

2017 Annual Reporting

Home Performance with ENERGY STAR Program



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What is Home Performance with ENERGY STAR?

The Home Performance with ENERGY STAR Approach

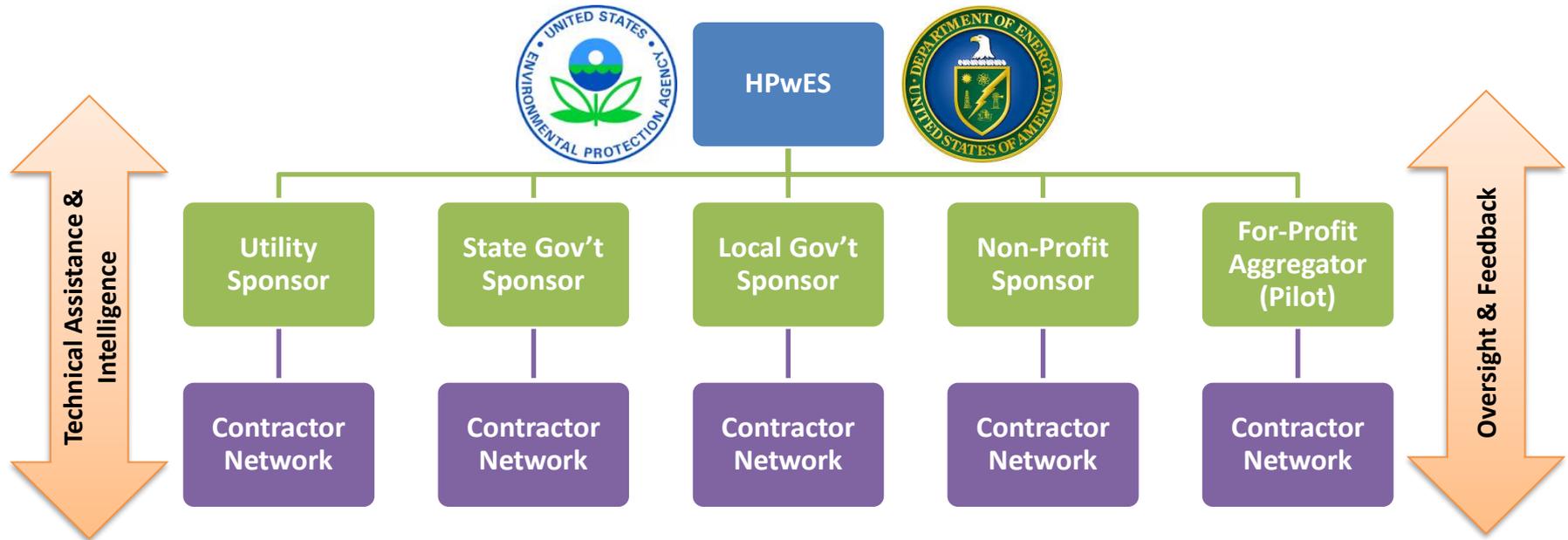
The Process



The Results

- ✓ **Trust**
- ✓ **Quality**
- ✓ **Whole-home assessment**

U.S. Department of Energy & U.S. Environmental Protection Agency Cooperatively Manage Home Performance with ENERGY STAR



The Home Performance with ENERGY STAR Approach



Benefits to Sponsors

- Access to ENERGY STAR mark
- Opportunity to apply for the ENERGY STAR Awards
- Account management and technical assistance
- Participation in HPwES Regional Collaboratives, working groups and conferences
- Facilitated access to DOE, EPA, & HUD resources
- Annual data collection analysis



The Power of the ENERGY STAR Brand

- 91% of households recognized the ENERGY STAR label when shown the label
- 75 % of households had a high understanding of the ENERGY STAR label

Apply for the ENERGY STAR Awards!

Are you a Home Performance with ENERGY STAR Sponsor or participating contractor?
Apply for the ENERGY STAR Awards!

Winners

- Receive tools to promote their award, including logos
- Are recognized at industry events
- Are invited to the ENERGY STAR Awards ceremony in the spring



Applications are posted now at
energystar.gov/awards

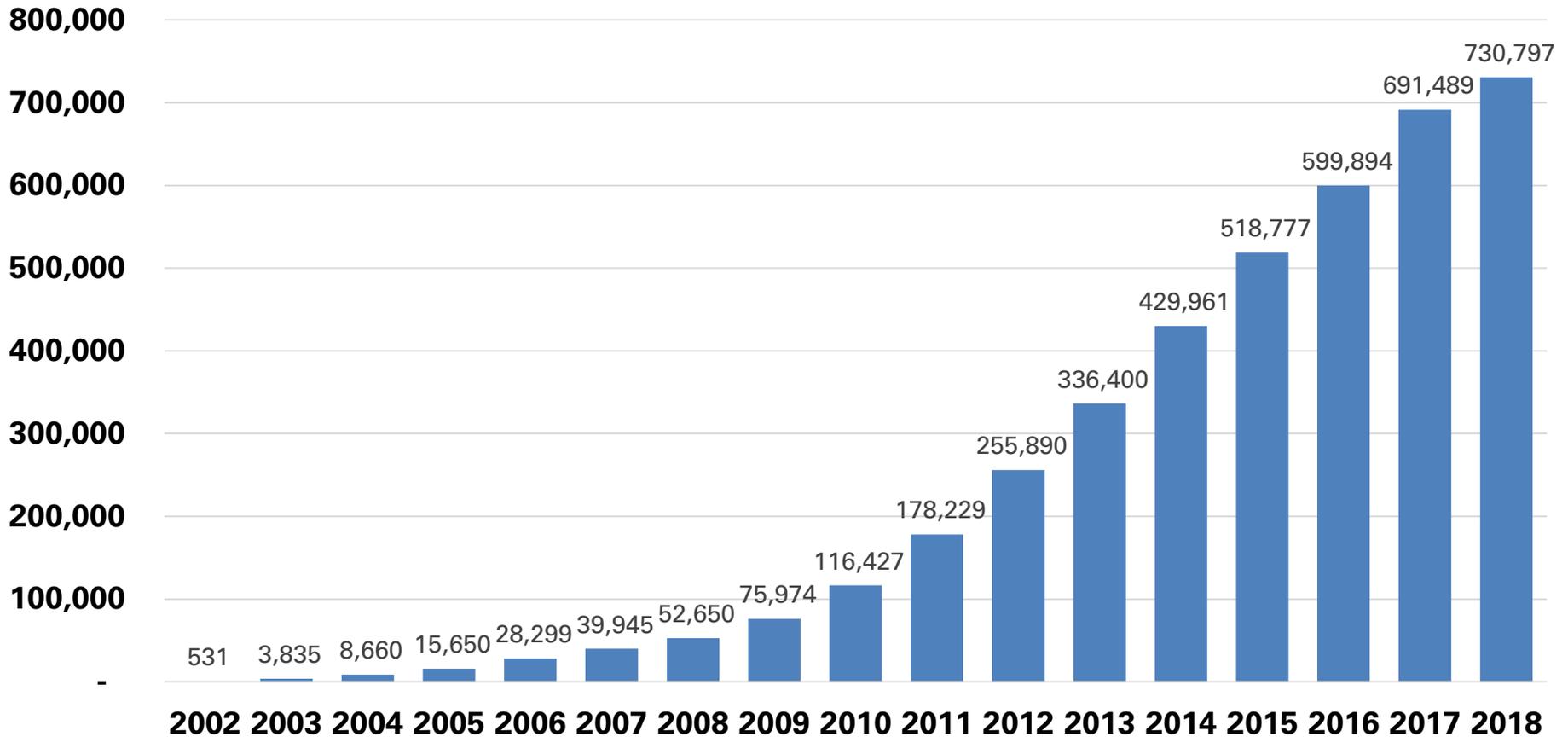
The Annual Reporting Process

- Pre-populated (where possible) Excel template distributed to Sponsors on January 1st.
- Sponsors complete to the best of their abilities and return by February 15th (40 of 42 Sponsors completed a report for the 2017 calendar year.)
- Data is accepted as reported, although follow-up clarification may be requested for any outlier values.
- Data is compiled and analyzed to produce findings for program guidance and the annual results presentation.

V- CY 2014 HPwES PROGRAM SAVINGS			Units
6. By fuel type, what are the program's estimated gross site energy savings^d for CY2015 (MMBtu)? If needed, please see fuel conversion formulas at the end of the "READ ME FIRST" tab. Reported savings should only be based on HPwES activities.	Electric	N/A	MMBtu
	Gas	45,312	MMBtu
	Oil	N/A	MMBtu
	Propane	N/A	MMBtu
	Other (Please Specify)		MMBtu
7. How are energy savings estimated at the project level? (P)	Deemed Savings (no interactivity)*		
If you selected "other" please specify.			
8. Is the program regulated by a public utility commission? (P)	Yes		
9. What is the total amount of water savings claimed by the program in CY2015 (Gallons)?	N/A		
10. Is the program evaluated by a third party independent evaluator^d ? (P)	No		
11. What is the total estimated peak demand reduction^d in CY2015? (MW)	N/A		MW
12. Does your program calibrate/adjust predicted energy savings^d based on the historical energy consumption of the home?	No		

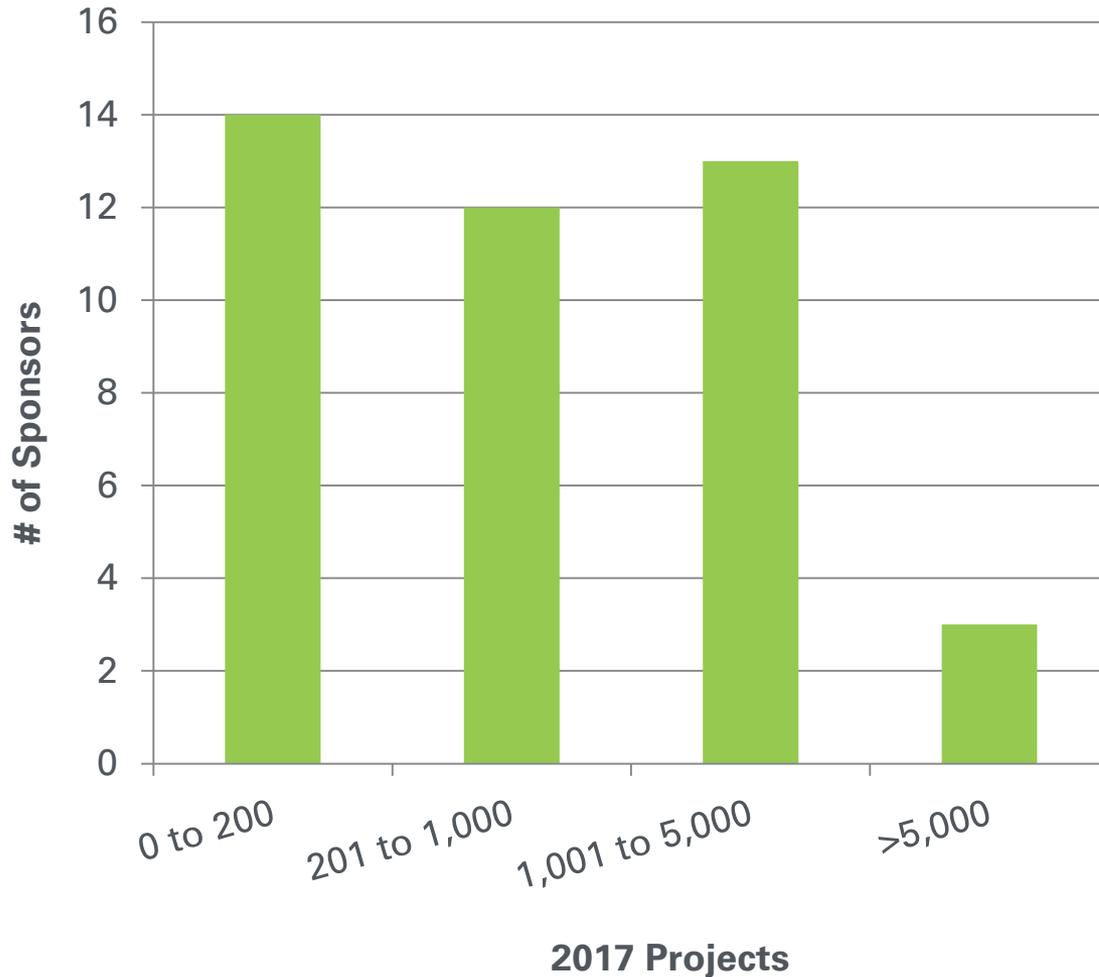
What the data reveals

Projects Since 2002



Over 700,000 projects in total!

2017 Projects

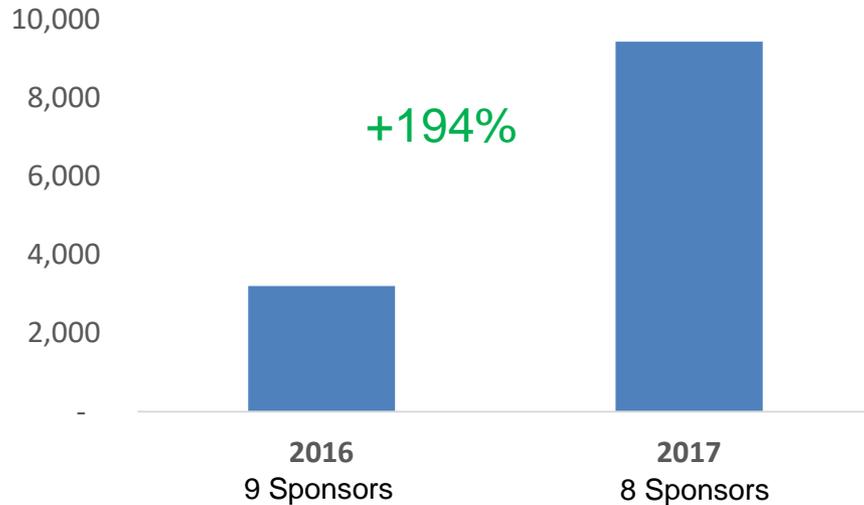


- 42 Sponsors completed a total of 91,015 projects* during 2017.
- Over 700,000 projects completed since program inception – equivalent to retrofitting all of the homes in Philadelphia.

** A completed project is counted for each independent contract executed between a homeowner and a qualified participating contractor which meets all program requirements.*

Emerging Opportunities

Multifamily Units



Multifamily Units

Low- and Moderate-Income Projects

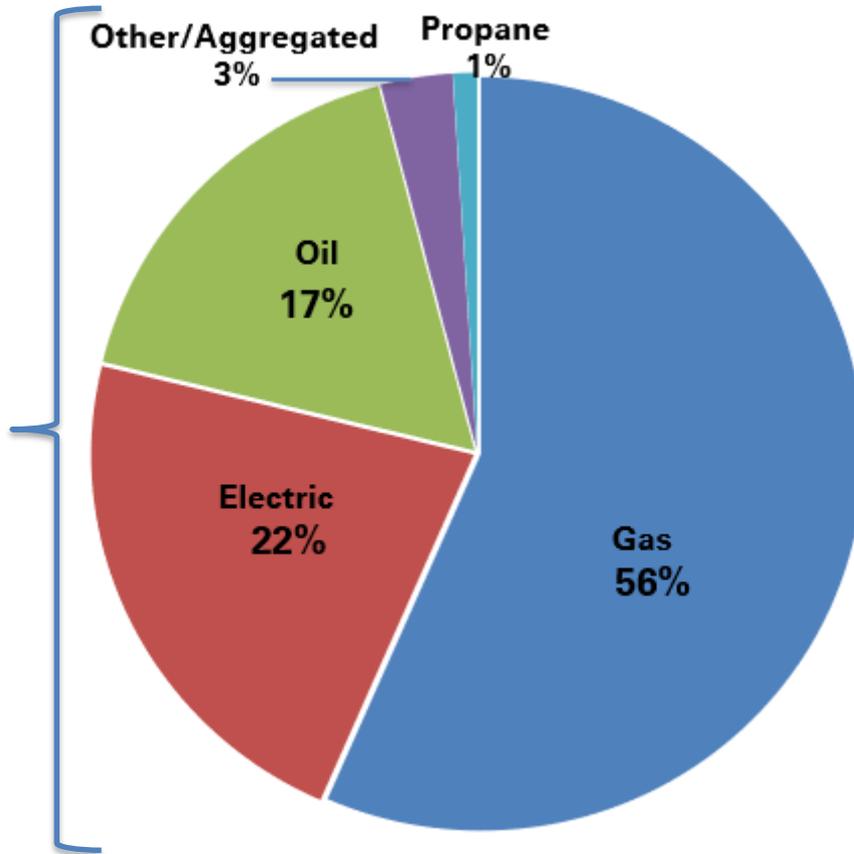


Low- and Moderate-Income Projects

2017 Energy Savings by Fuel Type (N=35)

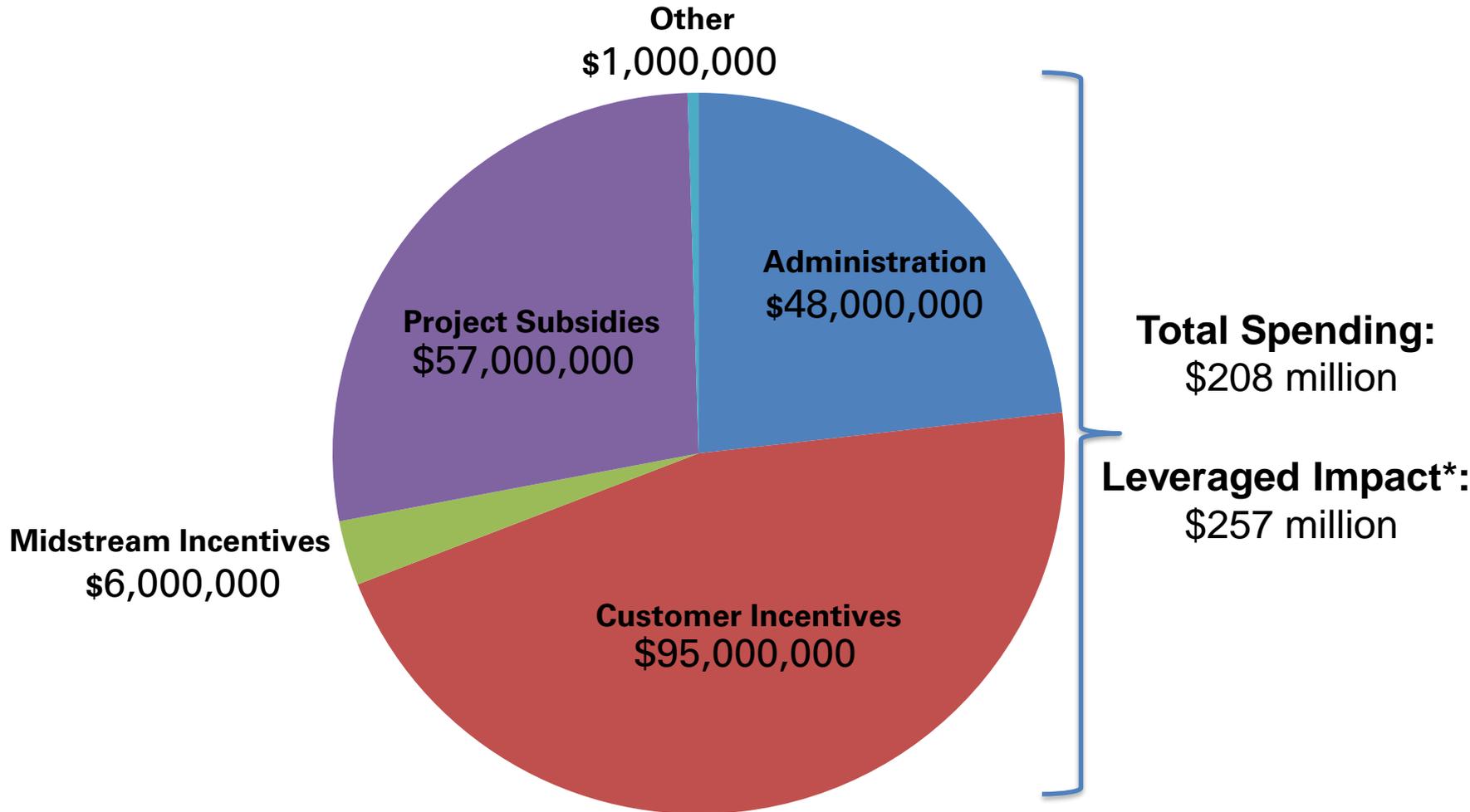
Total Savings:
1.6 million MMBtu

Per-Project Savings:
22 MMBtu



Estimated lifetime \$/kWh saved of between 3 and 4 cents based on a 2016 analysis of Sponsor program spending and fuel prices; we believe that this value characterizes 2017 as well.

2017 Sponsor Program Spending & Impact



**Leveraged Impact calculated as the number of 2017 projects multiplied by the difference between average invoice and average per-project customer incentives. Added to this is the total dollar value of energy savings, calculated by converting MMBtu savings to kWh savings and multiplying by the national average cost of 1 kWh of residential electricity.*

Total and Per-Project Incentives/Subsidies Spending

	2014 (N=41)	2015 (N=38)	2016 (N=41)	2017 Incentives (N=34)	2017 Subsidies (N=7*)
Total Spending	\$99 million	\$110 million	\$140 million	\$95 million	\$57 million
Per-Project Spending	\$1,800	\$2,300	\$2,800	\$1,377	\$1,322

A regression analysis of reported data since 2014 showed that spending on incentives correlates strongly with project volume (R-squared .90) and energy savings (R-squared .93).

**Per-project subsidies figure for 2017 reflects only those 7 Sponsors who reported spending more than \$0 on subsidies*

Per-Project Spending on Consumer Incentives, by % of Sponsors

	2014 (N=40)	2015 (N=38)	2016 (N=41)	2017 Incentives (N=34)	2017 Subsidies (N=34)
No Spending	15%	11%	15%	12%	80%
\$1 to \$1,000	35%	34%	24%	29%	11%
\$1,000 to \$1,999	20%	21%	29%	24%	6%
\$2,000 to \$2,999	23%	18%	15%	18%	3%
\$3,000 to \$3,999	5%	3%	10%	12%	0%
\$4,000 or more	2%	13%	7%	6%	0%

Customer Incentives Offered

Among Sponsors who indicated offering customer incentives...



72% offered measure-based rebates



28% offered free energy assessments



44% offered discounted energy assessments

Down from 76% in 2016



25% offered project-based rebates

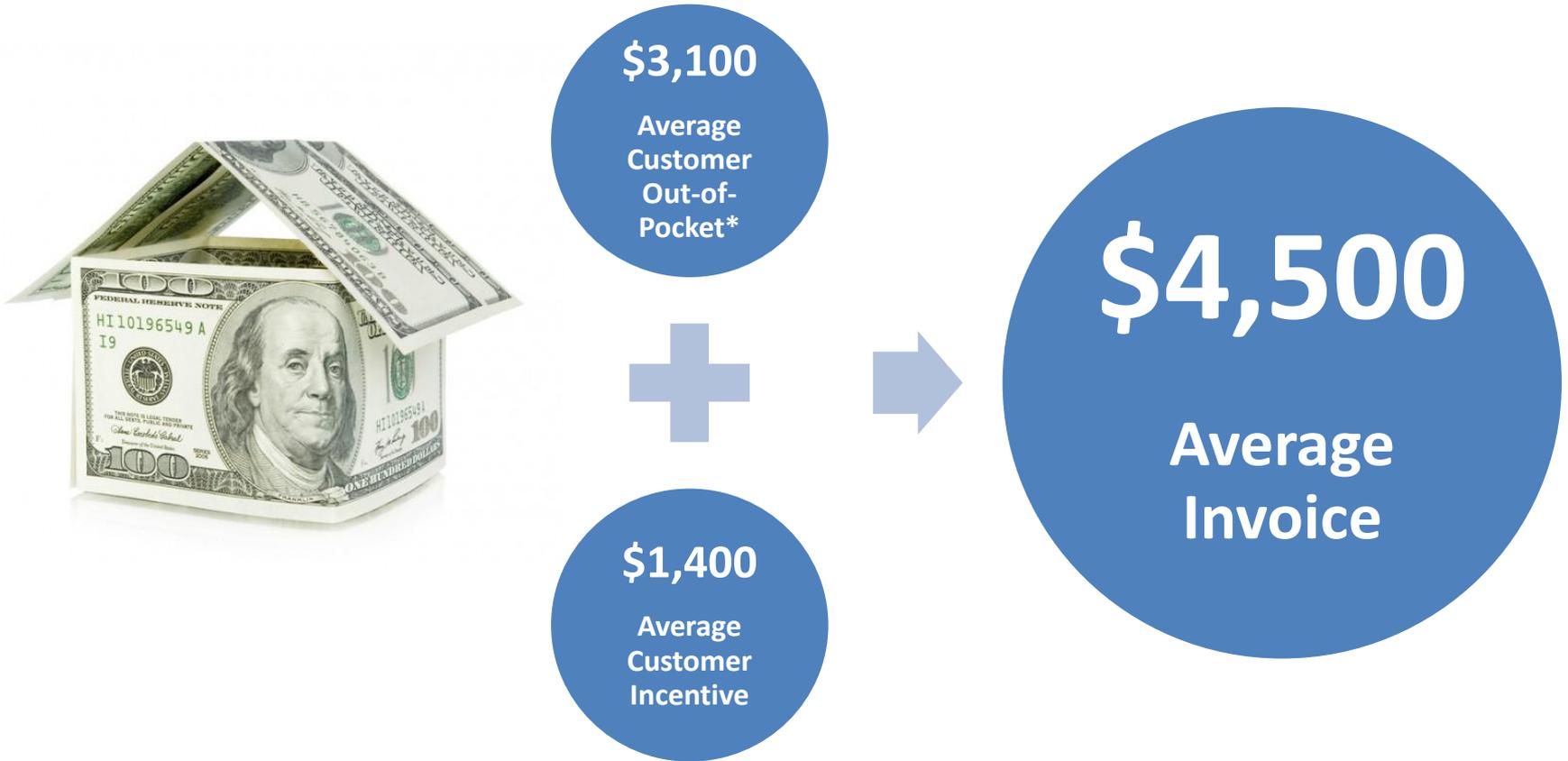


36% - offered low-interest financing



19% offered on-bill Financing

Settling Up



Average Invoice N=31
Average Customer Incentive N=34
*Calculated based on the other two figures

Project Measures

Percentage of Projects Completed with Each Measure (N=40)



Quality Assurance

\$387

Average cost of one field inspection
(N=34)

\$107

Average QA cost across all projects
(N=26)

Who Does QA? Sponsors say (N=40):

68% In-house
15% Contractor hired by program
10% Independent 3rd party
8% Hybrid

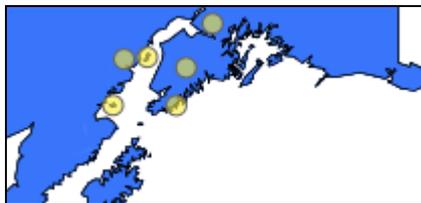
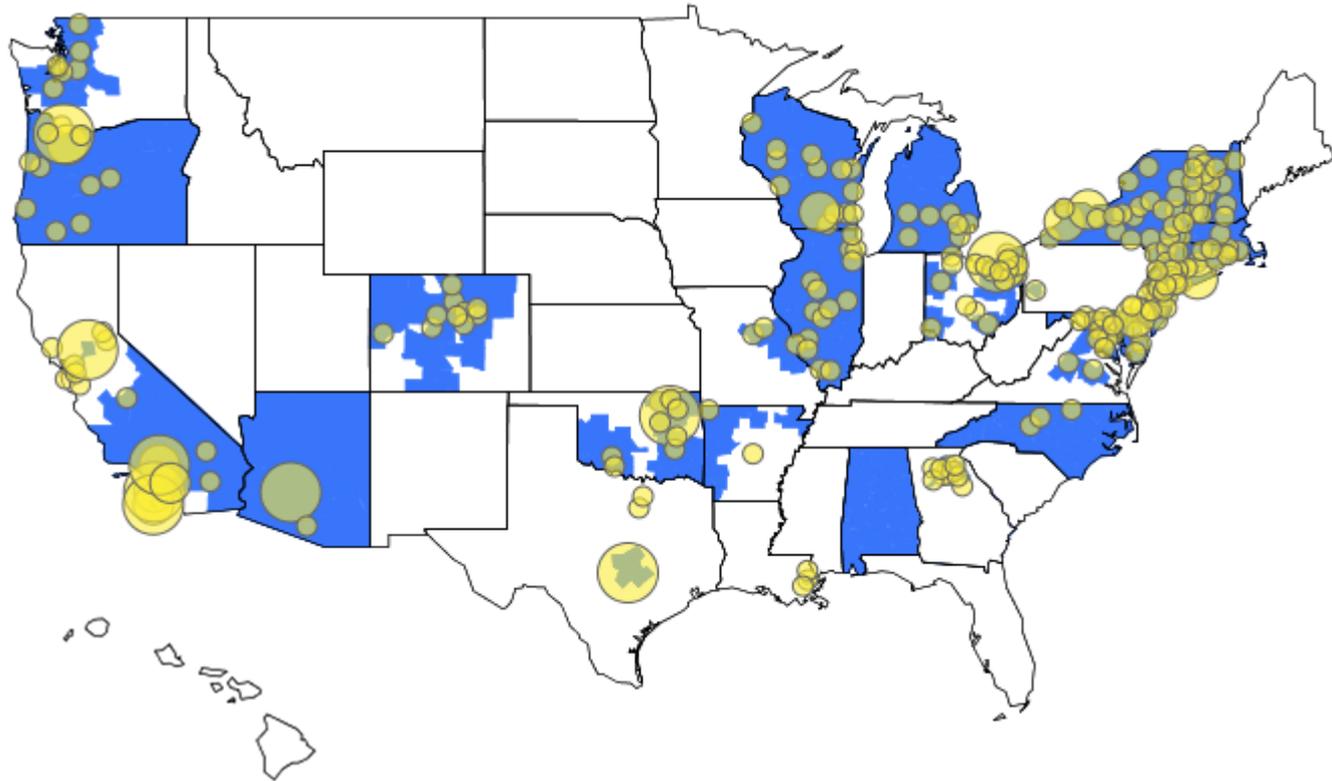
Data Limitations

- Data is as reported by HPwES Sponsors.
- In an attempt to compare similar data, it was necessary to omit some Sponsors' data from the analyses due to inconsistencies in it or how they defined the metric and/or answered the question. Unless otherwise stated, N=Number of Sponsors
- Apples-to-apples comparisons are complicated by differing reporting regimes and categorizations (see below).
- 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 cost, marketing, quality assurance, EM&V, or other miscellaneous program support costs.
- 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.
- All per-project averages are weighted by Sponsor project count unless otherwise indicated.
- Sponsors may define and incentivize low- and mid-income projects differently, with attendant differences in other reported figures.

2017 Regional Summary Data

Home Performance with ENERGY STAR Program

2017 HPwES Sponsor Territory Coverage

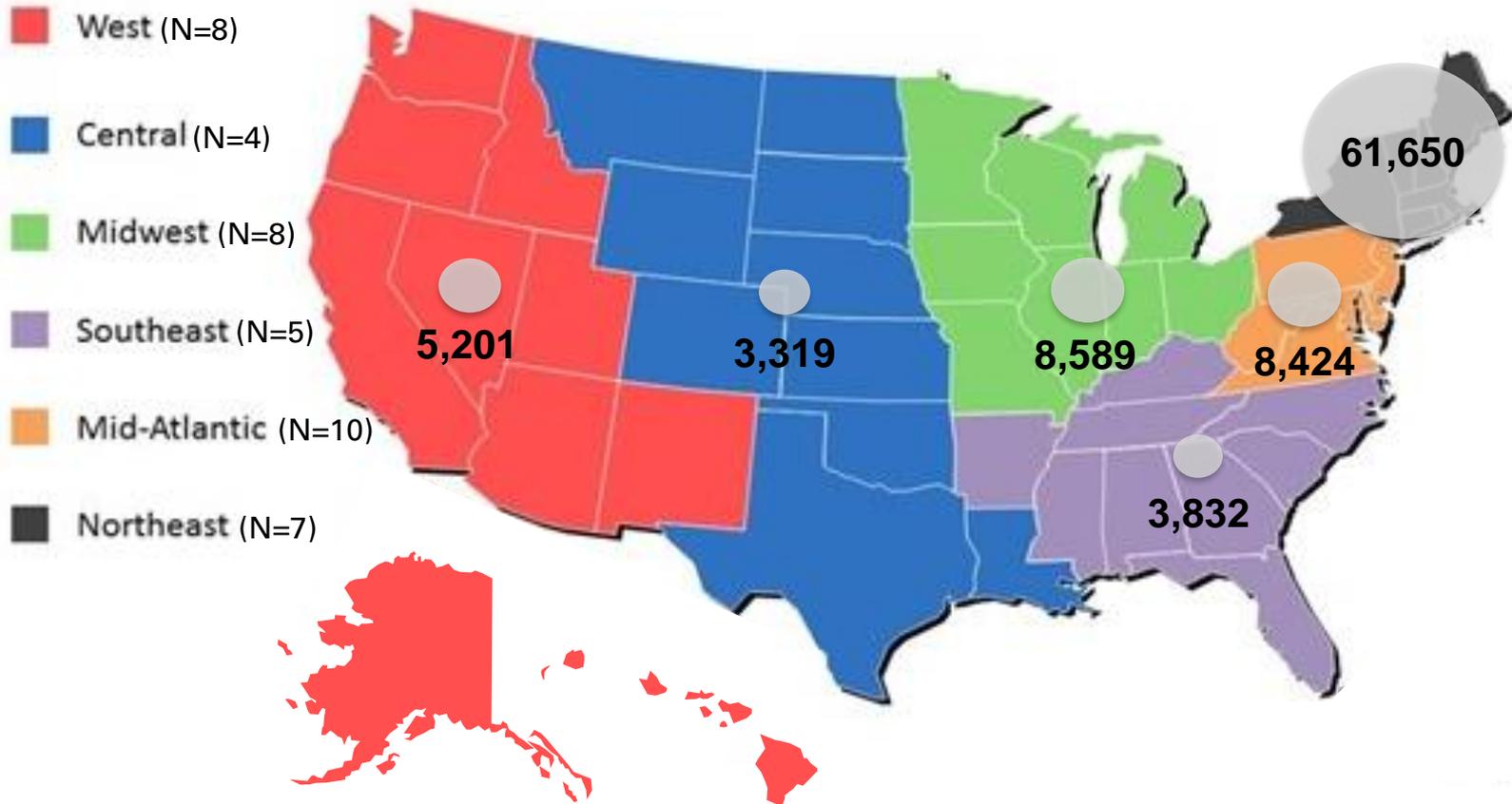


-  Contractor Presence
-  HPwES Coverage

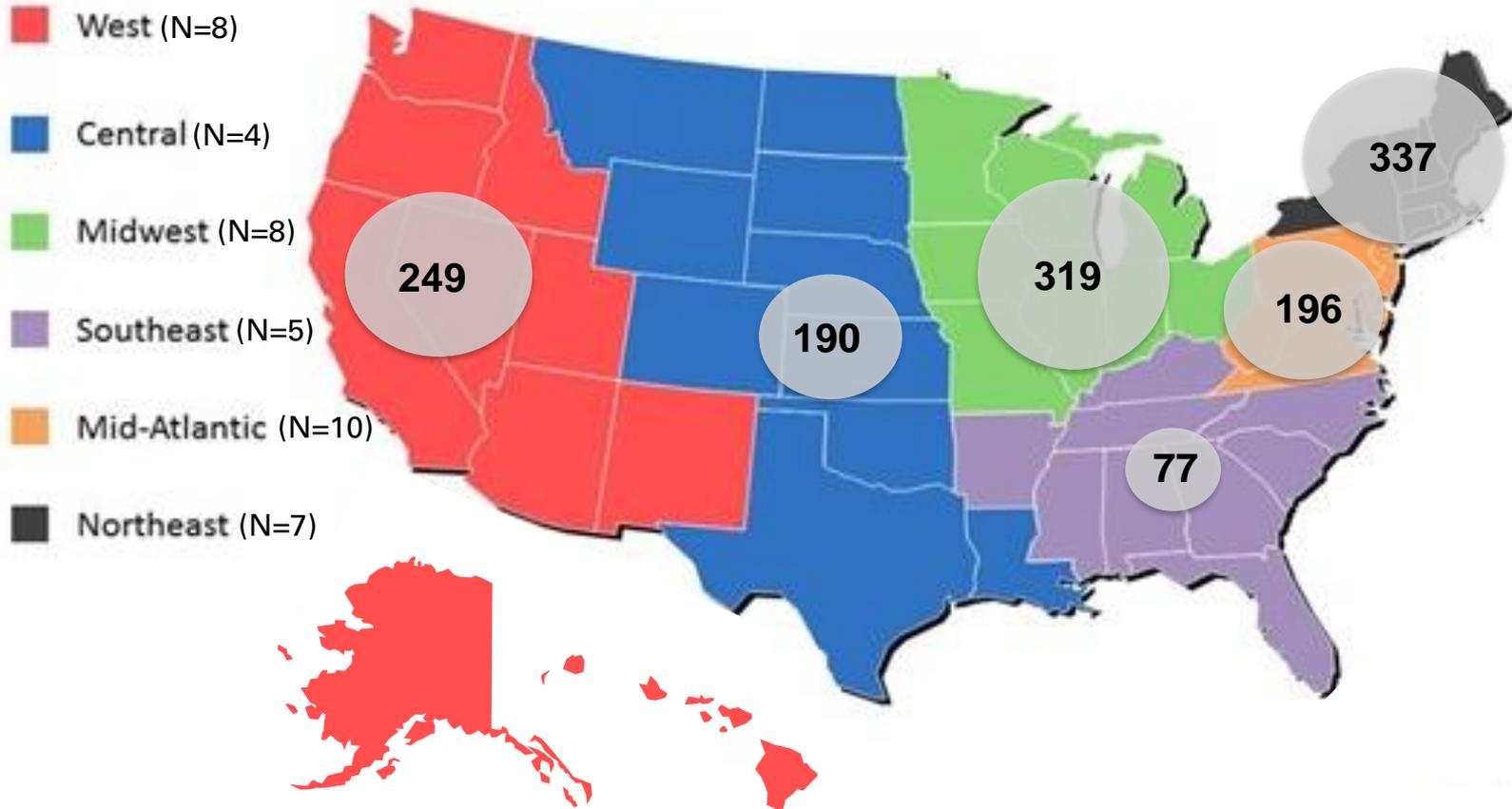
2017 HPwES Sponsors by NASEO* Region

Northeast	Energize Connecticut, New York State Energy Research and Development Authority, Public Service of New Hampshire, Efficiency Vermont, PSEG Long Island, National Grid Rhode Island, National Grid Massachusetts
Central	Entergy New Orleans, Public Service Company of Oklahoma, Austin Energy, Xcel Energy Colorado
Mid-Atlantic	New Jersey Board of Public Utilities, Baltimore Gas & Electric, Delaware Sustainable Energy Utility, Potomac Edison, Southern Maryland Electric Cooperative, Delmarva, Richmond Regional Energy Alliance, Conservation Consultants, Inc., Pearl Certification
Midwest	Focus on Energy, Dominion East Ohio, Consumers, Columbia Water & Light, Xcel Energy Minnesota, Greater Cincinnati Energy Alliance, Illinois Home Performance with ENERGY STAR, EarthWays
Southeast	Jackson Electric Membership Corporation, Southwestern Electric Power Company, Black Hills Energy Arkansas, Nexus, Advanced Energy
West	FSL Home Improvement, SoCal Gas, Alaska Housing Finance Corporation, Southern California Edison, Enhabit, Energy Trust of Oregon, Puget Sound, Efficiency First California

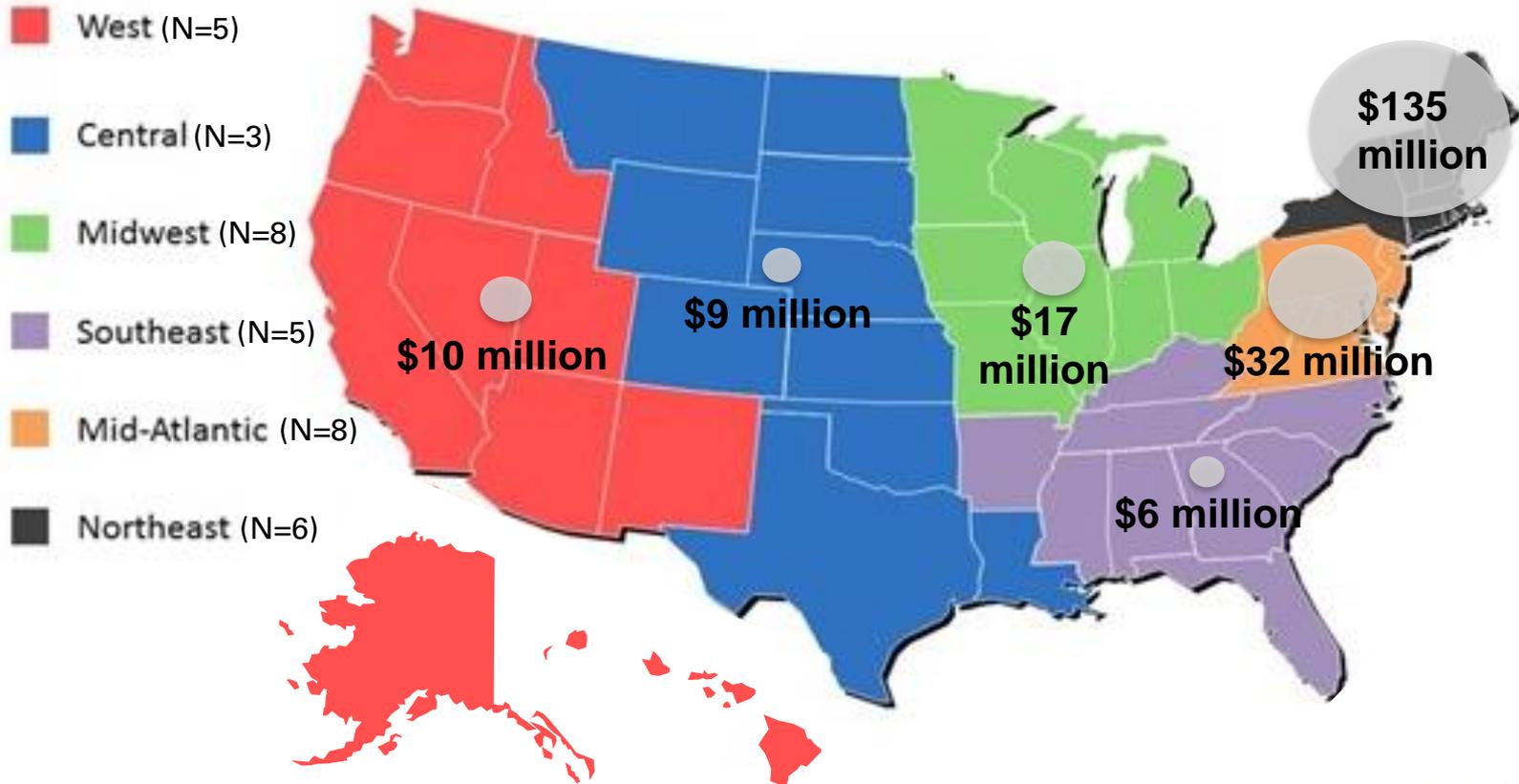
2017 Projects by Region (91,015 Total; N=42)



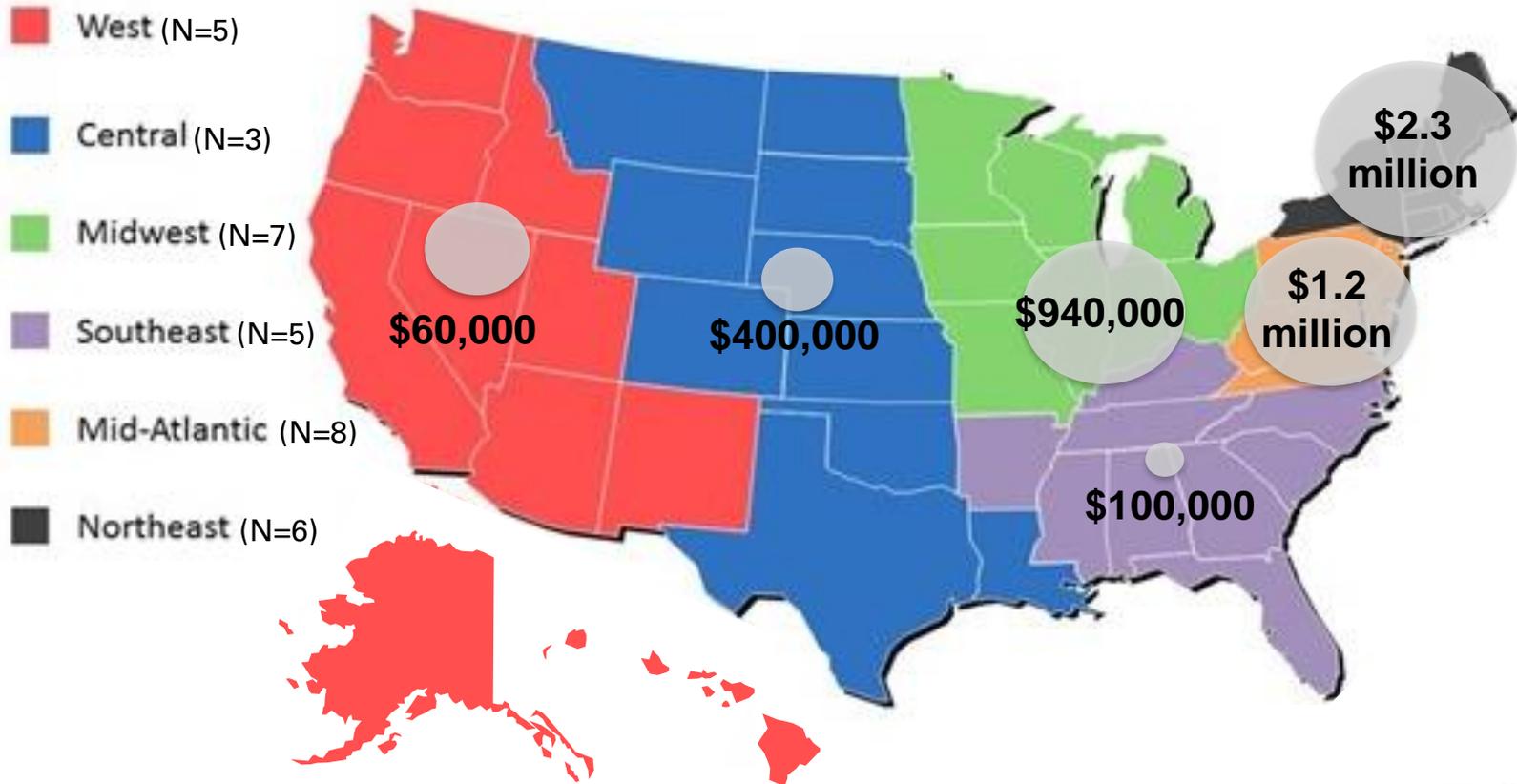
Active Contractors by Region (1,400 total; N=42)



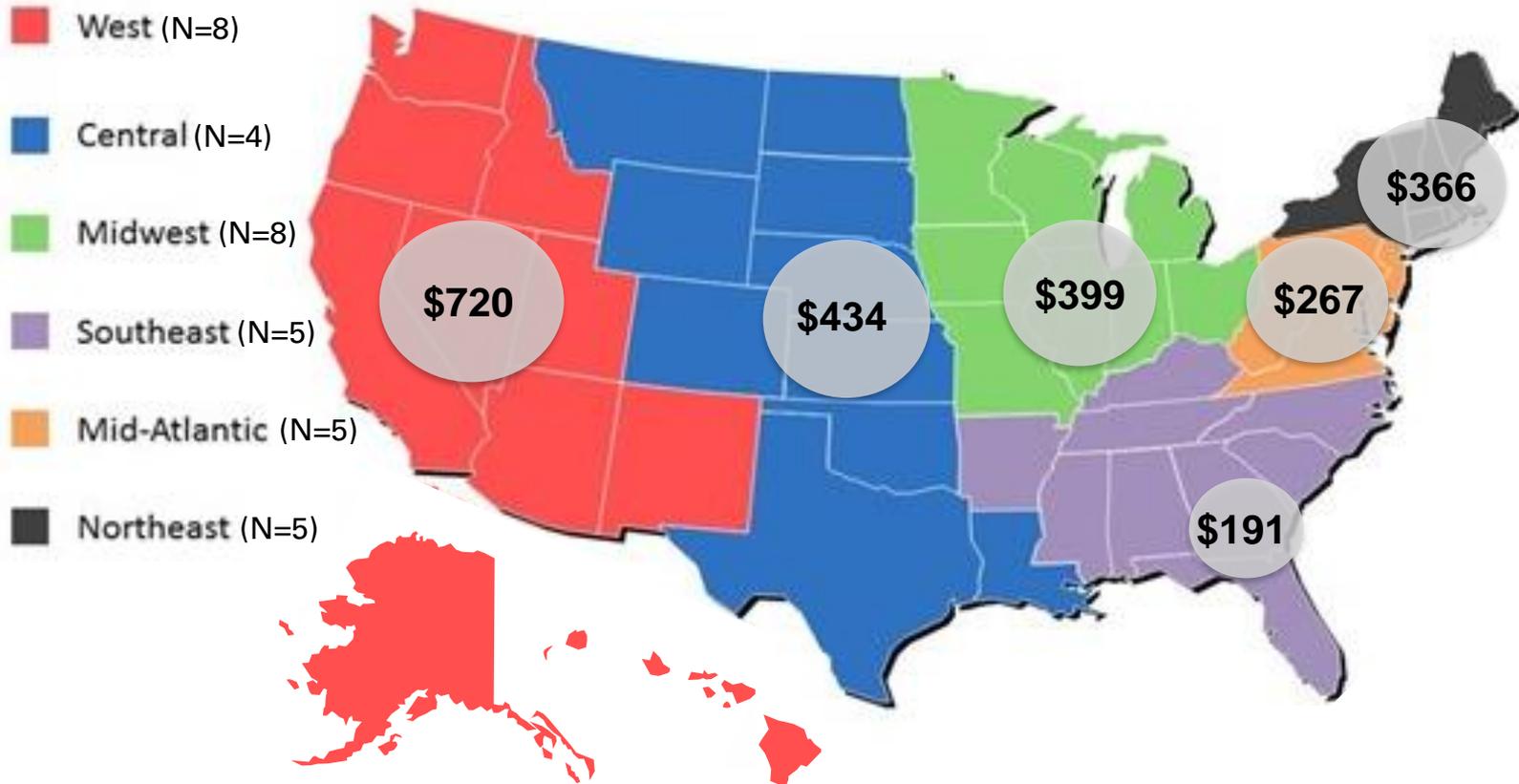
2017 Total Program Spending by Region (\$208 million total; N=35)



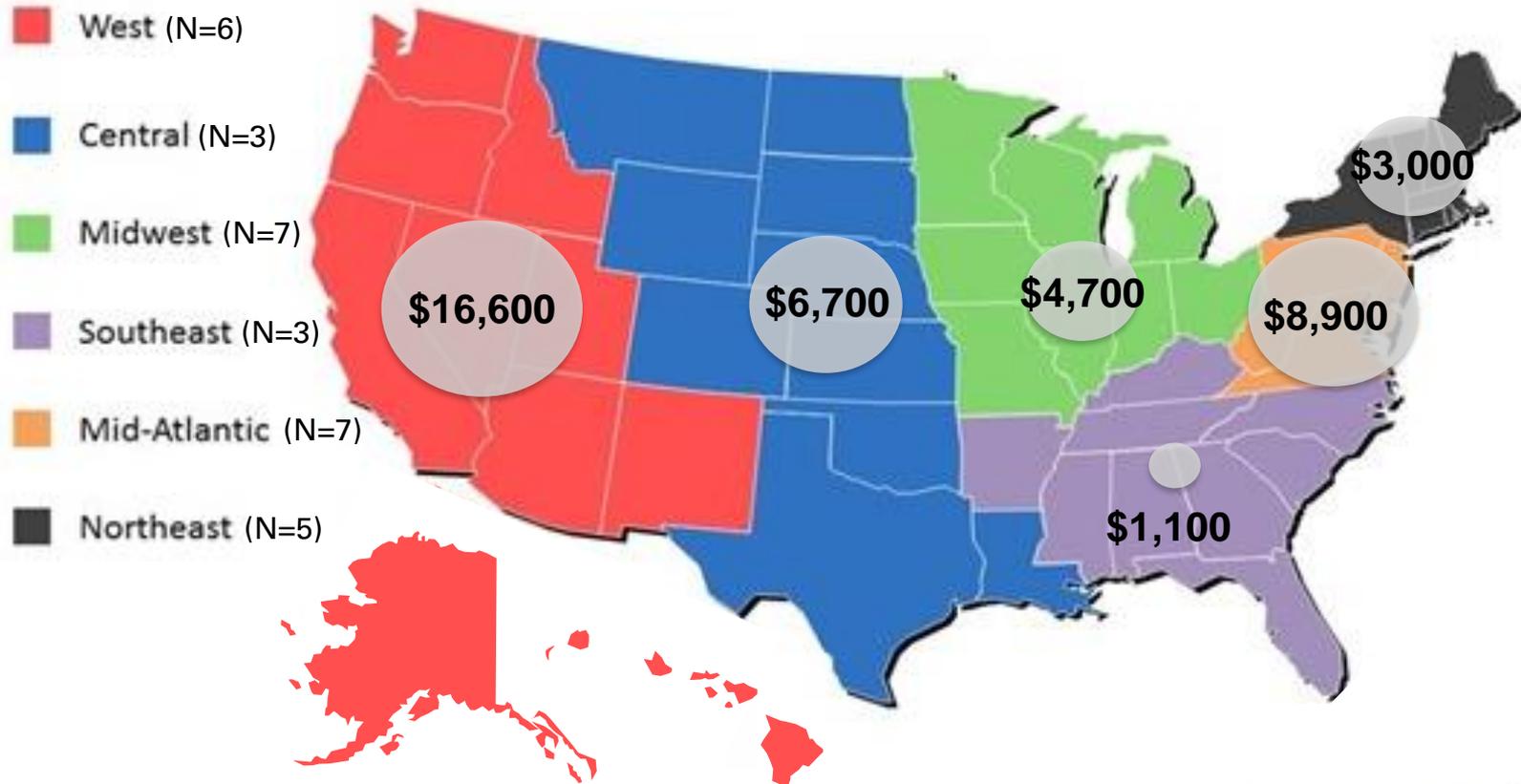
2017 Total Marketing Spend by Region (\$4.4 million total; N=34)



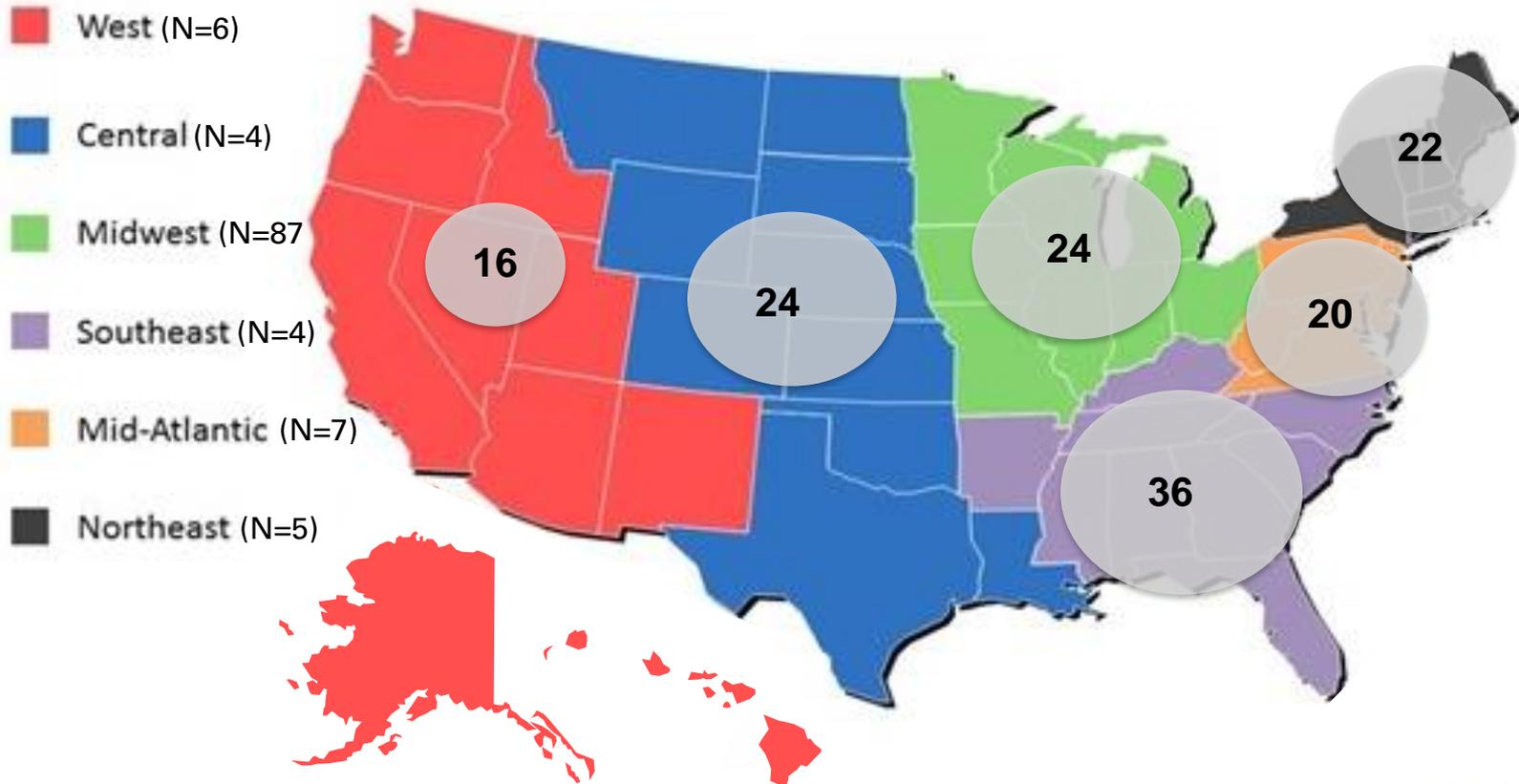
2017 Average Field Inspection Cost by Region (N=34)



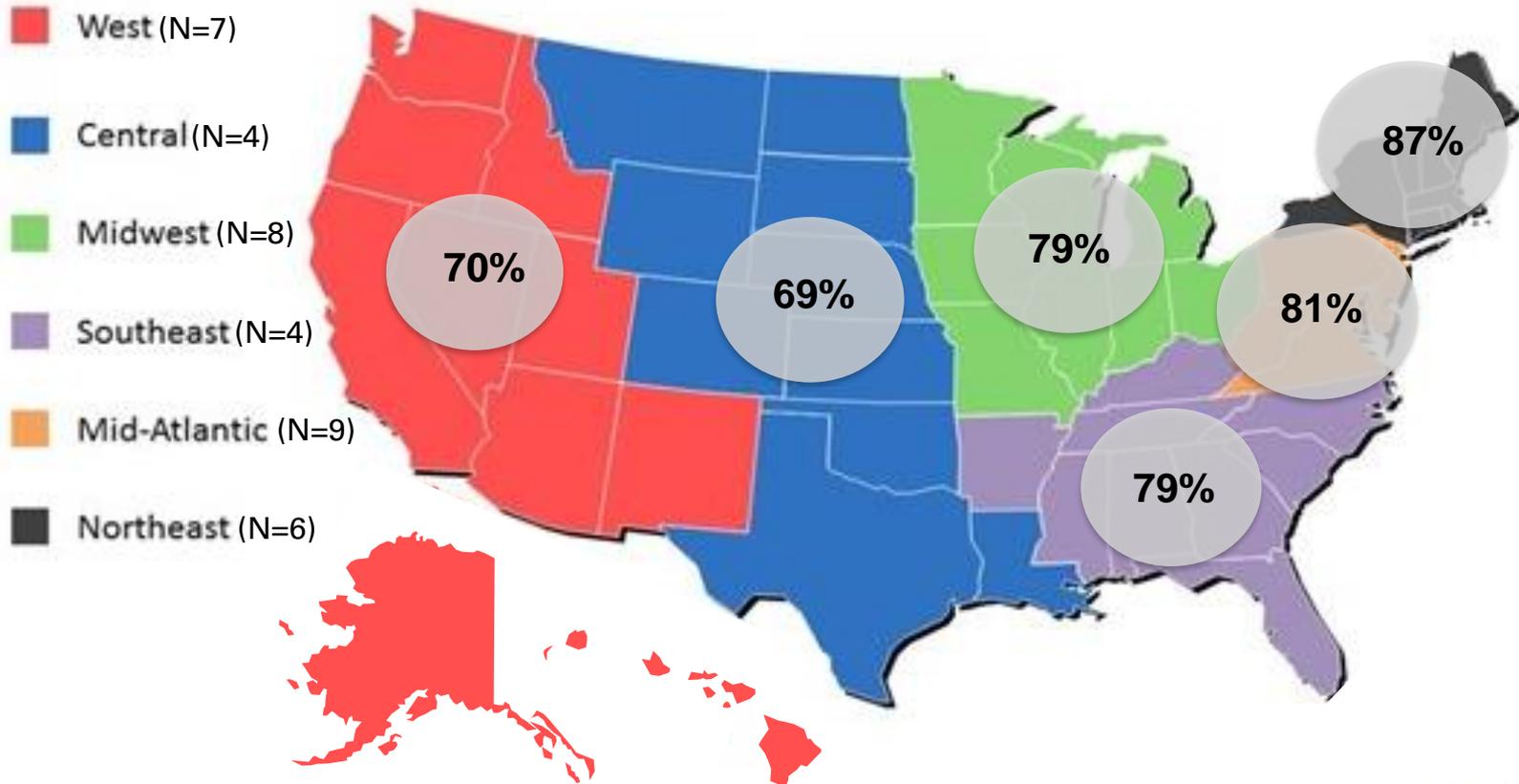
2017 Average Project Invoice Cost by Region (N=31)



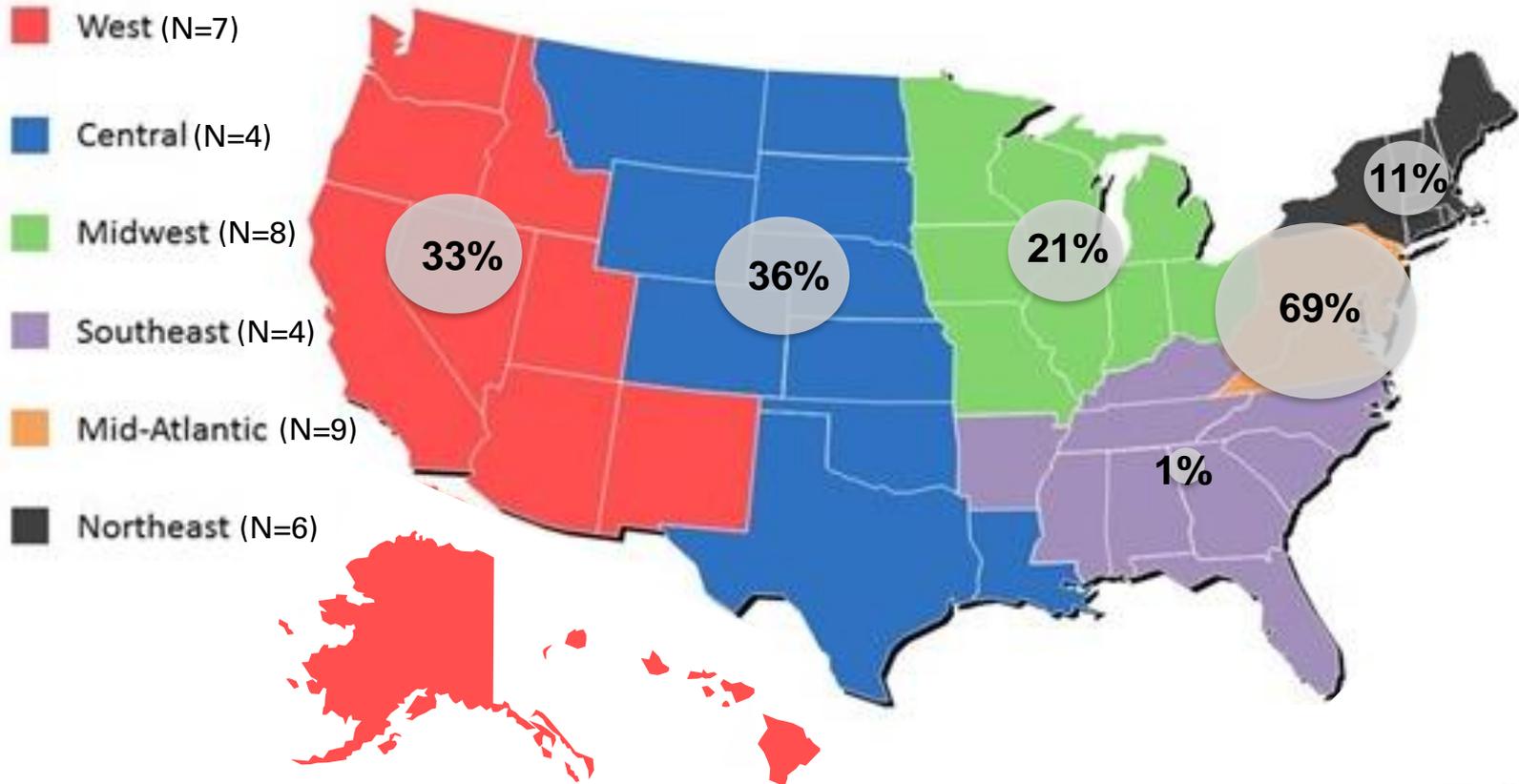
2017 Average Per-Project Energy Savings by Region (MMBtu; N=33)



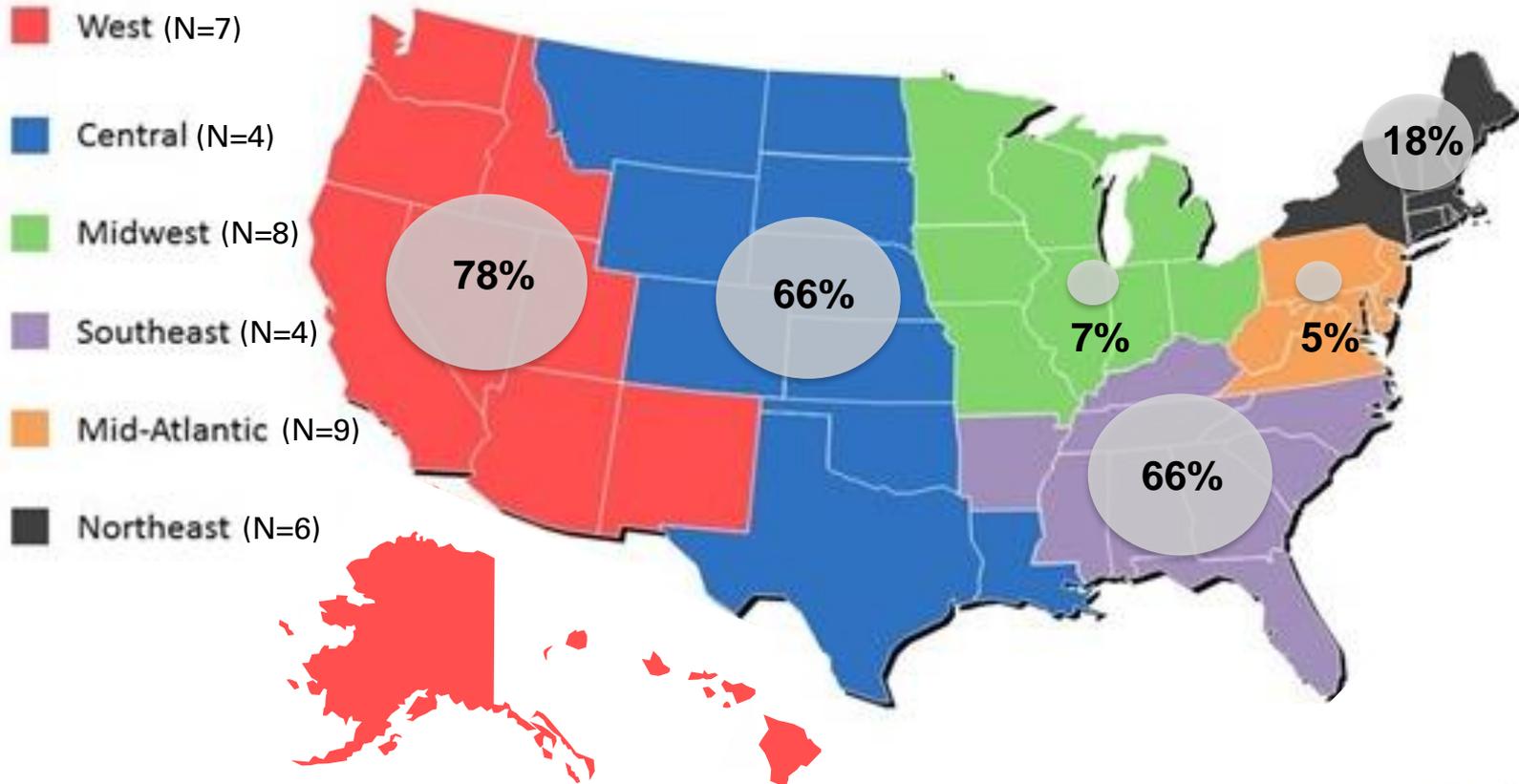
2017 % of Projects with Shell/Envelope Measures (N=38)



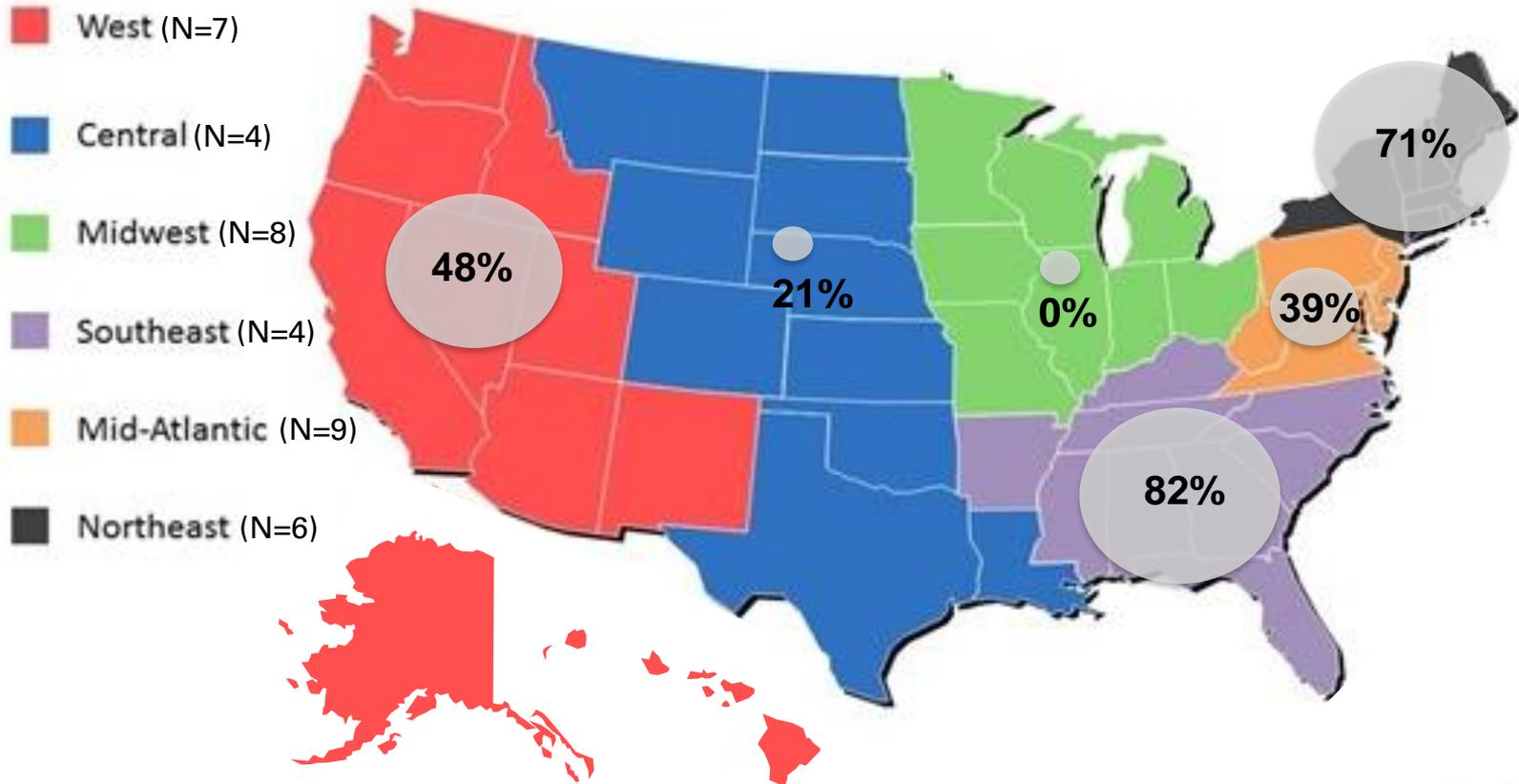
2017 % of Projects with HVAC Replacement Measures (N=38)



2017 % of Projects with Duct Sealing Measures (N=38)



2017 % of Projects with Lighting Measures (N=38)



Annual Results: Western Region

	2014	2015	2016	2017
<i>Sponsors</i>	5	6	8	8
<i>Projects</i>	3,805	3,902	5,507	5,201
<i>Administrative Spending</i>	\$2,100,000	\$910,000	\$5,700,000	\$3,050,000
<i>Customer Incentives/Subsidies Spending</i>	\$1,900,000	\$2,600,000	\$5,500,000	\$6,700,000
<i>Midstream Incentives Spending</i>	\$340,000	\$81,000	\$140,000	\$5,731
<i>Total Program Spending</i>	\$4,300,000	\$3,600,000	\$11,000,000	\$9,800,000
<i>Administrative Spend/Project (wtdavg)</i>	\$1,700	\$1,200	\$1,800	\$1,255
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$1,500	\$1,900	\$1,800	\$2,750
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$280	\$110	\$46	\$2
<i>Total Program Spend/Project (wtdavg)</i>	\$3,600	\$2,600	\$3,700	\$4,020
<i>Avg. Invoice (wtdavg)</i>	\$6,400	\$14,000	\$14,000	\$16,600
<i>Total Energy Savings (MMBtu)</i>	54,000	41,000	73,000	43,075
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	14	11	18	18
<i>Marketing Spending</i>	\$510,000	\$120,000	\$510,000	\$63,000
<i>Marketing Spend/Project (wtdavg)</i>	\$420	\$160	\$300	\$26
<i>Multifamily Projects</i>	NA	NA	2	0
<i>Low-Income Projects</i>	NA	NA	9	4
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$236	\$430	\$510	\$720

Annual Results: Mid-Atlantic Region

	2014	2015	2016	2017
<i>Sponsors</i>	11	9	11	10
<i>Projects</i>	9,449	9,455	7,704	8,424
<i>Administrative Spending</i>	\$9,000,000	\$8,500,000	\$7,000,000	\$7,200,000
<i>Customer Incentives/Subsidies Spending</i>	\$33,000,000	\$44,000,000	\$36,000,000	\$24,500,000
<i>Midstream Incentives Spending</i>	\$3,900,000	\$4,300,000	\$3,700,000	\$750,000
<i>Total Program Spending</i>	\$50,000,000	\$57,000,000	\$47,000,000	\$32,400,000
<i>Administrative Spend/Project (wtdavg)</i>	\$960	\$890	\$910	\$878
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$3,500	\$4,600	\$4,700	\$3,000
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$420	\$460	\$480	\$106
<i>Total Program Spend/Project (wtdavg)</i>	\$5,400	\$6,000	\$6,100	\$3,950
<i>Avg. Invoice (wtdavg)</i>	\$11,000	\$11,000	\$9,700	\$8,900
<i>Total Energy Savings (MMBtu; wtdavg)*</i>	260,000	270,000	250,000	170,000
<i>Energy Savings/Project (MMBtu; wtdavg)*</i>	28	29	32	20
<i>Marketing Spending</i>	\$400,000	\$1,400,000	\$1,300,000	\$1,200,000
<i>Marketing Spend/Project (wtdavg)</i>	\$62	\$150	\$160	\$150
<i>Multifamily Projects</i>	NA	NA	1249	1162
<i>Low-Income Projects</i>	NA	NA	5	43
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$310	\$330	\$300	\$270

Annual Results: Central Region

	2014	2015	2016	2017
<i>Sponsors</i>	6	6	4	4
<i>Projects</i>	4,933	5,100	3,625	3,319
<i>Administrative Spending</i>	\$1,800,000	\$2,200,000	\$1,900,000	\$3,300,000
<i>Customer Incentives/Subsidies Spending</i>	\$6,900,000	\$8,000,000	\$4,500,000	\$5,300,000
<i>Midstream Incentives Spending</i>	\$87,000	\$130,000	\$94,000	\$116,000
<i>Total Program Spending</i>	\$8,700,000	\$10,000,000	\$6,400,000	\$8,800,000
<i>Administrative Spend/Project (wtdavg)</i>	\$440	\$520	\$760	\$1,377
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$1,400	\$1,900	\$1,800	\$2,220
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$22	\$31	\$38	\$48
<i>Total Program Spend/Project (wtdavg)</i>	\$1,800	\$2,400	\$2,600	\$3,600
<i>Avg. Invoice (wtdavg)</i>	\$7,100	\$5,400	\$5,400	\$6,727
<i>Total Energy Savings (MMBtu)</i>	94,000	140,000	78,000	79,000
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	21	28	21	24
<i>Marketing Spending</i>	\$180,000	\$530,000	\$240,000	\$420,000
<i>Marketing Spend/Project (wtdavg)</i>	\$44	\$120	\$67	\$173
<i>Multifamily Projects</i>	NA	NA	102	117
<i>Low-Income Projects</i>	NA	NA	420	400
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$330	\$420	\$330	\$434

Annual Results: Northeast Region

	2014	2015	2016	2017
<i>Sponsors</i>	7	7	7	7
<i>Projects</i>	61,507	26,942	56,404	61,650
<i>Administrative Spending</i>	\$16,000,000	\$16,000,000	\$26,000,000	\$26,000,000
<i>Customer Incentives/Subsidies Spending</i>	\$48,000,000	\$50,000,000	\$87,000,000	\$103,000,000
<i>Midstream Incentives Spending</i>	\$5,400,000	\$4,700,000	\$5,500,000	\$4,900,000
<i>Total Program Spending</i>	\$208,000,000	\$102,000,000	\$146,000,000	\$135,000,000
<i>Administrative Spend/Project (wtdavg)</i>	\$613	\$680	\$870	\$604
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$1,800	\$2,100	\$3,000	\$2,368
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$200	\$180	\$190	\$112
<i>Total Program Spend/Project (wtdavg)</i>	\$3,600	\$4,300	\$5,000	\$3,090
<i>Avg. Invoice (wtdavg)</i>	\$5,600	\$5,700	\$4,600	\$3,000
<i>Total Energy Savings (MMBtu)</i>	1,400,000	730,000	1,100,000	900,000
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	24	31	36	22
<i>Marketing Spending</i>	\$2,700,000	\$1,100,000	\$1,400,000	\$2,300,000
<i>Marketing Spend/Project (wtdavg)</i>	\$100	\$48	\$47	\$53
<i>Multifamily Projects</i>	NA	NA	907	6628
<i>Low-Income Projects</i>	NA	NA	11,924	22,306
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$440	\$460	\$400	\$366

Annual Results: Southeast Region

	2014	2015	2016	2017
<i>Sponsors</i>	8	7	6	5
<i>Projects</i>	1,930	1,975	3,549	3,832
<i>Administrative Spending</i>	\$1,300,000	\$710,000	\$1,900,000	\$2,500,000
<i>Customer Incentives/Subsidies Spending</i>	\$1,600,000	\$2,000,000	\$3,000,000	\$3,000,000
<i>Midstream Incentives Spending</i>	\$110,000	\$54,000	\$90,000	\$80,000
<i>Total Program Spending</i>	\$4,000,000	\$2,800,000	\$5,000,000	\$5,500,000
<i>Administrative Spend/Project (wtdavg)</i>	\$660	\$360	\$540	\$640
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$890	\$1,000	\$820	\$771
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$58	\$28	\$25	\$21
<i>Total Program Spend/Project (wtdavg)</i>	\$2,100	\$1,400	\$1,500	\$1,443
<i>Avg. Invoice (wtdavg)</i>	\$2,800	\$1,600	\$900	\$1,143
<i>Total Energy Savings (MMBtu)</i>	18,000	47,000	100,000	136,000
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	11	25	31	27
<i>Marketing Spending</i>	\$170,000	\$37,000	\$69,000	\$100,000
<i>Marketing Spend/Project (wtdavg)</i>	\$86	\$18	\$20	\$26
<i>Multifamily Projects</i>	NA	NA	900	1518
<i>Low-Income Projects</i>	NA	NA	150	101
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$170	\$190	\$560	\$191

Annual Results: Midwest Region

	2014	2015	2016	2017
<i>Sponsors</i>	10	10	10	8
<i>Projects</i>	11,646	8,522	4,414	8,589
<i>Administrative Spending</i>	\$6,100,000	\$5,400,000	\$5,700,000	\$5,700,000
<i>Customer Incentives/Subsidies Spending</i>	\$7,600,000	\$6,400,000	\$4,400,000	\$9,900,000
<i>Midstream Incentives Spending</i>	\$560,000	\$400,000	\$310,000	\$350,000
<i>Total Program Spending</i>	\$14,000,000	\$12,000,000	\$10,400,000	\$16,900,000
<i>Administrative Spend/Project (wtdavg)</i>	\$530	\$660	\$1,300	\$661
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$660	\$780	\$1,000	\$619
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$49	\$48	\$71	\$40
<i>Total Program Spend/Project (wtdavg)</i>	\$1,200	\$1,500	\$3,100	\$1,958
<i>Avg. Invoice (wtdavg)</i>	\$4,100	\$4,100	\$4,600	\$4,717
<i>Total Energy Savings (MMBtu)</i>	330,000	200,000	140,000	208,000
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	33	28	33	24
<i>Marketing Spending</i>	\$480,000	\$520,000	\$930,000	\$940,000
<i>Marketing Spend/Project (wtdavg)</i>	\$42	\$64	\$217	\$108
<i>Multifamily Projects</i>	NA	NA	1	0
<i>Low-Income Projects</i>	NA	NA	549	3520
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$310	\$290	\$250	\$400

Annual Results: All Regions

	2014	2015	2016	2017
<i>Sponsors</i>	48	45	46	42
<i>Projects</i>	93,561	88,816	81,204	91,015
<i>Administrative Spending</i>	\$36,000,000	\$34,000,000	\$48,000,000	\$48,000,000
<i>Customer Incentives/Subsidies Spending</i>	\$99,000,000	\$110,000,000	\$140,000,000	\$153,000,000
<i>Midstream Incentives Spending</i>	\$10,000,000	\$10,000,000	\$10,000,000	\$6,000,000
<i>Total Program Spending</i>	\$290,000,000	\$187,000,000	\$230,000,000	\$208,000,000
<i>Administrative Spend/Project (wtdavg)</i>	\$670	\$700	\$920	\$700
<i>Customer Incentives/Subsidies Spend/Project (wtdavg)</i>	\$1,800	\$2,300	\$2,800	\$2,200
<i>Midstream Incentives Spend/Project (wtdavg)</i>	\$190	\$260	\$200	\$91
<i>Total Program Spend/Project (wtdavg)</i>	\$3,300	\$3,800	\$4,500	\$3,000
<i>Avg. Invoice (wtdavg)</i>	\$6,300	\$6,600	\$5,500	\$4,500
<i>Total Energy Savings (MMBtu)</i>	2,100,000	1,400,000	1,700,000	1,600,000
<i>Energy Savings/Project (MMBtu; wtdavg)</i>	24	28	33	22
<i>Marketing Spending</i>	\$4,500,000	\$3,700,000	\$4,400,000	\$5,000,000
<i>Marketing Spend/Project (wtdavg)</i>	\$87	\$77	\$88	\$73
<i>Multifamily Projects</i>	NA	NA	3,204	9,425
<i>Low-Income Projects</i>	NA	NA	13,061	26,384
<i>Avg. Field Inspection Cost (wtdavg)</i>	\$380	\$380	\$400	\$400

Questions?

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