

Making Sense of Home Performance Annual Report Data



Presentation Objectives

- Characterizing our data set
- Overview of key annual report data findings
- Program innovations
- Open discussion of the annual report completion, collection and analysis processes-what are your thoughts?

Characterizing Our Data Set

- Data is as reported by our Sponsors.
- Data is for the calendar year.
- Not all questions are answered by all Sponsors.
- Program administrative costs represent a heterogeneous cross-section of sub-categories which may vary broadly from one sponsor to another; admin cost sub-categories may include any or all of the following:
 - Program administrator staff time and direct costs
 - Implementation vendor staff time and direct costs
 - Marketing
 - Quality assurance
 - EM&V
 - Other miscellaneous program support costs

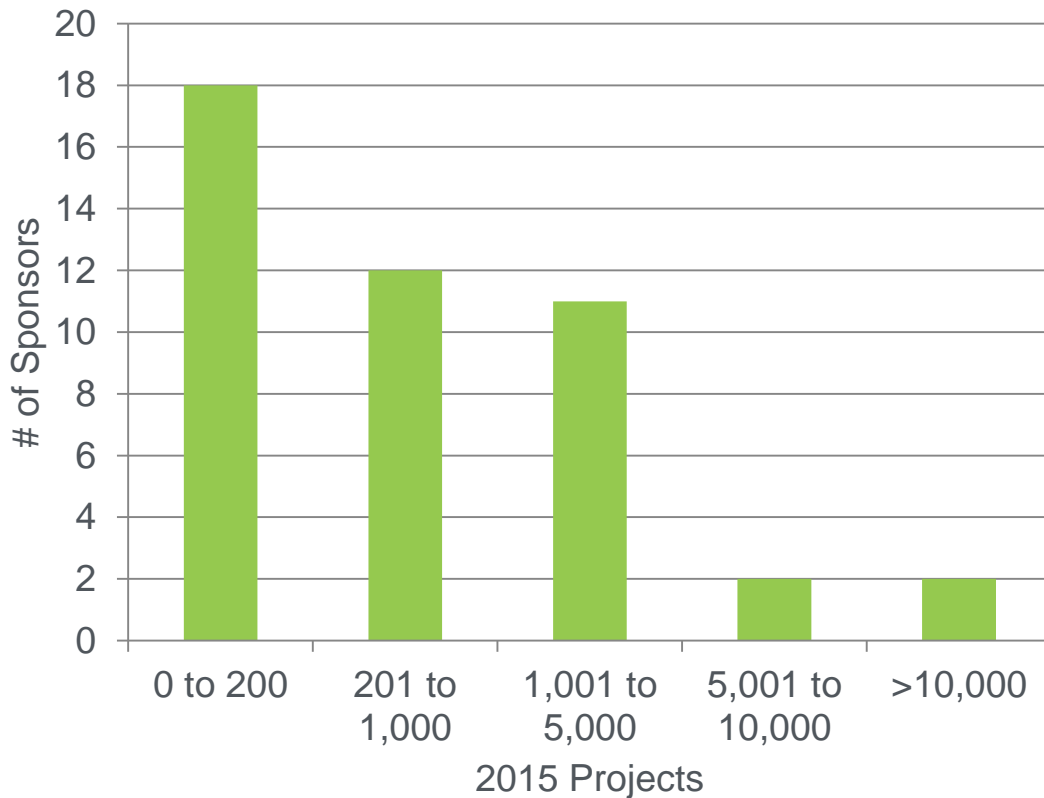
Characterizing Our Data Set (Continued)

- Energy savings data is calculated using predictive methods defined by each individual sponsoring program or state. Methods may include whole building energy simulations, modeled savings for individual measures or measure packages, deemed energy savings, or a combination. Underlying assumptions including baselines, effective useful life, and other key factors may vary significantly from one sponsor to another.
- Energy savings data is captured and reported only for the fuel types monitored by each sponsor. As a result, not all fuel savings attributable to Home Performance with ENERGY STAR will be represented in this data set.

2015 Home Performance with ENERGY STAR Annual Report

- In January 2016, DOE issued the 4th Annual Report Data Call to HPwES Sponsors requesting final overall CY 2015 results; and program plans for CY 2016
- 44 of 45 HPwES Sponsors completed their annual reports
- The Annual Report was intended to:
 - Evaluate Sponsor compliance with the Sponsor Guide (V1.5)
 - Document results and value of the program at the national level
 - Provide value to HPwES Sponsors and the greater market

Projects Completed

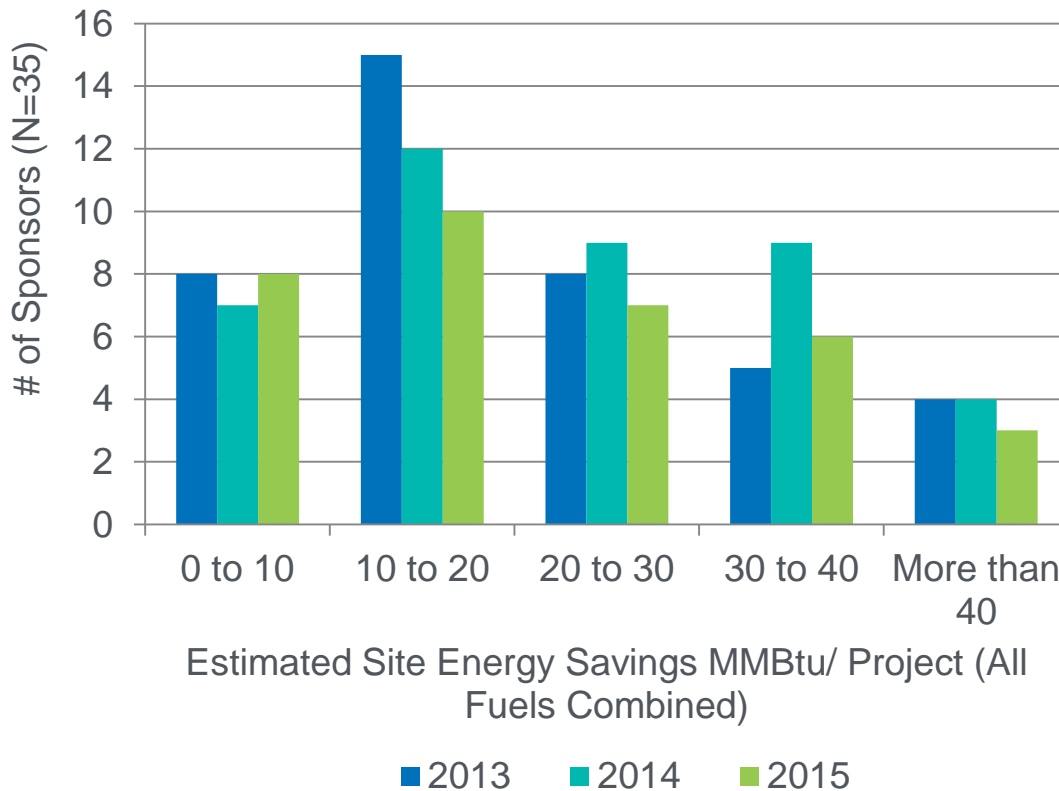


45 Sponsors completed a total of 89,248 projects* during 2015.

As of the end of 2015, the population of enrolled contractors stood at 1,665.

* **HPwES Project:** A completed project may be counted for each independent contract executed between the homeowner and a qualified participating contractor or other signatory designated by the Sponsor, which meets all program requirements including documentation of test-in and test-out results related to the scope of work completed under that contract.

Energy Savings Per Project



Average of 28 MMBtu saved per project at a first-year program cost of \$150/MMBtu.

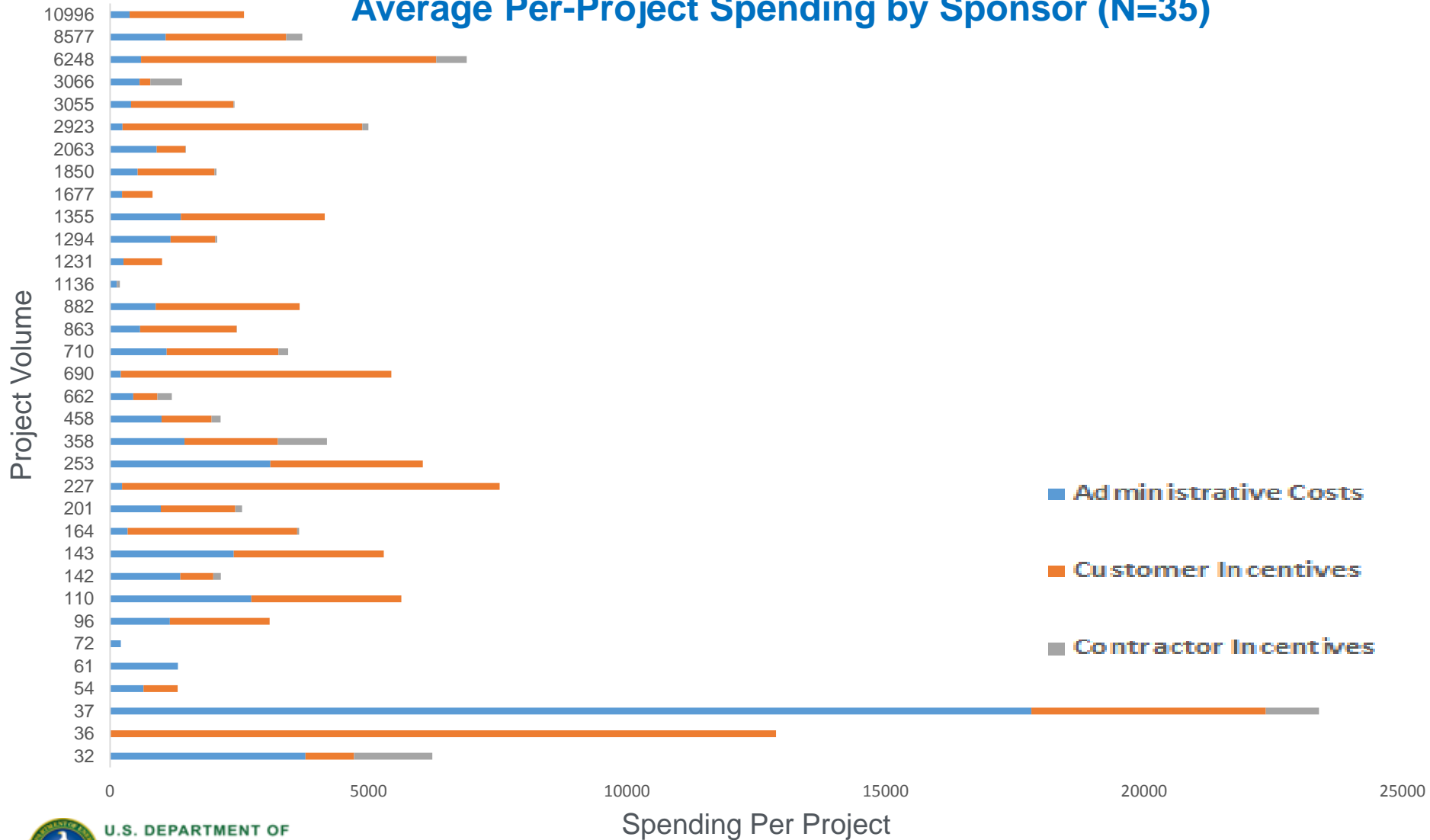
Electric-only programs report average savings that are approximately 76% lower than programs tracking other fuels.

Since all fuel savings are not being tracked, total energy savings is underreported by some programs.

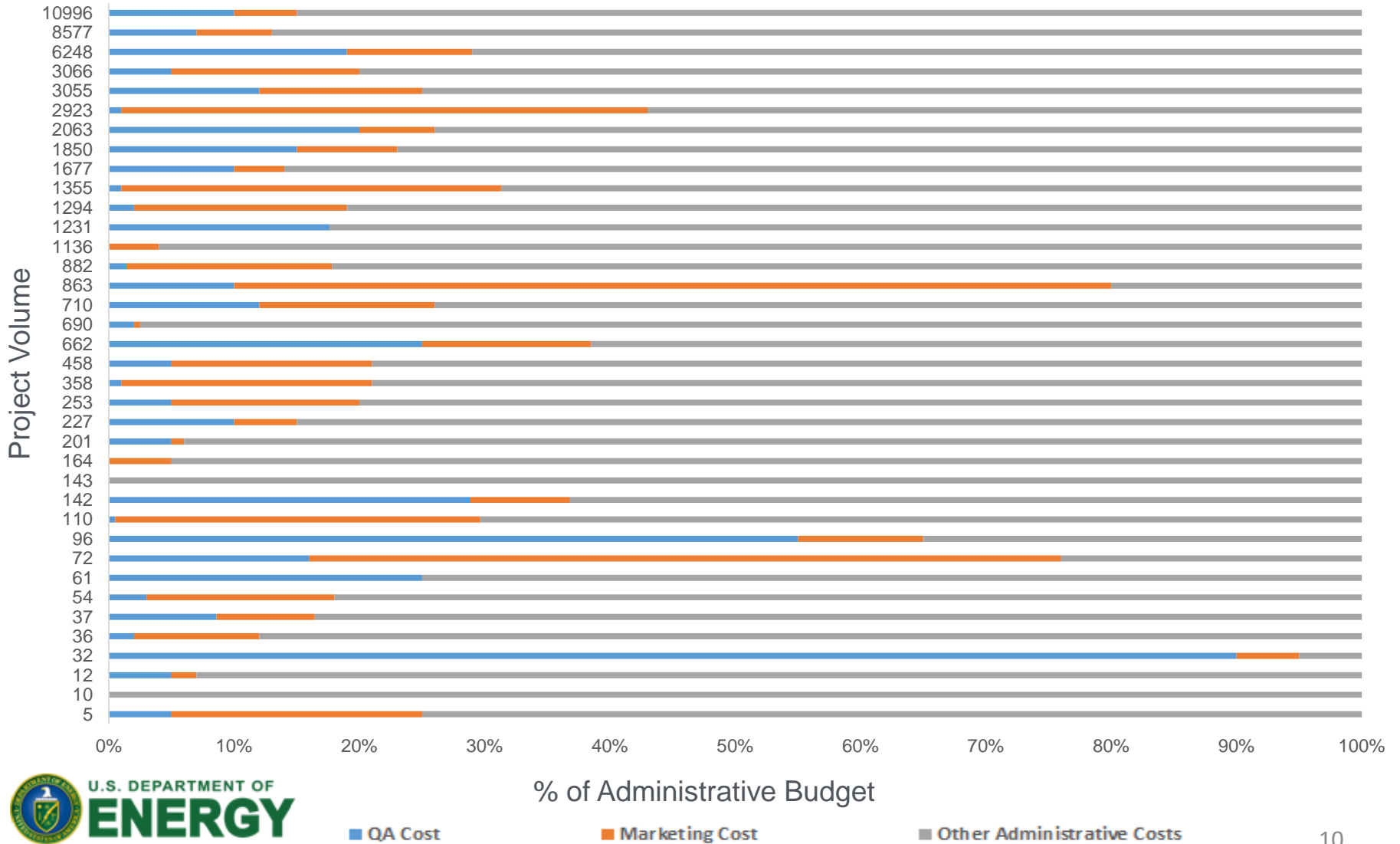
Total Home Performance with ENERGY STAR 2015 Sponsor Expenditures

- Total 2015 Sponsor Spending: \$200,000,000 (N=44)
 - Administrative Costs: \$35,000,000 (N=40)
 - Customer Incentives: \$127,000,000 (N=35)
 - Midstream Incentives: \$10,000,000 (N=19)
- Annual spending ranged from \$6,000 to \$60,000,000

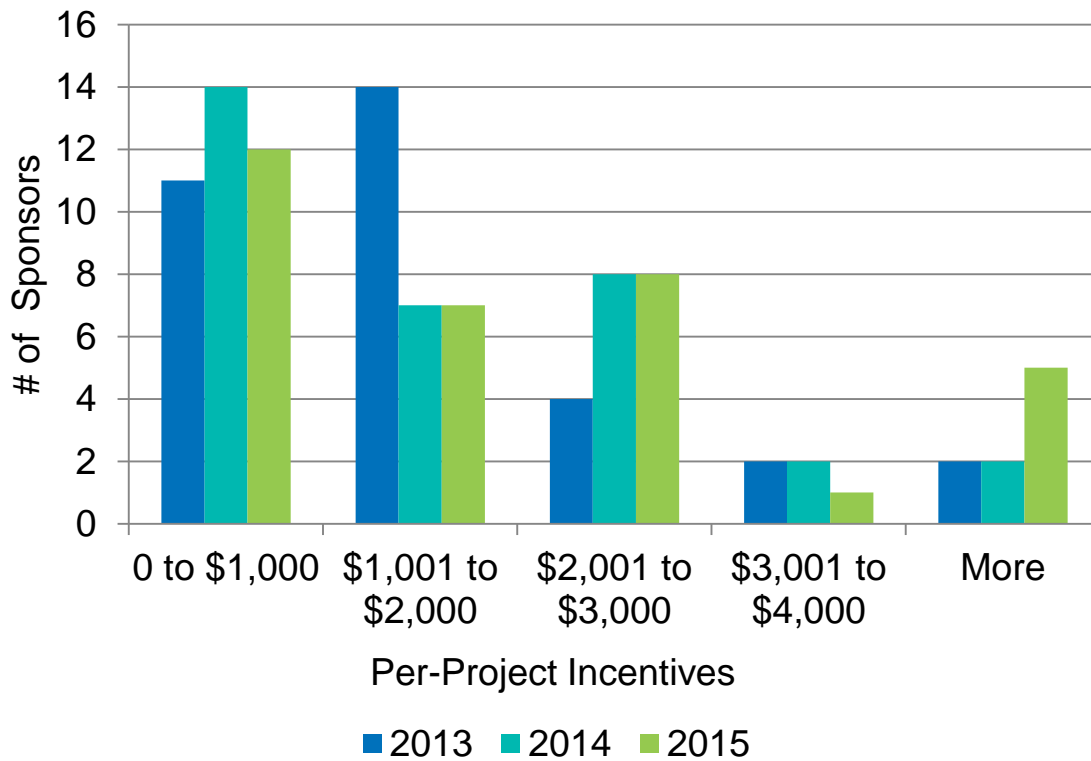
Average Per-Project Spending by Sponsor (N=35)



Average Per-Project Administrative Spending Breakdown

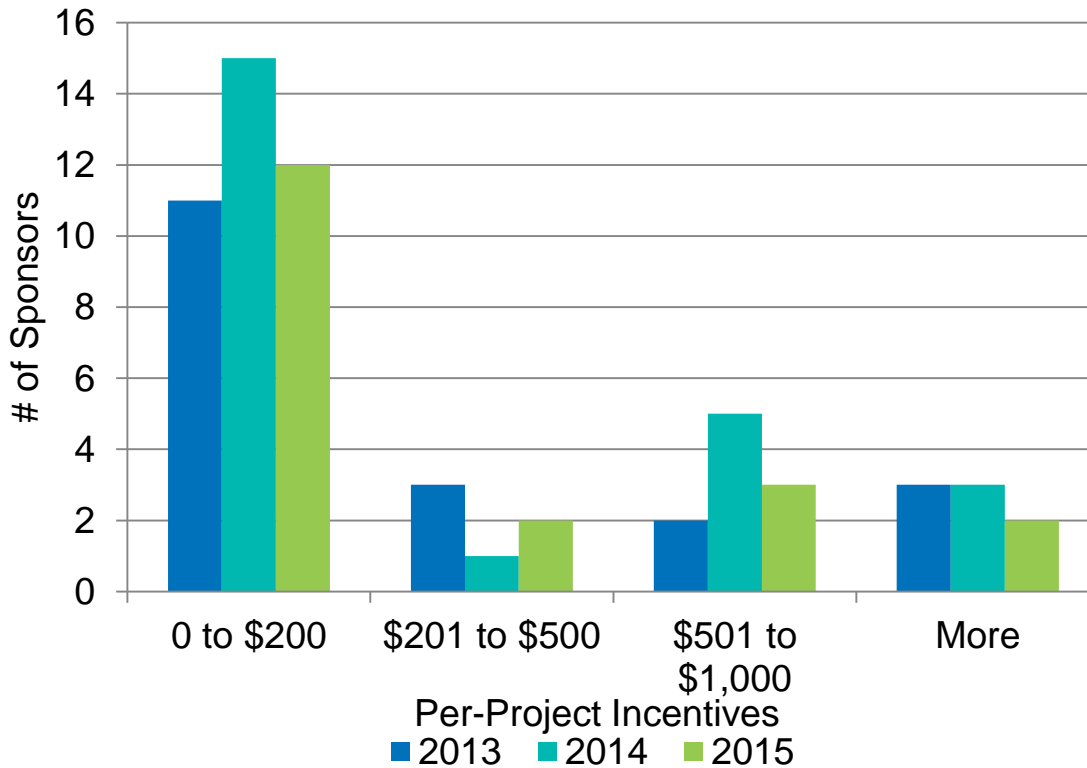


Average Homeowner Incentives Per Project (N=33)



The average homeowner incentive per project is \$2,167 per project. The range is between \$200 and \$7300 per project

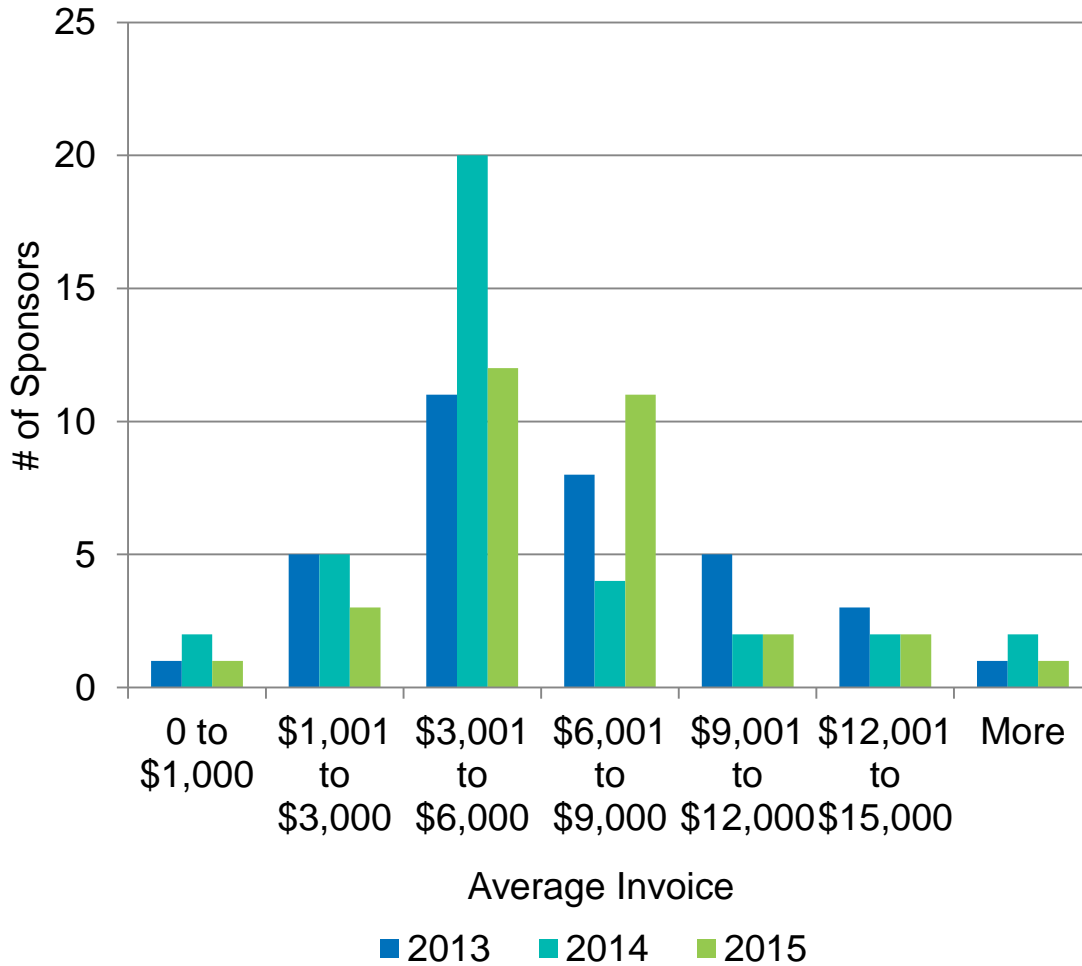
Average Mid-stream (Contractor) Incentive per Project (N=19)



On average, Sponsors offered about \$328 per project for contractor incentives

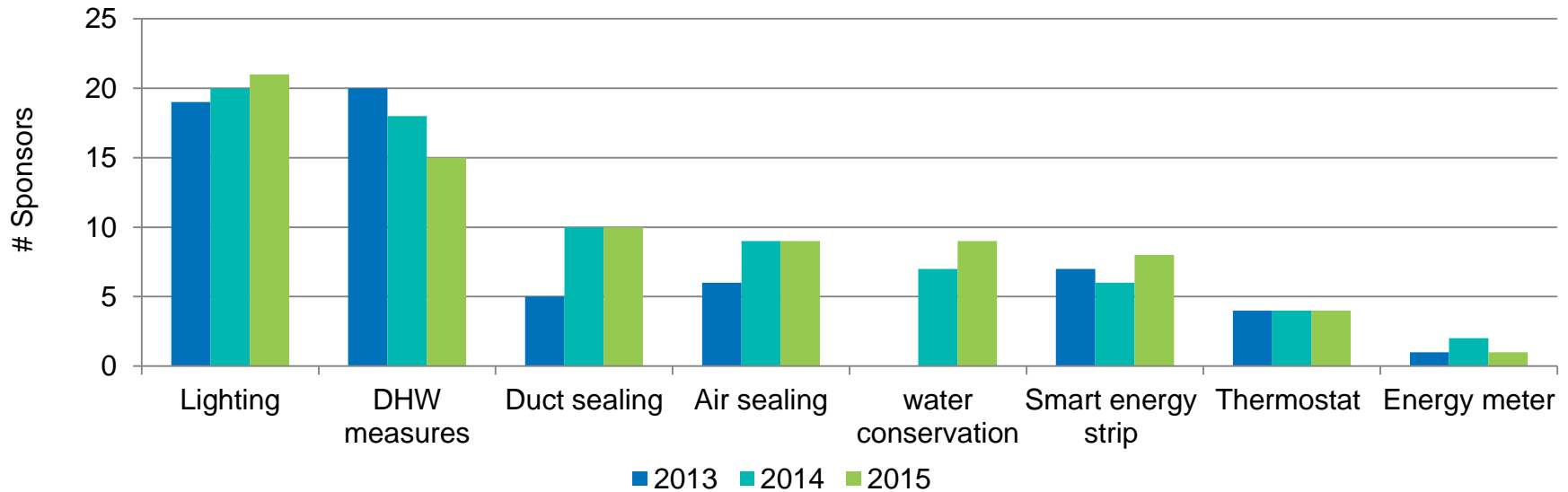
The range is \$20-\$1,500 per project

Average Homeowner Invoice Cost (N=32)



Year	Low	Average Invoice	High
2015	\$600	\$6,300	\$17,000
2014	\$700	\$5,500	\$15,000
2013	\$582	\$6,889	\$15,000

Direct Install Measures Offered by Program Sponsors in 2015



Often, Direct Install offers are leveraged for lead generation for programs.

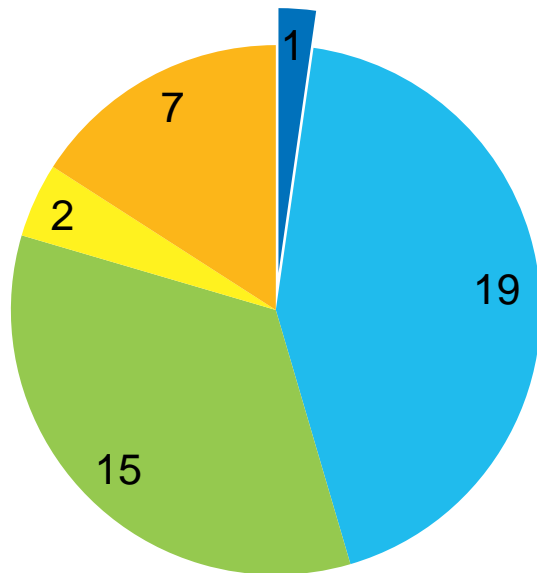
Programs with free or nearly free audits, often require DI measures at the time of audit; energy savings from the DI measures justify the cost of the audit.

Typical DI visits cover 3 measures (e.g. lightbulbs, showerheads, and power strips).

Some programs offer air sealing and/or duct sealing as a direct install (i.e. free to the customer).

Quality Assurance

QA Sampling Rate Reported by Sponsors (N=37)



- <5%
- 5%
- 6% to 25%
- 26% to 50%
- 51% to 100%

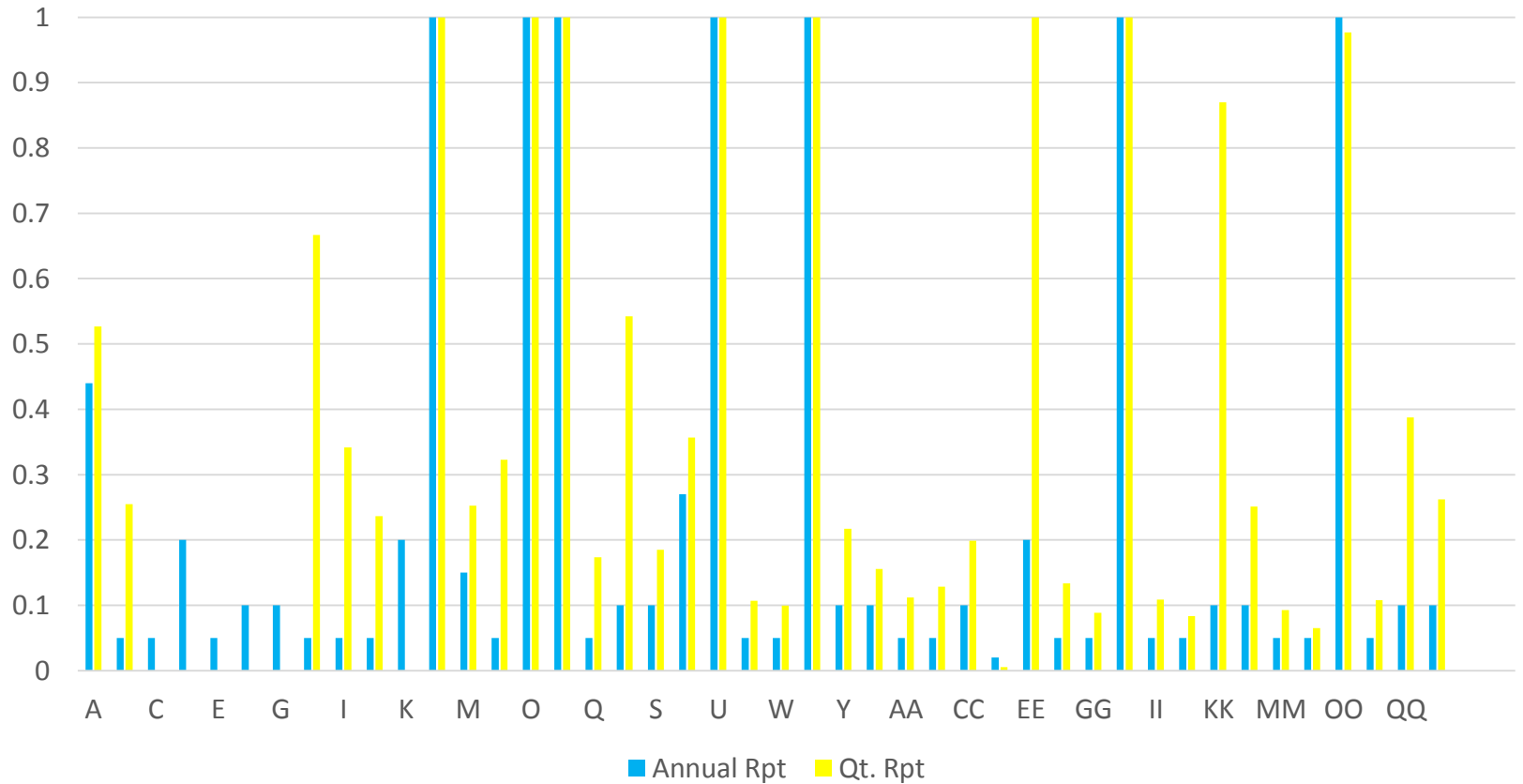
43 of 44 reporting sponsors indicated QC sampling rates greater than DOE's 5% minimum requirement.

Average cost of a field inspection is \$370. This largely depends on the economic conditions of the Sponsor service territory and how wide spread it is (commute time).

A program completing 1,000 projects per calendar year and fulfilling the min 5% field inspection ratio, on average might incur \$19k in direct field inspection costs.

On average about 13% of program admin budget is invested in QA.

Reported versus Realized Field Inspection Rate



Program Innovations

Highlights from ENERGY STAR Award Winners:

- VEIC launched the Efficiency Excellence Network to provide special financing and training opportunities to select contractors.
- Both National Grid Rhode Island and Public Service Company of Oklahoma implemented Certificate of Completion programs.
- NYSERDA cut the project approval process to from 8 days to 1 with the help of HPXML.
- Public Service Company of Oklahoma began working with Native American communities to deliver Home Performance with ENERGY STAR to rural and low-income homeowners.
- SWEPCO delivered an 11% growth in energy savings with a revised incentives structure and a new project allocation system.
- Entergy New Orleans used the Home Performance with ENERGY STAR brand to build trust of the home-improvement community following the aftermath of Hurricane Katrina.

Poll Question 1: To what degree does aggregate Home Performance with ENERGY STAR data such as that contained in this presentation help your program achieve its goals?

Poll Question 2: To what degree does aggregate Home Performance with ENERGY STAR data help your program understand the home-performance market?

Discussion: Submit your thoughts via the “Chat” window:

What are your thoughts on the reporting process generally?

Which data points do you find most/least helpful?

Which metrics should Home Performance with ENERGY STAR use to document results and measure progress?

How valuable is benchmarking of your results (as with this presentation) with these metrics?

Other thoughts?

Questions?

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