



On the Horizon:

Making Home Energy Data Meaningful Beyond the MLS

Panelists

- Moderator: Chad Curry, National Association of REALTORS®
- Jodi Horne, Fannie Mae, Senior Risk Manager
- Jeremy Crawford, RESO Executive Director
- Matt Casey, CRS Data, President, CEO



**Better
Buildings®**
U.S. DEPARTMENT OF ENERGY

Standards & Innovation

Chad Curry, National Association of
REALTORS

CRT, RETS and RE Data



HEIA, RESO & CRT




Data Dictionary & BEDES



Challenges with Data


Walk Score® Get Scores Find Apartments My Favorites Add to Your Site Log in ▼



Live Where You Love


Chicago, IL

Great Nearby Places




View neighborhood restaurants, coffee shops, grocery stores, schools, parks, and more.

Improve Your Commute



Get a commute report and see options for getting around by car, bus, bike, and foot.

Fits Your Lifestyle



Learn about the neighborhood, view crime and safety, see what locals are saying, browse photos and places.

AIA Home Design Trends Survey

1. Smarter homes.
2. Healthier homes.
3. Disaster-proof.
4. Energy efficiency.
5. Age-in-place.
6. All about the kitchen.
7. Outdoor living spaces.
8. Home offices.
9. Smaller but better designed homes.
10. Urban influence.

Source:

<http://styledstagedsold.blogs.realtor.org/2016/03/28/10-trends-driving-the-next-decade-of-home-design/>

Energy Use

Home Energy Manager

The central nervous system for the net zero energy home helps homeowners optimize energy consumption.



Solar Photovoltaic

3 kW to 4 kW solar array on the roof to meet energy requirements of the home.

Small Wind

Supplementary renewable generation.



Smart Meter

A communication gateway between the Smart Grid and the home.

Geothermal Heat Pumps

Reduces HVAC and water heating energy requirements by 30%.

GE Heat Pump Water Heater

Uses less than half the energy of a conventional electric water heater.

GE Water Filtration

Filters, conditions and monitors home water usage.

Energy Storage

Battery storage for backup power and peak loads.

Demand Response Appliances

High efficiency Energy Star Appliances shed load from the grid and help consumers save money during peak demand.

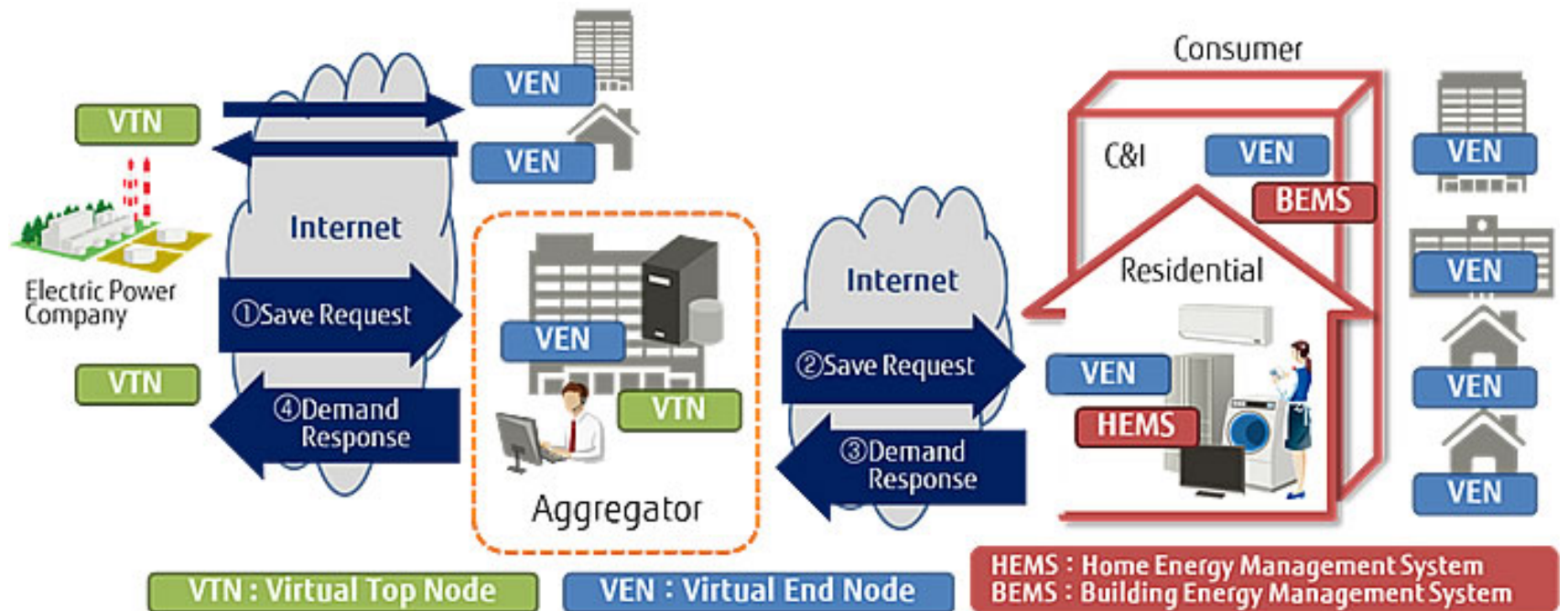
Energy Efficient Lighting

High efficiency CFL, LED and OLED lighting.



imagination at work

OpenADR



Rosetta Home Concept



Rosetta Home

Environmental Quality



Netatmo Weather Station
\$150



- CO₂
- Noise
- Pressure
- Temperature (Indoor & Outdoor)
- Humidity (Indoor & Outdoor)

Energy Usage



Neurio
\$249



Rainforest Eagle
\$99

- Works with smart meters
- Real-time energy data

Rosetta Home

- Listing data is static
- Changes manually
- No environmental quality data or energy

7467 Sheridan [Edit](#)



© VHT STUDIOS

7467 Sheridan

\$765,000.00

Enormous, 4,100 sq ft., solid brick mini-mansion on 50x175' lot awaits new owner. Grand entry & staircase, double parlor. DR w/ cross beamed ceilings opens to enclosed greenhouse. Grand, open kitchen. Oak floors & trim throughout. Big BR's, vintage tile in kit and baths, 3 FP's. Tile roof, 2 car brick gar + 3 pkg spaces, 6ft. iron fence, expandable full walk-up 3rd fl., high ceiling basement, 1/2 block to Lake.

Similar Properties



1761 MORSE

[View](#)



7625 Eastlake

[View](#)




Rosetta Home


- Improve quality of life
- Dynamic data in listings
- Data is voluntarily shared by homeowner

CRT LABS Dashboard Chad Curry


Locations




7467 Sheridan **\$765,000.00**
Enormous, 4,100 sq ft., solid brick mini-mansion on 50x175' lot awaits new owner. Grand entry & staircase, double parlor. DR w/ cross beamed ceilings opens to enclosed greenhouse. Grand, open



1761 MORSE **\$267,000.00**
Stunning! Extra large 1500sf newer all brick/limestone construction, with PRIVATE GARAGE included! Lush gardens welcome you to this intimate 8 unit bldg. Situated on the south side of the building, this unit is



7625 Eastlake **\$215,000.00**
Highly Sought after Boutique elevator Building on Eastlake Terrace, Sunny & Bright Corner unit, Huge private Deck with a Beautiful Lake View, secure indoor heated Garage parking, features open floor



1727 Division **\$200,000.00**

7467 Sheridan Edit

7467 Sheridan

\$765,000.00

Enormous, 4,100 sq ft., solid brick mini-mansion on 50x175' lot awaits new owner. Grand entry & staircase, double parlor. DR w/ cross beamed ceilings opens to enclosed greenhouse. Grand, open kitchen. Oak floors & trim throughout. Big BR's, vintage tile in kit and baths, 3 FP's. Tile roof, 2 car brick gar + 3 pkg spaces, 6ft. iron fence, expandable full walk-up 3rd fl., high ceiling basement, 1/2 block to Lake.

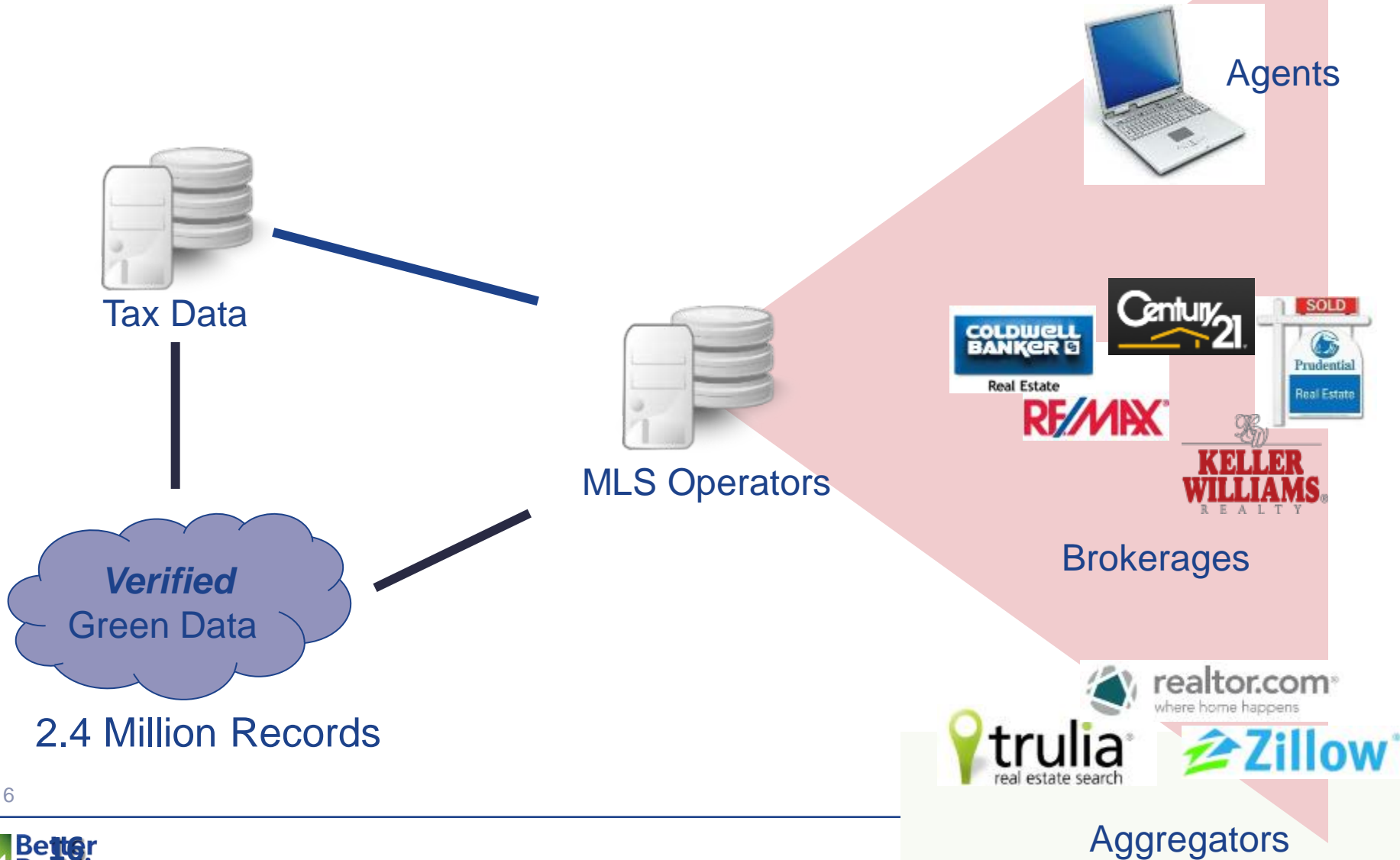
Listing Details

Rosetta Home

True Living Cost

PostalCodePlus4	None
BuyerOfficePhone	None
ListAgentLastName	Maguire
PhotosChangeTimest...	2015-05-03 16:05:43
IDXEntireListingDispl...	True
BedroomsTotal	4
ListingAgreement	E
BuyerAgencyCompen...	2.5% - MLS \$275
BuyerAgentCellPhone	None
Longitude	-87.665138
YearBuilt	1908
ParcelNumber	11293080010000
PurchaseContractDate	None
StatusChangeTimest...	2015-05-09 05:06:35
PostalCity	None
PrivateRemarks	Currently leased until July 31, 2015. \$2500. Zoned RT-4. PLEASE USE 4 PAGE CAR CONTRACT.
ListAgentFirstName	Frank
CapRate	None
StreetName	Sheridan
ClosePrice	None
ListAgentMlsId	112446
OriginalEntryTimesta...	None
Latitude	42.018051
CloseDate	None
VOWConsumerCom...	True
OperatingExpense	None

Auto-pop - Tax works, why not green?





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U.S. DEPARTMENT OF ENERGY

Identifying The Right Place for Energy Data Integration

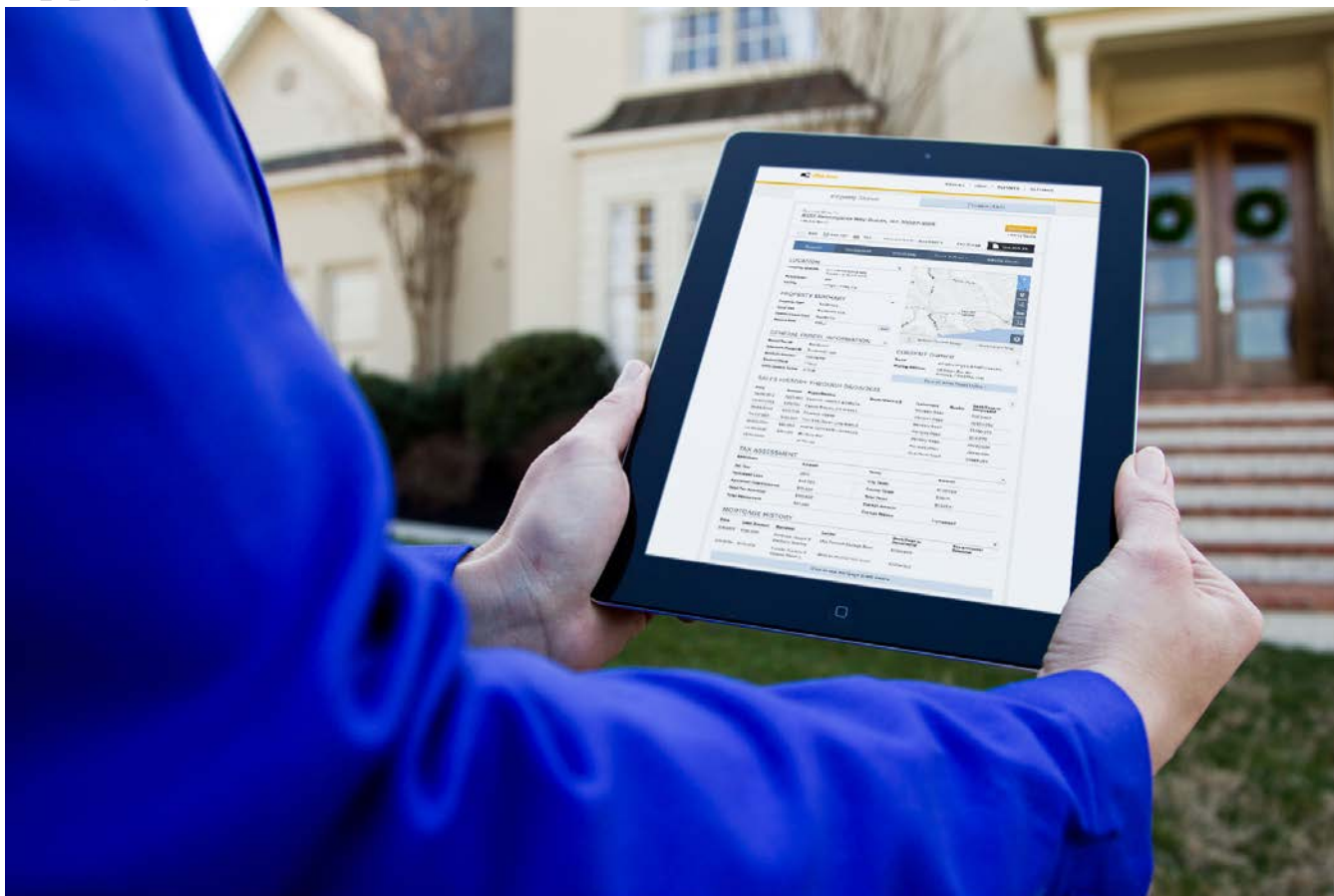


Matt Casey, President/CEO

CRS Data



Who Are We?



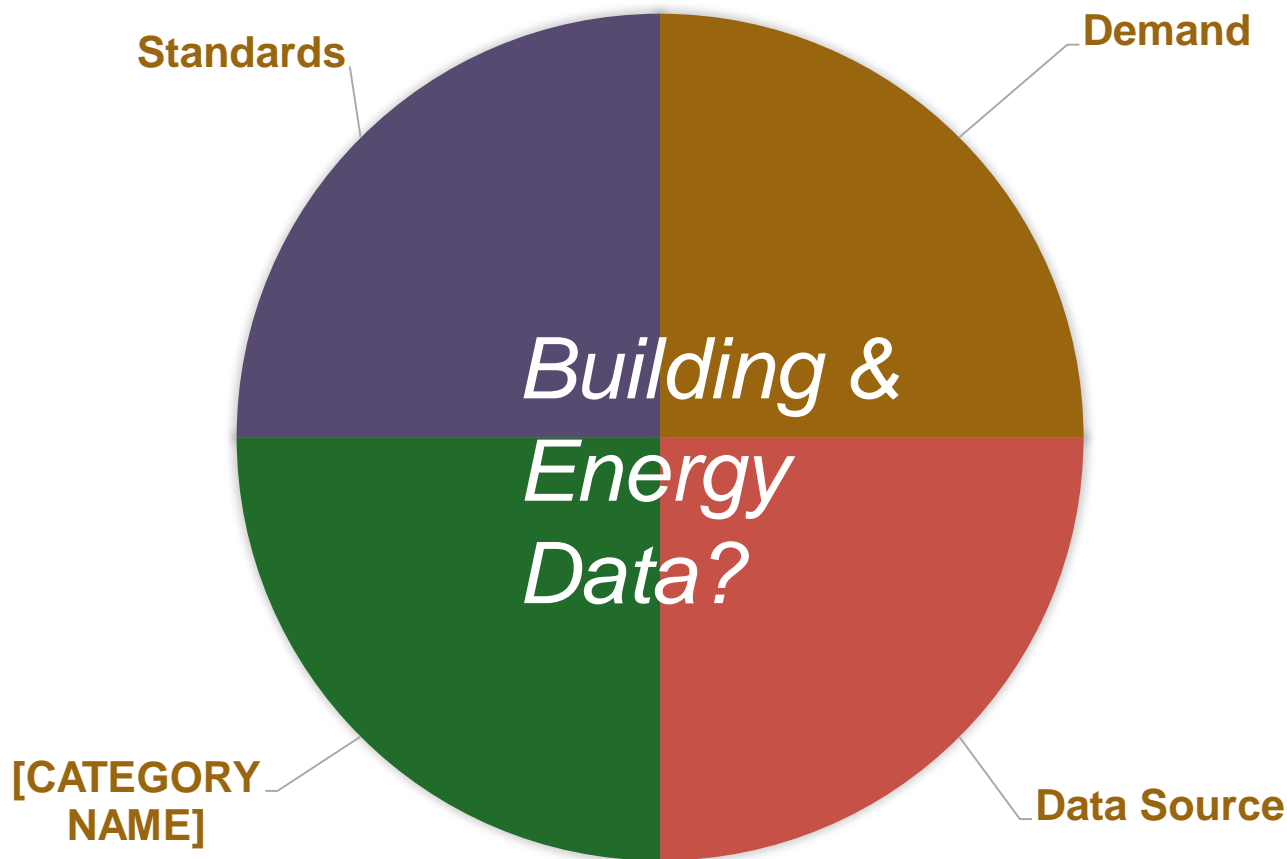
Providing powerful, accurate data since 1989

Providing Clear & Current Property Tax Data

- Property & tax records
- Interactive GIS and plat maps
- Sales and mortgage histories
- Area demographics
- Warranty deeds
- Property analyses
- Comps

The screenshot displays the CRS Data Property Search interface. At the top, there is a navigation bar with 'CRS Data' on the left and 'PROFILE | HELP | REPORTS | SETTINGS' on the right. Below this, there are two tabs: 'Property Search' and 'Prospecting', with 'Prospecting' being the active tab. The main content area shows search results for the address '8335 Kennington Way Duluth, GA 30097-1668'. There are buttons for 'Save Search' and 'Refine Results'. Below the search results, there is a row of utility buttons: 'Email', 'Save PDF', 'Print', 'Previous Report | Next Report', 'Save Settings', and 'View MLS Info'. A navigation bar below these buttons includes 'Property', 'Comparables', 'Prospecting', 'Charts & Graphs', and 'Refined Values'. The 'Prospecting' tab is selected. The main content area is divided into two sections: 'LOCATION' and 'PROPERTY SUMMARY'. The 'LOCATION' section includes fields for 'Property Address' (8335 Kennington Way, Duluth, GA 30097-1668), 'Subdivision' (567), and 'County' (Forsyth County, GA). The 'PROPERTY SUMMARY' section includes fields for 'Property Type' (Residential), 'Land Use' (Residential Lots), and 'Improvement Type' (Residential). To the right of the text is a map showing the property location in a residential area with streets like 'Fain Cemetery Rd' and 'Fairview Heights'.

The Potential For Integrating Building & Energy Data



The Role: Property Assessors

- Assess all property and property ownership
- Produces an assessment roll that is the basis for levying taxes
- Establishes and maintains property maps
- Values all taxable property



Baldwin County
Revenue Commissioner

Property Link BALDWIN COUNTY, AL

Tax Year 2015

Current Date 4/28/2016

Valuation Date October 1, 2014
Records Last Updated 4/27/2016

PROPERTY DETAIL		
OWNER	SMITH, AARON WILLIAM ETAL SMITH, 3 CORTE CT	ACRES : **NA**
	FAIRHOPE, AL 36532	APPRAISED VALUE: 174100
		ASSESSED : 17420
PARCEL	46-04-19-4-000-009.102	
ADDRESS	3 CORTE CT	

TAX INFORMATION			
YEAR 2015	TAX DUE	PAID	BALANCE
	704.06	704.06	0.00

LAST PAYMENT DATE 11 / 22 / 2015

MISCELLANEOUS INFORMATION			
EXEMPT CODES	H1	DESCRIPTION	69.71' X 161.09' IRR LOT 6 UNI T 2 COVERED BRIDGE ESTATE MB 1
TAX DISTRICT	06		1 PG 87 LESS A PARCEL DSEC AS;
PPIN	114255	Entry 00	BEG AT NW COR OF LOT 6 RUN E
ESCAPE YEAR			115'(S) TH SW'LY ALG A CURVE 2
ACCOUNT NUMBER	305492		2.94'; TH NW 114.89' TO POB (W

TAX HISTORY					
Year	Owner	Total Tax Paid(Y/N)	Appraised	Assessed	
2014	SMITH, AARON WILLIAM ETAL SMITH,	666.22 Y 11/29/2014	165300	16540	
2013	CLARK, JEFFREY ALLEN	661.06 Y 10/ 2/2013	164200	16420	
2012	CLARK, JEFFREY ALLEN	667.94 Y 12/22/2012	165700	16580	

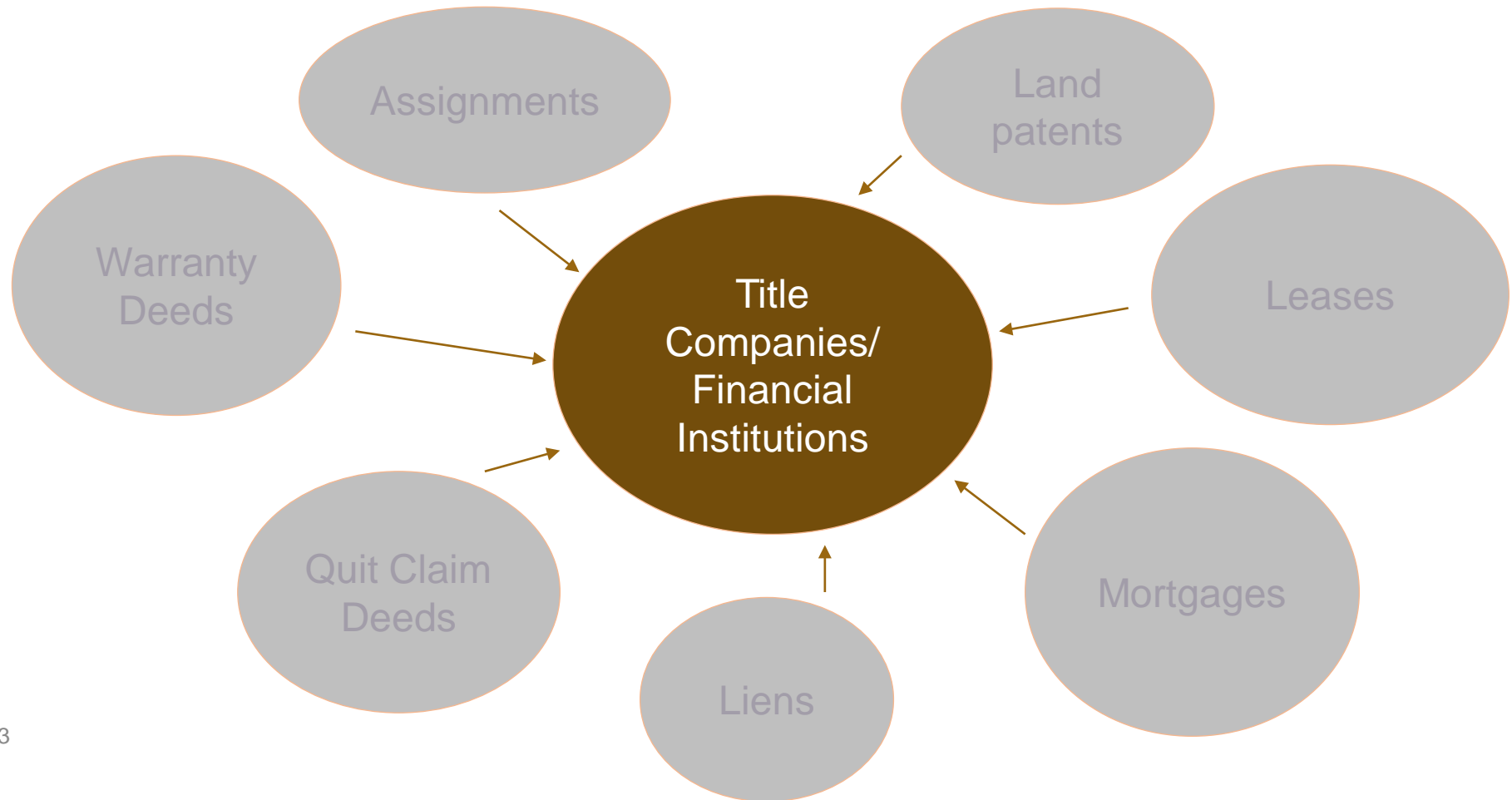
The Role: Property Assessors

Opportunity for Integration?



The Role: Register of Deeds

- The official recording and filing office for all legal documents affecting real and personal property



The Role: Register of Deeds

Trade & Standards Organizations



American Land
Title Association
Protecting the American Dream Since 1907

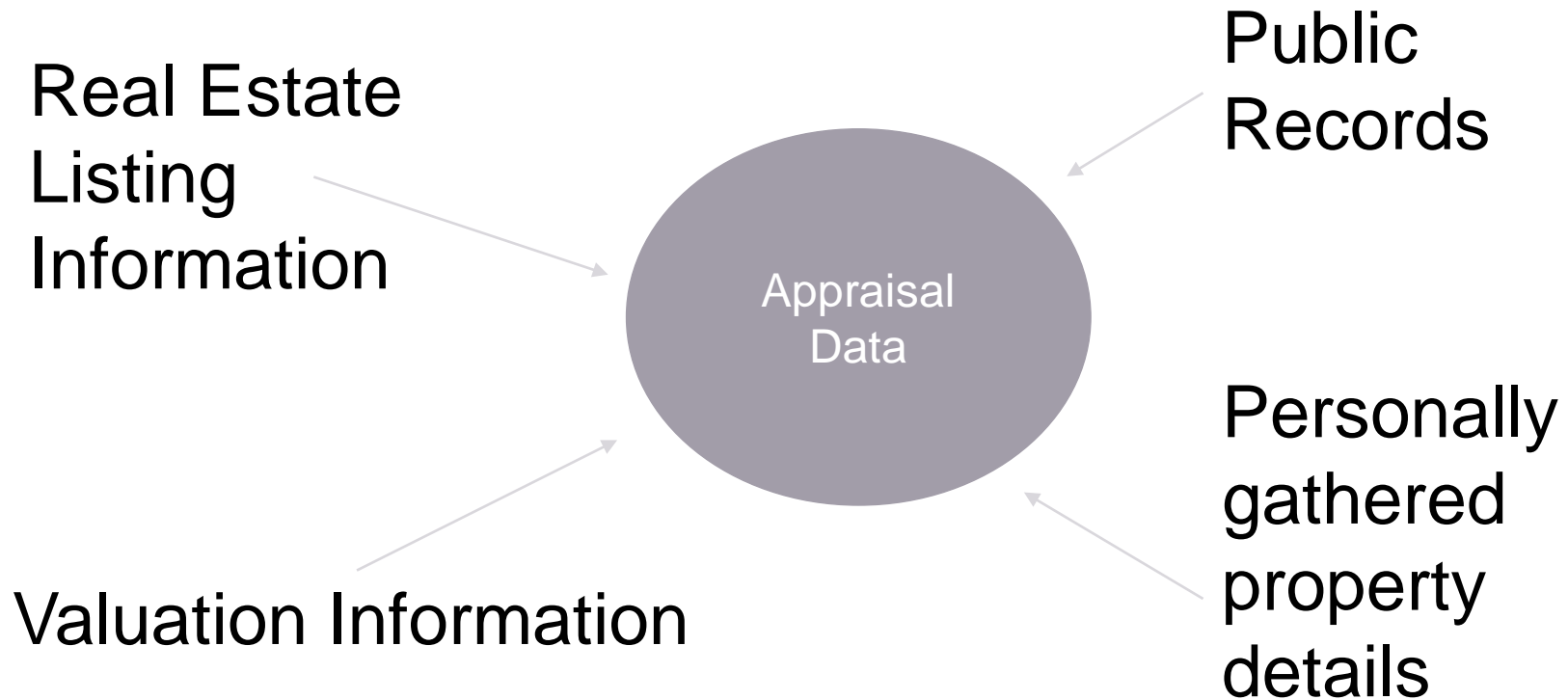
The Role: Property Assessors

Opportunity for Integration?



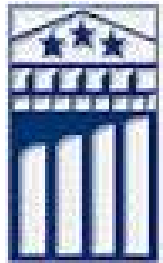
The Role: Appraisers

- Appraisers provide an estimate of the value of land and the buildings on the land usually before it is sold, mortgaged, taxed, insured or developed.



The Role: Appraisers

Trade & Standards Organizations



THE APPRAISAL
FOUNDATION



Appraisal
Institute™

*Professionals Providing
Real Estate Solutions*

The Role: Appraisers

Opportunity for Integration?



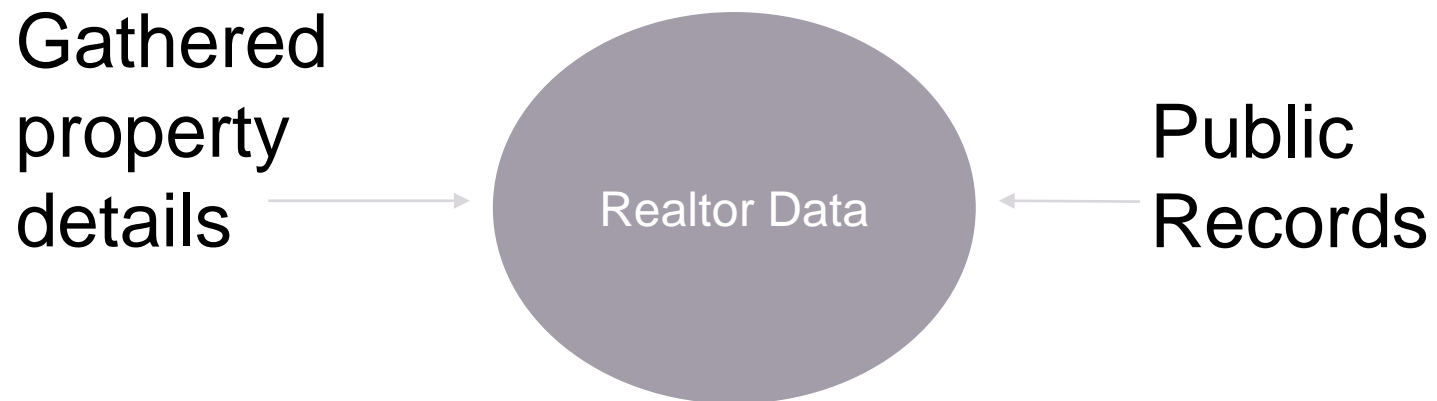
The Role: Realtors

- Help clients buy, sell and rent properties



The Role: Realtors

- Some listing data is publicly available, but bulk listing data is not normally provided to the public.



The Role: Realtors

Trade & Standards Organizations



CMLS
Council of Multiple Listing Services



NATIONAL
ASSOCIATION *of*
REALTORS®

The Role: Realtors

Opportunity for Integration?



Thank you!



Matt Casey, President/CEO
CRS Data | www.crsdata.com



Fannie Mae™

HomeStyle® Energy Mortgages

Better Building Summit May 2016





Overview

HomeStyle Energy offers affordable financing options for borrowers interested in improving the energy and water efficiency of their homes.

- Pay off higher-interest energy improvement debt, including PACE (Property Assessed Clean Energy)* loans through a limited cash-out refinance
- Finance up to 15% of the “as completed” appraised value of a home for new cost-effective energy improvements as part of a purchase or limited cash-out refinance
- Finance up to \$3,500 in basic weatherization or water-efficient improvements with no energy report as part of a purchase or limited cash-out refinance

*Fannie Mae policies related to PACE loans have not changed. More information can be found in the *Fannie Mae Selling Guide B5-3.4-01: Property Assessed Clean Energy Loans (12/01/2010)*.



Lender Benefits

Key Benefits for Lenders

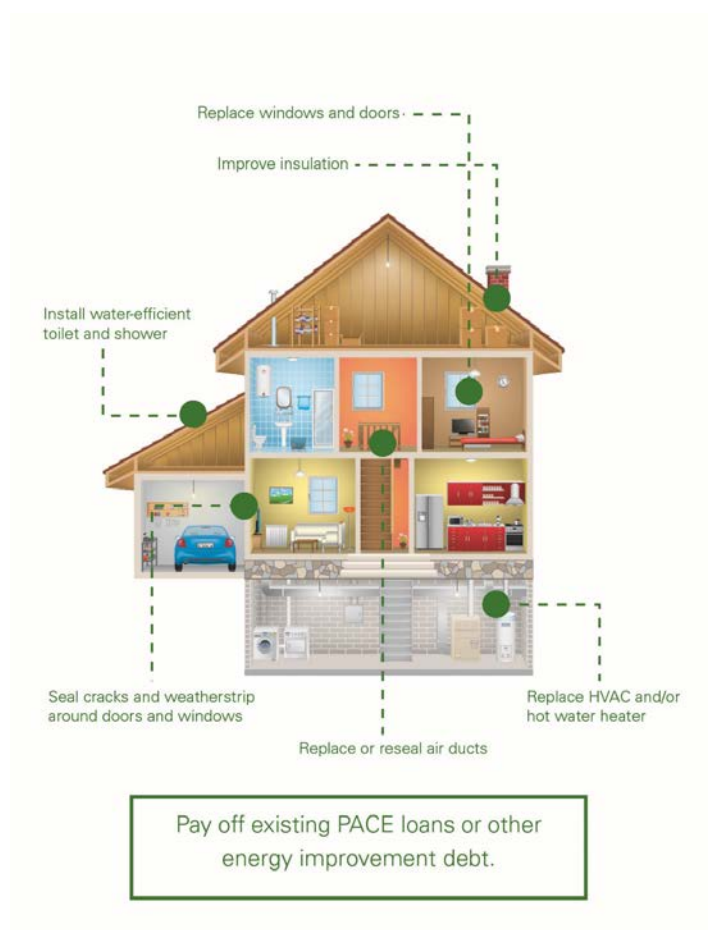
- Available to all Fannie Mae approved sellers – No special lender approval needed
- Expand your market to new customers purchasing homes that need upgrades and strengthen your relationships with real estate professionals
- Help customers reduce their energy costs and improve the comfort of their homes with refinance opportunities
- \$500 loan-level price adjustment (LLPA) credit



Eligible Energy Improvements

HomeStyle Energy is focused on cost-effective energy and water efficiency improvements.

- Basic weatherization and water-savings devices
- Pay off of existing energy improvement debt, including PACE
- Cost-effective energy and water improvements identified through an energy assessment or that are completed as part of an overall cost-effective energy improvement home upgrade
- Eligible energy assessment programs:
 - RESNET Home Energy Rating Service
 - U.S. Department of Energy Home Energy Score
 - Comparable state or local program that assesses cost-effective energy improvements with an independent energy assessment professional





Eligible Energy Assessments

Expanded options for home energy assessments.

- **RESNET Home Energy Rating Service**
- **U.S. Department of Energy Home Energy Score**
- **Comparable state or local program that assesses cost-effective energy improvements with an independent energy assessment professional**



When to consider HomeStyle Energy

Is your borrower buying an older home?

- The average age of homes in the United States is 37 years old. Basic weatherization and the installation of low flow water devices may result in immediate monthly savings for homeowners. Larger efficiency projects may create even more comfort and savings.

Are your customers looking to improve the comfort of their homes?

- Improving comfort and livability of homes is a key motivator for consumers seeking energy and water efficiency improvements

Are your refi customers paying too much on energy costs?

- Having an energy assessment will identify the most cost-effective options for improving the performance of a home. Some of these options may be easier to install and less expensive than what homeowners might expect.

Does your refi borrower have an existing energy-improvement debt to pay off?

- Many homeowners take on expensive consumer debt or financing offered by contractors when a home emergency strikes such as a furnace or air conditioner failure. They may not have time to shop around for affordable financing options. HomeStyle Energy may be a lower cost option to refinance this debt.



Key Lending Parameters

- Up to 95% Loan-to-Value Ratio
- All 1-4 unit existing properties except manufactured homes
- All occupancy types
- Desktop Underwriter® (DU ®) and manual underwriting permitted
- Allowable funds:
 - Up to 15% of the “as completed” value permitted to be used for new improvements
 - Up to 15% of the value permitted to be used to pay-off existing debt used for energy improvements
- Loans may be delivered prior to completion of improvements, escrow and completion verification requirements apply
- No lender recourse for loans delivered prior to the completion of the improvements
- Plug and play with all Fannie Mae programs, products, and features

- Exclusions: New construction, Refi Plus, and DU Refi Plus



Resources

All lender resources for HomeStyle Energy can be found on one convenient webpage on the Fannie Mae Single-Family Business Portal.

- Fact sheets and Frequently Asked Questions (FAQs)
- Training
- Product comparisons
- Real estate professional fact sheet
- Selling Guide references
- External resources

<https://www.fanniemae.com/singlefamily/homestyle-energy>

Fannie Mae Selling Guide section B5-3.3-01: HomeStyle Energy for Energy Improvements on Existing Properties



Fannie Mae Single-Family Business Portal

HomeStyle Energy

The HomeStyle® Energy mortgage loan helps lenders offer affordable financing to borrowers seeking to improve the energy and water efficiency of their homes. HomeStyle Energy is open to all Fannie Mae lenders; no special approval needed.

HomeStyle Energy Update

Watch Jude describe the March Selling Guide Update.



Related Links

Single-Family Mortgage Products
Renovation and Construction Products

Learn More

Overview

Lender Fact Sheet
Product Matrix
Real Estate Professional Fact Sheet

Frequently Asked Questions

FAQs | HomeStyle Energy
Product Comparison

HomeStyle Energy and HomeStyle Renovation Mortgage Comparison

Selling Guide Reference

BS-3.3-01: HomeStyle Energy for Energy Improvements on Existing Properties

Upcoming Webinars

Title	Date & Time
HomeStyle Energy Mortgage Overview for Lenders	Click link for dates

Industry Resources

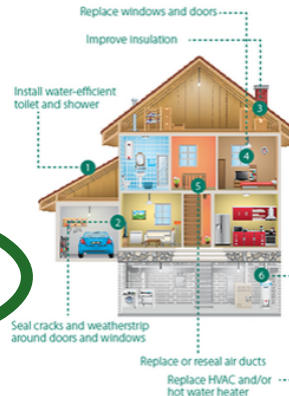
U.S. Department of Energy | Home Energy Efficiency

What's New

Announcement SEL-2016-03

Mar 29, 2016

This update includes the HomeStyle Energy mortgage loan, designed to help lenders offer affordable financing to borrowers who want to enhance the comfort of their homes and reduce utility costs by making energy improvements. Available to all Fannie Mae lenders.





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U.S. DEPARTMENT OF ENERGY

RESO Data Standards

Jeremy Crawford, Executive Director
RESO

Real Estate Standards Organization Corporate Overview

- RESO – Standards for Real Estate
 - Non-Profit Membership based organization
 - RESO's work products are Technical Data Standards
 - Transportation Standards – RETS, Web API
 - Data Definition Standards – RESO Data Dictionary
 - Standards are created through members' only volunteer based Committees and Workgroups
 - RESO Standards are Free, Open Source
 - RESO provides standards certification services to ensure correct standards adoption and implementation
 - Driving Force: Creating efficiencies and fostering technological innovation through standards creation, implementation, adoption and certification



RESO Current State of Standards Adoption and Steps toward the Future

- RESO Data Dictionary Version 1.4 (<http://ddwiki.reso.org>)
- Over 1.1 Million Brokers & Agents represented across over 500 MLSs that are RESO Data Dictionary Certified
- RESO Data Dictionary Certification Levels: Core, Bronze, **Silver**, Gold, Platinum
- RESO Data Dictionary v1.5 scheduled for June 2016 Release
- v1.5 has home energy fields and values assigned to silver certification
- MLSs must adopt Silver level fields and values by 2018
- Home Energy field implementation pave the way for MLS Data integration
- RESO Web API v1.0.2 – RESO's latest data transportation standard utilizing Global Technologies
- MLSs must adopt the RESO Web API by June 30th, 2016




Panel Discussion

RESO Standards – MLS Connection Points to Energy Data Sources via BEDES

- RESO Data Dictionary v1.5 provides data mapping between MLSs and BEDES
- Data Mapping provides translation points between Energy Data Sources and MLS Databases



 **GreenVerification[Type]Body Field** PUBLISHED
Created by RESO DD Workgroup on Apr 07, 2016

Field Name (Standard Name)²: GreenVerification[Type]Body

Definition (May contain rules that must be observed)

The name of the body or group providing the verification or certification named in the Green repeating element. If desired replace [Type] with the name of the certification from the Green

Group²: [Property Resource](#), [Structure Group](#), [Performance Group](#), [GreenVerification Group](#)

Simple Data Type²: String

Suggested Maximum Length²: 50

Synonym(s)²:
GreenCertifyingBudy

Field (Element) Status²: Proposed

BEDES²: Assessment Program Organization = [value]

Certification Level²: Silver

