

DOCKETED

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Filer:	Raquel Kravitz
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The Many Uses of Energy Data

April 14th, 2015

Michael Murray
Chief Technology Strategist

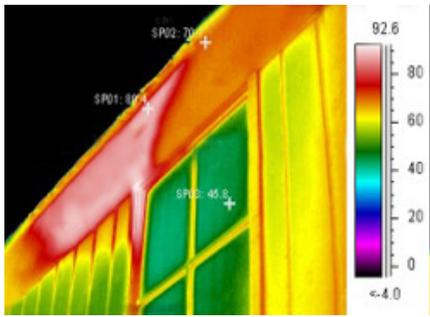


**GREENTECH
LEADERSHIP GROUP**



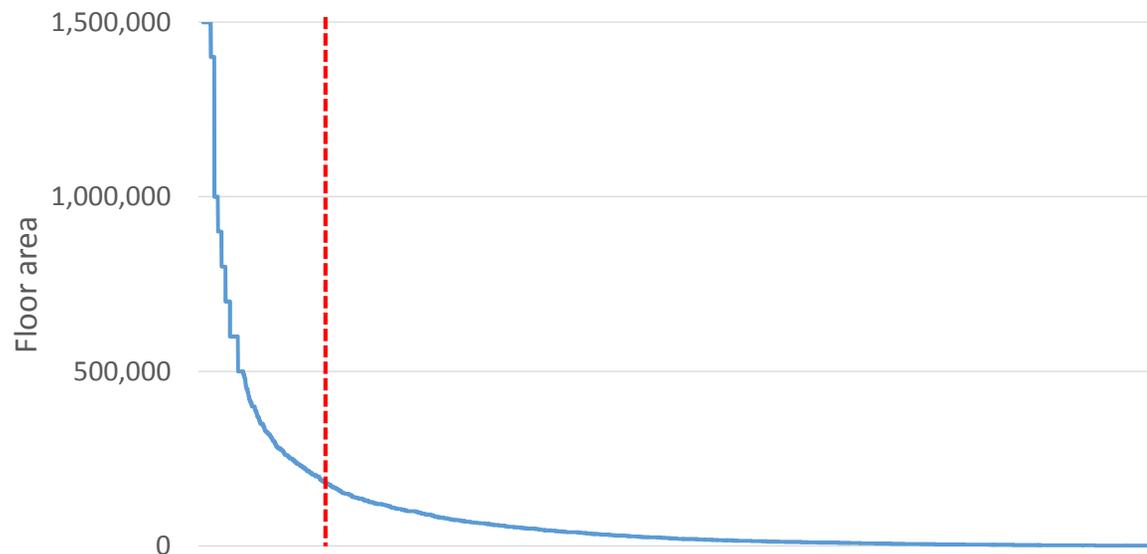
Energy data can be used *everywhere*.

bill estimation and auditing - rate selection - load-shift assessment - DR management - fault detection - DR settlement - demand forecasting - M&V - efficiency measure identification - efficiency program effectiveness - distribution planning - work order management - capital planning - OpEx forecasting - cost of goods accounting - expense management - Energy Star - LEED for existing buildings - solar sizing - PV payback estimation - PPA financing - real estate valuation - disclosure compliance - appraisal - weather normalization - benchmarking - baselining - carbon accounting - system efficiency - occupancy trending - retrofit return-on-investment - load profiling - IPMVP option C - performance guarantees - balance point analysis - Commissioning - persistence - commissioning - budget forecasting -

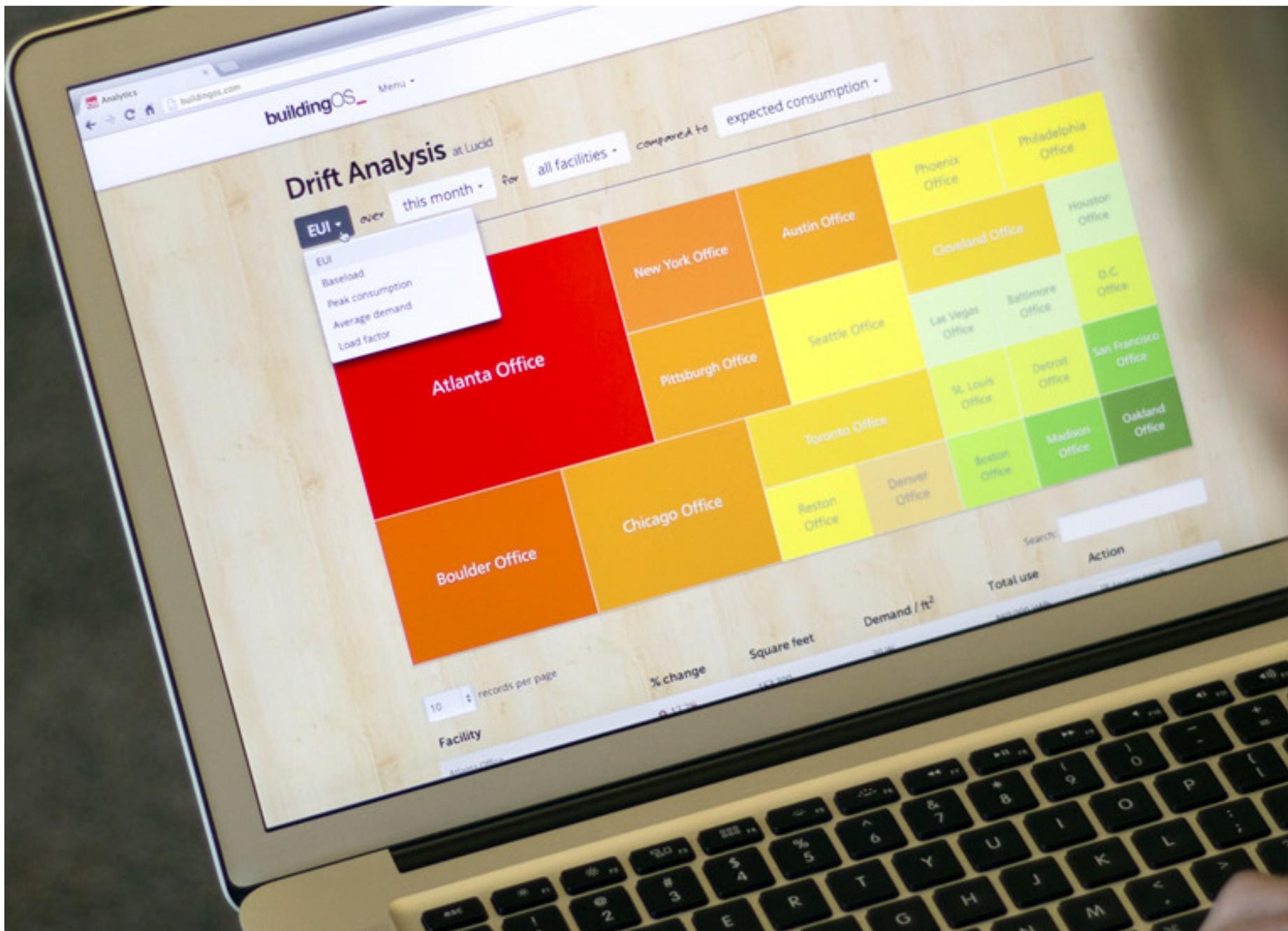


App: \$1.99

Audit: \$25,000+







Residential Solar Rate Analyzer

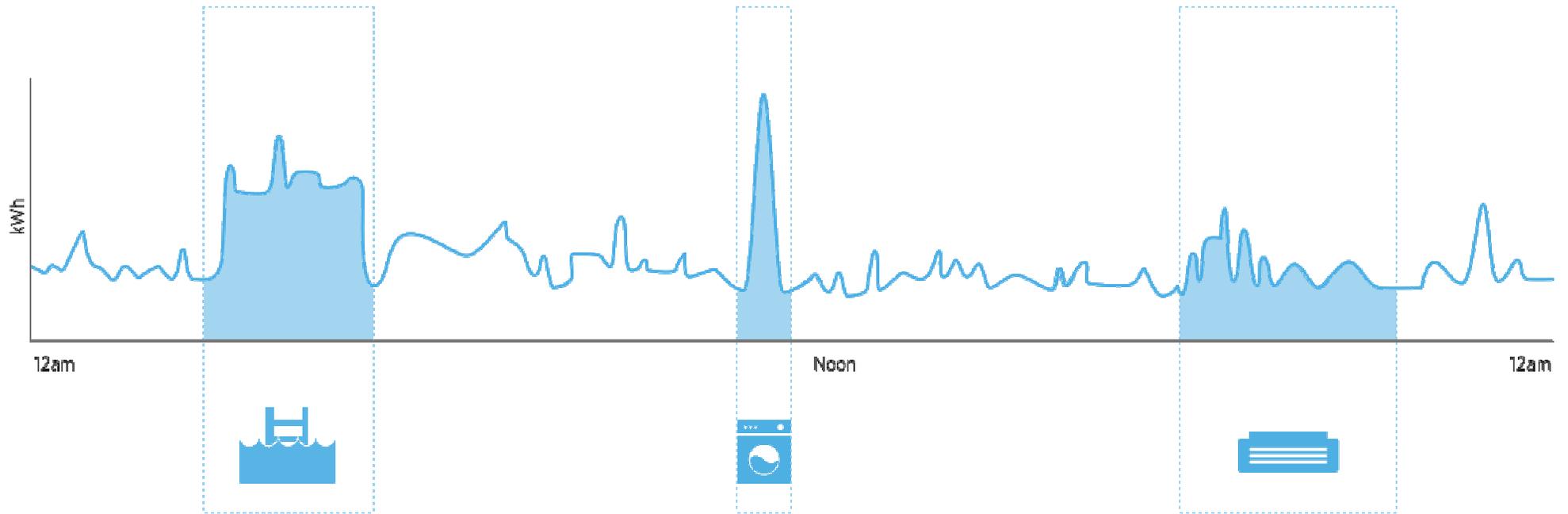
The Residential Electric Rate Analysis Tool utilizes Green Button interval data, the location of the home, and solar design factors (azimuth, tilt) specific to the home to show how the addition of a solar electric system will affect a residential utility customer's bill. Once the analysis is complete, the residential utility customer will have a deeper understanding of how various solar systems sizes will affect their monthly and annual utility bill.

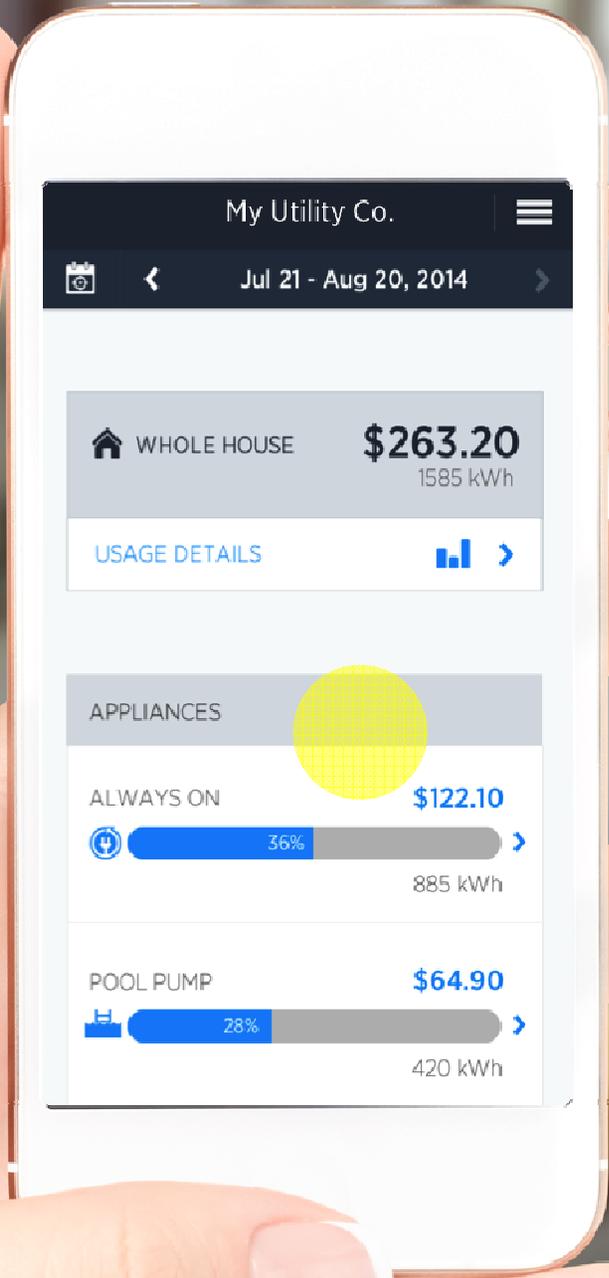
Step 1: Enter Details

Enter your home address



Disaggregation





My Utility Co.



Jul 21 - Aug 20, 2014



WHOLE HOUSE

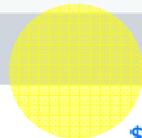
\$263.20

1585 kWh

USAGE DETAILS



APPLIANCES



ALWAYS ON

\$122.10



36%



885 kWh

POOL PUMP

\$64.90



28%



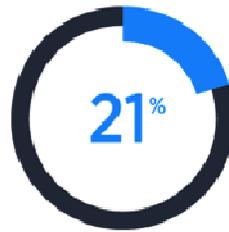
420 kWh

My Utility Co.



Jul 21 - Aug 20, 2014

A/C IN WHOLE HOUSE



 A/C **\$56.20** 423 kWh

 WHOLE HOUSE **\$143.20** 1585 kWh

YOUR A/C VS. SIMILAR



Santee Save-A-Tree Energy Challenge



COMPETITIONS

Santee Save-A-Tree Energy Challenge

Sep 29

Oct 19

Competition completed!



TOTAL SAVINGS:

\$7,745

1	Pepper Drive School	19.3% reduction	+
2	PRIDE Academy at Prospect Avenue School	19.2% reduction	+
3	Rio Seco School	18.5% reduction	+
4	Sycamore Canyon School	17.6% reduction	+
5	Cajon Park School	17.1% reduction	+
6	Chet F. Harritt School	13.4% reduction	+
7	Hill Creek School	11.9% reduction	+
8	Carlton Oaks School	9.2% reduction	+
9	Carlton Hills School	8.7% reduction	+



Introduction



Competition



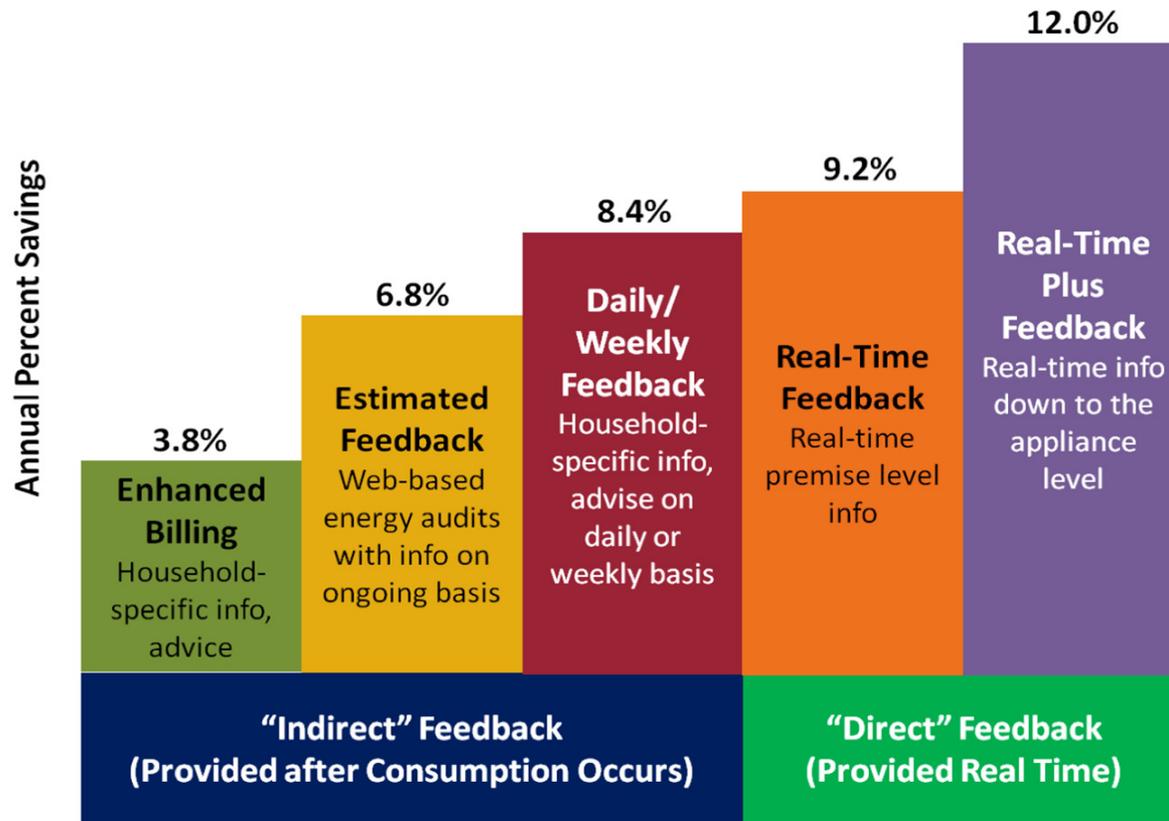
Electricity



Comparisons

Energy savings increases with granularity/frequency of feedback

Average Household Electricity Savings (4-12%) by Feedback Type



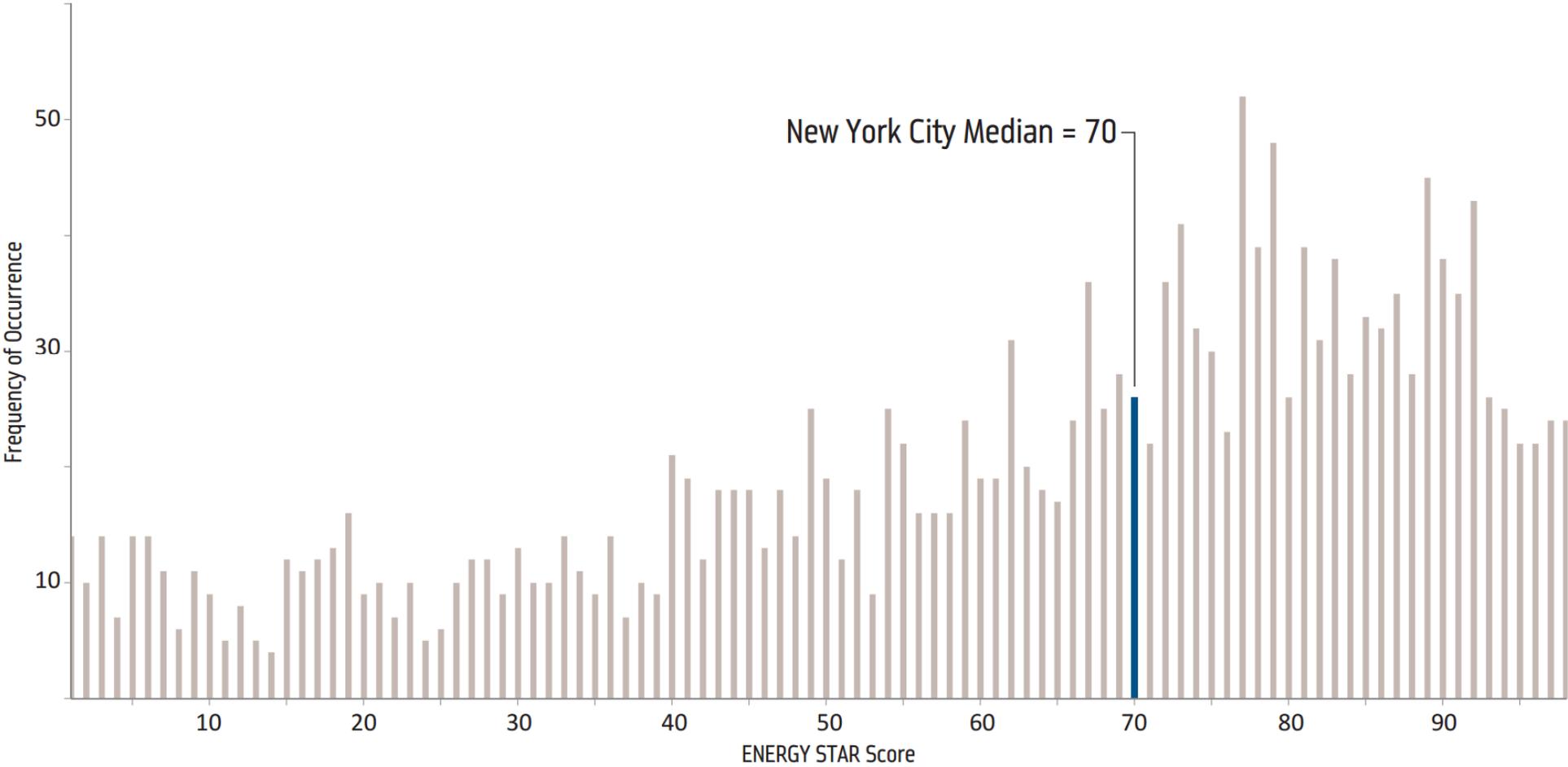
Based on 36 studies implemented between 1995-2010

Submetering costs are large...

Item	Range
Meter	\$500 to \$2,000
Data Acquisition	\$900 to \$2,400
Installation	\$1,500 to \$2,000
TOTAL	\$2,900 to \$6,400

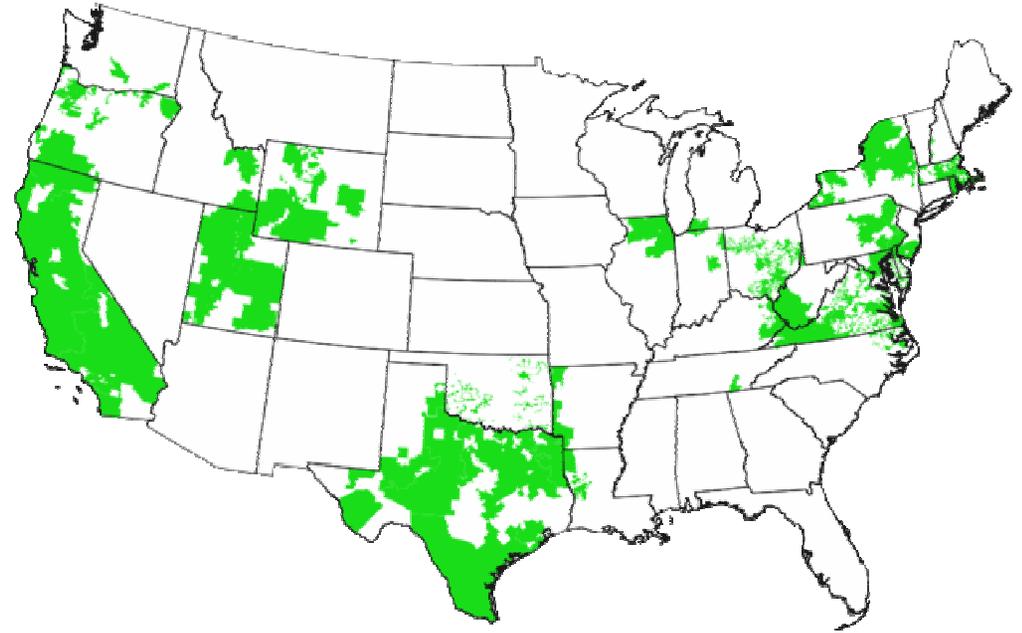


[Fig. 17] New York City Benchmarked Buildings Median ENERGY STAR Score

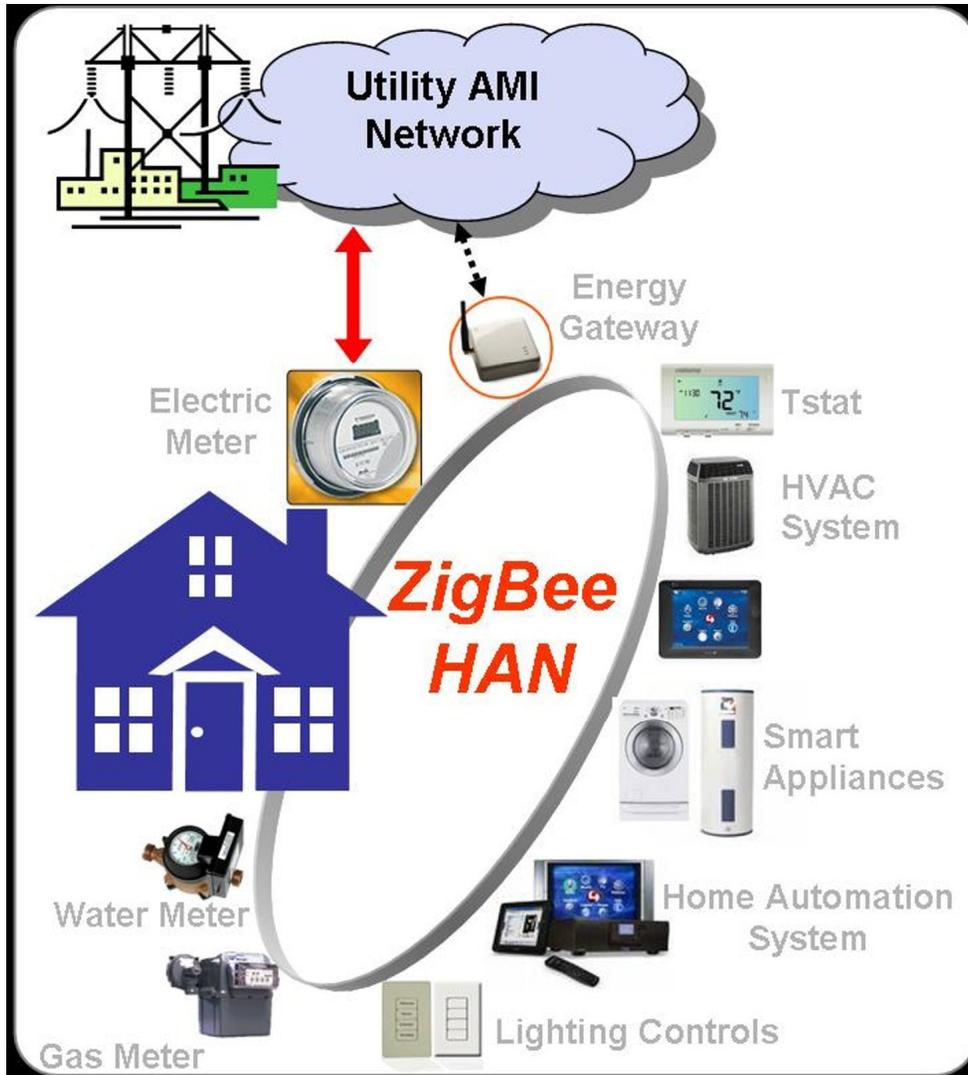




Data access method #1: Green Button



Data access method #2: Home Area Network (HAN) activation



\$99, installs in
10 minutes

