

HOME ENERGY SERVICES

CONSULTANT PRESENTATION TO THE EEAC
AUGUST 12, 2014

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AGENDA



1. HES Initiative Overview
2. Summary of In-Field and Planned Enhancements
3. Key Areas
 - a. Cost-efficiency of Program Delivery
 - b. Quality Assurance and Contractor Performance
 - c. Deeper Savings
 - a. Program design
 - b. Ensuring relevant savings are tied to audit
4. Summary of Recommendations

SUMMARY OF KEY POINTS



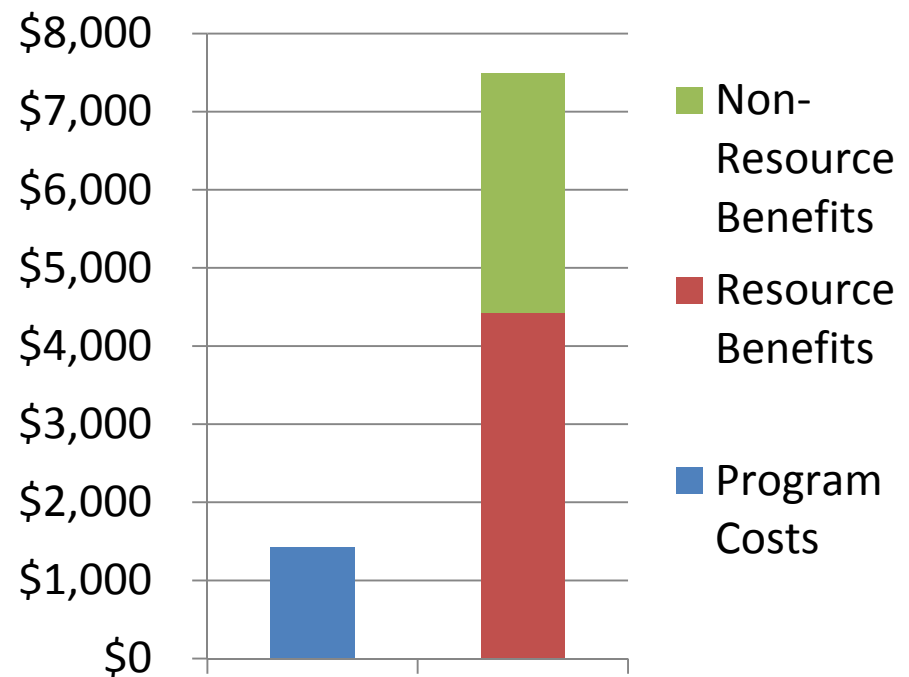
- ▶ HES has experienced dramatic growth in the past 3 years in terms of budgets and production
- ▶ New contractor implementation paths have proven challenging but are maturing
- ▶ Opportunities exist to continue to promote and track cross-initiative participation with HVAC
- ▶ Opportunity to build from on-going QA system development to introduce Quality Management Systems approaches
- ▶ Performance-based approaches can promote deeper energy savings for certain market segments

HES 2013 PROGRAM PROFILE

CORE ACTIVITIES

- ▶ In-home audit
- ▶ Free, installed light bulbs, smart strips, DHW saving measures & programmable thermostats
- ▶ Free air sealing
- ▶ 75% cellulose insulation incentive up to \$2k
- ▶ Guidance on HVAC incentives, HEAT loan – limited to existing home fuel sources

2013 Program Costs/Benefits (combined gas and electric, per participant)



HES IMPLEMENTATION PATHS

| Functions | Delivery Options | | |
|---|---|--|-------------------------------------|
| | Customers call Mass Save, and LV allocates projects to contractors | Customers call contractors, or contractors find projects through their own means | |
| Call Center Intake, Contractor Coordination, Data Management, Other | LV | LV | |
| Energy Assessments | LV | LV | |
| Measure Installation | Independent Installation Contractors (IICs) | Independent Installation Contractors | Home Performance Contractors (HPCs) |
| Quality Assurance | Statewide Quality Assurance/Quality Control (QA/QC) Vendor and/or Lead Vendor | | |

BPWG facilitates on-going communication among parties to inform continuous improvement.

2013-2014 HES ENHANCEMENTS

PAS

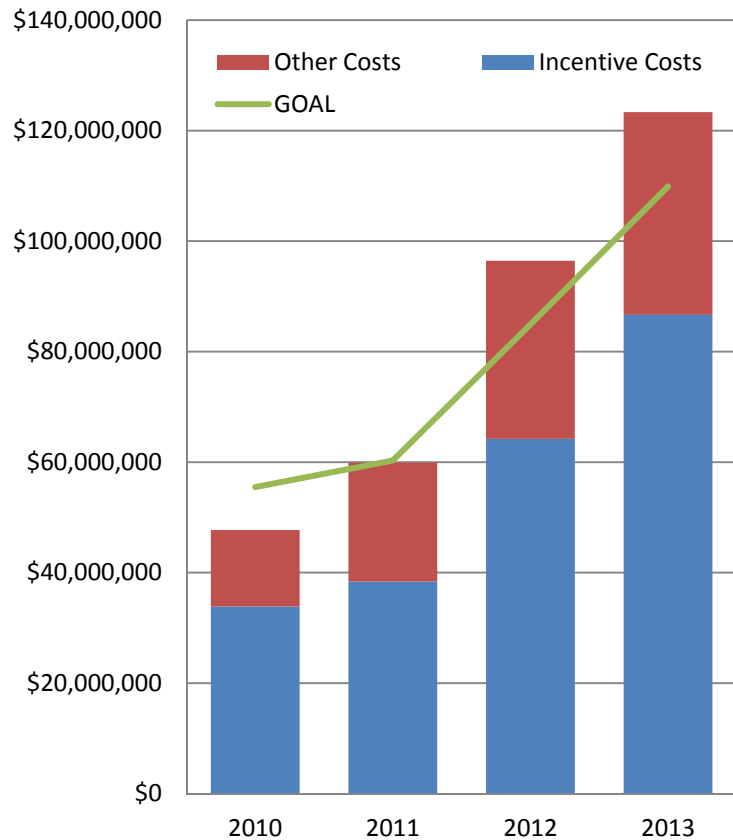
- ▶ Efficient Neighborhoods+®
- ▶ On-line audit/customer outreach tool
- ▶ Pre-weatherization barriers initiative
- ▶ On-line audit/customer outreach tool
- ▶ Early equipment replacement initiatives (boiler, furnace, AC)
- ▶ Bulk purchasing of DI lighting
- ▶ Continued integration of IIC/HPC delivery models
- ▶ 2-4 unit whole building approach (Renew Boston)
- ▶ LEDs and advanced power strips provided at audit
- ▶ Customer bonus incentives
- ▶ Rebates for wireless enabled thermostats (some PAs)

DOER

- ▶ Additional HEAT Loan offers
 - Enhanced pre-weatherization rebates (Asbestos & knob & tube wiring)
 - Biomass boilers eligible
 - Deep Retrofit - \$50k2-4 unit - \$50k
- ▶ Home MPG / Mass CEC pilots
 - Home Scorecard
 - 75% insulation cost up to \$3.75k
 - Cold Climate Heat Pumps
 - Biomass Pellet incentives

HES BUDGET HAS INCREASED SIGNIFICANTLY SINCE 2011... AND SO HAVE SAVINGS

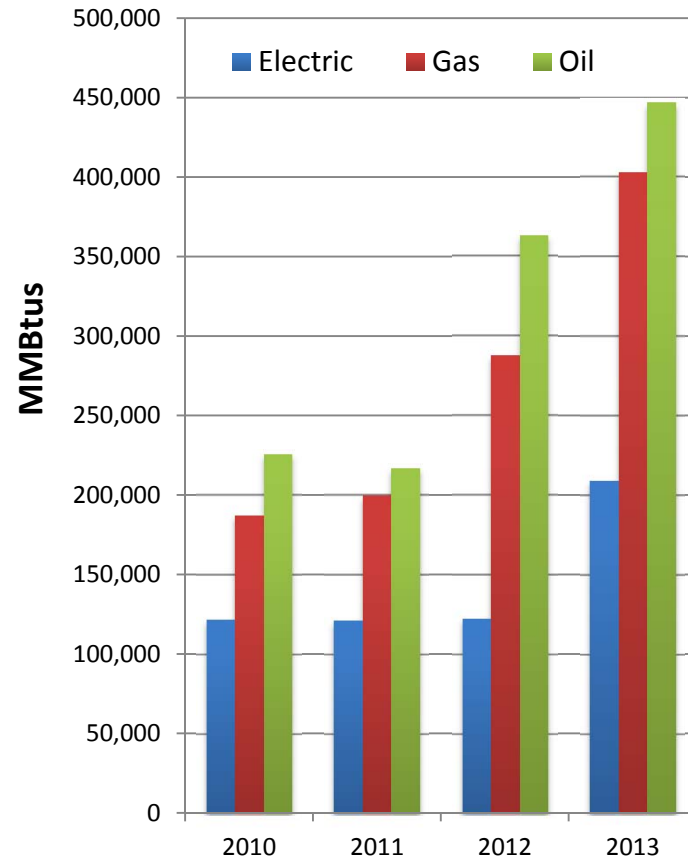
Total Spend



“other costs” includes the cost of home energy assessments

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Savings



HES Presentation August 2014

COST EFFICIENCY



CHALLENGES

- ▶ “Widget-based” BCR paradigm
- ▶ Important not to overload the audit (time = \$)
- ▶ Giving customers too many choices leads to indecision
- ▶ Cost of customer acquisition is not clearly tracked within current reporting framework

OPPORTUNITIES

- ▶ Current use of “vendor calculated savings” in TRM/BCR presents an opportunity for custom measure packages
- ▶ Leverage Energy Savvy data to channel customers into most effective levels of service based on input data
- ▶ HPC/IIC network presents opportunity to leverage marketing/lead acquisition
- ▶ HES Program Delivery Assessment in progress

QUALITY ASSURANCE AND CONTRACTOR PERFORMANCE

CHALLENGES

- ▶ Introduction of new market-based model
- ▶ Managing contractor performance

RESULTS/PROGRESS

- ▶ BPWG provides on-going stakeholder forum
- ▶ Contractor performance improving – indicated by shift in failure modes over time
- ▶ Tiered ranking and merit-based lead allocations
- ▶ 60% inspection rate

OPPORTUNITIES

- ▶ Tie in to RCS guidelines
- ▶ More robust feedback loops can support process improvements focused on prevention
- ▶ Opportunity to apply quality management system (QMS) principles (process based solutions, zero defect goals, root cause detection)

“The inspector gave me confidence in the whole process.”
–NU Customer

QMS OPPORTUNITY FOR HES – FROM FIGHTING FIRES TO INNOVATION



1. REACTING TO THE PROBLEM:

Inspections identify defects, make repairs

2. GENERAL IMPROVEMENT ORIENTATION:

Hire more inspectors, do more inspections, find more defects

3. SYSTEMIC EVALUATION AND IMPROVEMENT:

Evaluate which contractors have more problems, targeted remedial action

4. LEARNING AND STRATEGIC IMPROVEMENT:

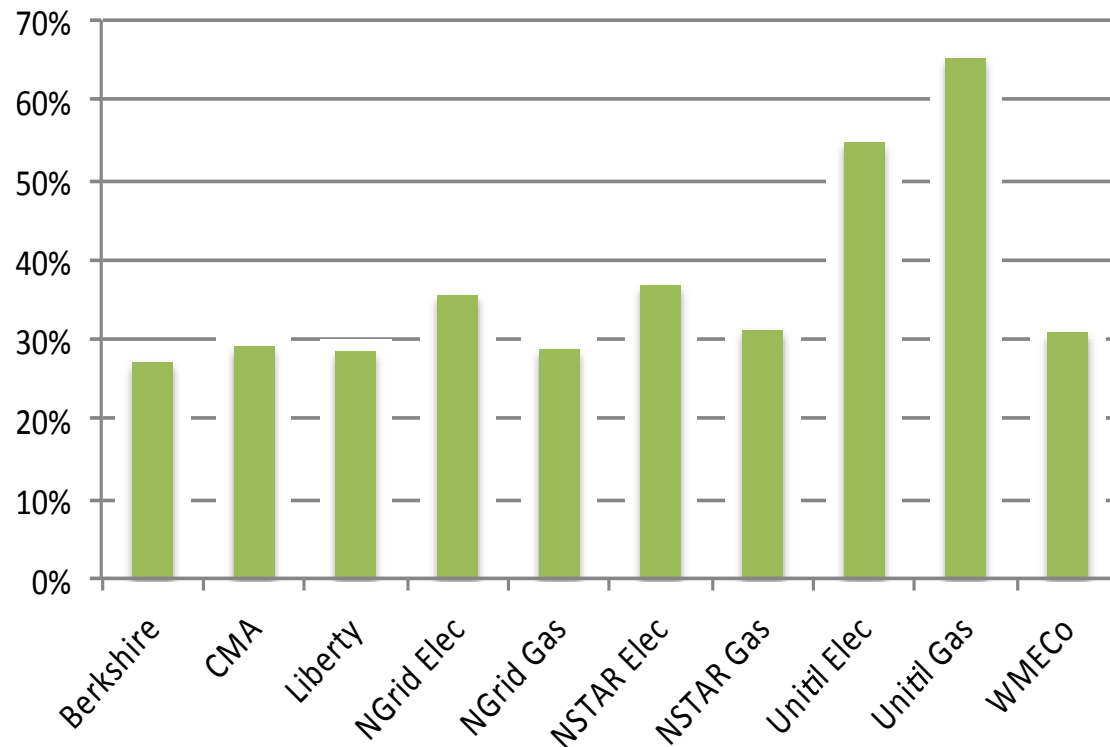
Identify systemic issues: training, process improvements, etc.

5. ORGANIZATIONAL ANALYSIS AND INNOVATION:

Focus on defect prevention at all stages of the project cycle

Credit: Baldrige Performance Excellence Program

2013 CLOSE RATES DO NOT TELL THE WHOLE STORY



From Residential Metric 1. Close rate measures percent of full assessments resulting in air sealing, envelope insulation, or both.

Reported close rates indicate conversions from assessments to weatherization installations.

Recommendation rates combined with close rates from recommendation to installation would provide better insight to the market opportunity and program performance.

THE HVAC CHALLENGE IN ACHIEVING AND DOCUMENTING DEEPER SAVINGS

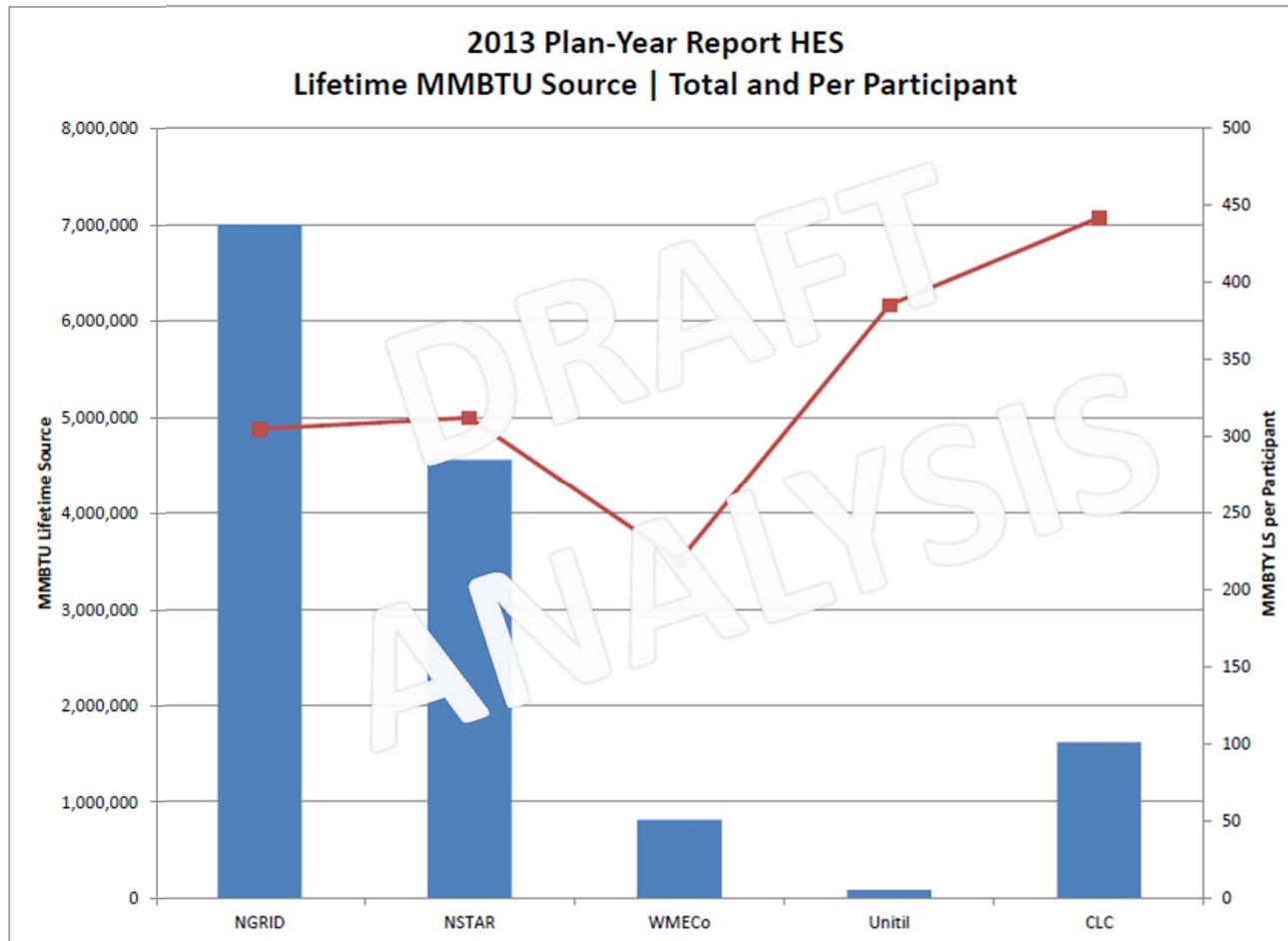
SILO-ING OF INITIATIVES

- ▶ Are there missed opportunities or just uncounted achievements?
- ▶ Initiative level goals and accountability can interfere with effectively and accurately capturing more global goals
- ▶ Legacy HVAC rebate programs present both challenges and opportunities

WHAT IS WORKING?

- ▶ HES as gateway to HEAT loan and vice versa
- ▶ Early equipment replacement through HES
- ▶ Strategic partnerships between HPCs and HVAC
- ▶ Energy Savvy online audit tool provides cross-promotion and lead generation
- ▶ HEHE spiffs have been used when needed

EXAMPLE DEPTH OF SAVINGS INDICATOR



- ▶ Incomplete data available through current reporting sources
- ▶ Improved tracking and reporting needed

DEEPER SAVINGS INITIATIVES



CHALLENGE

- ▶ Develop deeper savings offer that is accessible enough to meet participation goals

WORK COMPLETED TO DATE

- ▶ Development of technical manual for Deep Energy Retrofits
- ▶ National Grid initiative in field (50+ consultant/contractors enrolled)

OPPORTUNITIES

- ▶ Opportunity for alternate paths
- ▶ Preliminary analysis of national data* indicates 50+% energy savings is achievable with comprehensive but non-invasive measures
- ▶ Continue developing implementation strategies in coming weeks—deploy in field by late Q3/Q4

**Based on National Home Performance with Energy Star Annual Report Data 2013*

RECOMMENDATIONS



COST EFFICIENCY

- ▶ Establish performance indicators to measure performance over time

CONTINUE DEVELOPING QA/QC SYSTEMS

- ▶ Contractor performance standards, in development statewide
- ▶ Integration of QMS principles

CREATE PERFORMANCE-BASED PATH TO SUPPORT DEEPER SAVINGS INITIATIVES

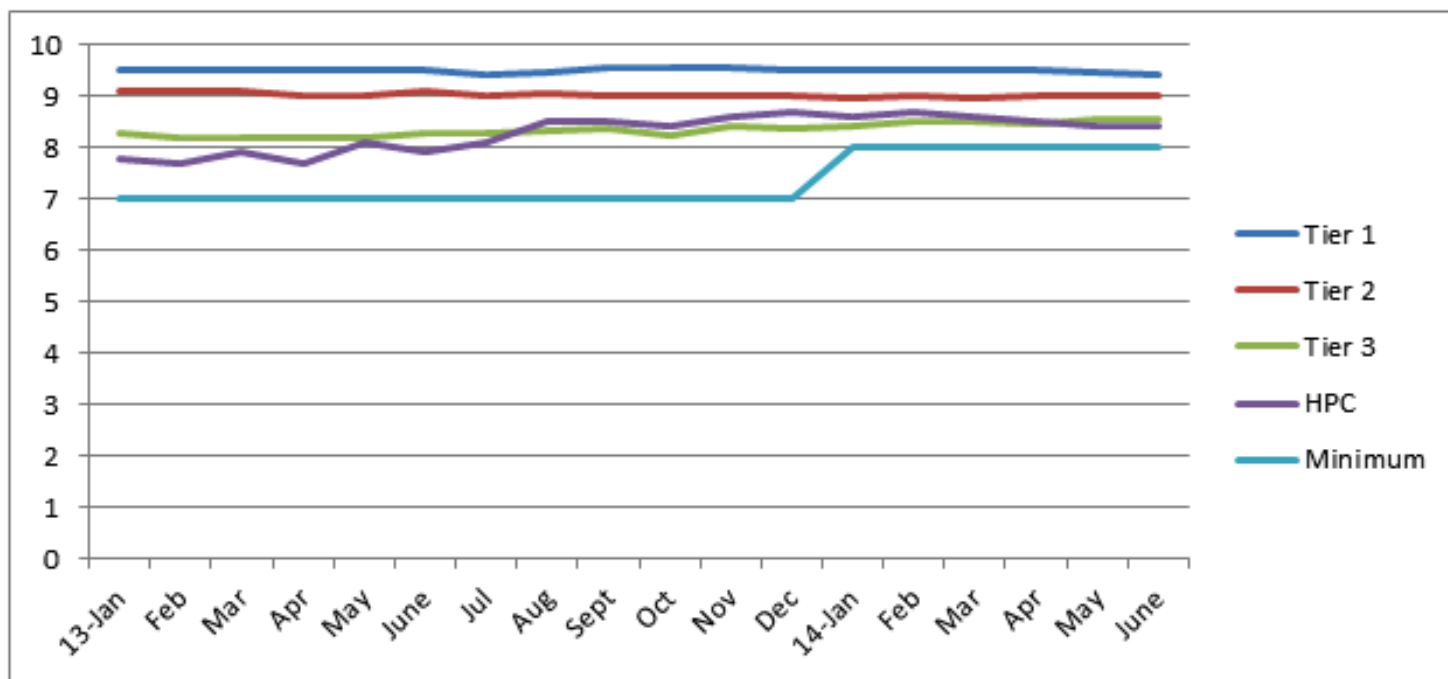
- ▶ Develop systems for tracking cross-initiative and multi-year participation
- ▶ Enable more flexibility in B-C screening to allow for bundling of measures, measure trade-offs, project-level savings estimates
- ▶ Enable broader range of measures
- ▶ Support greater flexibility for customers and contractors
- ▶ Promote comprehensive services option
- ▶ Incentivize deeper energy savings

EXTRA RESOURCE SLIDES



HPC & IIC QUALITY CONTROL SCORES

JAN 2013 – JUNE 2014 (ACCOUNTS FOR ~80% OF PAS)



Through June 2014: 48% of all IICs are in Tier 1, with average scores of 9.2 or greater

July 2013, 26% of contractors were in Tier 3, and in June of 2014, that number is only 18% showing that the bottom tier of contractors continue to improve

Since July of 2013, HPCs have grown from 10 -> 18 = 80% increase in participation

CUSTOMER SURVEY RESULTS

- ▶ Customer surveys conducted by CRI, reported to BPWG Nov. 2013
- ▶ 1-5 scale, NA responses removed
- ▶ Net promoter = all responses scoring 5 minus all 1, 2, and 3 scores

| Question | Net Promoter |
|---|--------------|
| Punctuality of auditor | 91% |
| Explanation by auditor | 80% |
| Cleanliness of installer | 85% |
| Your understanding of installed measures | 76% |
| How thoroughly did auditor inquire about your energy usage? | 63% |
| Auditor's presentation of next steps | 76% |
| How well did auditor encourage follow up appointments? | 78% |