



Better Buildings Neighborhood Program (BBNP) Summary of Reported Data

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- July 5, 2010: Kick-off (Originally called Retrofit Ramp-Up)
- Leverage \$508M in Recovery Act (ARRA) and FY10 funding to spur nationwide energy efficiency program innovation
 - Target urban, suburban, and rural environments (all building sectors)
 - Capitalize on economies of scale
 - Encourage industry partnerships and investment
 - Emphasize sustainability beyond the grant
- Learn what is effective and replicable

BBNP Goals & Accomplishment EO2013



BBNP Goals: Dec. 2013	Accomplishments: Dec. 2013
Upgrade more than 100,000 buildings	101,482 homes upgraded (single-family and multifamily) 3,858 commercial buildings upgraded (more than 83 million sq. ft.)
Achieve 15% to 30% energy savings	Average home energy savings of 22-26%
Save consumers \$65M annually	\$74M annual gross estimated saving More than \$800M gross estimated lifetime energy cost saving
Leverage \$1- \$3B in additional resources	Over \$770M non-BBNP expenditures (other federal and non-federal sources) Over \$440M in private and federal loan capital (>12,000 upgrades financed)
Reduce program delivery cost 20% or more	Reduction in cost of energy efficiency program delivery on track; analysis will be complete in 2014
Create or retain 10,000 – 30,000 jobs	4,266 person-years through June 2012 (final evaluation underway – on track to goal)

Why Collect Data?

Problem Statement: More data needed to understand the effectiveness of upgrade strategies and program models that reduce building energy use. More empirical data supporting effective strategies is foundational to the development of a self-sustaining building energy upgrade market.*

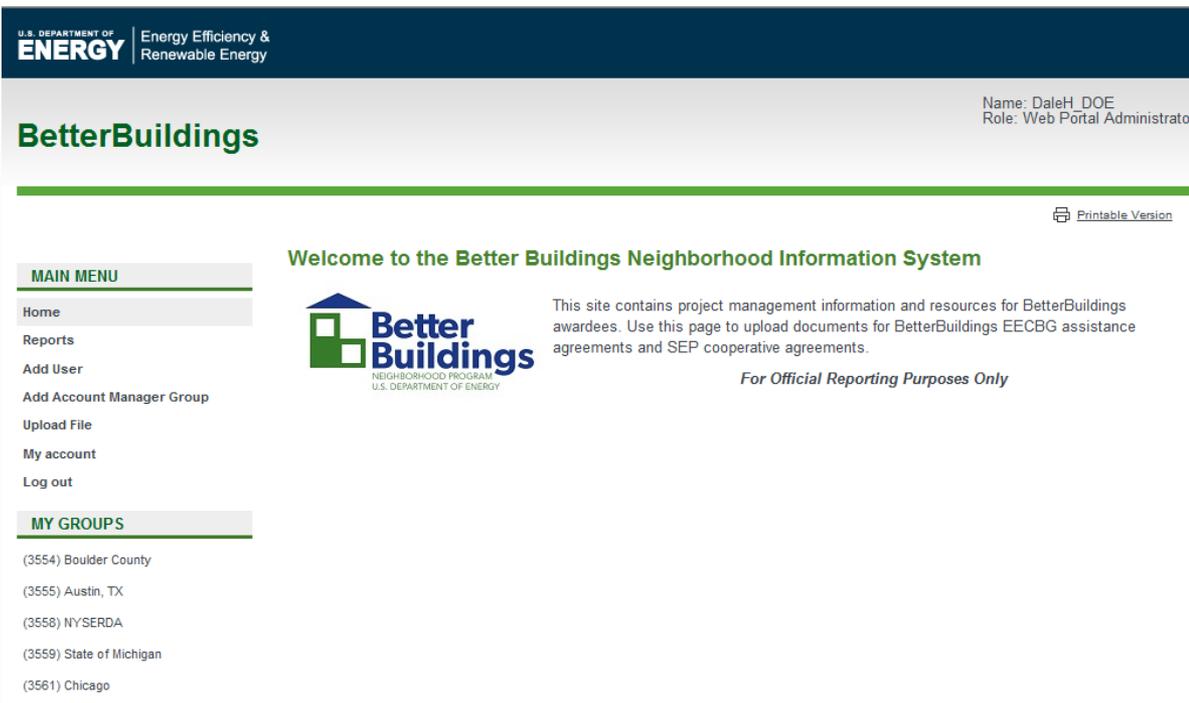
Target Market and Audience:

- 1) Data needed to monitor grantee progress
- 2) Data needed to complete BBNP evaluation.
- 3) Researchers, program administrators, building contractors, and investors that want to reduce building energy use are interested in effective strategies, supported by data, to help them make program design, business model and investment decisions.

How Was Data Collected?

Data collection was unique for each grantee
Grantee reporting was quarterly and standardized

- Upload Excel Reporting Template to BBNIS Web Portal
- Use BBNIS Web Service for XML Data Transfer



The screenshot shows the user interface of the Better Buildings Neighborhood Information System. At the top, there is a dark blue header with the U.S. Department of Energy logo and the text "Energy Efficiency & Renewable Energy". Below this, the "BetterBuildings" logo is displayed on the left, and the user's name and role, "Name: DaleH_DOE Role: Web Portal Administrator", are shown on the right. A green horizontal line separates the header from the main content area. On the right side of this line, there is a "Printable Version" link. The main content area features a "MAIN MENU" on the left with links for Home, Reports, Add User, Add Account Manager Group, Upload File, My account, and Log out. Below the menu is a "MY GROUPS" section listing various grantee locations: (3554) Boulder County, (3555) Austin, TX, (3558) NYSERDA, (3559) State of Michigan, and (3561) Chicago. In the center of the main content area, there is a "Welcome to the Better Buildings Neighborhood Information System" message, a "Better Buildings" logo, and a paragraph of text: "This site contains project management information and resources for BetterBuildings awardees. Use this page to upload documents for BetterBuildings EECEBG assistance agreements and SEP cooperative agreements." Below this text is the phrase "For Official Reporting Purposes Only".

Only a few grantees used XML to report building upgrade project data.

What Data Was Collected?

Programmatic Data

~50 potential data elements per grantee per quarter

- Obligations
- BBNP Award Spending (Marketing, Labor & Materials, Other Program Expenses),
- Total Job Hours Worked (**SEP**)
- # of Individuals Trained and Certified (**EECBG**)
- Audits Completed (by building sector)
- Estimated Annual Energy Saving (by energy type)
- Estimated Annual Energy Cost Savings
- Other Federal and Non-federal expenditures (Leveraged Funding)
- Market Definition (**EECBG**)
- # of Active Contractors (**SEP**)
- Marketing and Outreach tactics

(optional)

Upgrade Project Data

~50-60 potential mandatory data elements per project (over 200 total requested, including optional)

- General (ID#, type, zip code)
- Building (energy provider, **floor area, year constructed, # of occupants**)
- Audit (date, software/type, hours, cost, est. energy savings)
- Upgrade (date, **contractor**, contractor certification, hours worked, invoiced cost, loan amount, **incentives**)
- Installed Measures (# of heating, cooling, or energy conservation measures, **details**)
- Estimated Annual Energy Savings (by energy type and method of prediction)
- Estimated Annual Energy Cost Savings
- Renewable system (type, size, hours, cost)
- Loan Details (date, terms, rate, income, FICO, debt, valuation)
- Monthly energy consumption

Information was reported by grantees using DOE reporting forms and processes. Steps were taken to verify data quality, but we cannot ensure 100% accuracy.

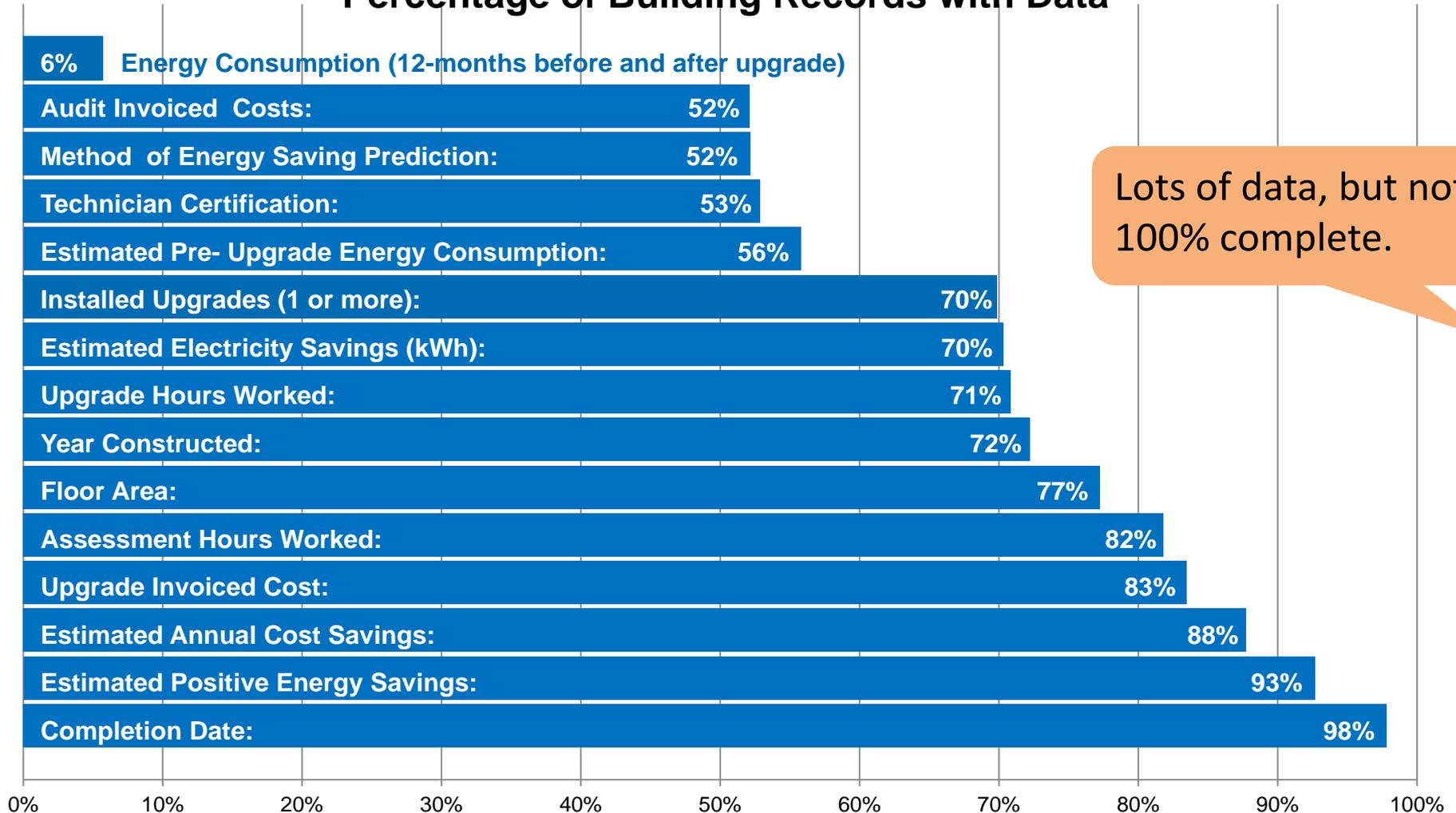
Lots of data, but not 100% reliable.

Three potential types of errors in data

- Non-response—data that is not available, not applicable, or not reported.
- Incorrect Response—data that is incorrect because the requested information was not understood; there was a lack of attention to detail; or information was misrepresented.
- Processing Errors—data that is incorrect because of errors introduced when processing reports

Buildings Data Completeness

Percentage of Building Records with Data



Lots of data, but not 100% complete.

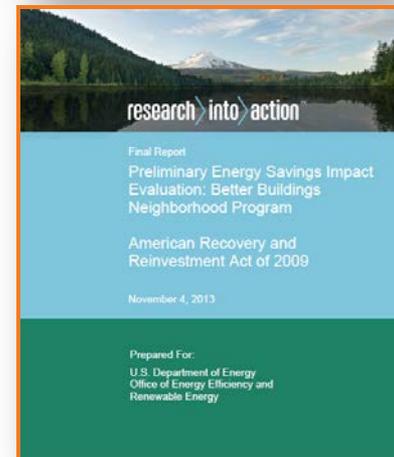
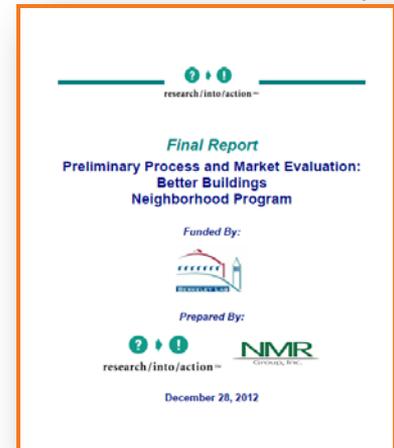
What Data Will Be Available?

- BBNP Independent Evaluations [next slide]
- Recovery.gov / ARRA data (jobs, expenditures by recipient, sub-grants and vendors)
- BBNP Summary of Reported Data (reports)
 - Programmatic data from 41 grants implementing diverse program strategies over 2½ years
- Building Upgrade Data
 - ~75,000 Residential Single-Family Building records
 - ~12,000 records with loans
 - ~5000 with normalized consumption before and after the upgrade.
- Grant Recipients' Final Reports (results, strategies used, lessons learned, next steps)

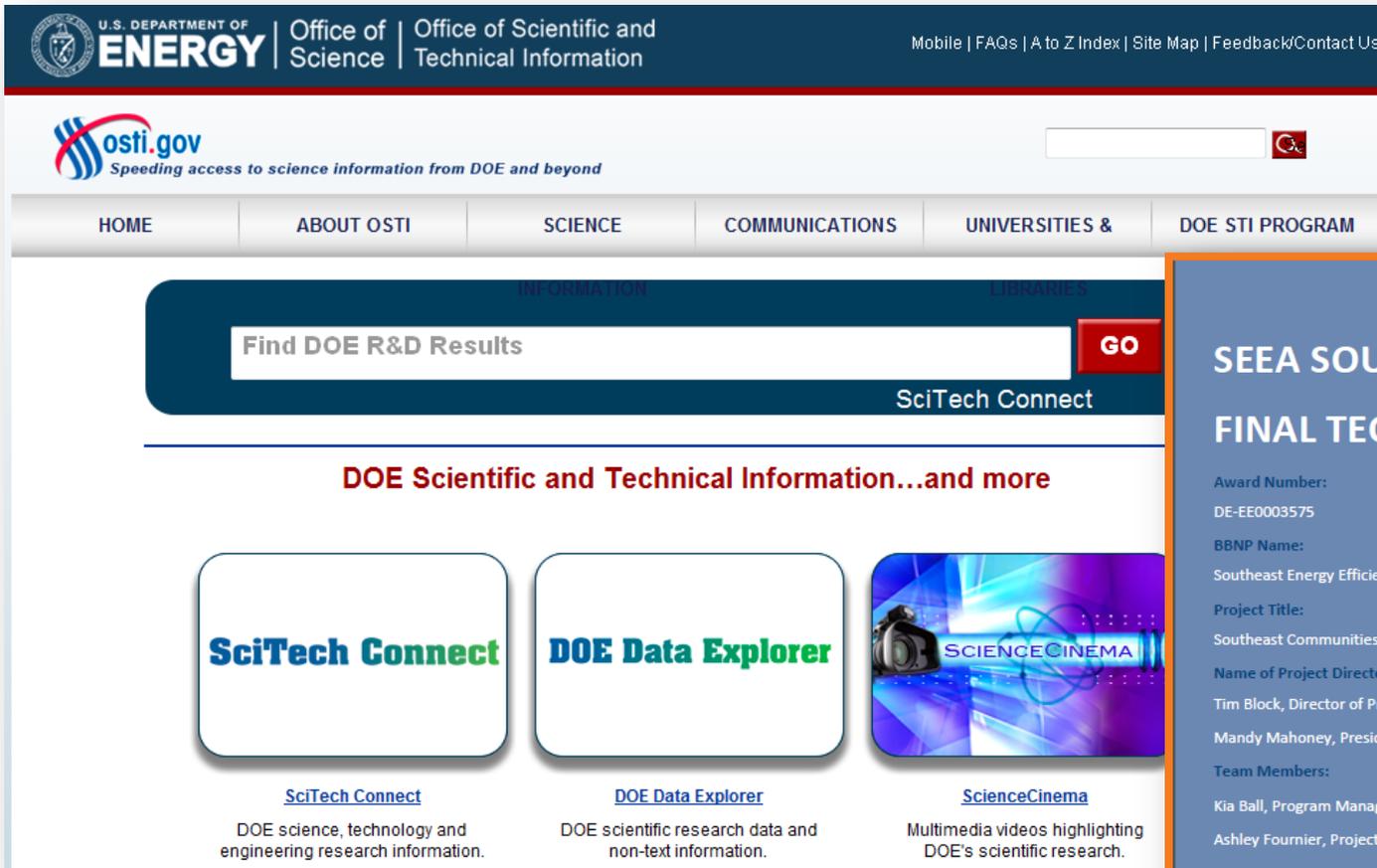
BBNP Independent Evaluations

Evaluation Team: Research Into Action, Nexant, Evergreen Economics, and NMR Group

- Preliminary Process and Market Evaluation
 - Completed Spring 2013
- Preliminary Energy Savings Impact Evaluation
 - Completed Fall 2013
- Final Process and Market Evaluation
 - Report Anticipated Late 2014
- Final Energy Savings Impact Evaluation
 - Report Anticipated Early 2015
- Additional Research Questions
 - Anticipated 2015



Grantee Final Technical Reports



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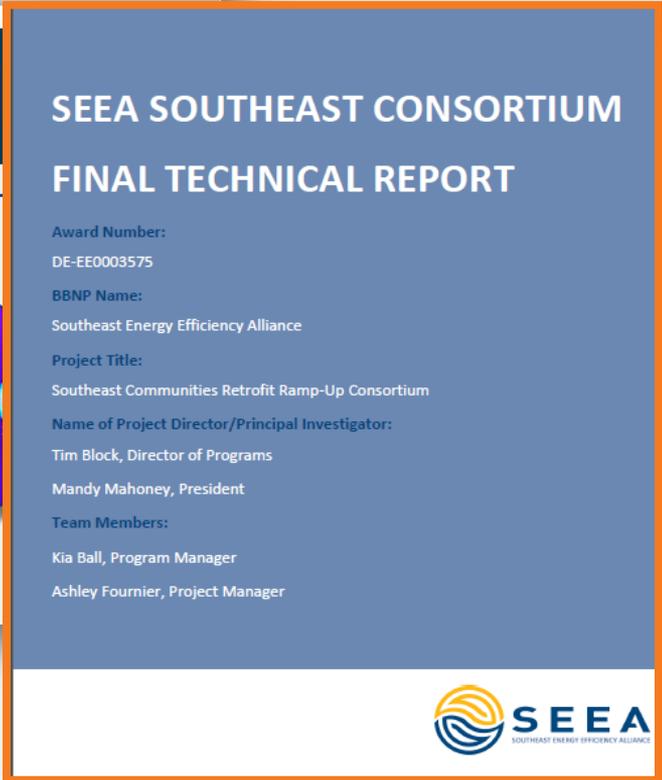
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**SEA SOUTHEAST CONSORTIUM
FINAL TECHNICAL REPORT**

Award Number:
DE-EE0003575

BBNP Name:
Southeast Energy Efficiency Alliance

Project Title:
Southeast Communities Retrofit Ramp-Up Consortium

Name of Project Director/Principal Investigator:
Tim Block, Director of Programs
Mandy Mahoney, President

Team Members:
Kia Ball, Program Manager
Ashley Fournier, Project Manager



Some available. More will be added.

EXAMPLE of Programmatic Data



Gantee Dashboard		Date		1/24/2014									
		AWARDEE NAME		AWARDEE #									
		Granted Amount		\$ 20,000,000									
OUTLAYS			LEVERAGING			INVOICED COST*		AUDITS					
Year	Quarter	Total Marketing & Outreach	Labor & Materials Cost	Other Program Expenses	Total Grantee Outlays	Other Federal Expenditures	Non-Federal Expenditures	Retrofit Invoiced Cost	Residential Single-Family	Residential Multi-Family Units	Residential Multi-Family Buildings	Commercial Buildings	Industrial Buildings
2010	4	\$ -	\$ 213,102	\$ 213,803	\$ 426,905	\$ 284,441	\$ 3,893,171	\$ 165,931	376	-	-	-	-
2011	1	\$ 82,912	\$ 408,849	\$ 160,840	\$ 652,601	\$ -	\$ 1,643,004	\$ 1,267,459	167	-	-	-	-
2011	2	\$ 69,987	\$ 374,978	\$ 659,041	\$ 1,104,006	\$ 125,230	\$ 1,664,836	\$ 1,308,287	428	-	-	-	-
2011	3	\$ 67,222	\$ 217,239	\$ 4,351,950	\$ 4,636,411	\$ 1,082,416	\$ 2,834,083	\$ 3,226,638	919	-	-	-	-
2011	4	\$ 335,011	\$ 318,163	\$ 588,594	\$ 1,241,768	\$ 1,261,895	\$ 1,093,143	\$ 4,942,394	408	-	-	-	-
2012	1	\$ 325,897	\$ 367,186	\$ 916,441	\$ 1,609,524	\$ 1,038,042	\$ 4,611,642	\$ 4,467,763	667	-	-	-	-
2012	2	\$ 409,549	\$ 415,094	\$ 1,359,900	\$ 2,184,543	\$ 31,500	\$ 4,913,836	\$ 4,689,948	891	-	-	-	-
2012	3	\$ 213,609	\$ 523,479	\$ 1,951,974	\$ 2,689,062	\$ 9,500	\$ 658,986	\$ 3,950,441	804	-	-	-	-
2012	4	\$ 248,417	\$ 500,423	\$ 1,979,597	\$ 2,728,437	\$ 13,000	\$ 5,837,700	\$ 6,361,878	1,048	-	-	-	-
2013	1	\$ 81,381	\$ 434,006	\$ 1,435,223	\$ 1,950,610	\$ 9,500	\$ 5,639,757	\$ 4,443,679	533	-	-	-	-
2013	2	\$ -	\$ 72,095	\$ 339,483	\$ 411,578	\$ 1,500	\$ 3,117,905	\$ 3,637,236	854	-	-	27	-
2013	3	\$ -	\$ 84,145	\$ 137,340	\$ 221,485	\$ 1,000	\$ 3,119,399	\$ 2,893,813	675	-	-	-	-
Total		\$ 1,833,985	\$ 3,928,759	\$ 14,094,186	\$ 19,856,930	\$ 3,858,024	\$ 39,027,462	\$ 41,355,467	7,770	0	0	27	0

* Aggregated from the Residential, Commercial, Agricultural

Grantee Dashboard / Grantee Expenditure / Grantee Audits and Upgrades

UPGRADES*							Commercial Buildings Floorspace (square feet)*	Total Job hours	TOTAL ENERGY SAVINGS				Energy Cost Savings
Residential Single-Family	Residential Multi-Family Units	Residential Multi-Family Buildings	Commercial Buildings	Industrial Buildings	Agricultural Buildings	Total Upgrades			Electricity (kWh)	Natural Gas (therms)	Heating oil (gallons)	LPG (gallons)	
259	-	-	-	-	-	259	-	47,196	361,035	89,966	-	-	\$ 156,647
108	-	-	-	-	-	108	-	23,472	-	-	-	-	\$ 68,754
96	-	-	-	-	-	96	-	21,551	-	-	-	-	\$ 42,132
220	-	-	-	-	-	220	-	61,970	-	-	-	-	\$ 109,824
339	-	-	2	-	-	341	57,251	56,376	599,329	115,650	-	-	\$ 226,366
301	-	-	5	-	-	306	324,731	53,753	218,355	92,482	-	-	\$ 161,713
336	-	-	1	-	-	337	32,910	67,800	503,995	114,532	-	-	\$ 212,023
282	-	-	8	-	-	290	272,957	54,133	343,842	67,432	-	-	\$ 134,343
462	-	-	3	-	-	465	319,973	71,872	2,969,604	169,738	32,567	12	\$ 720,270
349	-	-	4	-	-	353	106,961	59,662	513,375	35,237	11,563	-	\$ 136,737
258	-	-	24	-	-	282	220,557	41,251	784,397	24,013	15,068	-	\$ 73,184
189	-	-	8	-	-	197	128,188	37,746	592,451	28,449	7,911	-	\$ 106,351
3,199	0	0	55	0	0	3,254	1,463,528	596,782	6,886,383	737,499	67,109	12	\$ 2,148,343

Grantee Dashboard / Grantee Expenditure / Grantee Audits and Upgrades

Grantee Dashboard File

BBNP Summary of Reported Data

Reported by BBNP Partners from 2010 - September 30, 2013

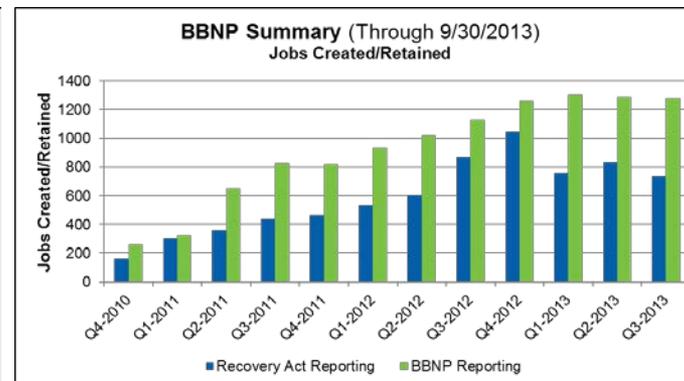
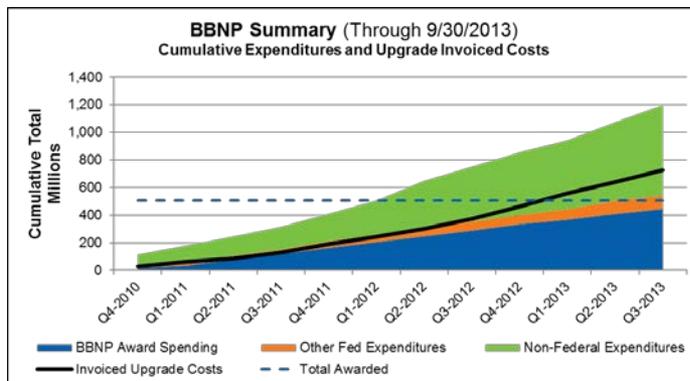
Not an evaluation of the BBNP program

Not the grantees final technical report

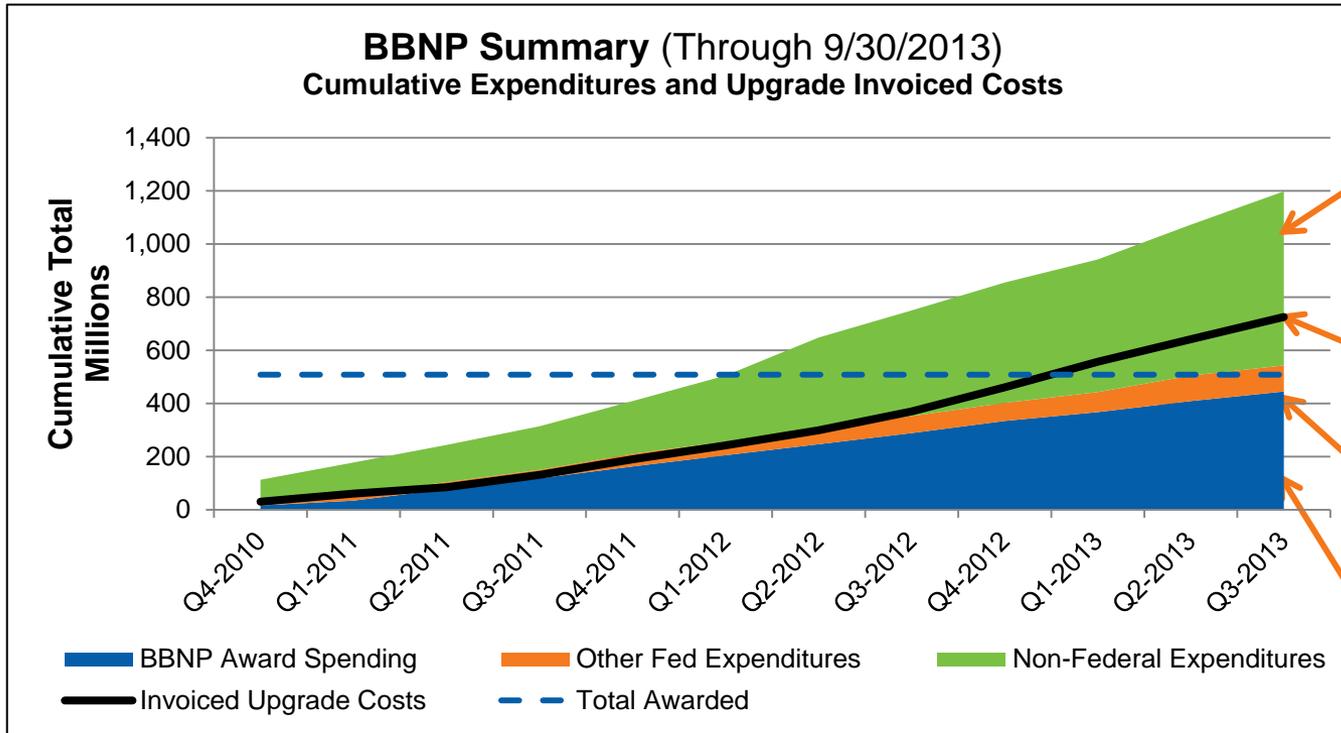
As they are completed, grantee summaries will be available on the BBNP web site with grantee programmatic data (dashboard file)

Summary of Reported Data

- Executive summary and 41 recipient summaries
- Consistent structure (the story)
 - Funding Synopsis
 - Program Design Synopsis
 - Driving Demand Synopsis
 - Financing Synopsis
 - Workforce Development Synopsis
 - Energy Savings Synopsis
- Consistent graphs and tables (the data)



Expenditures Summary



Sum on Non-Federal Expenditures reported quarterly. Should include building owner expenditures.

Sum of invoice cost of reported upgrade projects.

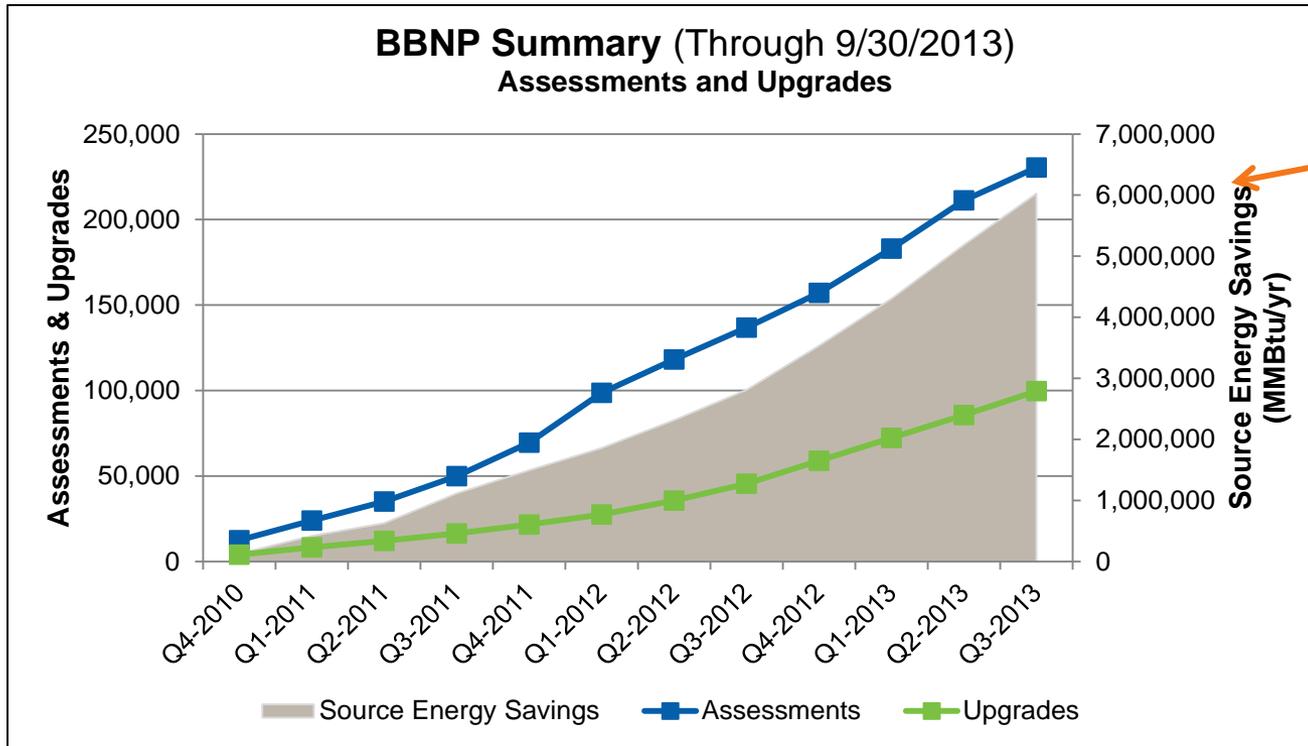
Sum of Other Federal Expenditures reported quarterly.

Sum of BBNP Award spending reported quarterly.

- ✓ It appears that some grantees have under-reported non-federal expenditures.
- ✓ Invoiced upgrade cost is the sum of the reported amount for all upgraded projects that included this information (83% of projects).

What was the cost?

Assessment & Upgrades Summary



Gross Estimate Source Energy Saving calculated by DOE

What were the outputs?

	Residential Single-Family	Residential Multi-Family Units	Commercial Buildings	Industrial Buildings	Agricultural Buildings
Assessments	138,323	84,476	7,323	36	276
Upgrades	74,680	21,330	3,547	15	163

Sum of Energy Assessments reported quarterly.

Sum of upgrade projects reported quarterly.

Financing Summary

Financing Investments and Results (Through 9/30/2013)	
RLF (Commercial)	\$39,180,788
RLF (Residential)	\$28,532,003
Percent of Total Awards Invested in RLF	13%
LLR (Multi-Sector)	\$7,791,637
LLR (Commercial)	\$36,704,152
LLR (Residential)	\$30,154,770
Percent of Total Awards Invested in LLR	15%
Interest Rate Buy-down	\$10,399,504
Total Financing Investment	\$152,759,531
Percent of Total Awards	30%
Total Capital (Private and Other Non-BBNP) Leveraged for Lending	\$ 443,645,923
Results	
Amount Loaned Out (Residential* and Commercial)	\$166,924,842
# of Loans (Residential and Commercial)	12,788
Average Loan Amount (Residential*)	\$11,135
Average Loan Amount (Commercial)	\$145,182

RLF – Revolving Loan Fund
LLR – Loan Loss Reserve

Includes investments of
BBNP grant funds.

Total estimated investments
of BBNP grant funds.

Estimate of non-BBNP
funded sources of capital.
Not available from some
grantees.

Based on # of projects with
reported loan amount.

*Residential includes single-family and multi-family

Estimate Energy Savings Summary



Estimated Annual Energy Savings (Through 9/30/2013)	
kWh Electricity	284,736,708
Therms Natural Gas	19,344,629
Gallons of Oil	3,632,892
Gallons of Propane	514,097
Total Estimated MMBtu Savings (Source Energy)	6,024,745
Total Estimated Energy Cost Savings	\$69,046,770
Average % Savings per Upgrade / # of Upgrades Used to Calculate	Residential single family 22%/34,198 Residential multifamily 26%/14,114 Commercial 7%/2,918

Sum of program total annual estimated savings reported quarterly.

Estimated source energy savings calculated by DOE

The average percent savings was calculated by DOE using recipient reported project savings estimates.

Sum of Estimated Annual Energy Savings (Through 9/30/2013)		
	Number of Projects Summed	Sum of Estimated Savings Reported
kWh Electricity	61,850	283,754,856
Therms Natural Gas	55,938	18,492,790
Gallons of Oil	11,906	3,428,653
Gallons of Propane	649	305,404
Sum of Estimated Annual Energy Cost Savings	77,418	\$65,587,880

Sum of annual estimated savings reported for each upgrade project.

Additional Summaries of Reported Data

Financing Volume (by state)

Loan Amount (single-family)

Upgrade Project Invoiced Cost (single-family)

Estimated Annual Energy Cost Savings (single-family)

Estimated Annual Energy Savings (single-family)

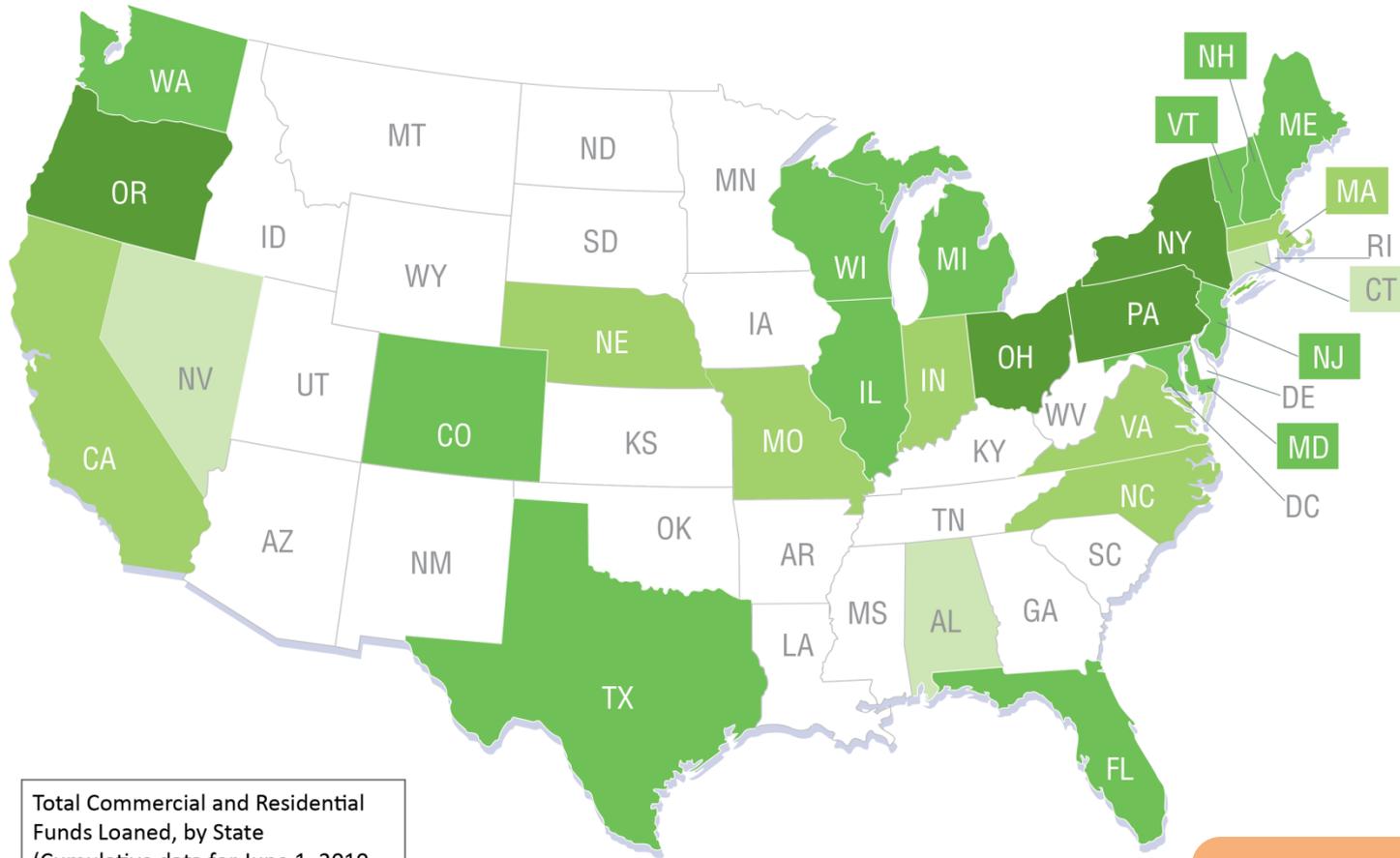
Better Buildings Neighborhood Program Residential and Commercial Loan Summary

Total Amount Loaned (Residential): \$140,356,480

Average Residential Loan Amount Across Program: \$11,135

Total Amount Loaned (Commercial): \$26,568,362

Average Commercial Loan Amount Across Program: \$145,182



Total Commercial and Residential Funds Loaned, by State
(Cumulative data for June 1, 2010 through September 30, 2013)

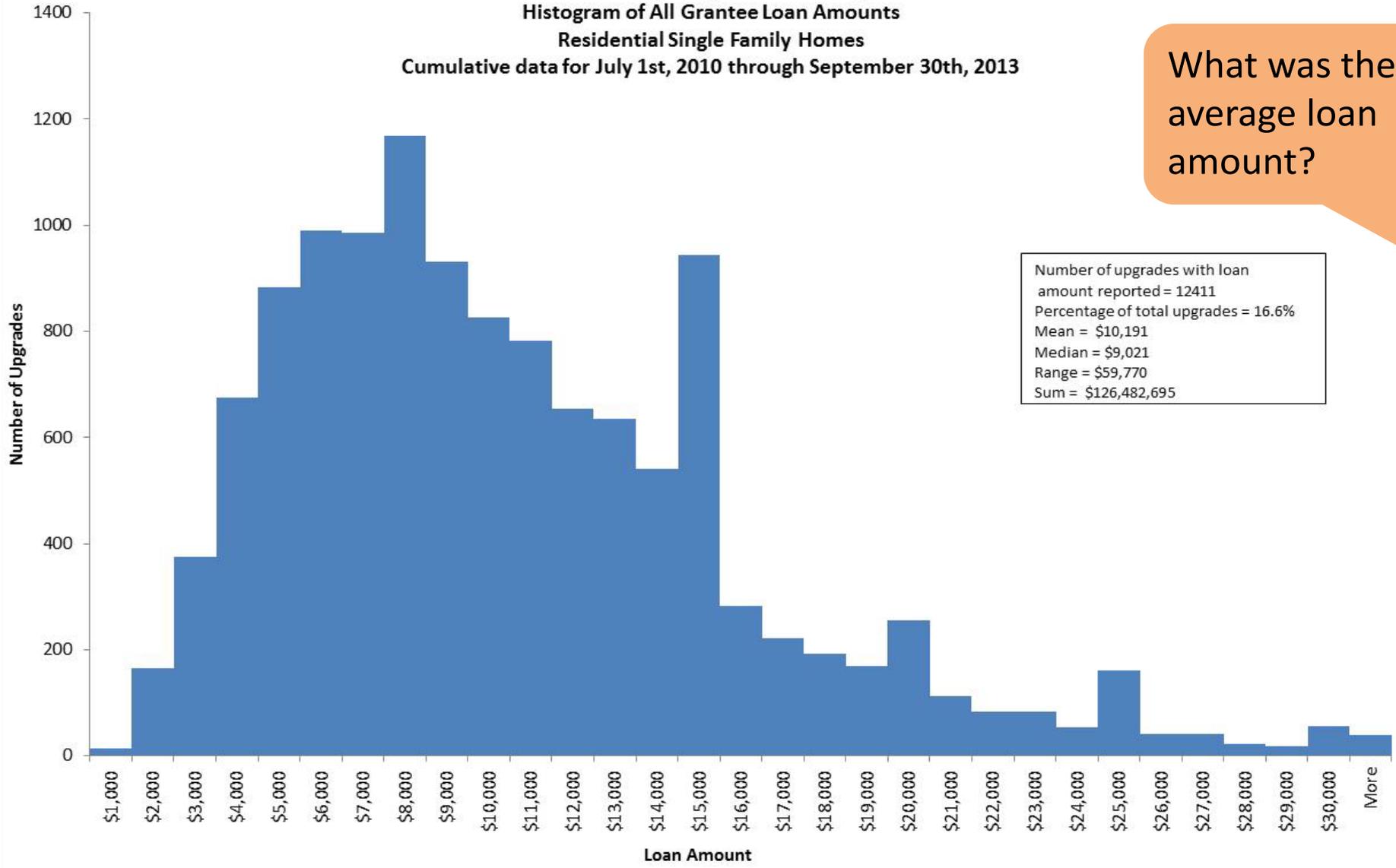
- \$0
- \$1 - \$100,000
- \$101,000 - \$1,000,000
- \$1,000,001 - \$10,000,000
- \$10,000,001 - \$100,000,000

What was financing volume by state ?

Loan Amount

Single-family homes

**Better Buildings Neighborhood Program
Histogram of All Grantee Loan Amounts
Residential Single Family Homes
Cumulative data for July 1st, 2010 through September 30th, 2013**

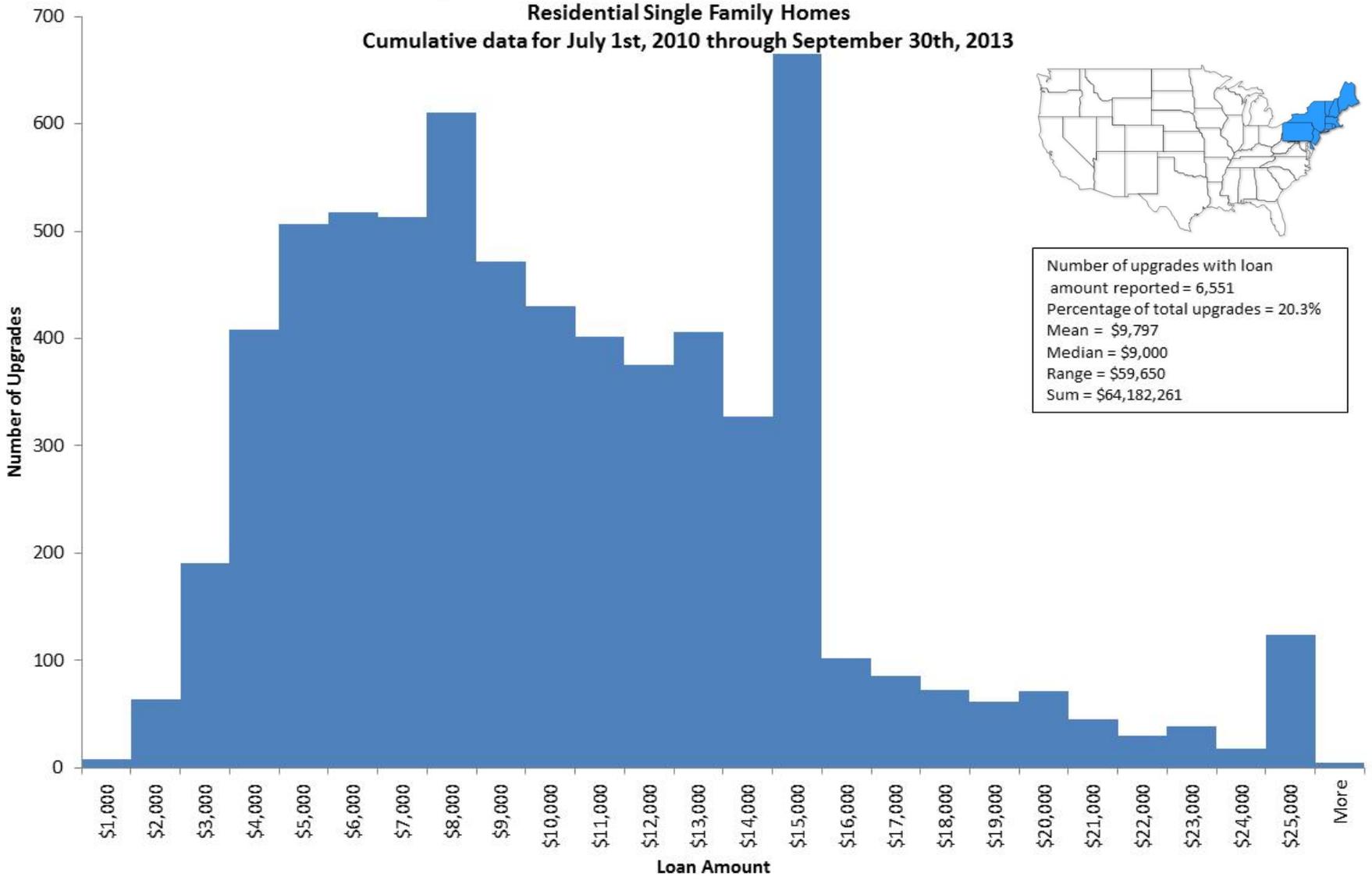


What was the average loan amount?

Number of upgrades with loan amount reported = 12411
 Percentage of total upgrades = 16.6%
 Mean = \$10,191
 Median = \$9,021
 Range = \$59,770
 Sum = \$126,482,695

- 39 projects or .3% of Loan Amounts were more than \$30,000.
- Philadelphia has 305 projects with Loan Amounts between \$14,000 and \$15,000.
- Portland has 82 projects with Loan Amounts between \$19,000 and \$20,000.
- NYSERDA has 101 projects with Loan Amounts between \$24,000 and \$25,000.

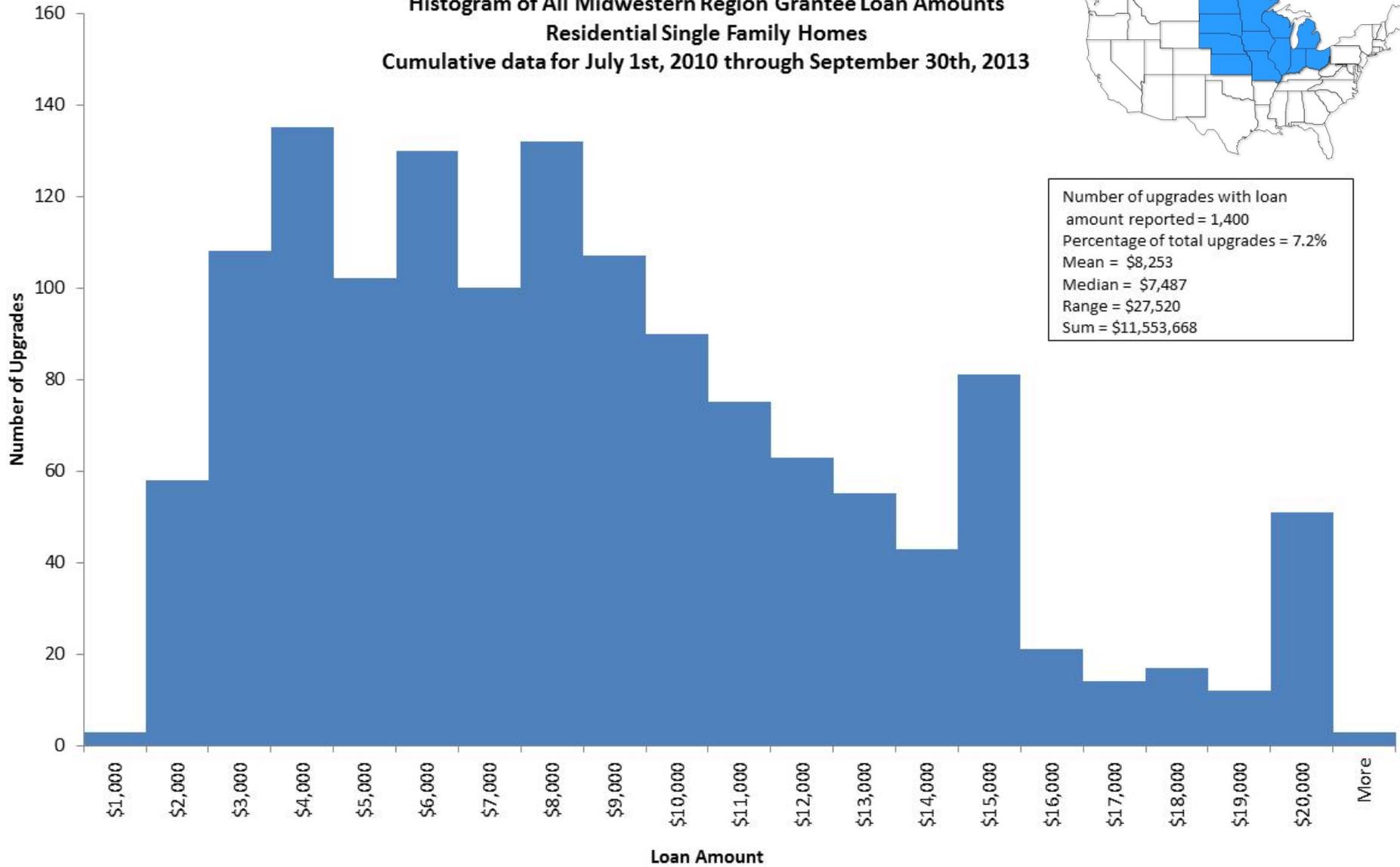
**Better Buildings Neighborhood Program
 Histogram of All Northeastern Region Grantee Loan Amounts
 Residential Single Family Homes
 Cumulative data for July 1st, 2010 through September 30th, 2013**



Number of upgrades with loan amount reported = 6,551
 Percentage of total upgrades = 20.3%
 Mean = \$9,797
 Median = \$9,000
 Range = \$59,650
 Sum = \$64,182,261

- 5 projects or .07% of Loan Amounts were more than \$25,000.
- Philadelphia has 305 projects with Loan Amounts between \$14,000 and \$15,000.
- NYSERDA has 101 projects with Loan Amounts between \$24,000 and \$25,000.

**Better Buildings Neighborhood Program
Histogram of All Midwestern Region Grantee Loan Amounts
Residential Single Family Homes
Cumulative data for July 1st, 2010 through September 30th, 2013**

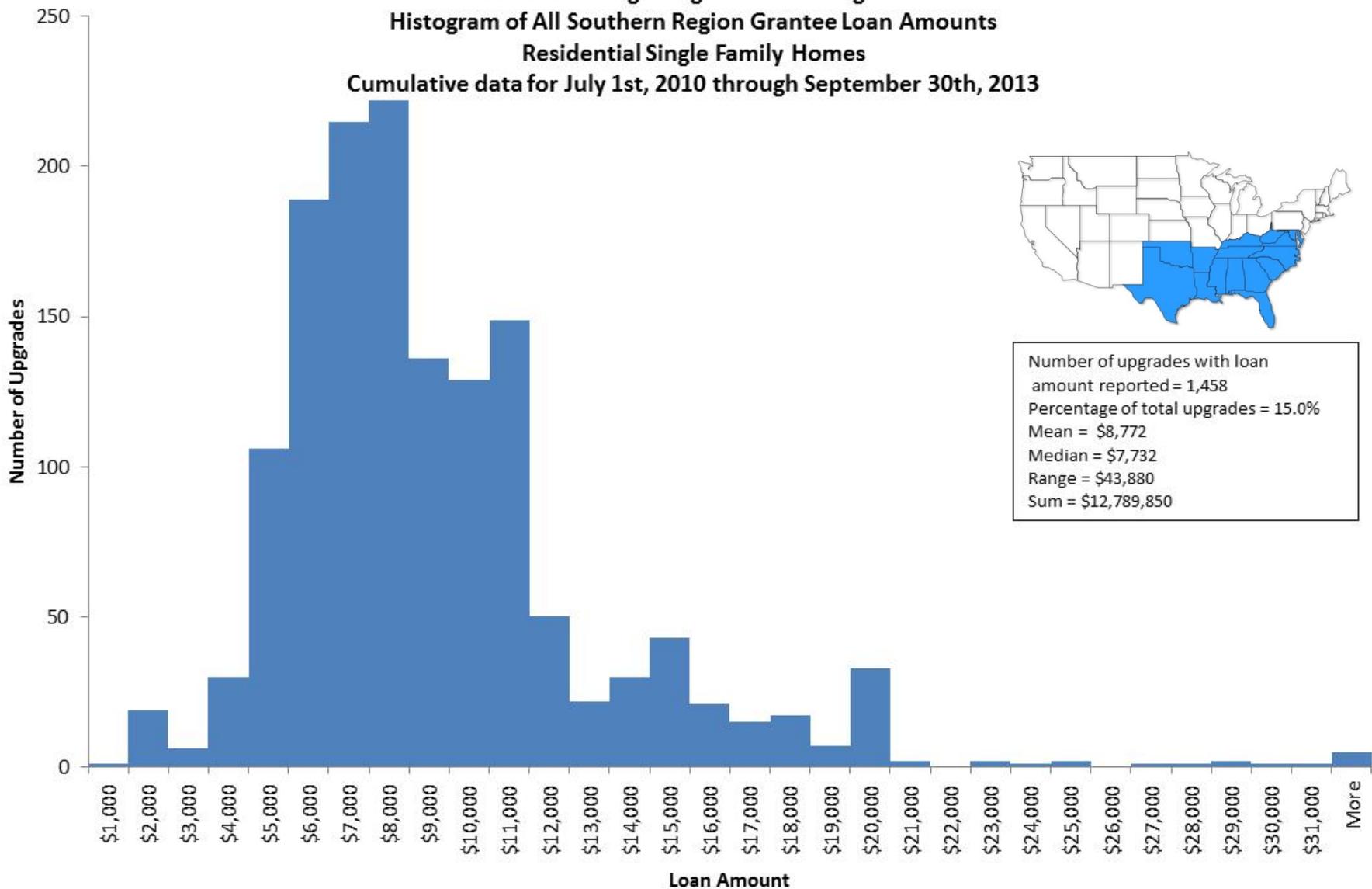


Number of upgrades with loan amount reported = 1,400
 Percentage of total upgrades = 7.2%
 Mean = \$8,253
 Median = \$7,487
 Range = \$27,520
 Sum = \$11,553,668

- 3 projects or .2% of Loan Amounts were more than \$20,000.
- Wisconsin has 37 projects with Loan Amounts between \$14,000 and \$15,000.
- State of Michigan has 46 projects with Loan Amounts between \$19,000 and \$20,000.

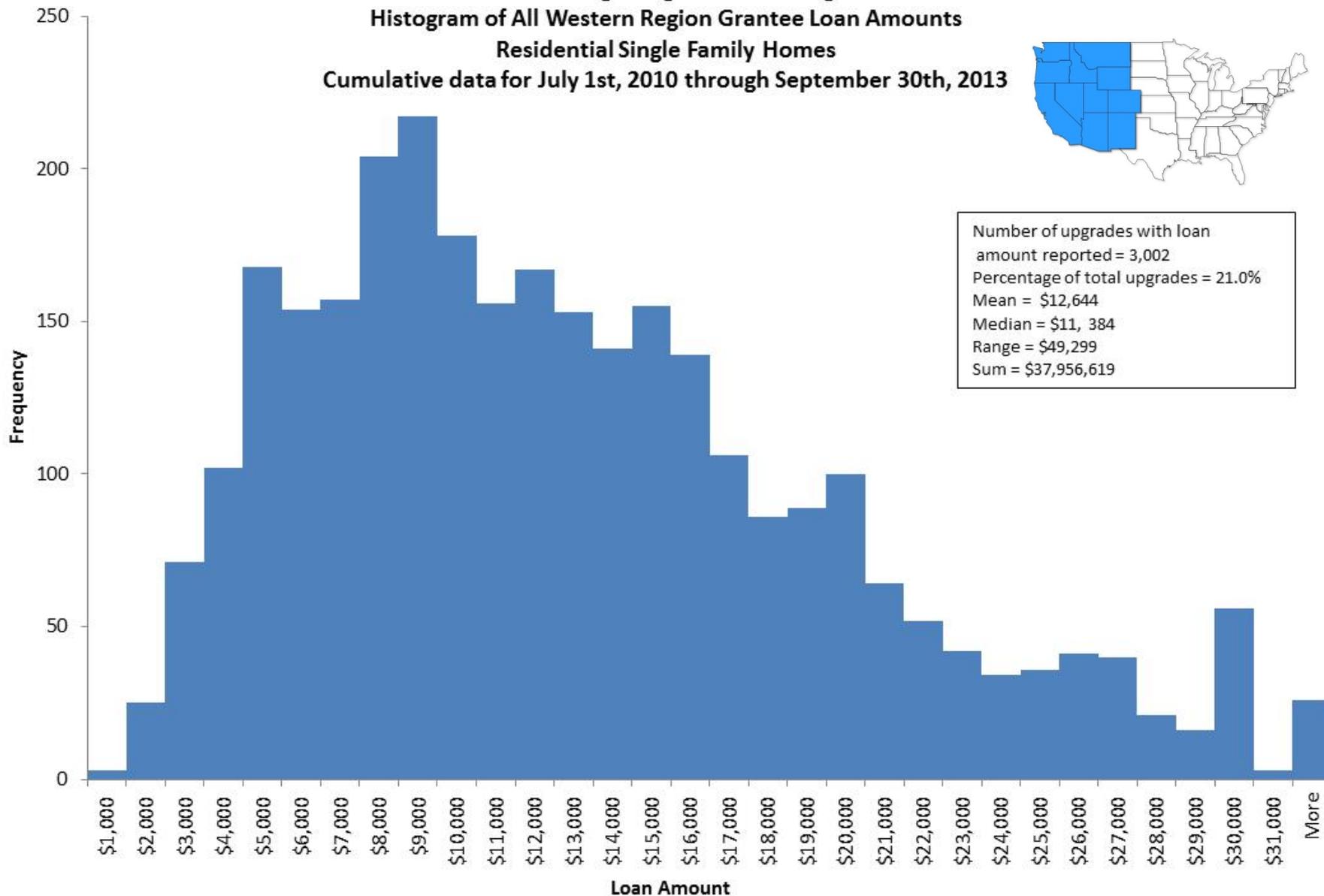
**Better Buildings Neighborhood Program
Histogram of All Southern Region Grantee Loan Amounts
Residential Single Family Homes**

Cumulative data for July 1st, 2010 through September 30th, 2013



- 5 projects or .3% of Loan Amounts were more than \$31,000.
- San Antonio has 21 projects with Loan Amounts between \$19,001 and \$20,000.

**Better Buildings Neighborhood Program
Histogram of All Western Region Grantee Loan Amounts
Residential Single Family Homes
Cumulative data for July 1st, 2010 through September 30th, 2013**



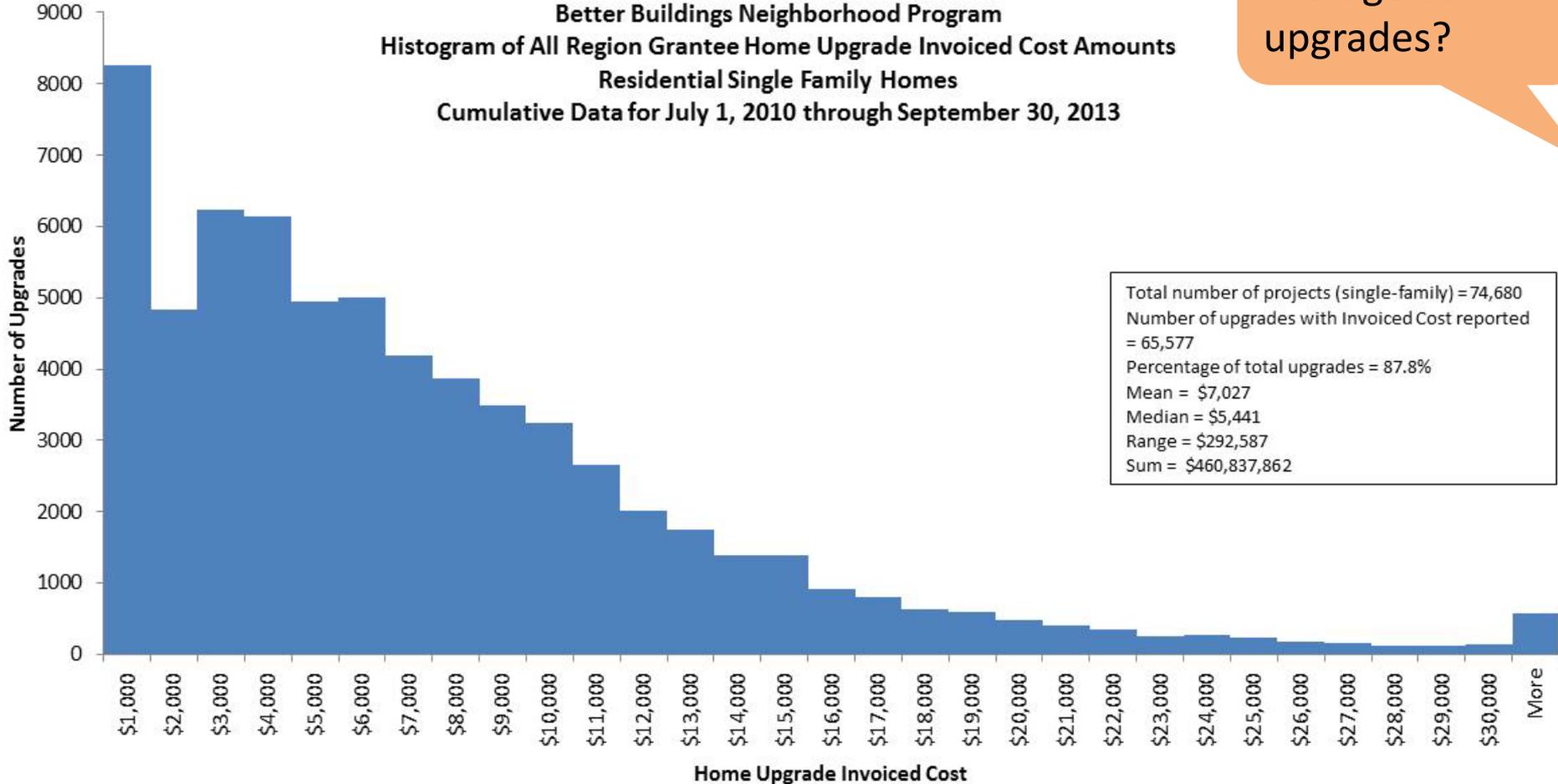
- 26 projects or .8% of Loan Amounts were more than \$31,000.
 - Portland accounted for 82 projects with Loan Amounts between \$19,000 and \$20,000, and 43 projects between \$29,000 and \$30,000.

Upgrade Invoiced Costs

Single-family homes

What was the average cost of upgrades?

Better Buildings Neighborhood Program
Histogram of All Region Grantee Home Upgrade Invoiced Cost Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013



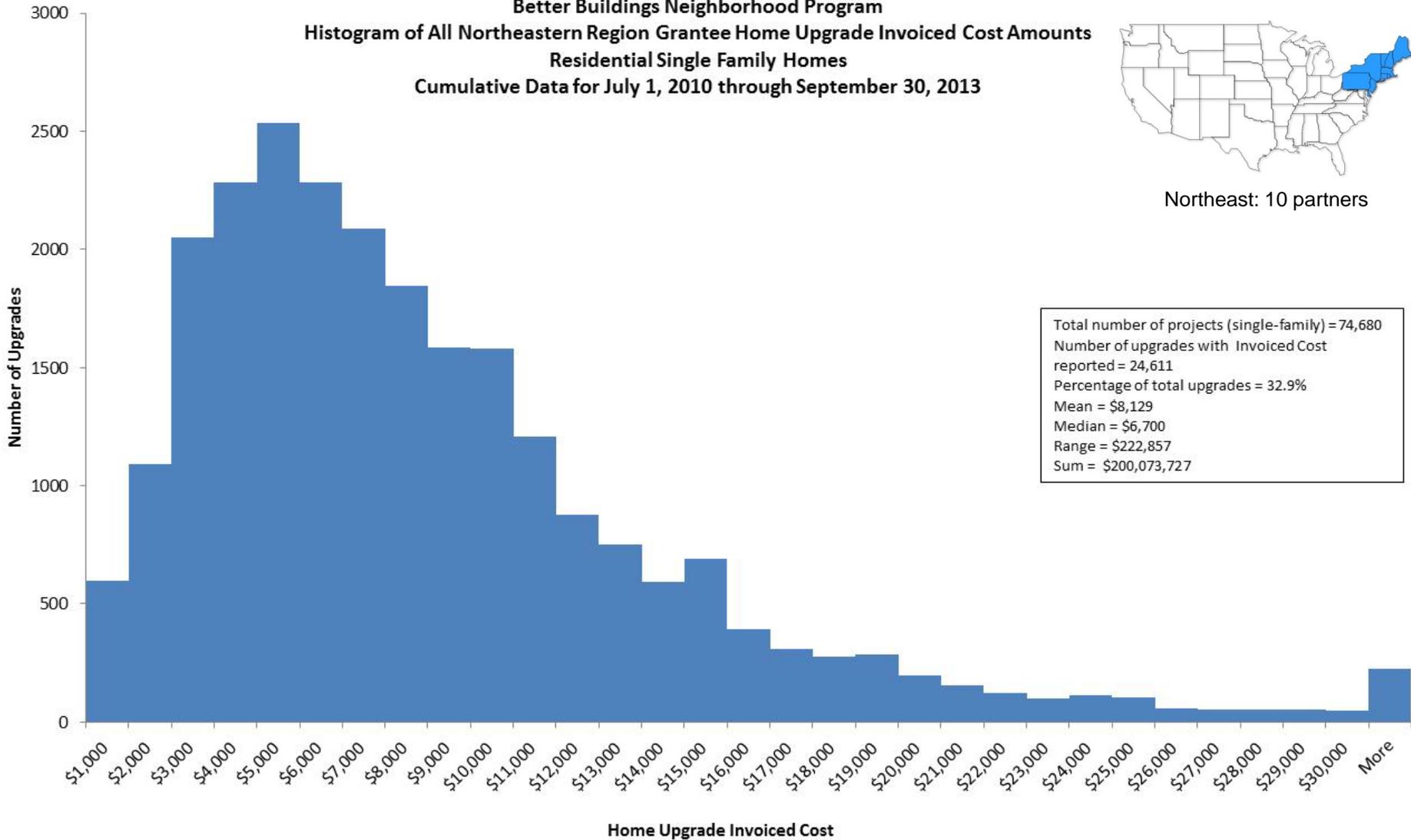
Total number of projects (single-family) = 74,680
 Number of upgrades with Invoiced Cost reported = 65,577
 Percentage of total upgrades = 87.8%
 Mean = \$7,027
 Median = \$5,441
 Range = \$292,587
 Sum = \$460,837,862

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Invoiced Costs greater than \$30,000 : 580 projects.
- Invoiced Costs between \$0 and \$1,000: State of Michigan reported 4,856 projects, Kansas City reported 862 projects, and Indianapolis reported 705 projects.
- Invoiced Costs between \$2,000 and \$3,000: NYSERDA reported 1,096 projects, and Chicago reported 948 projects.
- Invoiced Costs between \$3,000 and \$4,000: NYSERDA reported 1,745 projects, and Chicago reported 1,202 projects.

Better Buildings Neighborhood Program
Histogram of All Northeastern Region Grantee Home Upgrade Invoiced Cost Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013



Northeast: 10 partners



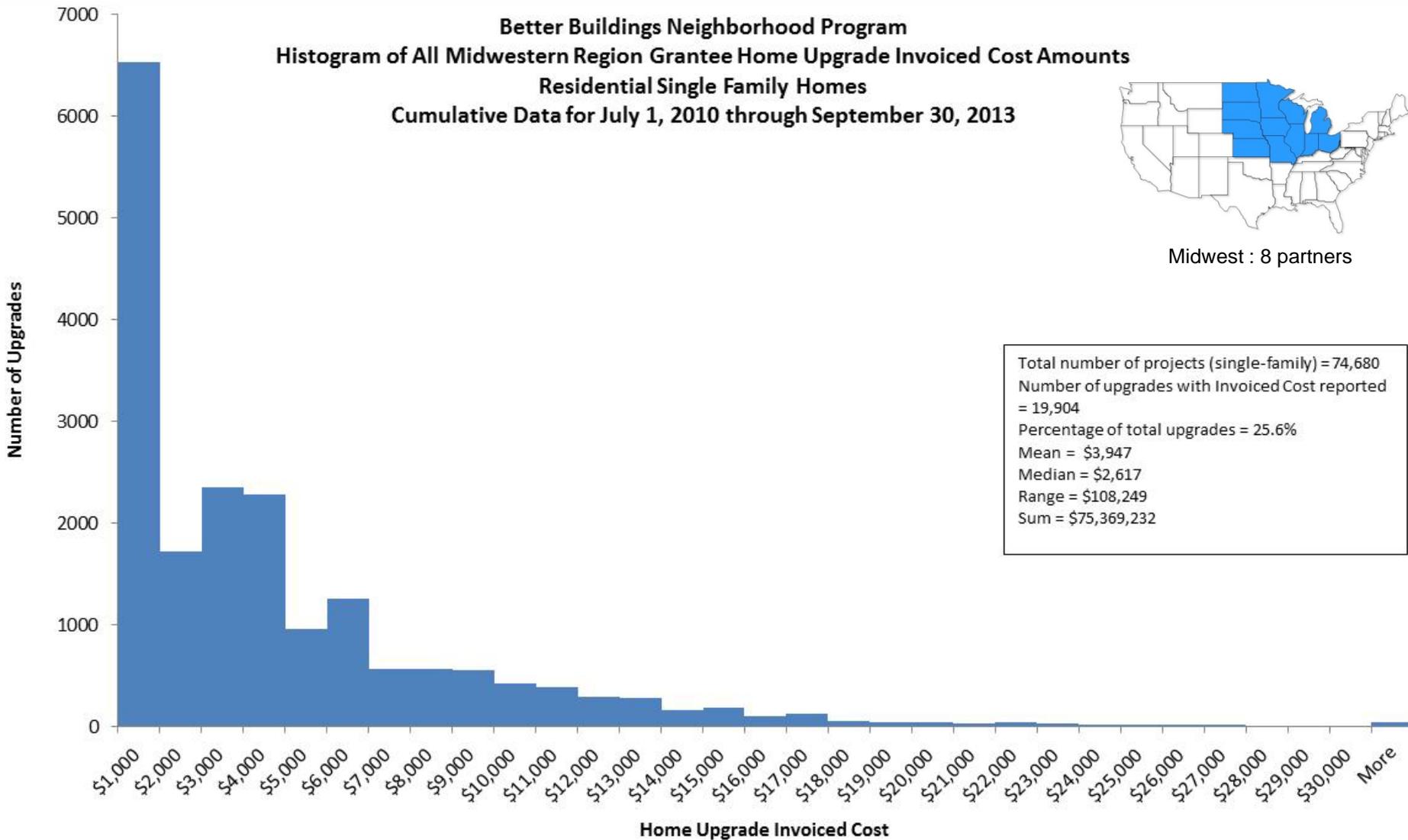
Total number of projects (single-family) = 74,680
 Number of upgrades with Invoiced Cost reported = 24,611
 Percentage of total upgrades = 32.9%
 Mean = \$8,129
 Median = \$6,700
 Range = \$222,857
 Sum = \$200,073,727

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Invoiced Cost greater than \$30,000 : 225 projects or .9% of Invoiced Costs reported.
- Invoiced Cost between \$2,000 and \$3,000 : NYSERDA reported 1843 projects
- Invoiced Cost between \$3,000 and \$4,000: NYSERDA reported 3,588 projects
- Invoiced Cost between \$4,000 and \$5,000 : NYSERDA reported 3,551 projects
- Invoiced Cost between \$5,000 and \$6,000 : NYSERDA reported 1,604 projects .

**Better Buildings Neighborhood Program
Histogram of All Midwestern Region Grantee Home Upgrade Invoiced Cost Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013**



Midwest : 8 partners

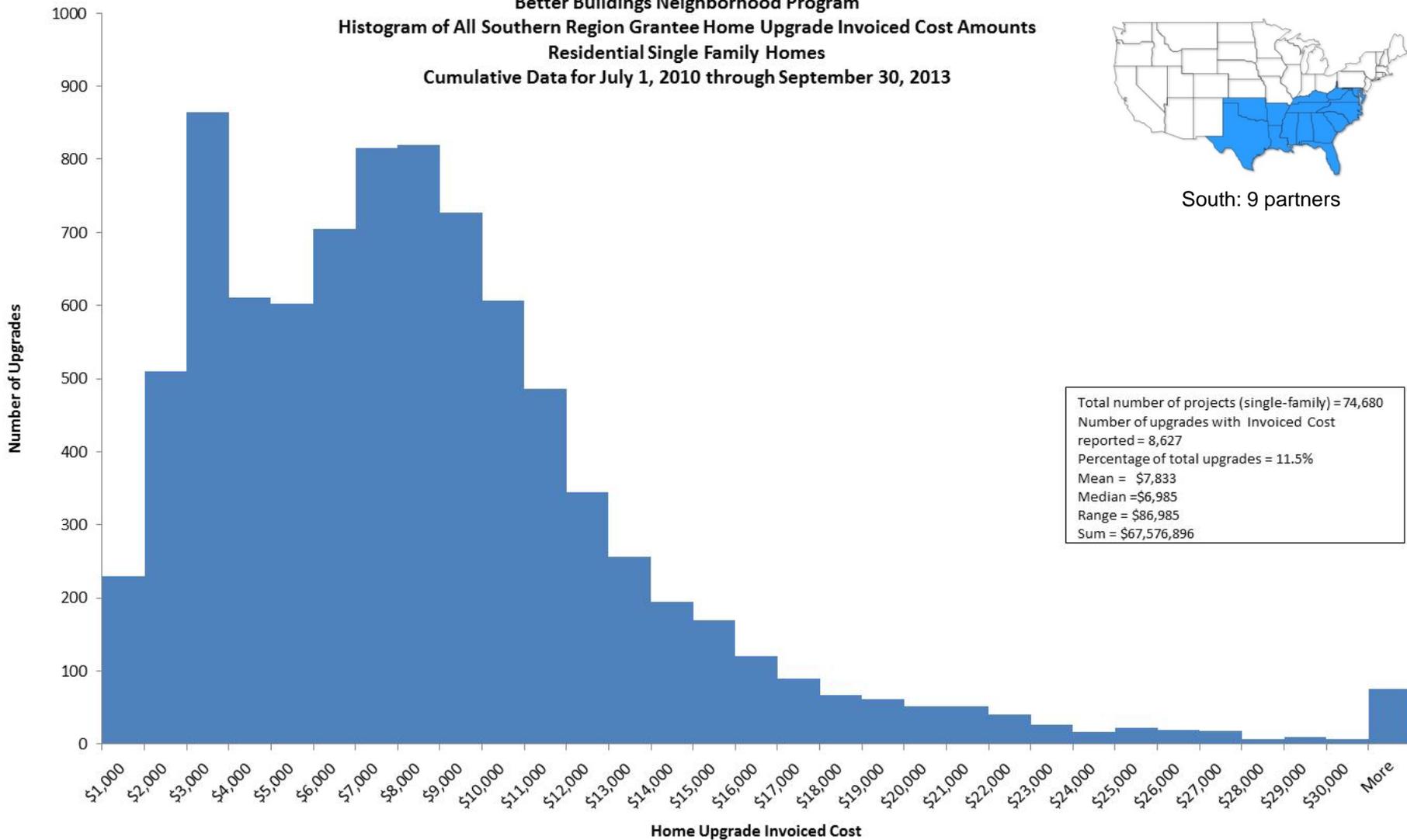


- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Invoiced Cost greater than \$30,000 : 40 projects.
- Invoiced Cost between \$0 and \$1000: State of Michigan reported 4,856 projects, Kansas City reported 862 projects, and Indianapolis reported 705 projects.
- Invoiced Cost between \$2000 and \$3000: Chicago reported 948 projects, Omaha reported 516 projects, Kansas City reported 400 projects, and State of Michigan reported 297 projects.

Better Buildings Neighborhood Program
Histogram of All Southern Region Grantee Home Upgrade Invoiced Cost Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013



South: 9 partners



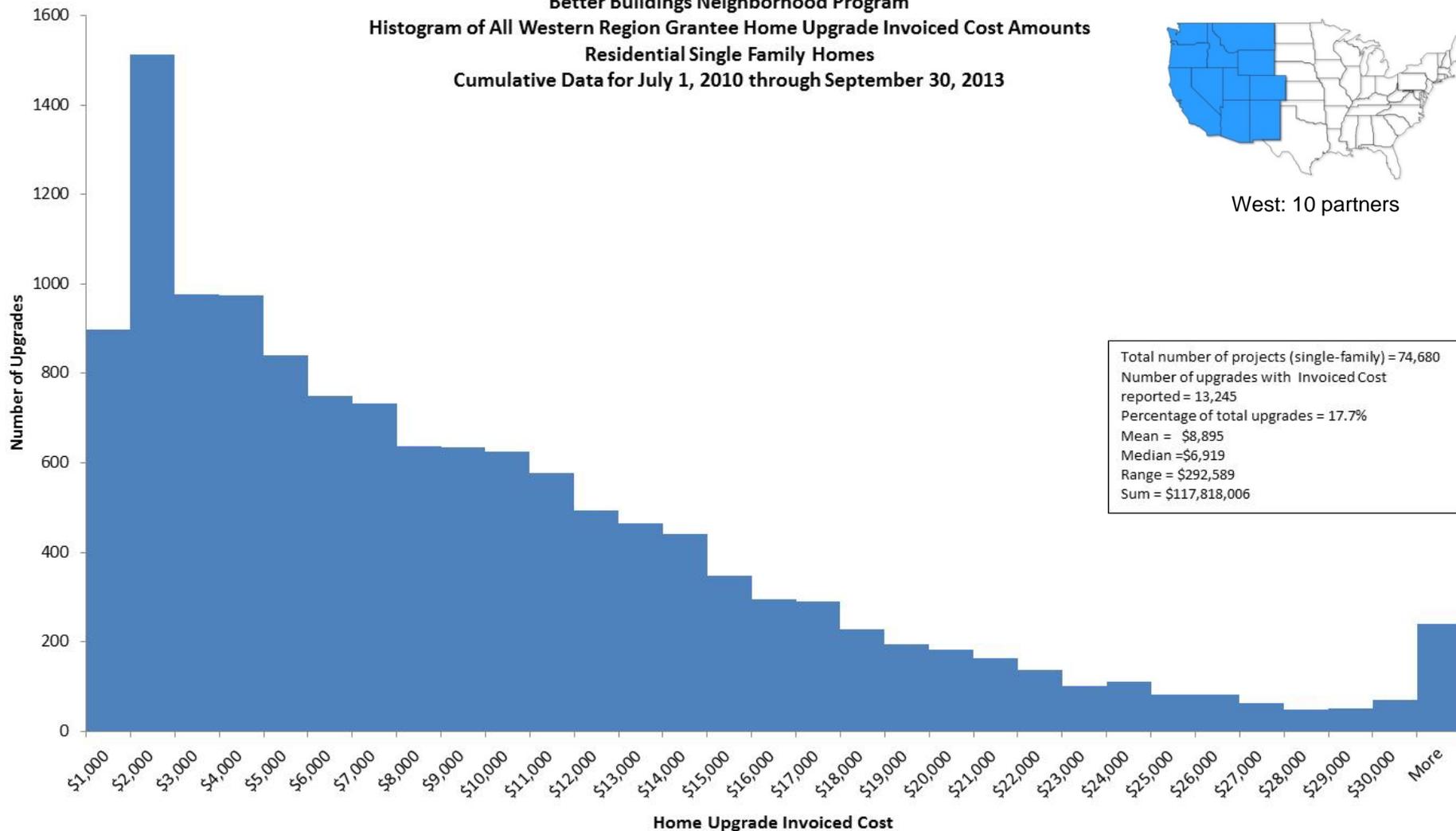
Total number of projects (single-family) = 74,680
 Number of upgrades with Invoiced Cost reported = 8,627
 Percentage of total upgrades = 11.5%
 Mean = \$7,833
 Median = \$6,985
 Range = \$86,985
 Sum = \$67,576,896

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Invoiced Cost greater than \$30,000 : 76 projects or .9% of Invoiced Costs reported.
- Invoiced Cost between \$2000 and \$3000: SEEA reported 300 projects, Greensboro reported 212 projects, and San Antonio reported 131 projects.
- Invoiced Cost between \$6000 and \$7000: SEEA reported 401 projects, Austin reported 128 projects, and Maryland reported 119 projects.
- Invoiced Cost between \$7000 and \$8000: SEEA reported 355 projects, and Austin reported 263 projects.

Better Buildings Neighborhood Program
Histogram of All Western Region Grantee Home Upgrade Invoiced Cost Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013



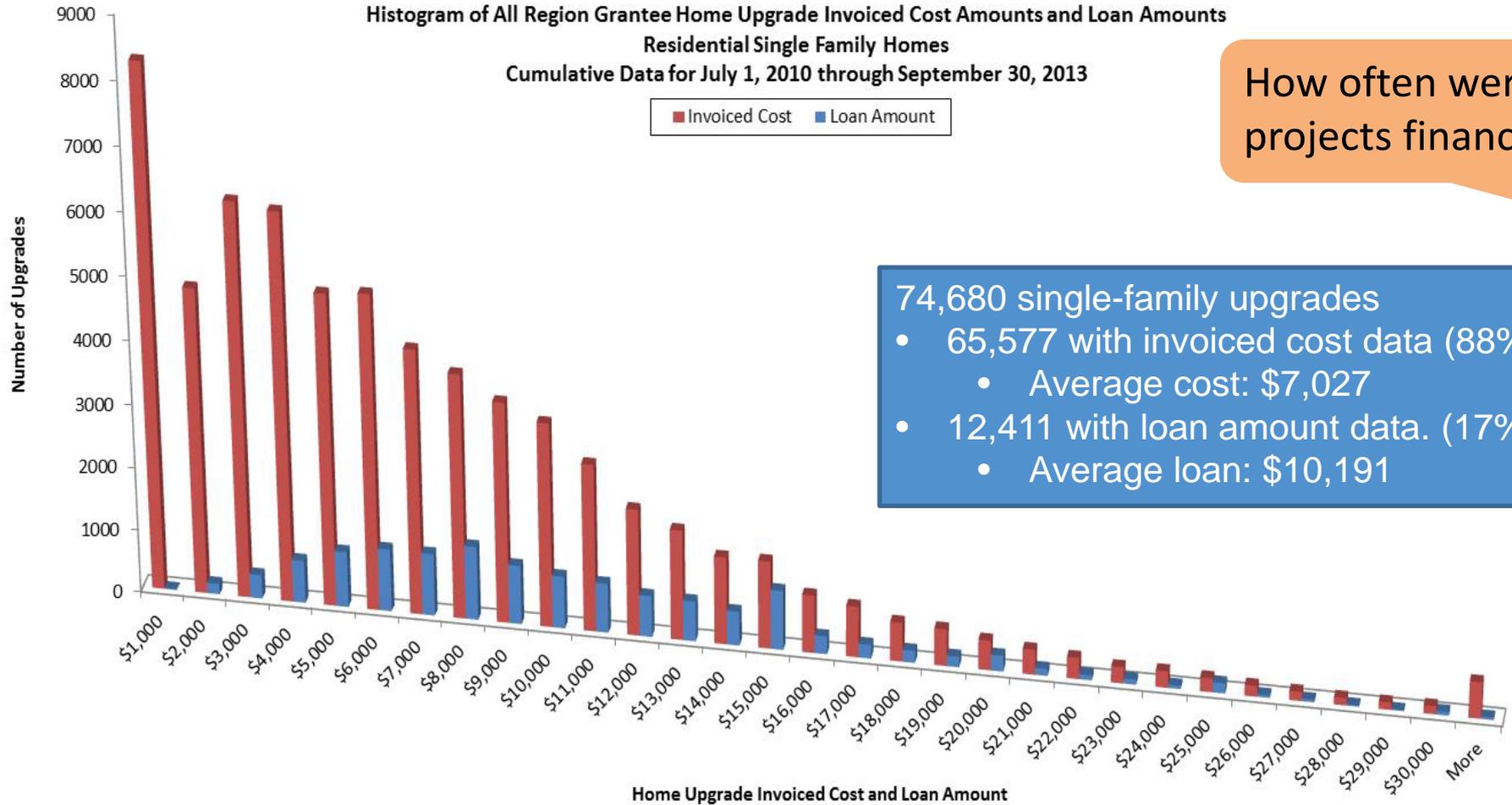
West: 10 partners



Total number of projects (single-family) = 74,680
 Number of upgrades with Invoiced Cost reported = 13,245
 Percentage of total upgrades = 17.7%
 Mean = \$8,895
 Median = \$6,919
 Range = \$292,589
 Sum = \$117,818,006

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Invoiced Cost greater than \$30,000 : 239 projects or 1.8% of Invoiced Costs reported.
- Invoiced Cost between \$1000 and \$2000: Los Angeles County reported 656 projects, and Boulder County reported 472 projects.
- Invoiced Cost between \$2000 and \$3000: Los Angeles County reported 208 projects, and Boulder County reported 358 projects.
- Invoiced Cost between \$3000 and \$4000: Los Angeles County reported 217 projects, and Boulder County reported 263 projects.

Better Buildings Neighborhood Program
Histogram of All Region Grantee Home Upgrade Invoiced Cost Amounts and Loan Amounts
Residential Single Family Homes
Cumulative Data for July 1, 2010 through September 30, 2013



How often were projects financed?

74,680 single-family upgrades

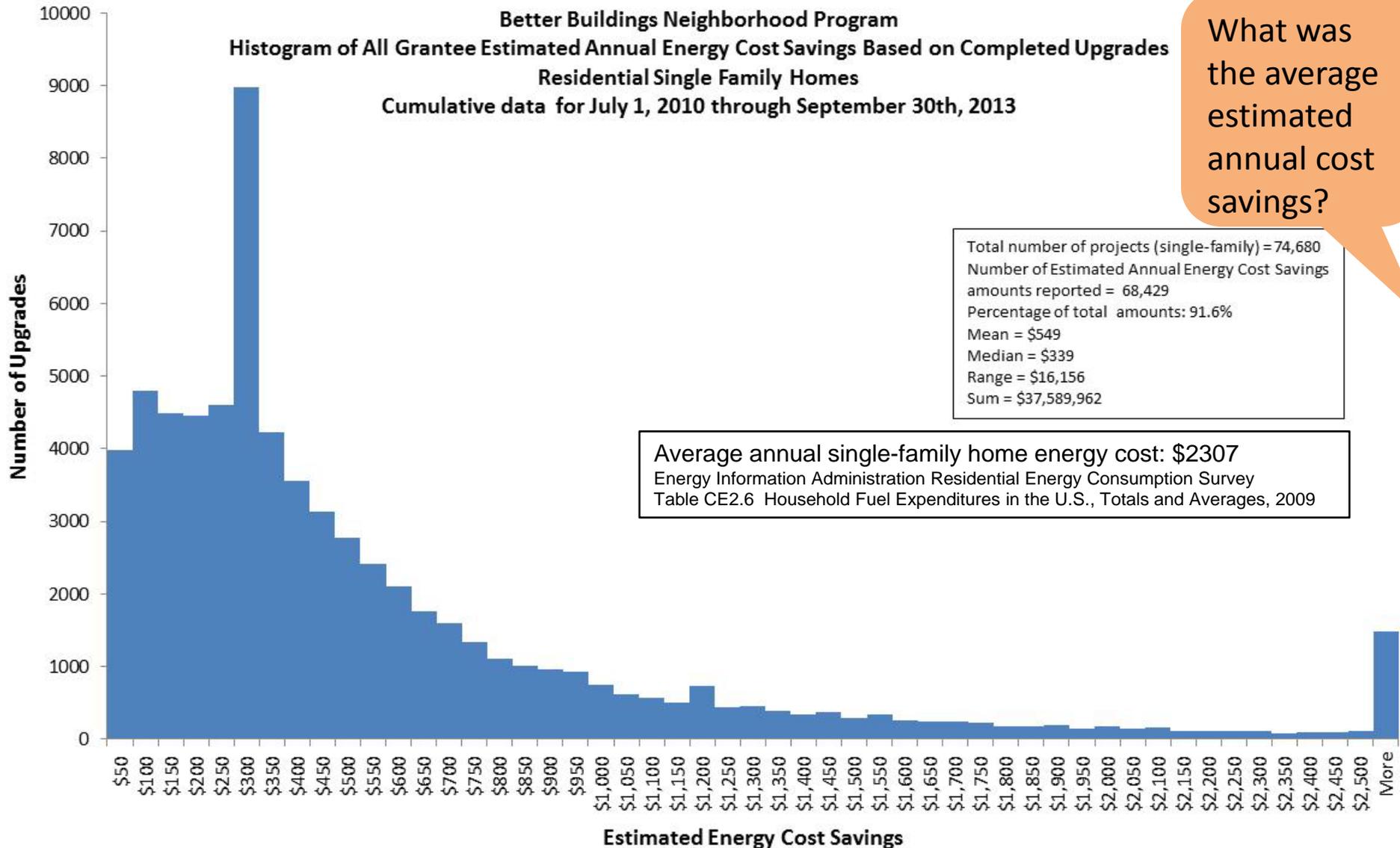
- 65,577 with invoiced cost data (88%)
 - Average cost: \$7,027
- 12,411 with loan amount data. (17%)
 - Average loan: \$10,191

Estimated Annual Energy Cost Savings

Single-family Homes

Better Buildings Neighborhood Program
Histogram of All Grantee Estimated Annual Energy Cost Savings Based on Completed Upgrades
Residential Single Family Homes
Cumulative data for July 1, 2010 through September 30th, 2013

What was the average estimated annual cost savings?



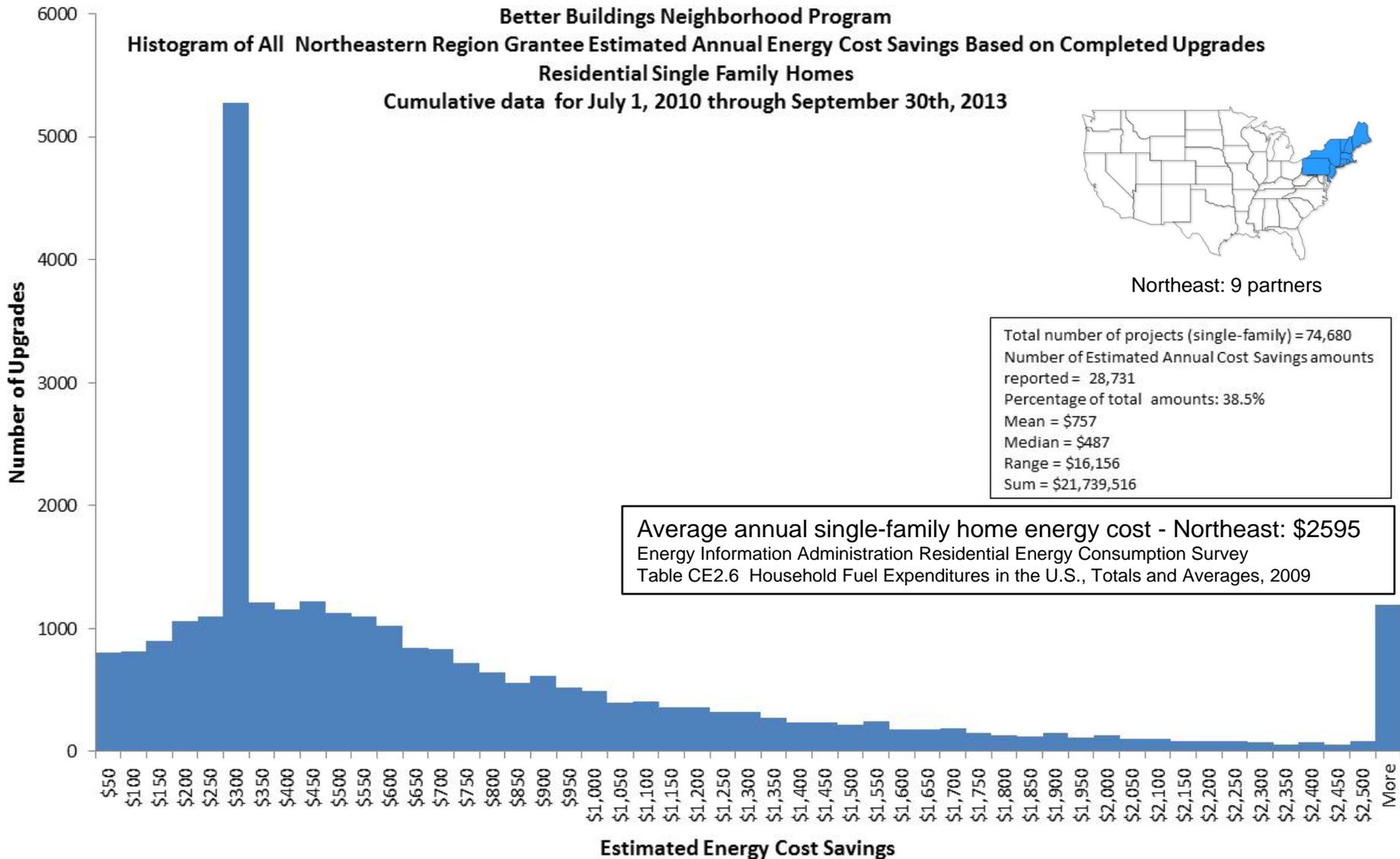
Average annual single-family home energy cost: \$2307
 Energy Information Administration Residential Energy Consumption Survey
 Table CE2.6 Household Fuel Expenditures in the U.S., Totals and Averages, 2009

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Energy Cost Savings greater than \$2,500: 1479 projects or 2.2% of all Cost Savings reported - State of Maine reported 584 projects and NYSERDA reported 468 projects.
- Energy Cost Savings between \$250 and \$300: State of Maine reported 4,106 projects, and NYSERDA reported 958 projects.
- Energy Cost Savings between \$1,150 and \$1,200: CSG, Bainbridge Island reported 233 projects.

Better Buildings Neighborhood Program
Histogram of All Northeastern Region Grantee Estimated Annual Energy Cost Savings Based on Completed Upgrades
Residential Single Family Homes
Cumulative data for July 1, 2010 through September 30th, 2013



Northeast: 9 partners

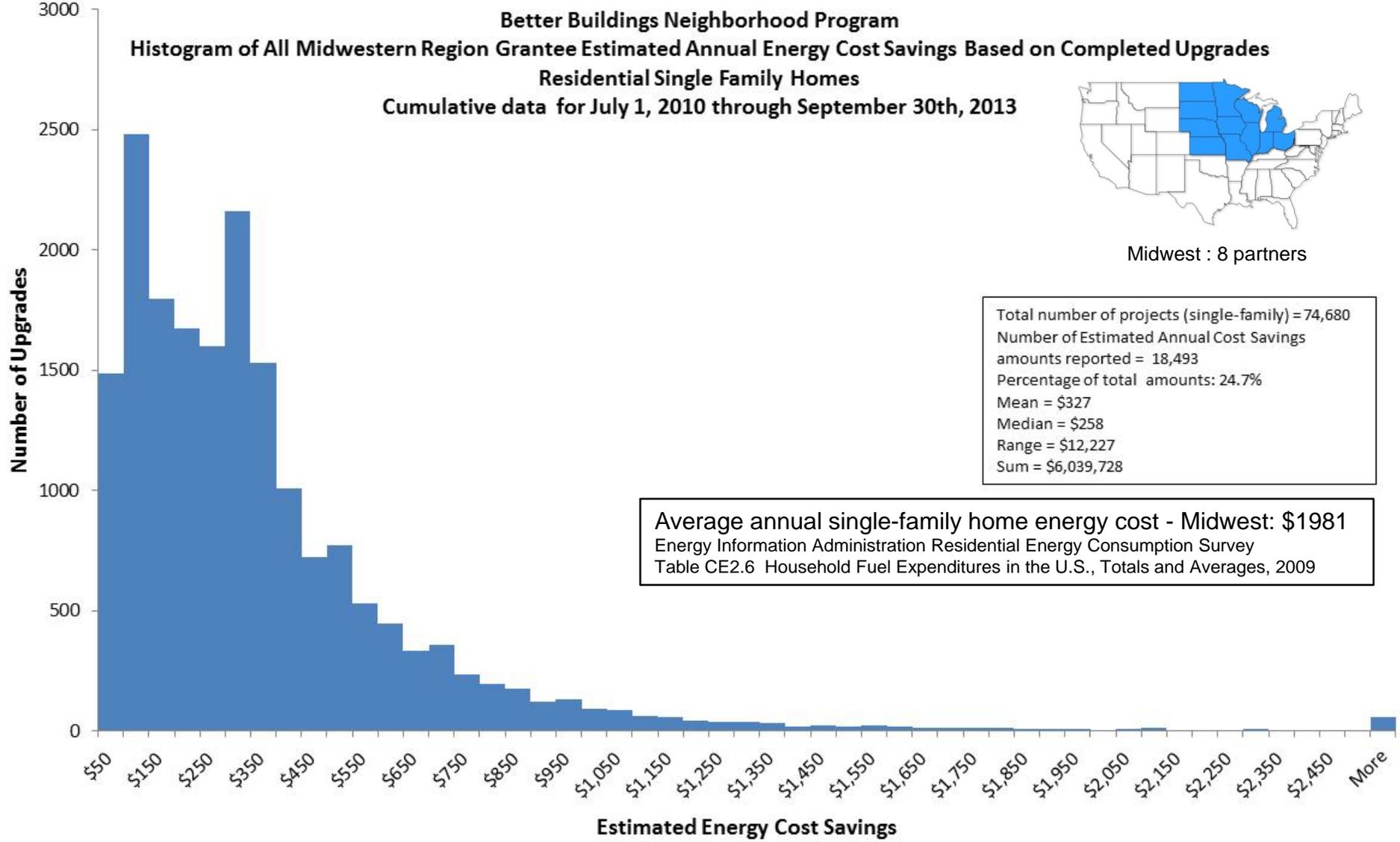


- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Energy Cost Savings greater than \$2,500: 1192 projects or 4.2% of all Cost Savings reported - State of Maine reported 584 projects, and NYSERDA reported 468 projects.
- Energy Cost Savings between \$200 and \$300 : State of Maine reported 4,211 projects and NYSERDA reported 958 projects.

Better Buildings Neighborhood Program
Histogram of All Midwestern Region Grantee Estimated Annual Energy Cost Savings Based on Completed Upgrades
Residential Single Family Homes
Cumulative data for July 1, 2010 through September 30th, 2013



Midwest : 8 partners



Total number of projects (single-family) = 74,680
 Number of Estimated Annual Cost Savings amounts reported = 18,493
 Percentage of total amounts: 24.7%
 Mean = \$327
 Median = \$258
 Range = \$12,227
 Sum = \$6,039,728

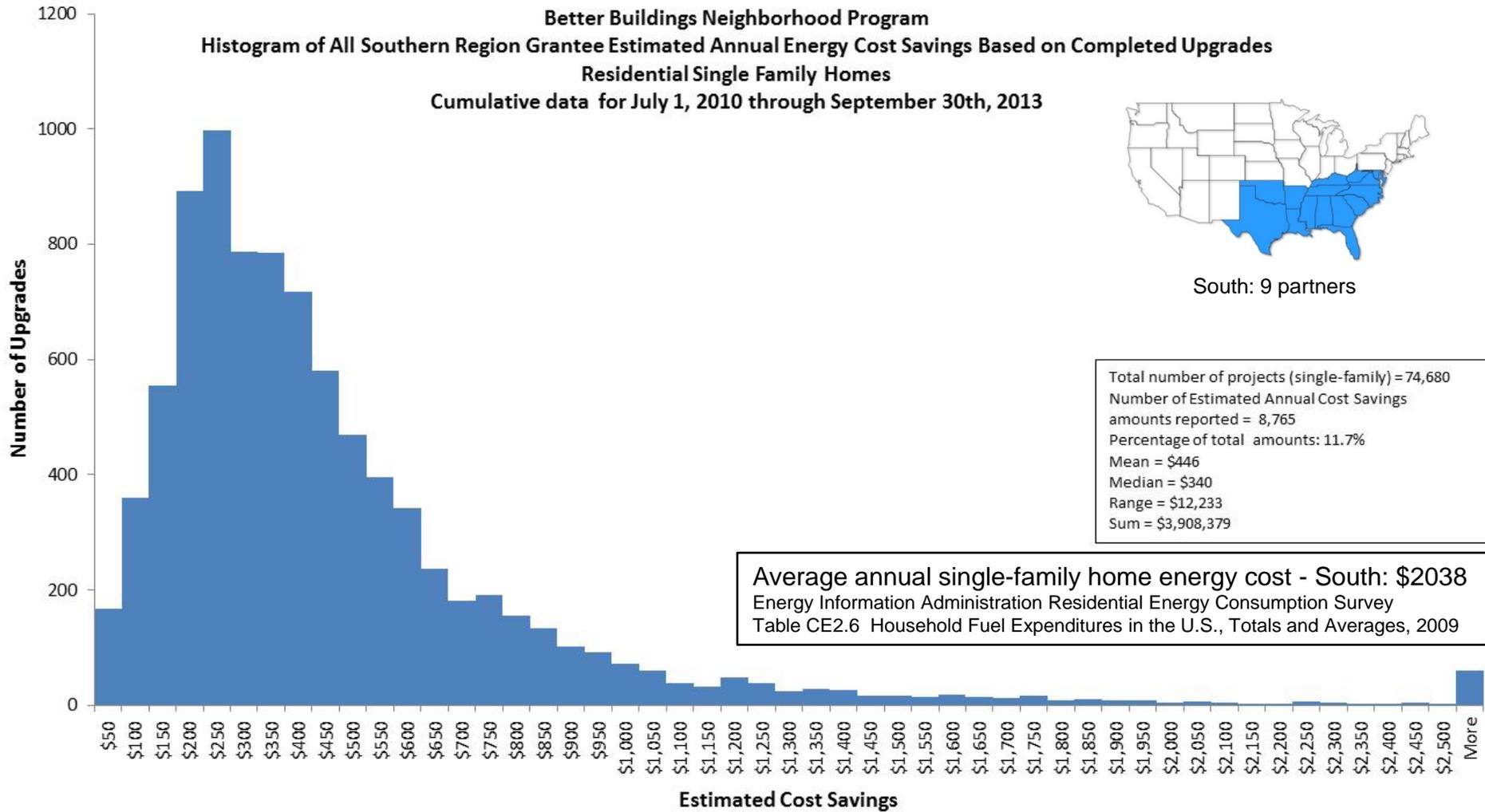
Average annual single-family home energy cost - Midwest: \$1981
 Energy Information Administration Residential Energy Consumption Survey
 Table CE2.6 Household Fuel Expenditures in the U.S., Totals and Averages, 2009

- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Energy Cost Savings greater than \$2,500 : 56 projects or .3% of all Cost Savings reported.
- Energy Cost Savings between \$50 and \$100: State of Michigan reported 1,737 projects
- Energy Cost Savings between \$250 and \$300: Indianapolis reported 878 projects

Better Buildings Neighborhood Program
Histogram of All Southern Region Grantee Estimated Annual Energy Cost Savings Based on Completed Upgrades
Residential Single Family Homes
Cumulative data for July 1, 2010 through September 30th, 2013



South: 9 partners

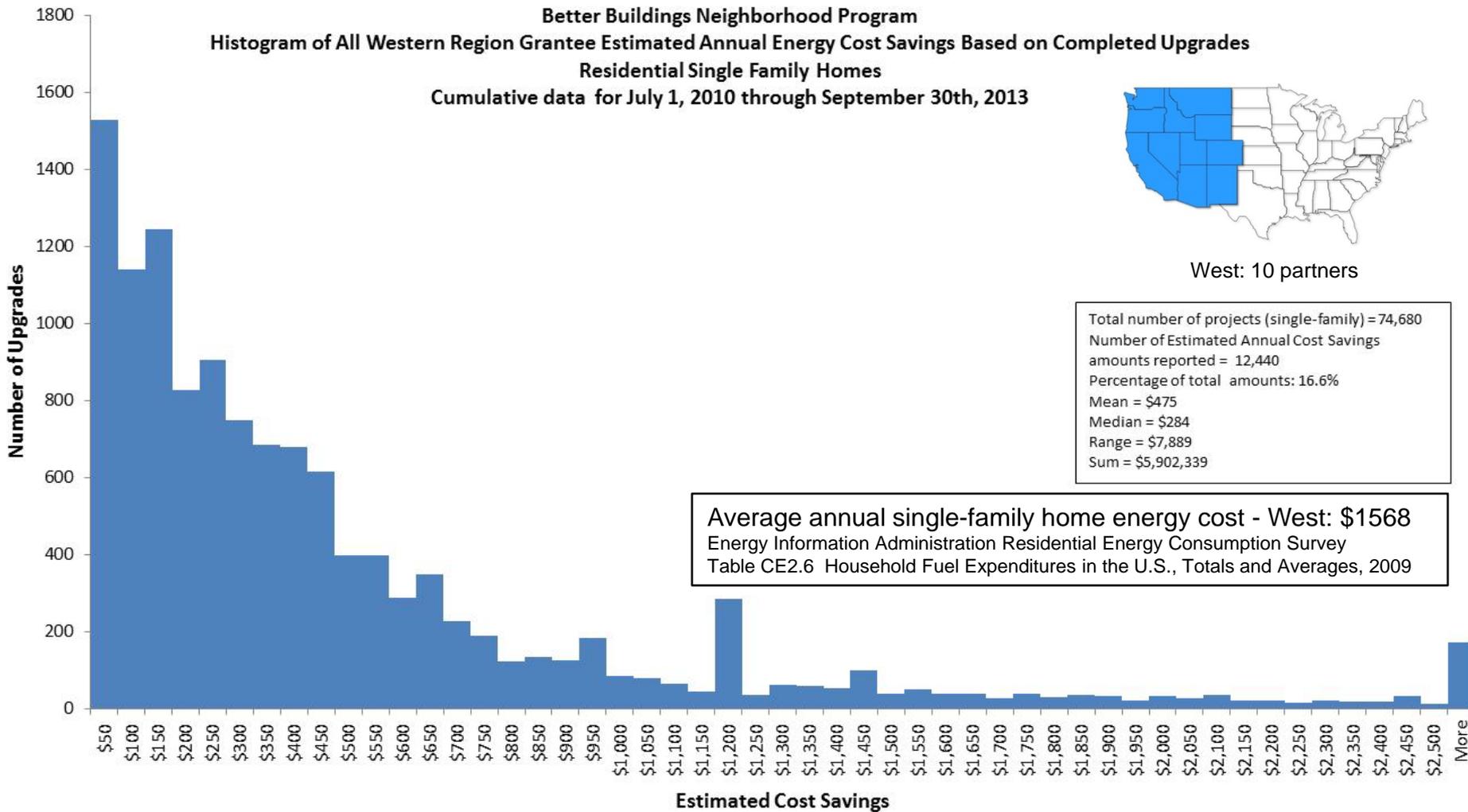


- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Energy Cost Savings greater than \$2,500: 60 projects or 0.7% of all Cost Savings reported
- Energy Cost Savings between \$150 and \$200: San Antonio reported 386 projects.
- Energy Cost Savings between \$200 and \$250: San Antonio reported 328 projects.
- Energy Cost Savings between \$700 and \$750: SEEA reported 83 projects.

Better Buildings Neighborhood Program
Histogram of All Western Region Grantee Estimated Annual Energy Cost Savings Based on Completed Upgrades
Residential Single Family Homes
Cumulative data for July 1, 2010 through September 30th, 2013



West: 10 partners



Average annual single-family home energy cost - West: \$1568
 Energy Information Administration Residential Energy Consumption Survey
 Table CE2.6 Household Fuel Expenditures in the U.S., Totals and Averages, 2009

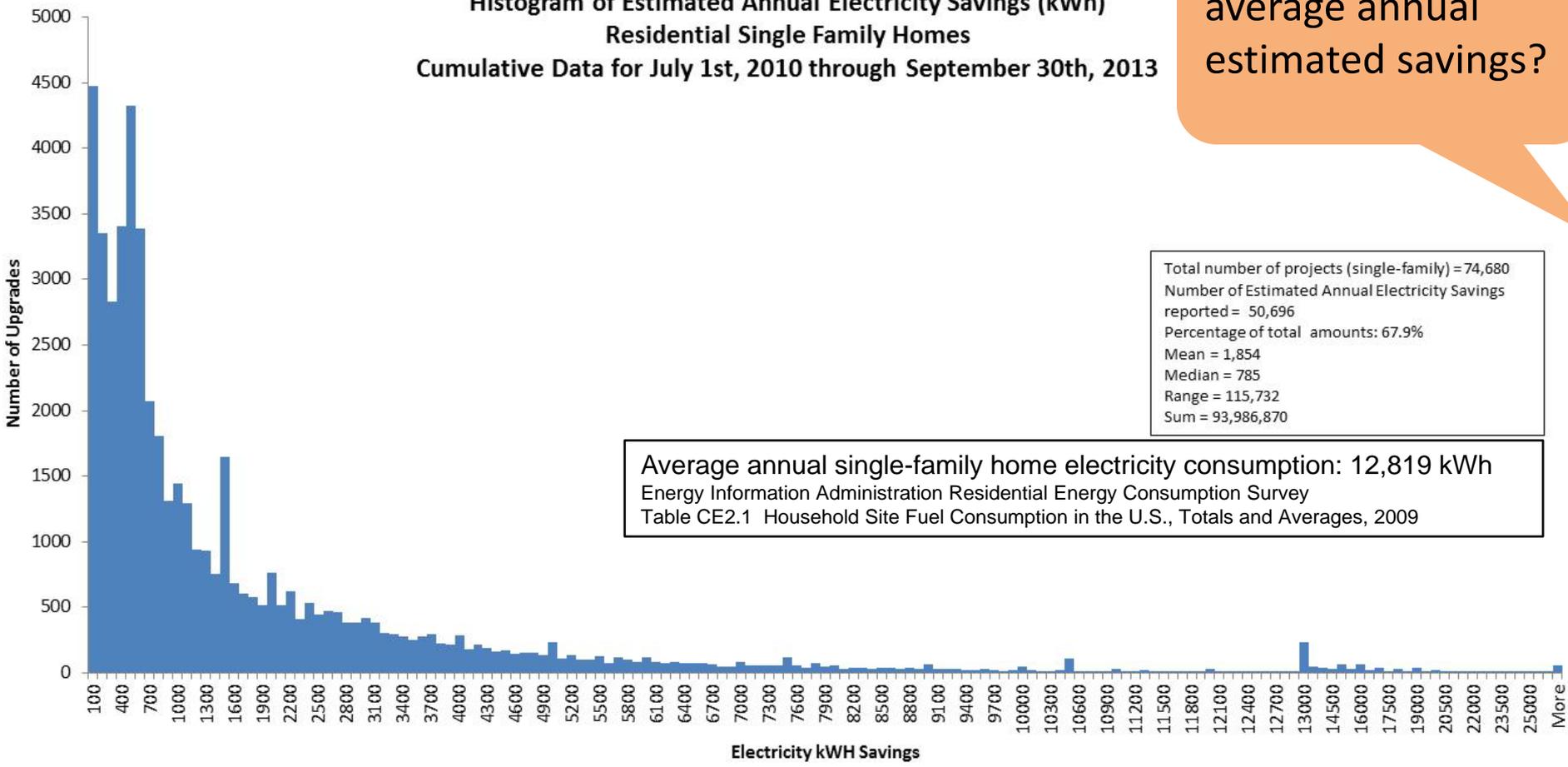
- Data notes: Projects with incorrect Building Type have been ignored; All upgrade completion dates are considered.
- Energy Cost Savings greater than \$2,500: 171 projects or 1.4% of all Cost Savings reported - Seattle reported 78 projects, and CSG, Bainbridge Island reported 48 projects.
- Energy Cost Savings between \$0 and \$50: Boulder County reported 1,346 projects, and Eagle County reported 109 projects.
- Energy Cost Savings between \$50 and \$100: Boulder County reported 866 projects, and Portland reported 103 projects.
- Energy Cost Savings between \$100 and \$150: Boulder County reported 770 projects, Portland reported 202 projects, and Seattle reported 115 projects.
- Energy Cost Savings between \$200 and \$250: Boulder County reported 407 projects, Portland reported 263 projects, and Seattle reported 160 projects.

Estimated Annual Energy Savings (electricity, natural gas, and other fuels)

Single-family Homes

**Better Buildings Neighborhood Program
Histogram of Estimated Annual Electricity Savings (kWh)
Residential Single Family Homes
Cumulative Data for July 1st, 2010 through September 30th, 2013**

What was the average annual estimated savings?

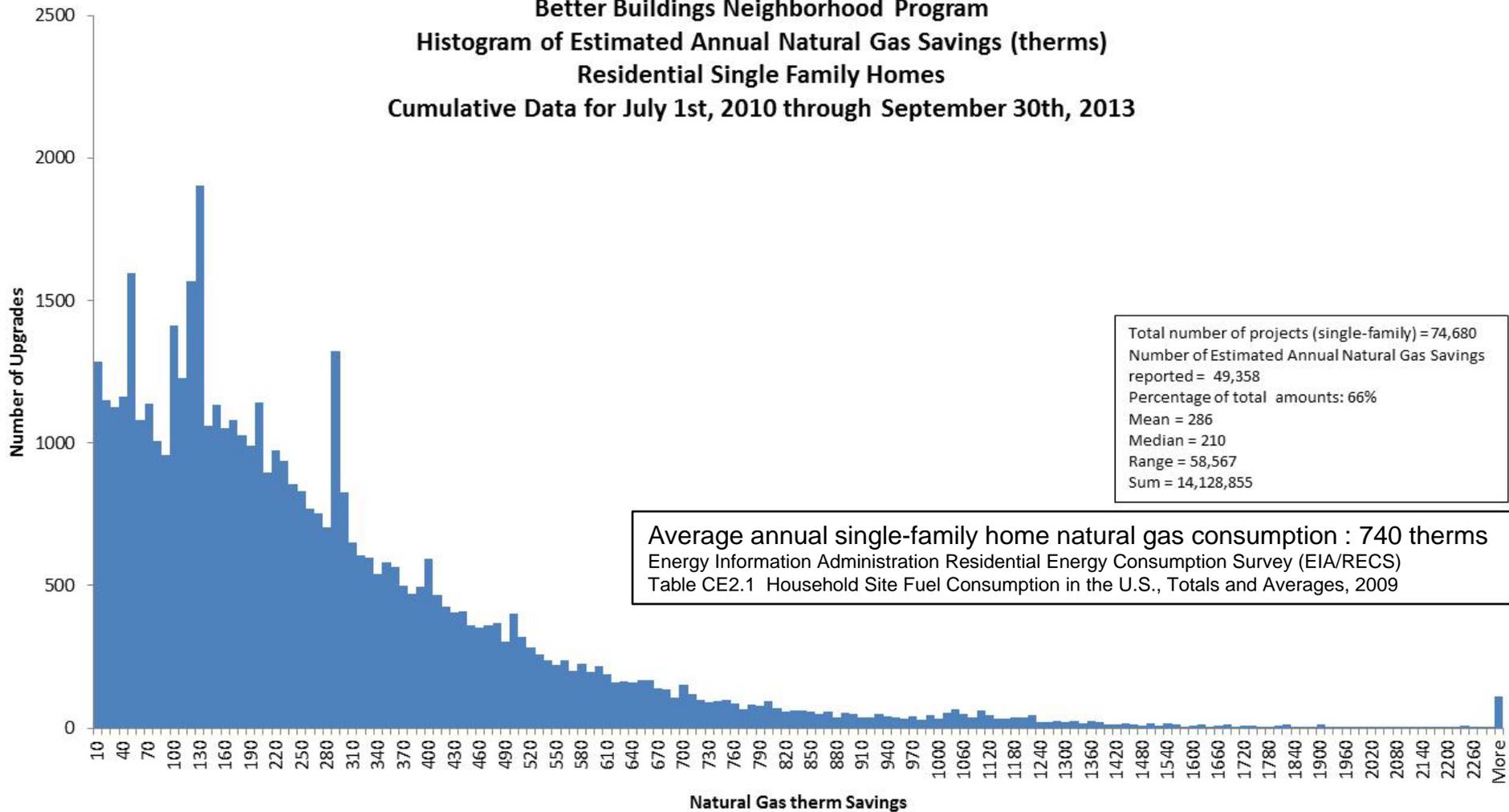


Total number of projects (single-family) = 74,680
 Number of Estimated Annual Electricity Savings reported = 50,696
 Percentage of total amounts: 67.9%
 Mean = 1,854
 Median = 785
 Range = 115,732
 Sum = 93,986,870

Average annual single-family home electricity consumption: 12,819 kWh
 Energy Information Administration Residential Energy Consumption Survey
 Table CE2.1 Household Site Fuel Consumption in the U.S., Totals and Averages, 2009

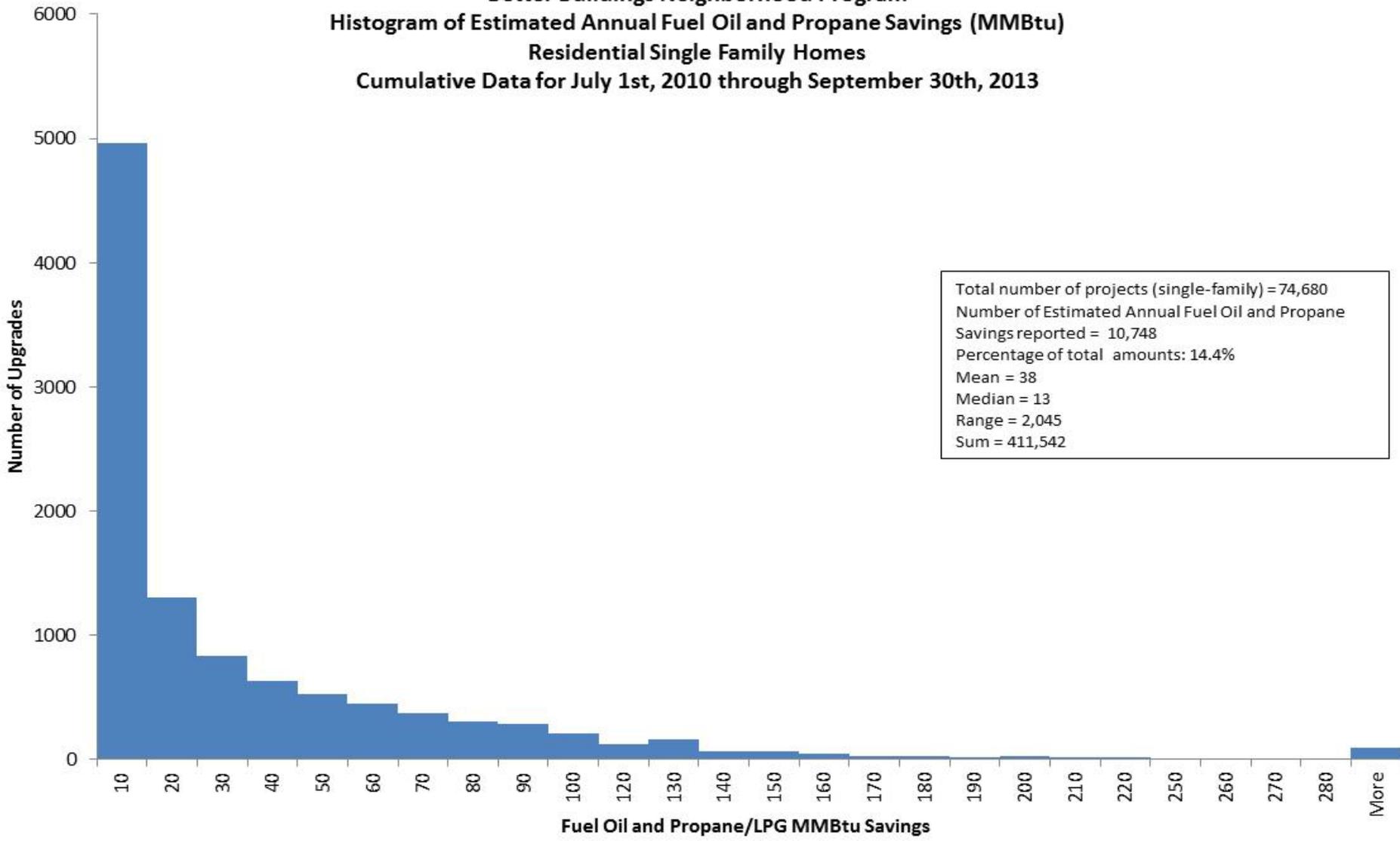
- Bin size is 100 kWh from 0 to 13,000 kWh, and 500 kWh after that.
- Electricity Savings greater than 26,000 kWh : 53 projects or 1.1% of all Electricity kWh Savings reported.
- Electricity Savings between 0 and 100 kWh: NYSERDA reported 1,713 projects.
- Electricity Savings between 400 and 500 kWh : State of Michigan reported 2,253 projects.
- Electricity Savings between 1,400 and 1,500 kWh : Indianapolis reported 829 Electricity kWh.
- Electricity Savings between 12,900 and 13,000 kWh : CSG, Bainbridge Island reported 215 Electricity kWh.
- Electricity Savings less than 0 kWh : 1818 projects.

Better Buildings Neighborhood Program
Histogram of Estimated Annual Natural Gas Savings (therms)
Residential Single Family Homes
Cumulative Data for July 1st, 2010 through September 30th, 2013



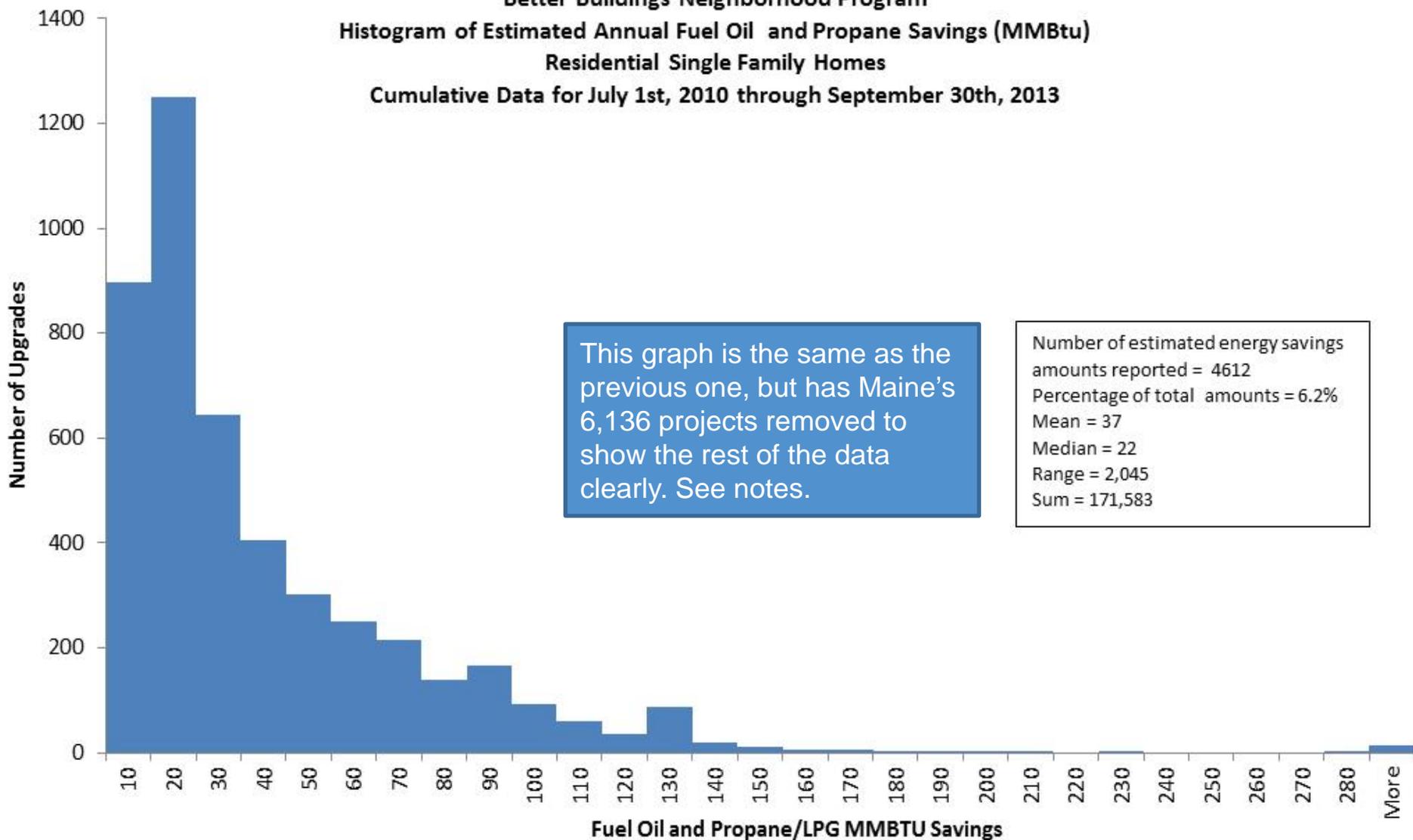
- Bin size is 10 therms from 0 to 1,000 therms, and 20 therms after that.
- Natural Gas Savings greater than 2,300 therms : 112 projects or .2% of Natural Gas therm Savings reported.
- Natural Gas Savings between 40 and 50 therms : CSG, Bainbridge Island reported 235 projects.
- Natural Gas Savings between 110 and 120 therms : NYSERDA reported 287 projects.
- Natural Gas Savings between 120 and 130 therms : NYSERDA reported 1,905 projects.
- Natural Gas Savings between 280 and 290 therms : NYSERDA reported 267 projects.
- Natural Gas Savings less than 0 therms : 758 projects.

Better Buildings Neighborhood Program
Histogram of Estimated Annual Fuel Oil and Propane Savings (MMBtu)
Residential Single Family Homes
Cumulative Data for July 1st, 2010 through September 30th, 2013



- Data notes: 129 projects with unknown or incorrect units were excluded. Additionally, 388 projects with other fuel types, such as, wood, kerosene, and steam have been excluded.
- Energy Savings greater than 280 MMBtu : 91 projects or .86% of Fuel Oil or Propane Savings reported.
- Energy Savings between 9 and 10 MMBtu : State of Maine reported 4,049 projects.
- Energy Savings less than 0 MMBtu : 10 projects.

Better Buildings Neighborhood Program
Histogram of Estimated Annual Fuel Oil and Propane Savings (MMBtu)
Residential Single Family Homes
Cumulative Data for July 1st, 2010 through September 30th, 2013



- Data Notes: 129 projects with unknown or incorrect units were excluded.
- Energy savings greater than 280 MMBTu: 15 projects or .3% of Fuel Oil or Propane Savings reported.
- Energy Savings between 9 and 10 MMBTu: State of Maine reported 4,049 projects. All Maine projects have been ignored in the above graph to display the other data more clearly.
- Energy Savings less than 0 MMBTu: 10 projects.

For More Information



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