



# HELIX

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Home Energy Labeling Information eXchange



Massachusetts Department  
of Energy Resources



SUSTAINABLE REAL  
ESTATE  
CONSULTING  
SERVICES



HELIX 1.0

MARCH 2018

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## Appendix A

Detailed Mapping Instructions

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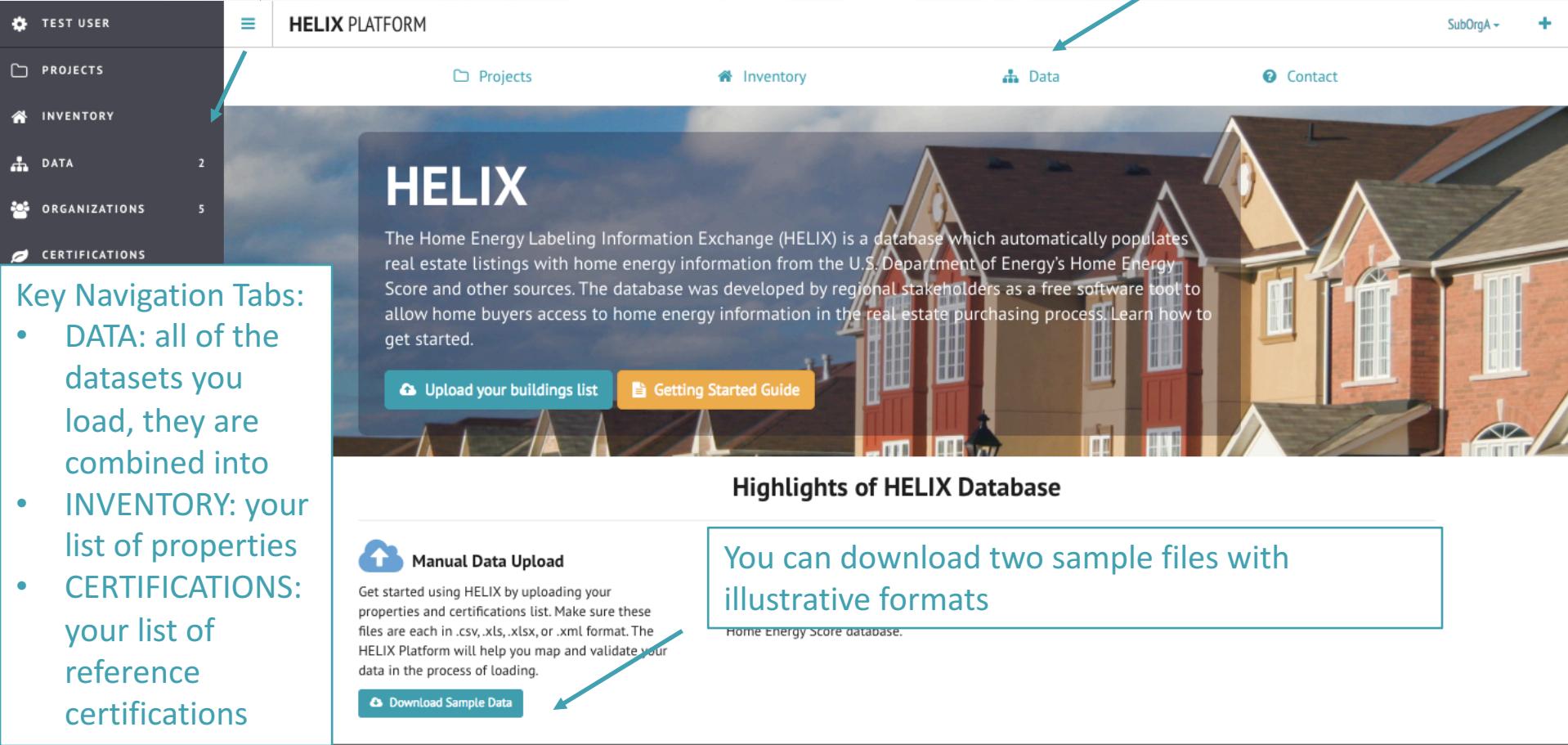
# HELIX Home Page

You can open the Navigation Drawer to see your homes and organizations count

You can also navigate through the tabs at the top

**Key Navigation Tabs:**

- DATA: all of the datasets you load, they are combined into
- INVENTORY: your list of properties
- CERTIFICATIONS: your list of reference certifications



The screenshot shows the HELIX Platform interface. On the left, there's a sidebar with icons for TEST USER, PROJECTS (2), INVENTORY (5), DATA, ORGANIZATIONS (5), and CERTIFICATIONS. The main header says "HELIX PLATFORM". Below it are tabs for Projects, Inventory, Data, and Contact. The central area features a large image of houses and text about the HELIX database. At the bottom, there's a section for "Manual Data Upload" with a "Download Sample Data" button.

**Highlights of HELIX Database**

You can download two sample files with illustrative formats

# HELIX Workflow

Import data

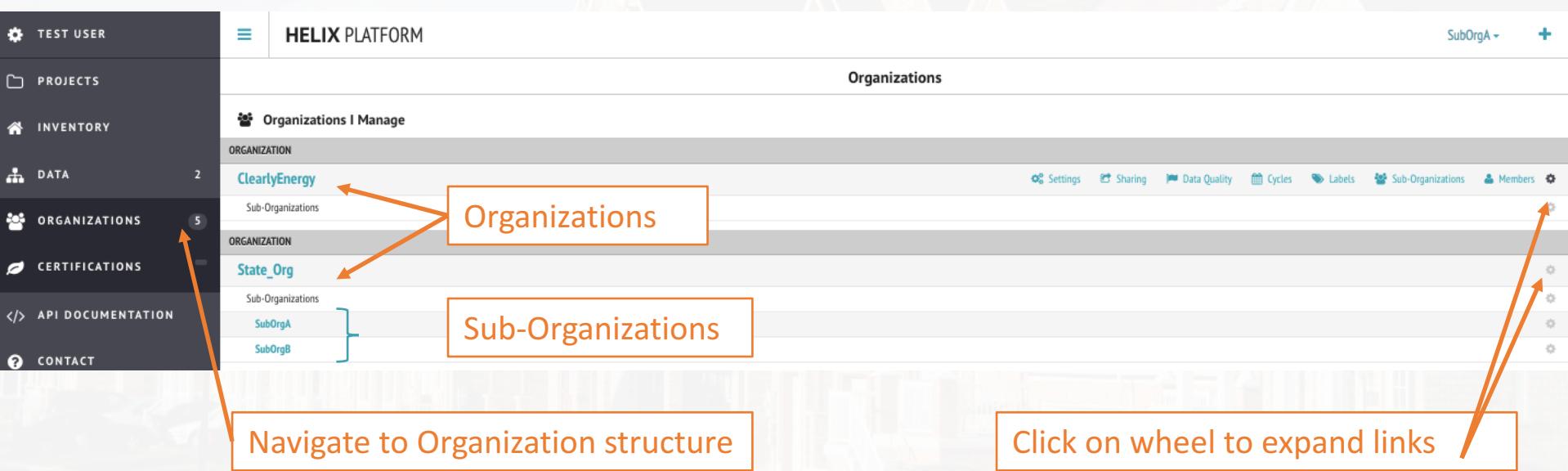
Map field headers to HELIX naming conventions

Merge data into existing building list

Export data as needed

# Organizations

- Every account holder belongs to one or more Organizations, though most users will only belong to one
- HELIX allows Organizations to have Sub-Organizations



The screenshot shows the HELIX Platform interface with a sidebar and a main content area.

**Sidebar:**

- TEST USER
- PROJECTS
- INVENTORY
- DATA
- ORGANIZATIONS (5)
- CERTIFICATIONS
- API DOCUMENTATION
- CONTACT

**Main Content Area:**

The title is "HELIX PLATFORM" and the sub-section is "Organizations".

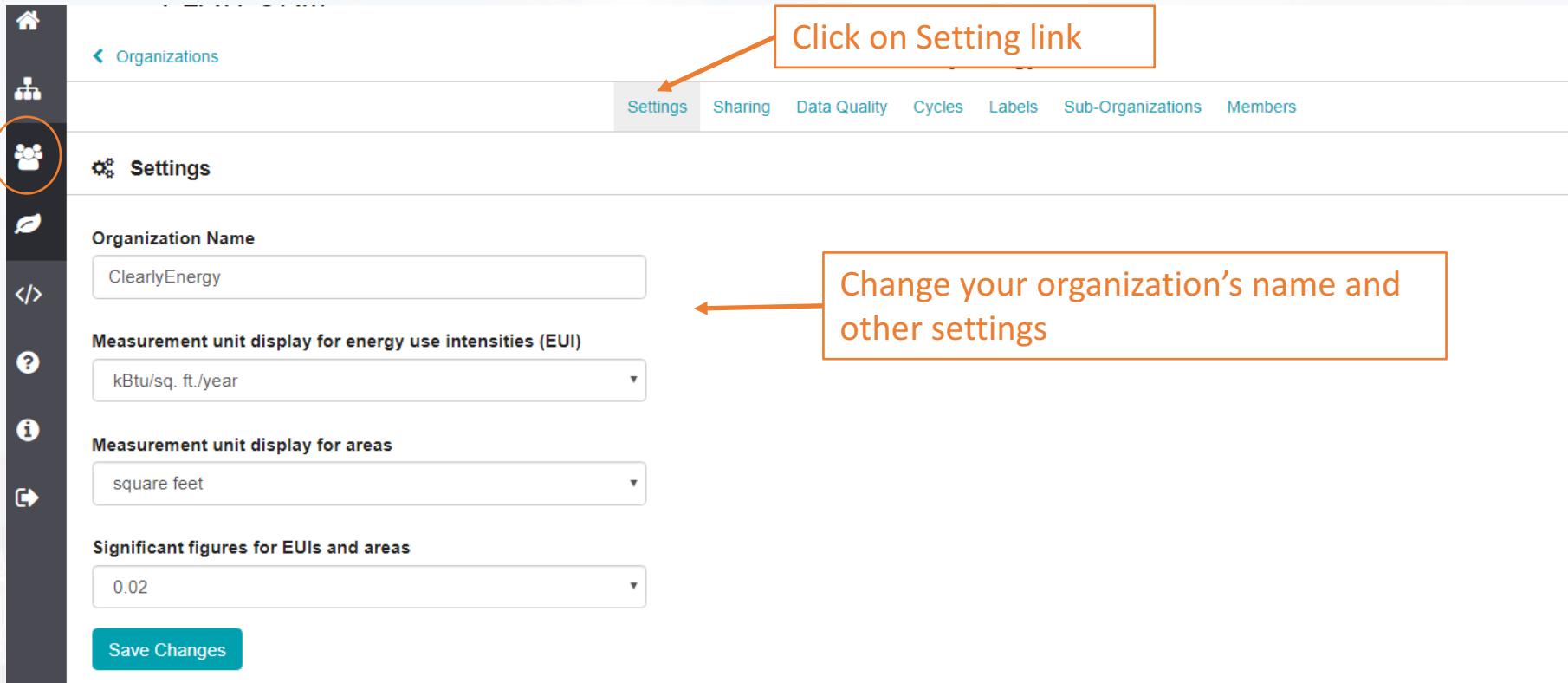
The main content displays the organization structure:

- ClearlyEnergy** (highlighted with an orange box) has a "Sub-Organizations" link.
- State\_Org** (highlighted with an orange box) has a "Sub-Organizations" link.
- SubOrgA** and **SubOrgB** are listed under State\_Org's sub-organizations.

Annotations with orange arrows and boxes:

- An arrow points from the "ORGANIZATIONS" sidebar item to the "Organizations" section in the main content.
- An arrow points from the "Sub-Organizations" link under ClearlyEnergy to the "Sub-Organizations" section in the main content.
- An arrow points from the "Sub-Organizations" link under State\_Org to the "Sub-Organizations" section in the main content.
- A large bracket on the left side groups "SubOrgA" and "SubOrgB" under the "Sub-Organizations" heading.
- A box labeled "Organizations" highlights the main "Organizations" section in the main content.
- A box labeled "Sub-Organizations" highlights the "Sub-Organizations" section in the main content.
- A box labeled "Navigate to Organization structure" is located at the bottom left.
- A box labeled "Click on wheel to expand links" is located at the bottom right.

# Organizations - Settings



Click on Setting link

Change your organization's name and other settings

Settings

Sharing Data Quality Cycles Labels Sub-Organizations Members

Organization Name

Measurement unit display for energy use intensities (EUI)

Measurement unit display for areas

Significant figures for EUIs and areas

Save Changes

# Organizations – Sub-Organizations

HELIK PLATFORM      SubOrgA +

Organizations

 Organizations | Manage

ORGANIZATION

ClearlyEnergy	
Sub-Organizations	

ORGANIZATION

State_Org	
Sub-Organizations	
SubOrgA	
SubOrgB	

Parent Organization

Create new sub-organization

Organizations owners can click to create new sub-organizations

**Create a New Sub-Organization**

Sub-Org Name:

Invite an Owner:

**Note 1:** Sub-organizations cannot be deleted.  
**Note 2:** Parent organization members are not automatically made members of sub-organizations.

The owner of the new sub-organizations must initially be a member of the parent organizations (can be deleted from the parent later)

[Cancel](#)    [Create New Sub-Organization](#)

# Organizations - Sharing

HELIX PLATFORM SubOrgA +

< Organizations

Settings Sharing Data Quality Cycles Labels Sub-Organizations Members

1. Click on Sharing link



## Sharing Your Data

Save Changes

### Selecting Fields to Share

As the admin of your SEED instance you can control what data is shared throughout your organization and between your sub-organizations as well as what data is shared externally with the public-at-large. The subset of data you choose to share with the public can be different than the subset shared between your sub-organizations.

From the list below, select the fields that you want to: 1) share internally within your organization, and 2) share publicly with users outside your organization.

SHARE DATA WITH		
INTERNAL	PUBLIC	FIELD NAME
<input type="checkbox"/>	<input type="checkbox"/>	Search field name
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Address Line 1
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Address Line 2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Building Certification
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Building Count

The owner of a parent organization can select fields to view between Sub-Organizations

### Set a Query Threshold

Enter the minimum threshold count of buildings that can be returned in a shared query. The building count threshold is important without revealing information about individual buildings.

Count #

The owner of a parent organization can set the query threshold for viewing records between Sub-Organizations

analysis on your data

Save Changes

# Organizations - Members

HELIx PLATFORM

SubOrgA +

1. Click on the Members link

2. Invite new members by clicking on this link

3. You can set the role of a new member

4. Invitations to HELIX and to set a password are sent via email

Invite a new member

MEMBER NAME	MEMBER EMAIL	LAST LOGIN	MEMBER ROLE	CERTIFICATIONS ADDED	CERTIFICATIONS EXPORTED
member name	member email	member last login	member role	member certifications	member certifications exports
Test User	[REDACTED]	2018-01-13 10:41 PM	owner	1	0

Invite a New Member

First Name:

Last Name:

Email Address:

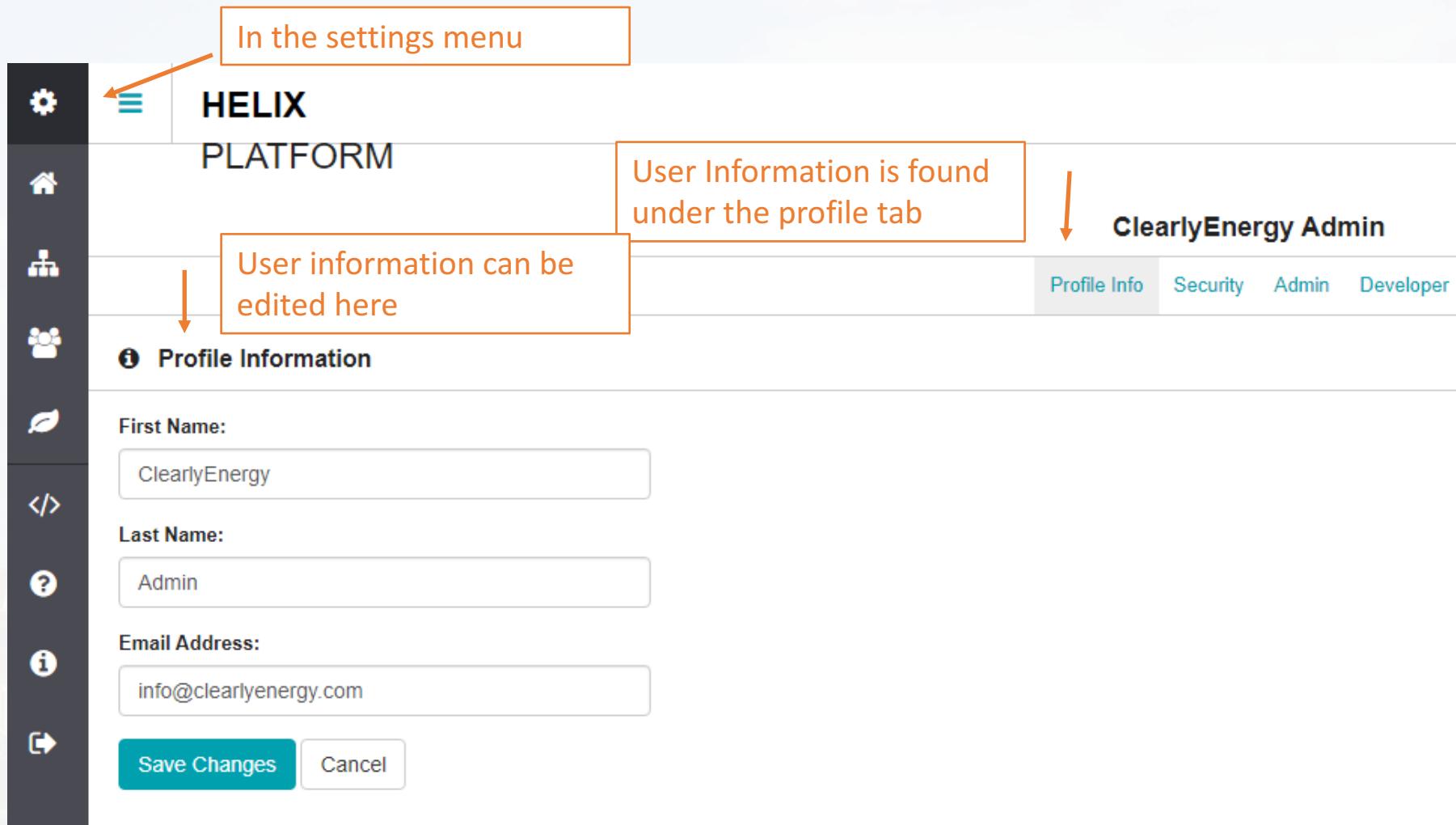
Role:  Member

Cancel Send Invite

# Organizations – Roles and Privileges

	Parent	Sub-Organization		
		Owner	Member	Viewer
<b>Set fields to display between Sub-Org</b>	✓			
<b>Create Sub Orgs</b>	✓			
<b>Add/remove members</b>	✓ to parent, or at setup of sub	✓		
<b>Add/remove certifications</b>	✓	✓		
<b>View members</b>	✓ in parent, owner(s) of subs	✓		
<b>Change settings:</b> • Rename Sub-org • Change member role	✓ in parent	✓		
<b>Add Data</b>	✓	✓	✓	
<b>Edit Data</b>	✓ all subs	✓	✓	
<b>View Data</b>	✓ all subs	✓	✓	✓

# User Profile Settings



In the settings menu

ClearlyEnergy Admin

User Information is found under the profile tab

User information can be edited here

Profile Info Security Admin Developer

Profile Information

First Name: ClearlyEnergy

Last Name: Admin

Email Address: info@clearlyenergy.com

Save Changes Cancel

The screenshot shows the HELIX Platform's User Profile Settings page. On the left is a vertical navigation bar with icons for gear, home, users, help, and back/forward. The main header says "HELIX PLATFORM". Below it, "Profile Information" is selected. The profile details for "ClearlyEnergy Admin" are shown: First Name (ClearlyEnergy), Last Name (Admin), and Email Address (info@clearlyenergy.com). At the bottom are "Save Changes" and "Cancel" buttons. Three orange callout boxes provide instructions: one points to the gear icon with "In the settings menu"; another points to the "Profile Info" tab with "User Information is found under the profile tab"; and a third points to the "Profile Information" section with "User information can be edited here".

# Certifications

Under the certifications tab

Click to edit

Create new Certification

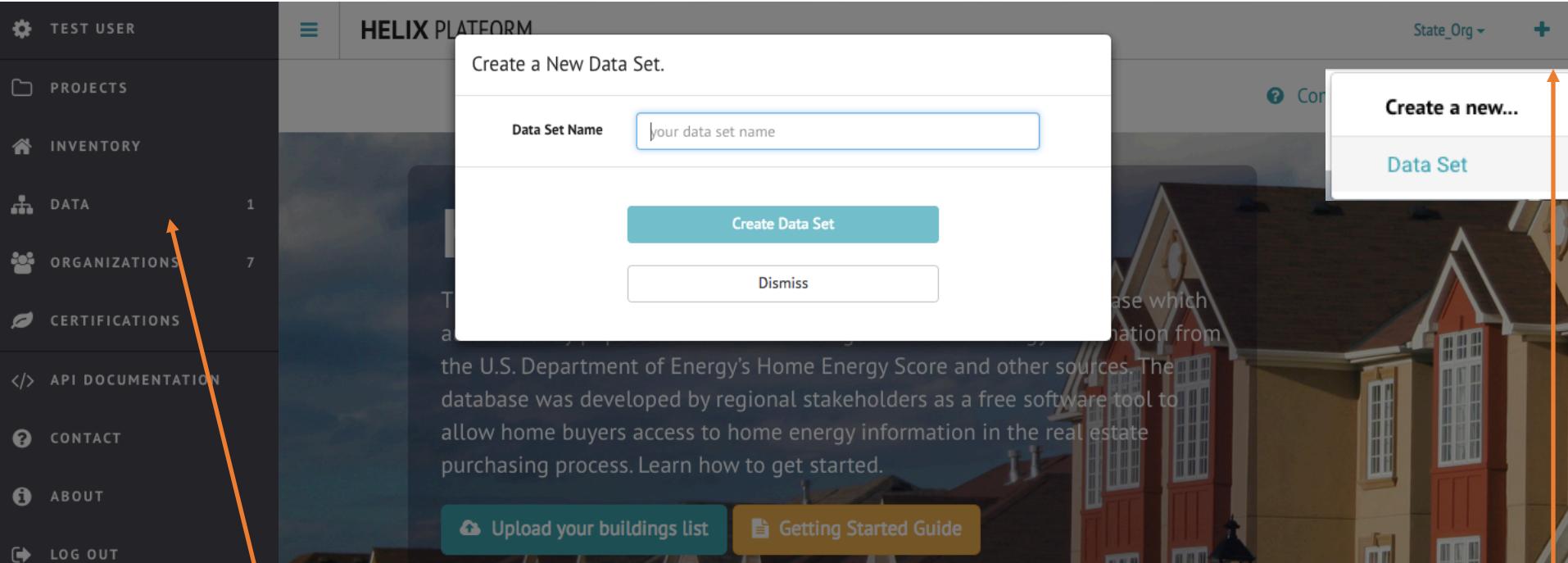
CERTIFICATION NAME	AWARD BODY	RECOGNITION TYPE	IS NUMERIC?	VALID FOR	RESO CERTIFICATION?	DESCRIPTION
LEED for Homes	U.S. Green Building Council	CRT			✓	LEED, or Leadership in Energy and E
ENERGY STAR Certified Homes	U.S. Environmental Protection Agency	CRT			✓	EPA ENERGY STAR Certified Homes
HERS Index Score	RESNET (Residential Energy Services Network)	SCR	✓		✓	The Home Energy Rating System (H)
Efficiency Vermont Residential New Construction Program	Efficiency Vermont	CRT			✓	Efficiency Vermont Certified homes fe
NGBS New Construction	Home Innovation Research Labs	CRT			✓	Home Innovation Research Labs cert
Zero Energy Ready Home	U.S. Department of Energy	CRT			✓	DOE Zero Energy Ready Homes are
Certified Passive House	PHI (Passive House Institute)	CRT			✓	The Passive House requires high qua

Create a New Certification

Certification Name	<input type="text" value="certification name"/>
Award Body	<input type="text" value="award body"/>
Recognition Type	<input type="radio"/> Numeric <input type="radio"/> Score <input type="radio"/> Certification <input type="radio"/> Award <input type="radio"/> Label <input type="radio"/> Participant <input type="radio"/> Rating <input type="radio"/> Zero Energy Ready home
Description	<input type="text" value="Enter duration in days"/>
Valid For	<input checked="" type="checkbox"/>
Export to MLS?	<input checked="" type="checkbox"/>
<input type="button" value="Cancel"/> <input type="button" value="Create Certification"/>	

- Certifications which are scores or ratings are assumed to be numeric. Make sure the Numeric option is checked for these
- Award, labels and other certifications can be True/False or a word descriptor
- If a score is only valid for a finite period of time, please enter this period in days
- Enable “Export to MLS” unless the data should not be exported

# Data Upload – Create Dataset

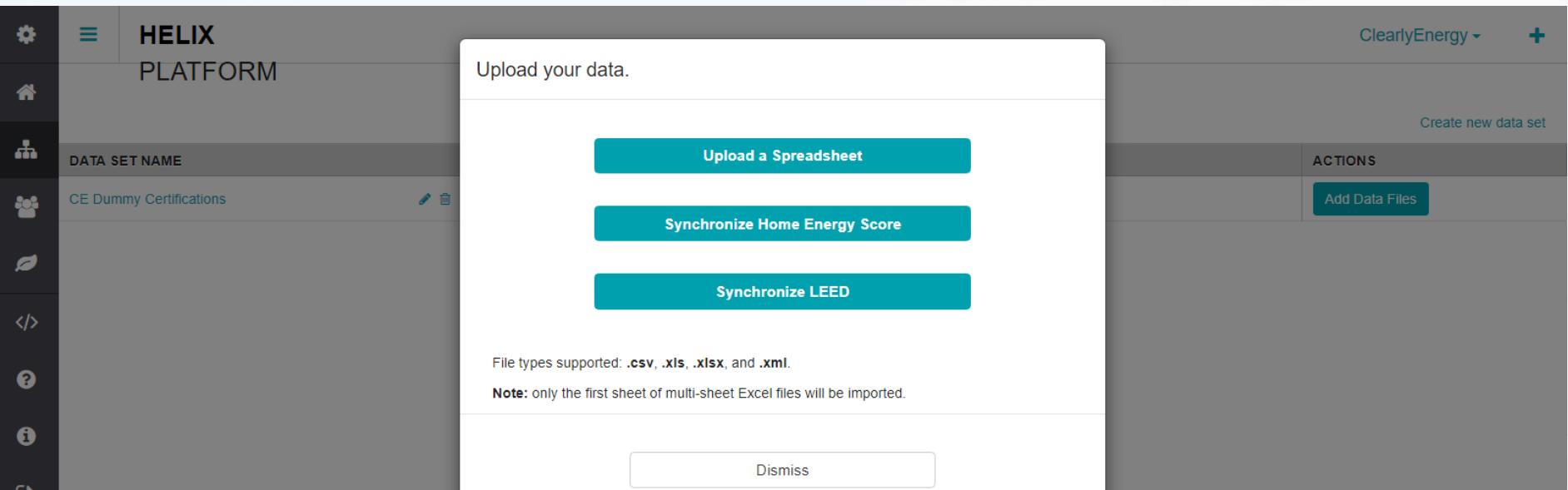


The screenshot shows the HELIX Platform interface. On the left, there is a vertical navigation menu with icons and labels: TEST USER, PROJECTS, INVENTORY, DATA, ORGANIZATIONS (highlighted with an orange arrow), CERTIFICATIONS, API DOCUMENTATION, CONTACT, ABOUT, and LOG OUT. In the center, a modal window titled "Create a New Data Set." is open. It contains a "Data Set Name" input field with the placeholder "your data set name", a "Create Data Set" button, and a "Dismiss" button. Below the modal, there is a descriptive text about the database and two buttons: "Upload your buildings list" and "Getting Started Guide". In the top right corner of the main page, there is a small overlay with the text "Create a new..." and "Data Set".

To start loading data, you first need to create a dataset. This will be used to organize various sources of data in the repository. You have three options to start:

- 1 Click the “Upload your buildings list” blue button on the home page
2. Click on the “+” in the upper right corner and select to Create a new Data Set
3. Click on Data in the left menu and select “Create new data set”

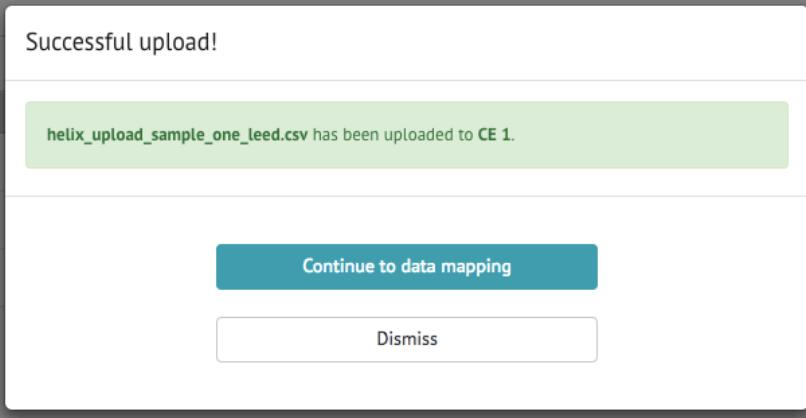
# Data Upload – File Formats



HELIX supports two types of upload and various file formats:

- Spreadsheet (cvs,xls,xlsx) or xml file upload. Sample file formats are provided on the home page by clicking on “Download Sample Data”
- Synchronizing with the Home Energy Score repository. This method requires HELIX to be a third-party recipient of the HES data and the HES credentials to be saved in your organization’s settings.
- Location settings are required to synchronize LEED scores

# Data Upload - Process



The screenshot shows the HELIX Platform interface. On the left is a vertical toolbar with icons for settings, dashboard, files, home, users, data sets, code editor, help, and info. The main header says "HELIX PLATFORM". In the top right are dropdowns for "State\_Org" and a plus sign, and a button for "Create new data set". Below the header is a table with three rows:

DATA SET NAME	# OF FILES	ACTIONS
CE 1		
VLS 2		
VLS 1		

A modal window is centered over the table, displaying a success message: "Successful upload! helix\_upload\_sample\_one\_leed.csv has been uploaded to CE 1." It contains two buttons: "Continue to data mapping" and "Dismiss".

The file upload records the data in the HELIX database and archives a copy of the original data files.

Upon successful upload, you are prompted to continue to data mapping.

# Data Mapping

[STEP 1: Map Your Data](#)
[STEP 2: Review Your Data Mappings](#)
[BEDES](#)
[Collapse Tabs](#)

## MAPPING YOUR DATA TO HELIX

It is necessary to map your field names to HELIX field names. You can select from the list that appears as you start to type, which is based on the Building Energy Data Exchange Specification (BEDES), or you can type in your own name, as well as typing in the field name from the original datafile.

In addition, you need to specify where the field should be associated with Tax Lot data or Property data. This will affect how the data is matched and merged, as well as how it is displayed in the Inventory view.

**Field names for matching:** The following fields are used by HELIX to match records: **Jurisdiction Tax Lot ID, Custom ID 1, Normalized Address** (which combines Address Lines 1 and 2). If there are fields in a datafile mapped to these names, the program will attempt to match on those same names in existing records.

When you click the **Map Your Data** button, the program will show a grid with the new field names as the column headings and your data in the rows. In that view, you can still come back to the initial mapping screen and change the field mapping.

[Map HELIX fields to imported file fields](#)

**Duplicate** -- if fields are marked as duplicates they need to be resolved to have different names

**HELIX uses a custom ID and/or the normalized address (derived from the address fields) to match new and existing records**

Click when finished mapping

[Map Your Data](#)

At least one of the following:

HELIX

Mapped Fields

Map names from import file to standardized HELIX data field names

Tax Id (with inventory type Tax Lot), or Prm Property Id (with inventory type Property).

d.csv.1517330028

Set all fields to:

Property

HELIX HEADER	DATA FILE HEADER	INVENTORY TYPE	ROW 1	ROW 2	ROW 3	ROW 4	ROW 5
Internal ID	Internal ID	Property	T1	T1			
Ad	address_line_1	Property	1 Test Street	3 Test Street			
Normalized Address	address_line_2	Property					
Owner Address	development name	Property	My Development	My Development			
Address Line 2	city	Property	Cambridge	Cambridge			
Address Line 1		Property	MA	MA			
		Property					

Start typing to see a list of fields containing that word

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# Data Mapping Nomenclature

**Summary list of key field names: See Appendix for detailed mapping instructions by source**

## Property Data

- Address Line 1
  - E.g. 1 Main St
- Address Line 2
  - E.g. Lot 5
- Postal Code
  - Same as Zip Code
- City, State
- Custom ID 1
  - Any unique identifier linked to the building (not the certification)
- Anything else that is linked to the building

## Certification Data

Two options:

1. Label headers with “Green Assessment” as well as:
  - Name
    - Must match existing certifications
  - Property Reference ID
    - Unique ID associated with the certification. It will not be used to map/merge homes
  - Property Metric
    - Number rating, for example 70
  - Or Property Rating
    - Text rating, for example Gold
2. Label headers with Certification Names:
  - Names must match existing certifications
  - Save certification dates using “Green Assessment Property Date” header

## Measurement Data

Measurement data includes: home consumption, cost and solar information

# Data Mapping - Review

Return to previous screen

The mapping review allows you to check that your data is properly mapped before saving the mappings

Click to continue

[Back to Mapping](#)

4 Data Quality Results

[Save Mappings](#)

View by Property											
Address Line 1 (Property)	Address Line 2 (Property)	City (Property)	State (Property)	Postal Code (Property)	Associated Tax Lot ID	Year Built	Conditioned Floor Area	Internal Id	Dev		
1 Test Street		Cambridge	MA	2144		2005	2000	T1	My B		
3 Test Street		Cambridge	MA	2144		2005	2000	T1	My B		

Inspect data quality warnings

## Data Quality Results

File Name: helix\_upload\_sample\_one\_leed.csv.1517330028

Date Uploaded: January 30th 2018, 11:33:48 AM -05:00

TABLE	ADDRESS LINE 1	JURISDICTION TAX LOT ID	PM PROPERTY ID	CUSTOM ID	FIELD	ERROR MESSAGE
Table	Address Line 1	Jurisdiction Tax Lot ID	PM Property ID	Custom ID	Field	Error Message
PropertyState	1 Test Street	--	--	--	Custom ID 1 (Property)	Custom ID 1 (Property) is null
PropertyState	1 Test Street	--	--	--	PM Property ID	PM Property ID is null
PropertyState	3 Test Street	--	--	--	Custom ID 1 (Property)	Custom ID 1 (Property) is null
PropertyState	3 Test Street	--	--	--	PM Property ID	PM Property ID is null

Data quality results can be exported

[Export](#)

[Close](#)

# Data Matching

- HELIX looks for existing records to merge new information into:
  - duplicates are ignored
  - last data into HELIX becomes the current information

Matching Results for file: **home\_energy\_score.csv**

**Summary of mapping results**

- Total rows in the import file: 28
- New properties: 3
- New tax lots: 1
- Merged properties: 10
- Ignored property duplicates within the import file: 1
- Ignored tax lot duplicates within the import file: 27

**Restarts process**

**View building list**

**Confirm Save Mappings?**

Did you review your mappings? It's a good idea to double check your mappings. Once HELIX matches your properties you cannot undo or edit these mappings.

**Confirm mappings & start matching**
**Dismiss**

→

**Add another file**
**View my properties**
**Review matches**

→

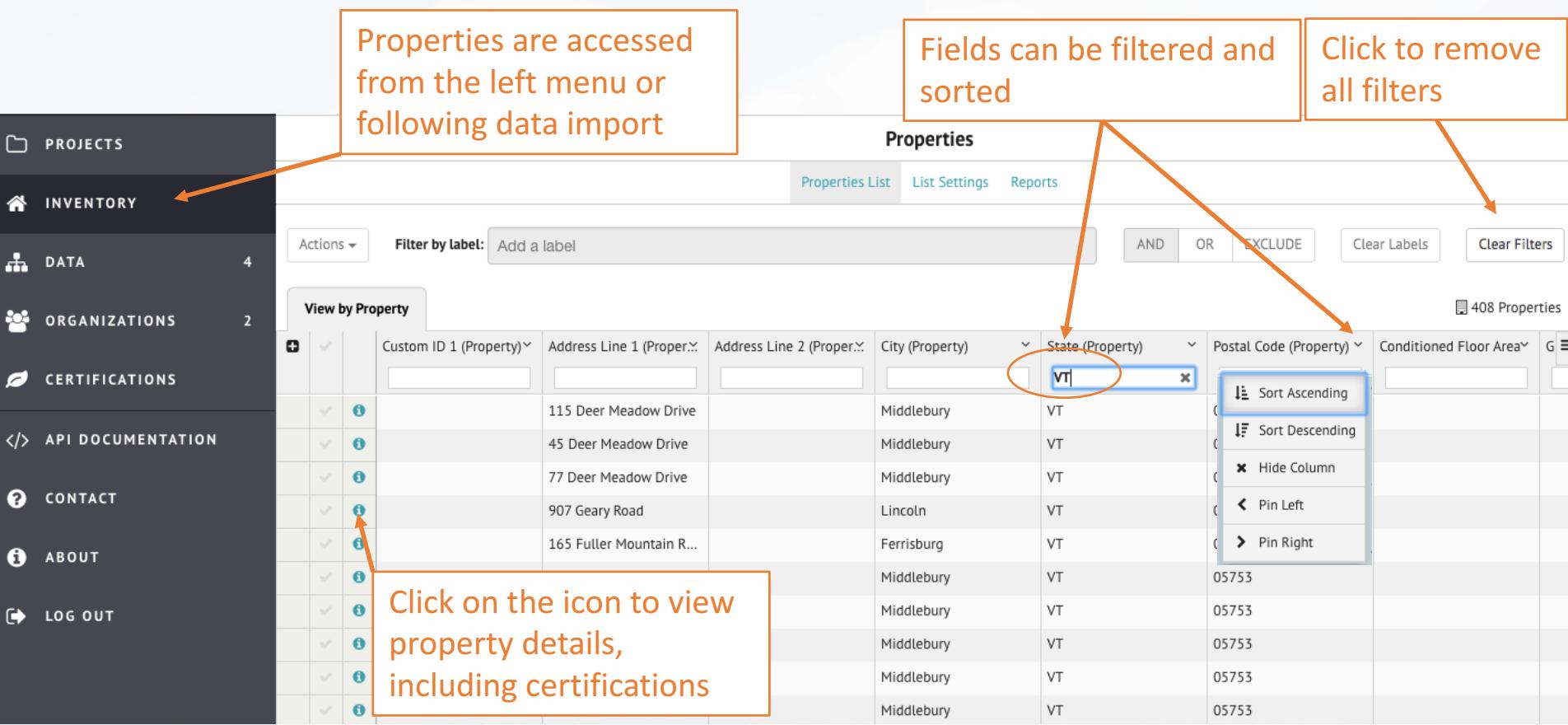
# Properties – List View

Properties are accessed from the left menu or following data import

Fields can be filtered and sorted

Click to remove all filters

Click on the icon to view property details, including certifications



	Custom ID 1 (Property)	Address Line 1 (Proper.:	Address Line 2 (Proper.:	City (Property)	State (Property)	Postal Code (Property)	Conditioned Floor Area
115 Deer Meadow Drive				Middlebury	VT		
45 Deer Meadow Drive				Middlebury	VT		
77 Deer Meadow Drive				Middlebury	VT		
907 Geary Road				Lincoln	VT		
165 Fuller Mountain R...				Ferrisburg	VT		
				Middlebury	VT	05753	
				Middlebury	VT	05753	
				Middlebury	VT	05753	
				Middlebury	VT	05753	
				Middlebury	VT	05753	

Filtering rules:

Numeric fields can be filtered by the following operators: =, ==, !=, !, <>, <, <=, >, >=

For example: >1200 returns values greater than 1200

# Properties – List View – List Settings

List Settings control the order of columns displayed

## Property List Settings

Properties List    **List Settings**    Reports

### Column Order/Visibility

#### Add Shared Properties.

Include in your properties list all pr

Select or de-select all fields

There are 89 columns of data available

Select columns from the list below to n

Check/Un-check fields to show/hide

the order in which they appear. Pin the rows for them to be left-pinned in the list view.

	Column Name
✓	State (Property)
✓	Postal Code (Property)
✓	Custom ID 1 (Property)
✓	Address Line 1 (Property)
✓	Address Line 2 (Property)
✓	City (Property)
✓	Conditioned Floor Area
✓	Gross Floor Area

Select fields to “pin” to the left of the list view;  
fields can also be pinned through the filter function of the list display

Drag individual fields up or down to re-organize the list display

# Properties - Export

The screenshot shows the 'Properties' interface with a modal dialog titled 'Export your Properties and Tax Lots'. The modal contains fields for 'Export Name' (File Name), file format selection (CSV, XLS, HELIX CSV, with CSV selected), and 'Cancel' and 'Export' buttons. On the left, a sidebar has 'Actions' dropdown with 'Delete Selected', 'Export Selected' (circled in orange), 'Add/Remove Labels', and 'Data Quality Check'. Below it is a 'View by Property' section with a 'Filter' button (circled in orange) and a list of properties. A callout box with an arrow points from the 'Filter' button to the 'Export Selected' option in the dropdown. Another callout box with an arrow points from the 'Select individual properties for export' text to the checked checkboxes in the list. A third callout box with an arrow points from the 'Click to select all filtered properties for export' text to the 'Select All' button.

Properties

Actions ▾

Filter

Delete Selected

Export Selected

Add/Remove Labels

Data Quality Check

View by Property

PM

Click to select all filtered properties for export

Select individual properties for export

Export your Properties and Tax Lots

Export Name File Name

CSV XLS HELIX CSV

Cancel Export

Clear Labels Clear Filters

7 Properties

Address Line 1 (Property)	Address Line 2 (Tax Lot)
2 Test Street	
3 Test Street	
1 Test Street	
1822 21st ave	
4441 Lowes Creek Rd	
12334 main street	
143 rollins ave	

- Make sure to select HELIX CSV export to export certification details

# Properties – Detail View

The property detail view has two parts:

1. View certification details, including any measurements or links attached to certification
2. View property history

[Properties](#)

**Property Detail**

[Click to view measurements and report links](#)

[Edit](#)

**Property : 12334 main street**

FIELD	MASTER	EXPIRATION DATE	STATUS	OPT-OUT?							
AWARD BODY	U.S. Department of Energy	ASSESSMENT TYPE	Home Energy Score	SCORE/RATING	9	DATE CREATED	2017-11-09	EXPIRATION DATE	Non-Official Score	OPT-OUT?	false
MEASUREMENT TYPE	PROD	SUB-TYPE	ELEC	FUEL	QUANTITY	UNIT	KWH	STATUS	YEAR		
CONS			ELEC		2737			ESTIMATE			
REPORT LINKS					11811			ESTIMATE			
<a href="http://hescore-pnnl-label-be.s3.amazonaws.com/hes_label_X3P6F.pdf">http://hescore-pnnl-label-be.s3.amazonaws.com/hes_label_X3P6F.pdf</a>											

[Add/Remove Labels](#)    Labels: (no labels applied)

**Building change history**

FIELD	MASTER	HOME_ENERGY_SCORE.CSV.1517602
PM Property ID		
PM Parent Property ID		
Jurisdiction Property ID		
Custom ID 1 (Property)		
Address Line 1 (Property)	12334 main street	12334 main street

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# Application Programming Interface (API)

To programmatically retrieve information from HELIX, obtain an API Key from the HELIX administrator. This key will be valid across the regions where your organization is active

## Individual Home Query

1. Retrieve home certification and/or home solar data for individual by parcel ID
  - Sample API call
  - `curl -G -u email:api_key -v "https://helix.neep.org/api/v2/reso_export-xml/" --data-urlencode "property_uid=0000B4716S2"`
  - Mandatory parameter: property\_uid

## Batch Query

1. Retrieve list of property ids updated within a certain time window
  - Sample API call:
    - `curl -u email:api_key https://helix.neep.org/api/v2/reso-export-list/?start_date=2018-08-01&end_date=2018-09-01`
    - Optional parameters: start\_date and end\_date
    - Date format: 'yyyy-mm-dd'
    - Returns list of <property\_id> tags
2. Retrieve home certification and/or home solar data for individual home
  - Sample API call
    - `curl -u email:api_key https://helix.neep.org/api/v2/reso_export/?property_id=...`
    - Mandatory parameter: property\_id

# Contact & FAQ

-  TEST USER
-  PROJECTS
-  INVENTORY
-  DATA 2
-  ORGANIZATIONS 5
-  CERTIFICATIONS
-  API DOCUMENTATION
-  CONTACT
-  ABOUT
-  LOG OUT

HELIX PLATFORM SubOrgA ▾ +

## Frequently Asked Questions

### What are the allowed file formats to upload data into HELIX?

You can upload Excel files (.xls, .xlsx), CSV and XML files into HELIX.

### What Green Certifications are allowed in HELIX?

Your HELIX installation will come populated with seven default certifications (DOE Home Energy Score, LEED for Homes, HERS Index, Energy Star Certified Homes, NGBS New Construction and Passive House). You can add new certification types by going to the [certifications](#) tab.

### Can HELIX data be exported in HPXML standard?

HPXML export is available

### Can HELIX display multiple certifications and sources of information for one record?

Yes, HELIX uses a standardized address to find existing homes and merge new sources of information into the home's record. Multiple certifications, solar information are all organized under a home address. When integrating a certification which duplicates an existing record, HELIX follows a last-in rule to determine the current record.

### Is the database of certifications already integrated within the platform?

HELIX provides a 'starter list' of standard certifications (DOE Home Energy Score, LEED for Homes, HERS Index, Energy Star Certified Homes, NGBS New Construction and Passive House), which is easy to supplement with certifications specific to your state, organization or program. Any record that then references that certification type will get mapped to it.

### Does HELIX integrate utility costs in auto population?

HELIX can collect annual estimates or actual utility costs. This data is, however, not part of the standard RESO export.

### Who will control opt-in/opt-out in HELIX?

The party (state agency/utility) managing the HELIX data will be responsible for tracking and managing the information, and can manually or via a file upload update opt-in or out preferences to reflect the property owners' wishes. The managing party may also choose to delete any records that opt-out. Opt-in/opt-out will happen at the certification level. Any certification with an opt-out flag is not available for export.

### Can records be identified by Property Tax ID

A tax ID can be incorporated into the HELIX by using the Jurisdiction Tax Lot ID field and the system will attempt to match records using that identifier. Make sure that your tax ID is properly mapped to that field.

Contact Information and Frequently Asked Questions are provided in the "Contact" tab

# About

VBUGNION@CLEARLYENERGY     HELIX PLATFORM    ClearlyEnergy 

 PROJECTS  
 INVENTORY  
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 CERTIFICATIONS  
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 CONTACT  
 ABOUT  
 LOG OUT

## About HELIX Platform

The Home Energy Labeling Information Exchange (HELIX) is a database which automatically populates real estate listings with home energy information from the U.S. Department of Energy's Home Energy Score and other sources. The database was developed by regional stakeholders as a free software tool to allow home buyers access to home energy information in the real estate purchasing process. Learn how to get started.

HELIX is managed by NEEP for more information please visit: [for more details](#)

### Development Team:

Managed by: [ClearlyEnergy](#)

HELIX is built on the SEED Platform™ managed by: [National Renewable Energy Laboratory](#)

With funding from the Department of Energy:

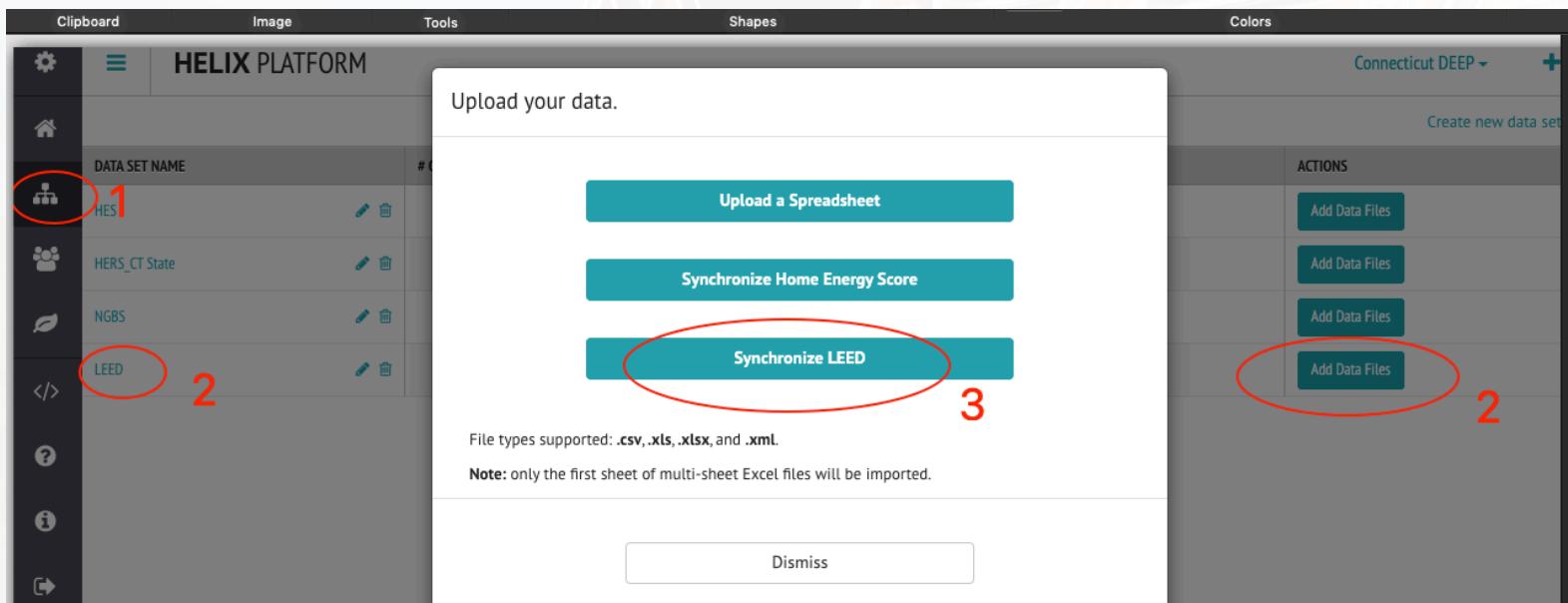
Version  
2.2.0.e1270a9

# APPENDIX A: Detailed Mapping Instructions

# General Data Upload Rules

Data uploads and data synchronization can be done either automatically or manually using spread sheets.

1. Open the Data tab
2. Select appropriate folder for data upload and add data files
3. Uploads and data synchronizations from named sources (HES, LEED) have field headers that will map automatically, just click to map. Spreadsheet uploads require further details



# Spreadsheet Upload Rules I.

- For spreadsheet uploads, data falls into 3 categories:
  - Green certifications** (NGBS, HERS...); should be prefixed with “Green Assessment” with the following fields:
    - Name: “Green Assessment Name” must match the list of existing certifications which are “HERS Index Score”, “Home Energy Score”, “LEED for Homes” and “NGBS New Construction” etc.
    - Other fields include (still prefixed with “Green Assessment”): Property Date, Property Rating , Property Metric, Property Extra Data. Please consult NEEP for details.

	E	F	G	H	I	J	K	L
Green Assessment Property	Green Assessment				Measurement			Measure
	Date	ConstructionYear	Green Assessment Name	Property Metric	Status	Cost Quantity	Unit Cost	Cost Stat
7	2017/05/06	1987	Home Energy Score	10	Confirmed	1184	dollar	Estimate

# Green Assessment Fields

- Source
  - Must match certification name in HELIX
- Reference ID
  - Unique ID for the certification/assessment (not for the home, other fields such as Custom ID 1, UBID exist to capture that)
- Status
- Metric / Rating
- Version
- Date
- Opt Out
  - True/False
- Extra Data
  - Any other non cost/consumption/savings data pertaining to audit

# Spreadsheet Upload Rules II.

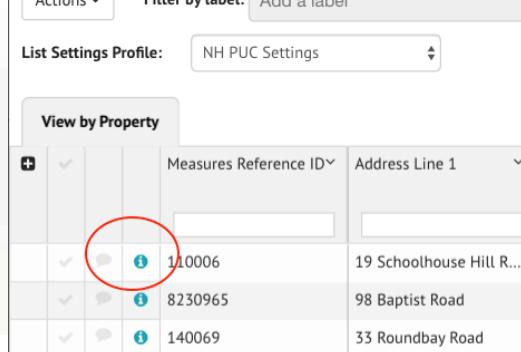
## 2. Efficiency measures on the homes; should be prefixed with “Measures”

- “Measures Name” in the spread sheet needs to be on the BuildingSync list of possible measures e.g. “Install photovoltaic system”.
- Other fields: Implementation Status, Description, electric, current\_financing, installer, various cost fields, please consult NEEP for details.

Fig 1.  
Excel  
snippet

A	B	Step 2 to BO
	<b>Measures Name</b>	
1	Install photovoltaic system	
2	Completed	200\$
3	Install photovoltaic system	
4	Completed	200\$

Fig. 3 (left): Click info in properties view to see measures as shown in Fig. 4 (below).



Measures Reference ID	Address Line 1
110006	19 Schoolhouse Hill R...
8230965	98 Baptist Road
140069	33 Roundbay Road

Measures		CATEGORY	MEASURE NAME	MEASURE INFORMATION
		Renewable Energy Systems	Install photovoltaic system	Status: Completed Recommended: false Scale: Entire facility Category Affected: Other Installation Cost: Material Cost: M&V Cost: Residual Cost: Total First Cost: Capital Replacement Cost: Description: 0 Electric: Installer: Current Financing: Ownership: Seller Owned Reference ID: 110006 Source: Program Sponsor

# Measures Fields

- Name: should be part of BuildingSync definitions
- Reference ID: unique project identifier
- Current Financing: In
- Electric
- Installer
- Property Measure Name
- Description
- Implementation Status
- Application Scale
- Recommended
- Cost MV
- Cost Total First
- Cost Installation
- Cost Material
- Cost Capital Replacement
- Cost Residual Value
- Category Affected

# Spreadsheet Upload Rules III.

**3. Measurements** or estimated data relating to either green certifications or measures such as photovoltaic generation, mmbtu (energy) consumption, utility costs; should be prefixed with “Measurement”.

- General field construction is Measurement  
Production/Consumption/Cost/Emissions/Capacity  
Unit/Quantity/Status/Year/Measurement Type/Measurement Subtype
- Example: Measurement Production Fuel or Measurement Consumption Unit

Measures		Measure Name		Measure Information			
	Category						
	Renewable Energy Systems		Install photovoltaic system	Status: Completed Recommended: false Scale: Entire facility Category Affected: Other Installation Cost: Material Cost: M&V Cost: Residual Cost: Total First Cost: Capital Replacement Cost: Description: Roof mount Electric: Installer: Trinity Solar Current Financing: Leased Renewables Ownership: Third-Party Owned			
MEASUREMENT TYPE	SUB-TYPE	FUEL	QUANTITY	UNIT	STATUS	YEAR	
Capacity	Photovoltaics	Electric	8.75	Kilowatt		2016	

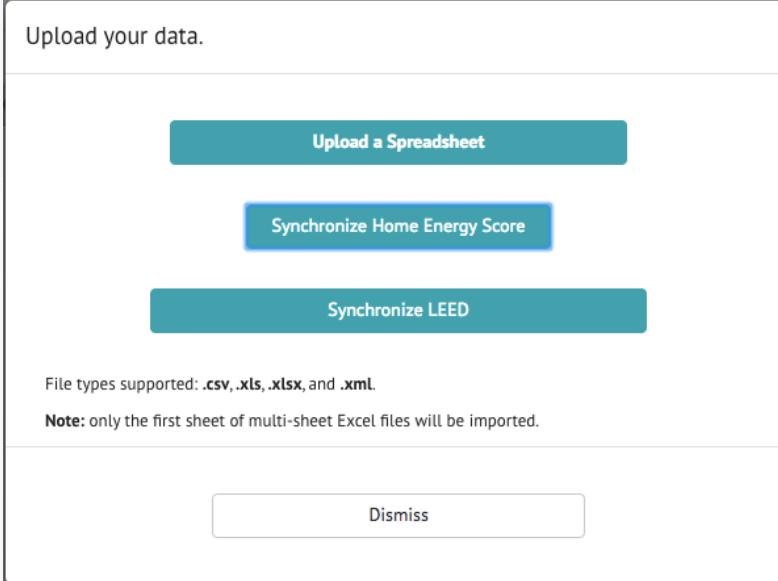
Fig. 5: In measures view similar to Fig. 4, click info to show measurements

Fig. 6:  
Measurements

# Measurement Fields

- The general label for measurements is
  - Measurement **Type Description**
- **Type** should be one of: Capacity, Production, Consumption, Cost or Emissions
- **Description** should include the following, with Measurement Type, Fuel, Unit and Status being required :
  - Quantity: numeric value
    - Measurement Savings Quantity= 2300
  - Measurement Type: repeat type
    - Measurement Production Measurement Type = Capacity
  - Measurement SubType: PV, Wind
    - Measurement Capacity Measurement SubType = PV
  - Fuel: Electric, Natural Gas, Heating Oil, Propane, Cord Wood, Pellet Wood
    - Measurement Capacity Fuel = Electric
  - Unit: kw, kwh, therms, therm, gallons, cords, pounds, mmbtu, dollars, dollar, tons\_ghg, tons\_CO2, tons\_CO2e
    - Measurement Capacity Unit = kw
  - Status: in Actual, Estimated, Partially Estimated
  - Year: any date
- If values exist for multiple fuels, prefix the label with the unit, e.g.
  - Measurement Savings Unit Dollars= dollar
  - Measurement Savings Unit Mmbtu = mmbtu

# LEED & Home Energy Score



Upload your data.

**Upload a Spreadsheet**

**Synchronize Home Energy Score**

**Synchronize LEED**

File types supported: **.csv, .xls, .xlsx, and .xml**.

**Note:** only the first sheet of multi-sheet Excel files will be imported.

**Dismiss**

## LEED

- Please contact the HELIX manager to set up 3<sup>rd</sup> party authorization to the Home Energy Score API

## Home Energy Score

- Please ask the HELIX manager to assign the regional LEED id relevant to your organization/region

## Record Synchronization

- With the HES or LEED authentication active, synchronizing the records is done by pushing the relevant button in the datasets tab. Simply click-through the mapping steps

# LEED & HES: Datasets Mapped Automatically

No changes in mapping required:

- LEED
- Home Energy Score

Map HELIX fields to imported file fields		Map Your Data			
HELIX		home_energy_score.csv			
Set all fields to: Property		Mapped Fields			
INVENTORY TYPE	HELIX HEADER	MEASUREMENT UNITS	DATA FILE HEADER	ROW 1	ROW 2
Property	City		City	Glocester	Coventry
Property	Measurement Capacity Quantity		Measurement Capacity Quantity		
Property	Green Assessment Name		Green Assessment Name	Home Energy Score	Home Energy Score
Property	Measurement Production Measu		Measurement Production Measurement Subtype		
Property	Green Assessment Property Sou		Green Assessment Property Source	Department of Energy	Department of Energy
Property	Measurement Production Quant		Measurement Production Quantity		
Property	Measurement Capacity Measure		Measurement Capacity Measurement Subtype		
Property	Green Assessment Property Met		Green Assessment Property Metric	6	3
Property	Measurement Production Unit		Measurement Production Unit		

If there are any issues at the mapping state, clicking "Map HELIX Fields to imported file fields" button should reset map to default values