Works—to operate:</td>
</tr>
<tr>
<td>High program costs</td>
<td>Community Power Works</td>
</tr>
<tr>
<td>SCL cost-effectiveness test</td>
<td>SCL Energy Audit Program</td>
</tr>
<tr>
<td>Reduced funding</td>
<td>SCL Single-family Weatherization Program</td>
</tr>
<tr>
<td>Government program</td>
<td></td>
</tr>
<tr>
<td>unsustainable</td>
<td></td>
</tr>
</tbody>
</table>
Issue: How can OSE reduce program costs given post-ARRA funding constraints?

Community Power Works is partnering with Seattle City Light and Clean Energy Works (Oregon) to bundle program offerings for customers and achieve economies of scale.

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>Reduced Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Design</td>
<td>Integrated design</td>
</tr>
<tr>
<td>Customer Service</td>
<td>Shared reps</td>
</tr>
<tr>
<td>Reporting</td>
<td>Data alignment</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Shared fixed costs</td>
</tr>
<tr>
<td>Marketing</td>
<td>Bundled offering</td>
</tr>
<tr>
<td>Fund management</td>
<td>Flat transaction fee</td>
</tr>
</tbody>
</table>
Reframing Challenges as Opportunities

- Look at players and gaps in the market as opportunities
- Collaborate and build trust with utilities from the beginning
- Demonstrate program value to stakeholders and funders
- Embed evaluation in a robust adaptive management strategy
- Focus on up-front and continued collaboration with stakeholders in decision-making process
- Don’t be afraid of innovation
- Leverage co-benefits to access myriad funding sources
Innovations to Simplify, Engage, and Access Capital

Strategies for Improving Efficiency in Delivering Efficiency
Simplify: LA County Prescriptive Retrofits

Features

• Multiple measures required, but without modeling
• Simplified points-based rebates per measure
• Incentives <=$3000, $10/point
• Streamlined approval for projects and rebates

Results

• Over 1,700 projects in first nine months
• Current goal is for 2000 more in a year
Engage: CHERP

Features

• Four target communities in LA County (pilot)
• Endorsements from local organizations, cities, and opinion leaders
• Training/managing volunteer networkers to engage homeowners in home retrofits

Results

• Extensive volunteer networks in operation
• Active interest in communities statewide
Access Capital: HERO Residential Property Assessed Clean Energy (PACE)

Features

• State loan loss reserve; loans bundled for resale
• Capital providers see reduced risk, new market
• Favorable financing (20 years, transferable)
• Variety of EE measures & solar allowed

Results

• 15,000 retrofits in Riverside County, no
Simplify, Engage, and Access Capital: Efficiency PAYS®

Features

- Both water and energy savings, on-bill repayment
- Single- and multi-family buildings
- Self-funded, scalable program, no upfront cost
- Utility surcharge is less than total utility bill savings

Results

- Windsor, CA pilot: 5% of residences in 18
QUESTIONS?