



RESO®

20

REFLECTING ON  
THE PAST

LOOKING TOWARD  
THE BEAUTIFUL  
FUTURE

20

# 2018 FALL CONFERENCE

OCTOBER 15-18, 2018 • THE PFISTER HOTEL • MILWAUKEE, WI



Photography: VISIT Milwaukee and iStock: artJazz

## Let's Streamline: Sourcing & Delivering Green Data via Auto-Population

# PANELISTS



**Meg Garabrant,  
Dir Mktg & CMN,  
NEREN® MLS**



**Chris Haran,  
CTO, MRED**



**Greg Moore, VP  
Tech Systems,  
RMLS**



**Matt Casey,  
President & CEO,  
CRS**



# S P E A K E R



## Meg Garabrant, NEREN

Meg Garabrant is the Director of Marketing & Communications for the NEREN® MLS with over 10,000 users throughout New England and is the primary MLS for the states of NH and VT.

Meg oversees third party integrations, product, member training & education, and is responsible for ensuring RESO field compliance. Meg is a member of RESO, CMLS, is Chair of the CMLS Green Section Council and a member of the NAR Sustainability Advisory Group.

# The benefits of Green Data Auto-Population

- Green Data = Home Performance Indicators (HPIs)
- Consumer Experience (Agents & Appraisers & their customers)
- More Comprehensive Data
- Reduction of Data Inaccuracies
- Risk Management

# **NEREN® MLS PV Data Auto-Population Pilot**

- PV Learning Network
- The data found us
- Vermont Solar Power Installation data  
(Photovoltaics)
- Launched 10/3/17

# Consumer Experience

Incorporated Vermont PV data into Public Records Database

- Already had auto-pop process in place in LIM
- RESO Standard fields – Power Production



The screenshot shows a web application interface with tabs for 'Listings', 'New Residential', and 'Criteria'. Below the tabs are buttons for 'Open All', 'Close All', and 'Tax Switcher (Vermont Tax Autofill)'. A message states: 'Please search for a property to use with autofill or click [here](#) to add the listing manually.' A note below says: 'NOTE: To get a Count or Search results, you must enter a County AND at least a Street Name -OR- Owner Last Name.' The 'Tax Search' section contains several input fields: 'County' (with a red 'R' icon and 'Chittenden' selected), 'Street Number' (with '1635' selected), 'Street Name' (with 'Hillview' selected and a red arrow pointing to it), 'Street Type', 'City' (with 'Richmond' selected), 'Owner First Name', 'Owner Last Name', and 'SPAN#'. Each field has a small icon to its right: a magnifying glass for 'County' and 'City', and a question mark for the others.



# Consumer Experience

Home Listings **Criteria | MLS - Vermont Tax Report (1)**

Checked All E-mail Print Export Autofill Customize Actions

### Vermont Tax Report

Tax & Legal Info			
Tax Id	(163) HV1635	Annual Tax	0
Tax Year	0	Total Assessment	409600
Assessment Year	2015	Legal Description	DWEL
Zoning			

Address Info			
Address	1635 Hillview Rd	Condo Unit #	
City	Richmond	State	VT
Zip Code	05477	Zip Plus 4	9156
County	Chittenden	Subdivision	

Property Characteristics			
Full Baths		Half Baths	
Baths		Bedrooms	
Fireplaces		Stories	
Building SqFt	0	Year Built	0
Lot Size		Lot SqFt	457380
Acreage	10.50	Number of Buildings	0
Number of Units			

Power Production			
Mount Location	Ground	Mount Type	Tracker
Power Production Size	4.20	Power Production Annual	5816
Power Production Year	2010	Power Production	Public Records
Install		Verification Source	
Power Production Type	Photovoltaics		

Review Available Data

### Load Tax Data

Save Cancel

Include	#	Description	Values
<input checked="" type="checkbox"/>	(245)	Acres	10.500000
<input type="checkbox"/>	(152)	TaxGrosAmt	0.00
<input checked="" type="checkbox"/>	(150)	AssmntYr	2015
<input type="checkbox"/>	(315)	BedsTot	0
<input type="checkbox"/>	(279)	SqftApxTI	0
<input type="checkbox"/>	(94)	UnitLot#	
<input type="checkbox"/>	(393)	BathsFull	0
<input type="checkbox"/>	(394)	Baths1/2	0
<input checked="" type="checkbox"/>	(93)	Address	1635 Hillview Rd
<input type="checkbox"/>	(246)	LotSoft	0
<input checked="" type="checkbox"/>	(453)	Mount Loc	Ground
<input checked="" type="checkbox"/>	(487)	MountType	Tracker
<input checked="" type="checkbox"/>	(470)	PowerProdA	5816.000000
<input checked="" type="checkbox"/>	(472)	PowerPSiz	4.20
<input checked="" type="checkbox"/>	(452)	Power Prod	Photovoltaics
<input checked="" type="checkbox"/>	(490)	PowrPVSrc	Public Records
<input checked="" type="checkbox"/>	(458)	PowerPYear	2010
<input checked="" type="checkbox"/>	(95)	City	Richmond

Data Auto-Selected

# Consumer Experience

Listing Information

Location

Tax/Public Records

Structure

Features

Green Mktg & 3rd Party Ver.

Lot

Rooms

Services

Power Production

Compensation

Remarks/Disclosures

## More Comprehensive Data

LISTING

Save Tax Autofill Reset Fields Required Only Open All Close All

Services

Power Production

(452)	Power Production Type	Photovoltaics
(453)	Mount Location	Ground
(487)	Mount Type	Tracker
(472)	Power Production Size	4.20
(470)	Power Production Annual	5816.000000
(454)	Power Production Annual Status	
(458)	Power Production Year Install	2010
(490)	Power Production Verification Source	Public Records

Risk Mitigation – Source: Public Records



# Share Across the Marketplace

## Listing Input Forms

Power Production			
Power Production Type (2 sets, if needed): Photovoltaics (Solar) / Wind		Mount Location: Ground / Roof	
Mount Type: Fixed Rack / Pole / Tracker		Power Production Size:	
Power Production Annual:		Power Production Annual Status: Actual / Estimated / Partially Estimated	
Power Production Year Install:			
Power Production Verification Source:			
Administrator	Contractor / Installer	Program Sponsor	See Remarks
Assessor	Other	Program Verifier	
Builder	Owner	Public Records	

Green Mktg & 3 <sup>rd</sup> Party Ver.			
Green Energy Efficient:			
Appliances	Exposure/Shade	Insulation	Thermostat
Constructions	HVAC	Lighting	Water heater
Doors	Incentives	Roof	Windows

Effective 10/01/2017 - Copyrighted NEREN\* Page 1/12 NEREN-037 Rev. E

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**NEREN Residential Listing Input Form**  
\*Denotes Required/Conditionally Required field

Green Energy Generation: Solar / Wind  
Green Indoor Air Quality: Contaminant Control / Integrated Pest Management / Moisture Control / Ventilation  
Green H2O (Water) Sustainability:

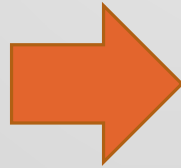
Conserving Methods	Recyclable Materials	Renewable Materials
Onsite Recycling Center	Regionally-Sourced Materials	Salvaged Materials

Green H2O (Water) Conservation:

Gray Water System	Low-Flow Fixtures	Water-Smart Landscaping
Green Infrastructure	Water Recycling	

Green Verification Program (3 sets, if needed):

Blower Door Test	Indoor airPLUS	Passive House (PHIUS+)
ENERGY STAR Certified Homes	LEED for Homes	Residential New Construction Svcs
EnerPhit	NGBS New Construction	Vermont Home Energy Profile
HERS	NGBS Small Project Remodel	WaterSense
Home Energy Score	NGBS Whole-Home Remodel	Zero Energy Ready Home (DOE Challenge Home)
Home Performance with ENERGY STAR	OTHER	



## Search

Green Verification  
Program

**Search Tips:**  
- Check them All!  
- Add GVP 2, 3

- ☒ Blower Door Test ☒ ENERGY STAR Certified Homes ☒ EnerPhit ☒ HERS
- ☒ Home Energy Score ☒ Home Performance with ENERGY STAR ☒ Indoor airPLUS
- ☒ LEED for Homes ☒ NGBS New Construction ☒ NGBS Small Project Remodel
- ☒ NGBS Whole-Home Remodel ☒ OTHER ☒ Passive House (PHIUS+)
- ☒ Residential New Construction Services ☒ Vermont Home Energy Profile
- ☒ WaterSense ☒ Zero Energy Ready Home (DOE Challenge Home)

Green PP Building Certs + New Search

Load Search Last Search Customize Save Search Open All Close All

Features Must Have Must Not Have Must Have 1 or More

Development / Subdivision

Condo Name

Mobile Park Name

Listing Service ☐ Entry Only ☐ Full Service ☐ Limited Service

Foreclosed/Bank-Owned/REO ☐ No ☐ Yes

Short Sale ☐ No ☐ Yes

Seasonal ☐ No ☐ Unknown ☐ Yes

Power Production Type

Green Verification Program

☐ Blower Door Test ☐ ENERGY STAR Certified Homes ☐ EnerPhit ☐ HERS

☐ Home Energy Score ☐ Home Performance with ENERGY STAR ☐ Indoor airPLUS

☐ LEED for Homes ☐ NGBS New Construction ☐ NGBS Small Project Remodel

☐ NGBS Whole-Home Remodel ☐ OTHER ☐ Passive House (PHIUS+)

☐ Residential New Construction Services ☐ Vermont Home Energy Profile

☐ WaterSense ☐ Zero Energy Ready Home (DOE Challenge Home)

**Power Production Type** Save Cancel

Data	Description
<input type="checkbox"/> Photovolt	Photovoltaics
<input type="checkbox"/> Wind	Wind

Page 1 of 1 25 View 1 - 2 of 2

# Share Across the Marketplace

## Property Reports

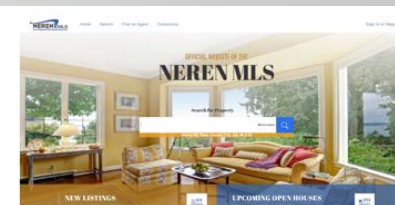
Green Verification Program	OTHER
Green Verification Body	Passive House Institute Quality Approved
Green Verification Status	Preliminary
Green Verification Year	2016
Green Verification Rating	Vermont High Performance Home
Green Verification Metric	9999Z
Green Verification Source	Contractor/Installer
Green Verification New Construction	No
Green Verification URL	http://012345678901234567890123456789green.com
Green Verificatn Program 2	LEED for Homes
Green Verificatn Body 2	DOE
Green Verificatn Status 2	Official
Green Verificatn Year 2	2017
Green Verificatn Rating 2	Certified
Green Verificatn Metric 2	9999Z
Green Verification Source 2	Program Sponsor
Green Verificatn NewCon 2	Yes
Green Verificatn URL 2	http://012345678901234567890123456789green.com
Green Verificatn Program 3	ENERGY STAR Certified Homes
Green Verificatn Body 3	EPA
Green Verificatn Status 3	Preliminary
Green Verificatn Year 3	2015
Green Verificatn Rating 3	Vermont High Performance Home
Green Verificatn Metric 3	9999Z
Green Verification Source 3	See Remarks
Green Verificatn NewCon 3	No
Green Verificatn URL 3	http://012345678901234567890123456789green.com

Power Production Type	Photovoltaics
Mount Location	Roof
Mount Type	Fixed Rack
Power Production Size	123.560000
Power Production Annual	123.560000
Power Production Annual Status	Partially Estimated
Power Production Year Install	2000
Power Production Verification Source	Builder
Power Production Type 2	Wind
Mount Location 2	Ground
Mount Type 2	Pole
Power Production Size 2	123.56
Power Production Annual 2	123.560000
Power Production Annual Status 2	Estimated
Power Production Year Install 2	2010
Power Production Verification Source 2	Contractor/Installer
Green Energy Efficient	Exposure/Shade, HVAC, Incentives
Green Energy Generation	Solar, Wind
Green Indoor Air Quality	Contaminant Control, Moisture Control
Green H2O Sustainability	Recyclable Materials, Regionally-Sourced Materi, Salvaged Materials
Green H2O Conservation	Green Infrastructure, Low-Flow Fixtures, Water Recycling
ROW - Parcel Access	Yes
ROW - Length	1500
ROW - Width	75
ROW to other Parcel	Unknown



## Data Distribution

Data Authorizations			
(65)	Display Listing - Internet	R	Yes ▼
(205)	Display Address - Internet	R	Yes ▼
(48)	Realtor.com	R	Yes ▼
(52)	Zillow Group	R	Yes ▼
(448)	Homes.com	R	Yes ▼
(46)	RPR	R	Yes ▼
(47)	ListHub	R	Yes ▼



Intra-Office  
IDX  
VOW  
Specialty Feeds

# The Future and Best Practices at NEREN® MLS

Evaluate &  
Improve

Local Green  
Verification  
Programs

Power  
Production data  
onto CRS reports

Power Production  
data searchable in  
CRS

NH, MA, ME, RI,  
CT PV Data

HELIX Data  
Auto-Population



# S P E A K E R



## Chris Haran, MRED

As Chief Technology Officer for MRED, Chris Haran is responsible for driving the strategic vision through technology, and bringing together people, ideas and resources to be innovators.

Prior to taking on the CTO role, Haran worked his way up through various levels of the marketing and operations departments on the real estate brokerage side of the industry.

# The MRED Green Journey

- Why Green Data?
  - We love the planet
  - City of Chicago made us



General

Ext. Feat.

Int. Feat.

Room Details

**Utilities/Green**

Tax/Assess.

Office/Sales

Media

Tour/Open House

Documents

## Utilities/Green

Preview Listing

<< Previous

\*Air Conditioning:  

\*Water:  

(2 max)

\*Sewer:  

(2 max)

Electricity:  

\*Heat/Fuel:  

HERS Index Score:  

Green Supporting Documents:   ?

Energy/Green Building Rating Source:  


Green Features:  

Equipment:  

<< Previous



To fill-in the following fields, click the "Lookup Estimates" link and follow the instructions.

 [Lookup Estimates](#)

\*Annual Estimated Electricity Costs:

\*Monthly Estimated Electricity Costs:

\*Annual Estimated Gas Costs:

\*Monthly Estimated Gas Costs:

[Continue](#)

[Cancel](#)

Lookup utility estimates for: **3300 W Irving Park Rd, Chicago, IL**

Enter the applicable Utility Customer Account Number(s) then click "Continue." If you do not know an account number, check "Unknown." If the property does not have a utility, check "Not Applicable." MRED Rules & Regulations Department will review "Unknown" and "Not Applicable" values.

\* Electricity Customer Account #:

-or- ☐ Unknown

-or- ☐ Not Applicable

\* Gas Customer Account #:

-or- ☐ Unknown

-or- ☐ Not Applicable

☐ I affirm that I am Chris Haran and am authorized to lookup this information.

When you click Continue, utility estimates will be retrieved from [MyHomeEQ](#) who are providing this service in conjunction with the City of Chicago, in accordance with Chapter 5-16 of the Municipal Code of Chicago pertaining to the disclosure of utility costs.

# The MRED Green Journey



How did we source and implement?



Improving the Value, Comfort and  
Energy Savings of Your Home

f Connect

LOG IN

ABOUT

FAQs

Home

Find Contractors

Financial Incentives

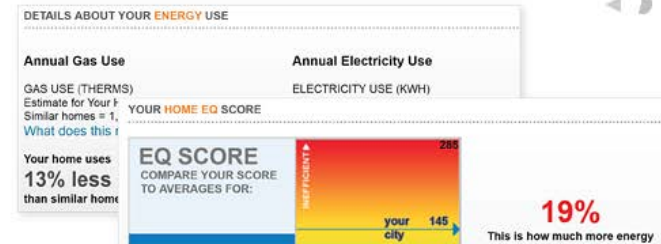
Resources

ENERGY **IMPACT** ILLINOIS

## How much energy does your single-family home *really* use?

### 1 See what you use

MyHomeEQ automatically pulls in all your household information and determines what you can do to save the most on your energy costs.



START  
HERE

Enter Your Address.

Search

example: 123 Main St. Riverside, IL



Is MLS Green Data available  
beyond the system?



- Property Reports
- RETS
  - All Green fields except City of Chicago Utility Costs, which are only for internally generated reports

<< Prev

2/3

Next >>

Chicago, IL 60647

Client-Friendly

\$524,888

Access

Lease Expiration Date:

Estimated Occupancy Date:

Existing Basement/Foundation:

Waterfront: No

Zoning Type:

Style of House: Contemporary

New/Proposed Construction Options:

Exposure: E (East)

Area Amenities:

Disability Access and/or Equipped: No

Disability Access/Equipment Details:

Directions: West on Cortland or Armitage, turn onto Springfield

Utilities/Green

Air Conditioning: Central Air

Water: Public

Sewer: Sewer-Public

Electricity: Circuit Breakers

Heat/Fuel: Gas, Forced Air

HERS Index Score:

Green Supporting Documents:

Energy/Green Building Rating Source: Energy Star Homes

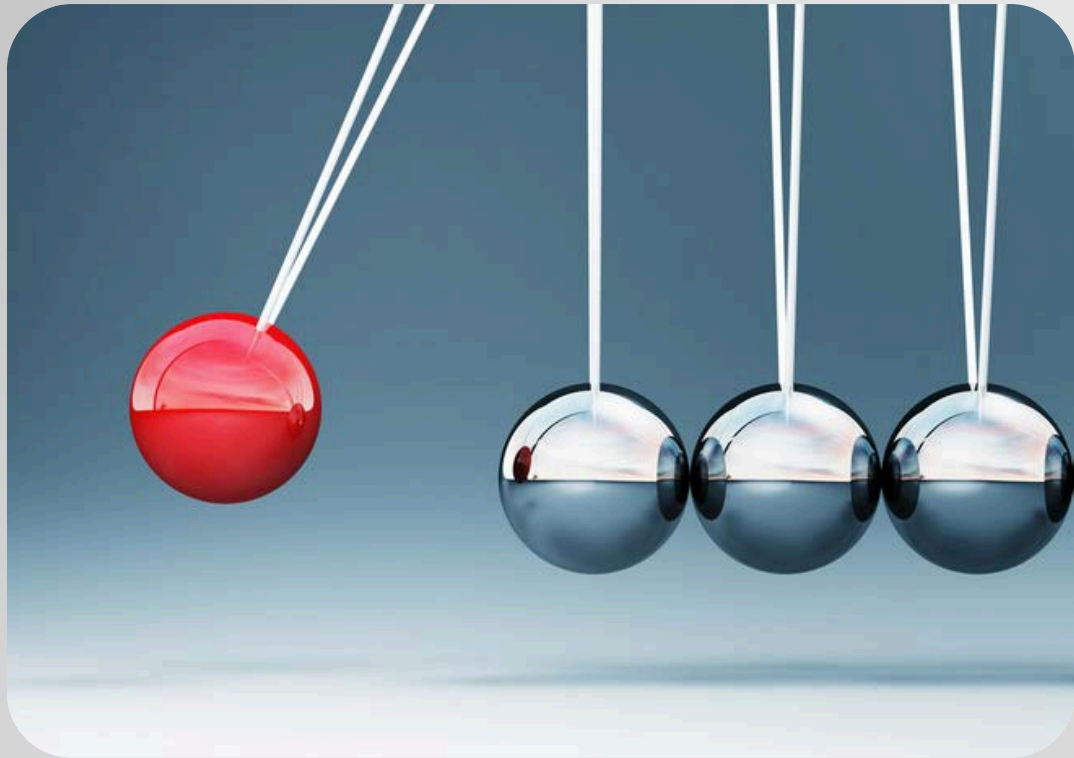
Green Features: Low flow commode, Low flow fixtures

Equipment: Humidifier, TV-Cable, Security System, CO Detectors, Ceiling Fan, Sump Pump

Utility Costs: Elec. - \$879.36/yr,\$73.28/mo; Gas - Unknown ?

Exterior Features

## The Future and Best Practices



- Require fields when possible
- Seek out financial benefits for seller/buyer
- Partner with local energy firms/consultants for education
- Learn from others (RESO, CMLS, etc.) in the industry



# S P E A K E R

## Greg Moore, RMLS



Greg began his Real Estate technology career in 1986 at the Santa Barbara Board of REALTORS and Multiple Listing Service to install and manage an in-house MLS system. After 6-years he moved on to East Bay Regional Data (EBRD) for 7-years to manage operations and technology for a 10,000 member, 6-MLS regional. He then spent 2-years with HomeSeekers.com developing and deploying one of the first Internet-based MLS systems.

Greg has been at RMLS for over 16 years. As Vice President of Technical Systems, he provides leadership and general oversight of RMLS' technological goals and activities. He facilitates the technical requirements for data processing, hardware services, network communications, and management information services to accomplish the company's goals and objectives.

## RMLS™ Implements HES Auto-Pop

RMLS™ had worked with a local partner, Earth Advantage, to obtain and auto-populate their EPS scores into our MLS system.

In 2017 the City of Portland created a ordinance requiring all residential properties for sale, to obtain a Home Energy Score (HES) before actively marketing the property for sale. This ordinance took affect January 1<sup>st</sup>, 2018.

In developing the technical solution needed for this ordinance the City of Portland put out an RFP looking for an origination to assist them with this. Earth Advantage was selected in that process. In order to assist RMLS™ subscribers in assisting their seller(s) in meeting this mandate, RMLS™ worked closely with Earth Advantage on utilizing the API they built to provide the City of Portland's Home Energy Score (HES) data and report URLs. The API function is called when the Listing Agent clicks a button in the listing input module.

# Listing Load Integration

When a listing is added with the city name of Portland  
The Green Supplement Form with the Load From Green Building Registry button is available.

Listing Load: New Listing - Step 2 [? Help](#)

New Listing

Fields Filled: 8%

MLS#: 18698870 Area: 144 Property Category: Residential

Form

Form Alerts

Listing Information

General Information

Residence

Remarks

Approximate Room Sizes and Descriptions

Features

Green/Energy Supplement Form *include* ☒

[Green Verification Type](#)

Load From Green Building Registry

Auto-populate Home Energy Score (HES) and report URL

Type 1:

# Implementation

- When the button is clicked the call is initiated; RMLS™ sends the address information to the API and receives a RESO compliant data set in return.
- The API call returns:
  - Address fields (Street Number, Street Direction, Street Name, etc.)
  - HES Score Value
  - HES Score Date
  - HES Report URL
- The score, date and URL are stored and displayed on the Listing Load form
- The fields are not editable by the user, if a refresh is needed the listing load button (the call) must be utilized.



# Search

## Advanced Search [? Help](#)

Search Criteria

Saved Deleted

Clear Last Save As Count  Search

Search Criteria

Required

- \* [Property Categories](#)
- \* [Status](#)

Frequently Used

<a href="#">Acres</a>	<a href="#">Price</a>
<a href="#">Bathrooms</a>	<a href="#">Property Type</a>
<a href="#">Bedrooms</a>	<a href="#">Style</a>
<a href="#">City</a>	<a href="#">Total SQFT</a>
<a href="#">Levels</a>	<a href="#">Year Built</a>
<a href="#">Lot Size</a>	<a href="#">Zip Code</a>
<a href="#">Open House/Broker Tour</a>	

Additional

Garage Description

Garages, Number of Cars

Green Energy, Certified Y/N

Green Energy, Energy Efficiency Feat

Green Energy, Verification Type

Green Energy, Year Certified

MLS Area: ☒ 141,142,143,144 [Area List](#)

Map Range: ☐

\* **Property Categories:** Residential [\[ Remove \]](#)

\* **Status:** ACT,BMP [\[ Remove \]](#)

**City:** Portland [\[ Remove \]](#)

**Green Energy, Verification Type:** Home Energy Score [\[ Remove \]](#)

# Reports

		GREEN / ENERGY SUPPLEMENT				
Green Verification	Obtained	Rating	Year	Version	Score	Date
Type 1: HES					4	7/20/2018
<a href="https://api.greenbuildingregistry.com/report/hes/OR10003449-20180720">https://api.greenbuildingregistry.com/report/hes/OR10003449-20180720</a>						
Type 2:						
Reach Code:	Solar Panel:					
Energy Eff:						
Public:						

# Data Feeds

Part of the ordinance requires that any advertisement of a property for sale in Portland that is required to have an HES score, must make the score and the HES Report available. To assist with this requirement the score and report URL would be appended to the end of the public remarks in various data feeds.

Example: About This Home

Nicely Updated! Newer Kitchen Cabs, Counter, Sink, Faucet, Stainless Steel Fridge, Range, Dishwasher. Laminate Flooring. Crisp Paint. Zonal Heaters. 3 Bed 1.1 Baths. Gas Hot Water Heater in Garage. Washer/Dryer hook-up. Patio in fenced Back Yard. Great location, Min to I-5, Hwy 30, Downtown PDX, Parks, Columbia River & Shopping. [Home Energy Score = 4. HES Report at <https://api.greenbuildingregistry.com/report/hes/OR10003449-20180720>]

In addition, individual green fields are also available in various data feeds.

# Take Aways

- API
  - Using an API to make a call and pull back information in a RESO standard format made the integration straight forward. It cut out a lot of extraneous analysis/data mapping work that would have otherwise been required.
- RESO Standard
  - The ability to reference the RESO Data Dictionary and standard eased the implementation effort as it made elements easier to identify and store.
- Communication
  - During the implementation both sides were able to clearly communicate the needs and wants of their efforts, and referred to the standard to resolve ambiguities.



# S P E A K E R



## Matt Casey, President & CEO

- Since 1989, CRS Data has put the power of clear and current property record information in the hands of real estate's leading professionals.
- We currently provide our service to over 85 MLS' as well as other real estate related industries such as appraisal and lending.
- We are focused on quality data, intuitive software and exceptional customer service.

# Benefits of integrating Green Data and Property Record Information

- Property record services have information on all properties, not just properties with active or recent listings
- Property record services have experience with data manipulation and matching; including tools for address standardization/certification and geographical (X,Y) based matching
- Because the property record service is integrated with the MLS software, Green Data can be incorporated into listing auto population, without the MLS having to connect to additional data sources

# Options for Integrating Green Data and Property Record Information

## Bulk Data:

- Allows for greater data manipulation and matching
- Reduces the number of data calls during auto population and display
- Requires higher level of data integration and may present licensing issues

## API:

- Provides direct access to data source
- Reduces the level of data manipulation and matching
- May be preferred from a licensing standpoint in some situations

# Integration of Power Production Data

Data overview: Photovoltaic (PV / Solar) data for Vermont from the Vermont Energy Atlas

<u>Steps</u>	<u>Results</u>
Import data and perform basic address cleaning and standardization	All records (5,958)
Match PV data to USPS database	4,648 of 5,958
	78% match rate
Match PV records with matched address to CRS parcel database	4,071 of 4,648
	87% match rate
Run GIS/Geocode based matching on unmatched records	Matched an additional 182 records

Overall: Matched 4,253 of 5,958 records for a 71% match rate



# PV and Green Building Certification Data - Property Report Display

## LEGAL DESCRIPTION

Subdivision	Plat Book/Page
Block/Lot	District/Ward 1
Description	House Bldgs & Land

## POWER PRODUCTION

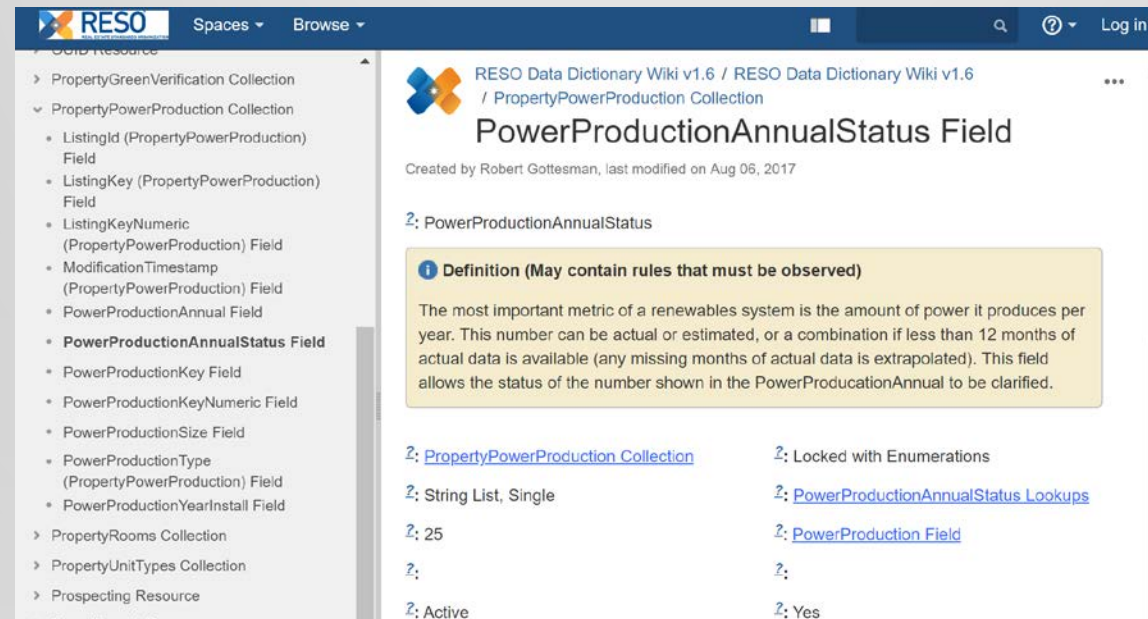
Type	Mount Location	Mount Type	Size (kw)	Annual (kwh)	Verification Source
Photovoltaics	Ground	Tracker	8.00	13558	Public Records

## GREEN VERIFICATION

Type	NGBS New Construction	Rating	Bronze
Year	2014	Source	Program Sponsor
Body	Home Innovation Research Labs		

# Benefits of RESO Standards

RESO Standards eliminate data schema planning, which is subjective and often time consuming and varies between installs.



The screenshot displays the RESO Data Dictionary Wiki v1.6 interface. The left sidebar shows a tree view of collections, with 'PropertyPowerProduction Collection' expanded. The main content area shows the 'PowerProductionAnnualStatus Field' definition. The definition states: 'The most important metric of a renewables system is the amount of power it produces per year. This number can be actual or estimated, or a combination if less than 12 months of actual data is available (any missing months of actual data is extrapolated). This field allows the status of the number shown in the PowerProductionAnnual to be clarified.' Below the definition, there are two columns of metadata. The left column lists: 'PropertyPowerProduction Collection', 'String List, Single', '25', and 'Active'. The right column lists: 'Locked with Enumerations', 'PowerProductionAnnualStatus Lookups', 'PowerProduction Field', and 'Yes'.

RESO Data Dictionary Wiki v1.6 / RESO Data Dictionary Wiki v1.6  
/ PropertyPowerProduction Collection

## PowerProductionAnnualStatus Field

Created by Robert Gottesman, last modified on Aug 06, 2017

**Definition (May contain rules that must be observed)**

The most important metric of a renewables system is the amount of power it produces per year. This number can be actual or estimated, or a combination if less than 12 months of actual data is available (any missing months of actual data is extrapolated). This field allows the status of the number shown in the PowerProductionAnnual to be clarified.

<b>PropertyPowerProduction Collection</b>	<b>Locked with Enumerations</b>
<b>String List, Single</b>	<b>PowerProductionAnnualStatus Lookups</b>
<b>25</b>	<b>PowerProduction Field</b>
<b>Active</b>	<b>Yes</b>

# I'm interested, now what?

# Sourcing Green Data for Auto-Pop



Building Certification Programs  
RESNET, LEED for Homes, Pearl Certification,  
BPI, Passive House



State Dept of Energy

Local Utilities

Solar Installers







- HELIX is a database capable of automatically populating real estate listings (whether they are accessed through local Multiple Listing Services (MLS) or portals like Trulia and Zillow) with home energy information from national and regional bodies such as DOE Home Energy Score, RESNET HERS ratings and other sources when it is available and approved by the seller.
- HELIX's initial goal is to incorporate the major residential building certifications and residential solar PV information. This includes the Department of Energy's Home Energy Score, RESNET's HERS Index, the National Green Building Certification, the U.S. Green Building Council's LEED for Homes certification, Passive House and Zero Energy Ready homes as well as state-level home certification and solar installation data. HELIX will host third-party certifications from disparate data sources in a common data format that is compliant with RESO Standards. In addition to hosting data fields that fall within RESO Silver Certification, HELIX also stores data on a home's estimated energy use, production and costs.
- HELIX is available and currently adding datasets for seven Northeast States! HELIX is expanding to auto-pop solar PV data in RESO compliant format and in 2019 will be available to states beyond the pilot region.
- HELIX is first and foremost there to facilitate residential energy information for MLS' and real-estate data intermediaries. HELIX can also be used by real-estate agents and appraisers interested in finding certified or solar homes.



[www.resnet.us](http://www.resnet.us)

- RESNET just completed the development of an API that will allow the sharing of HERS rating information with MLSs. It's just in the pilot phase right now, but a full roll-out is likely in 2019. RESNET has been in talks with the HELIX folks to share it with them.
- Although the RESNET/Pearl collaboration is just in the early stages, it's possible that Pearl information could be added to this API.



<https://pearlcertification.com/>

- Pearl's certification system enables home buyers to see and understand the value of a home's high-performing assets when the home is sold. Research from across the U.S. shows that third-party home performance certifications like Pearl's add an average of 4% to the sale price of high-performing homes, compared to similar homes lacking these assets. An appraiser authored study on Pearl Certified homes showed a 5% premium when the homes were marketed correctly.
- Pearl is the only private certification firm to sponsor the U.S. Department of Energy's prestigious Home Performance with ENERGY STAR program. Pearl is a National Association of Realtors (NAR) REach Accelerator company

# Resources

- RESO DD Wiki - <https://ddwiki.reso.org/>
- CMLS Resources - <https://www.councilofmls.org/research>
- NAR GREEN Designees - <http://greenresourcecouncil.org/find-nar-green-designee>
- NAR Green Resource Council - <http://greenresourcecouncil.org/>
- DOE Home Energy Information Accelerator Toolkit - <https://betterbuildingsinitiative.energy.gov/accelerators/home-energy-information>
- Solar-Estimate - <https://www.solar-estimate.org/news/2017-12-10-research-shows-solar-adds-value-homes-12112017>



**THANK YOU!**  
COMMENTS OR QUESTIONS?



Cheers!