How to Benchmark Your Building

User Guide for Benchmarking with
ENERGY STAR® Portfolio Manager®

SMUD®

2018

This document is a reference guide for creating a Portfolio Manager account, and setting up a building profile. For additional help, please refer to the resources available on SMUD's EPA Portfolio Manager page, on SMUD's Benchmarking help website, and in the Portfolio Manager Online Help library.

OVERVIEW

ENERGY STAR Portfolio Manager, an online service created by the Environmental Protection Agency (EPA), allows you to track the energy consumption of your facilities and compare them to similar buildings nationwide.

This guide will walk you through the process of benchmarking your building: how to register for a Portfolio Manager account, and how to create a profile for your property. You will also find detailed answers to frequently asked questions on SMUD's Benchmarking help website.

Before getting started, you may want to collect information about your building using the Data Collection Worksheet available on EPA's ENERGY STAR Portfolio Manager Benchmarking Web site.

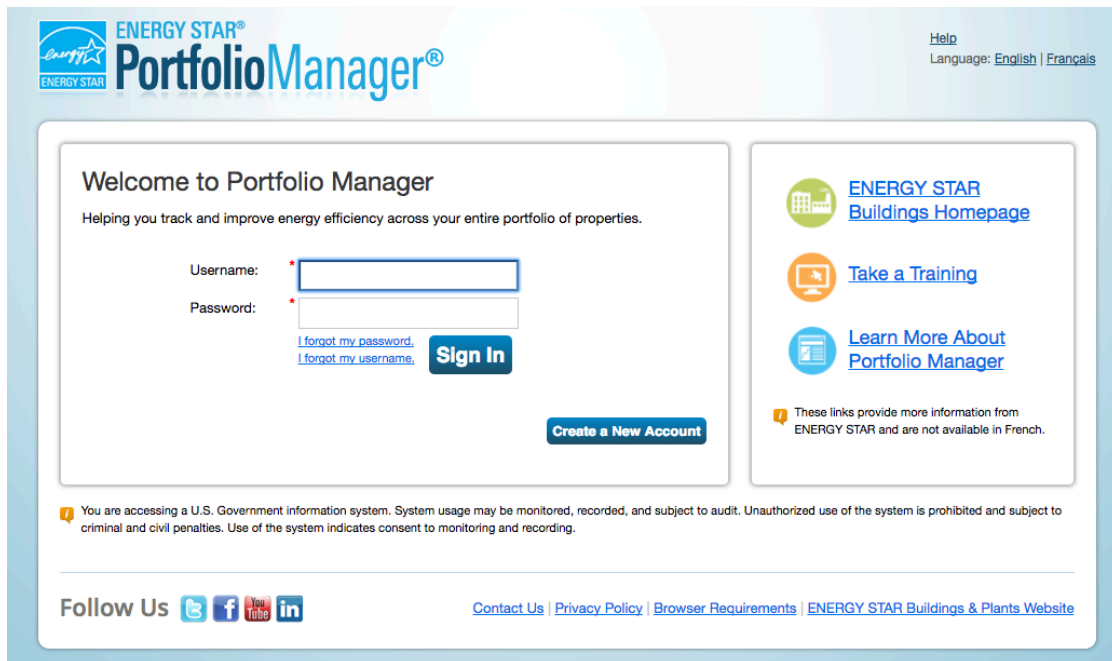TABLE OF CONTENTS

Section 1 – How to Register a Portfolio Manager Account

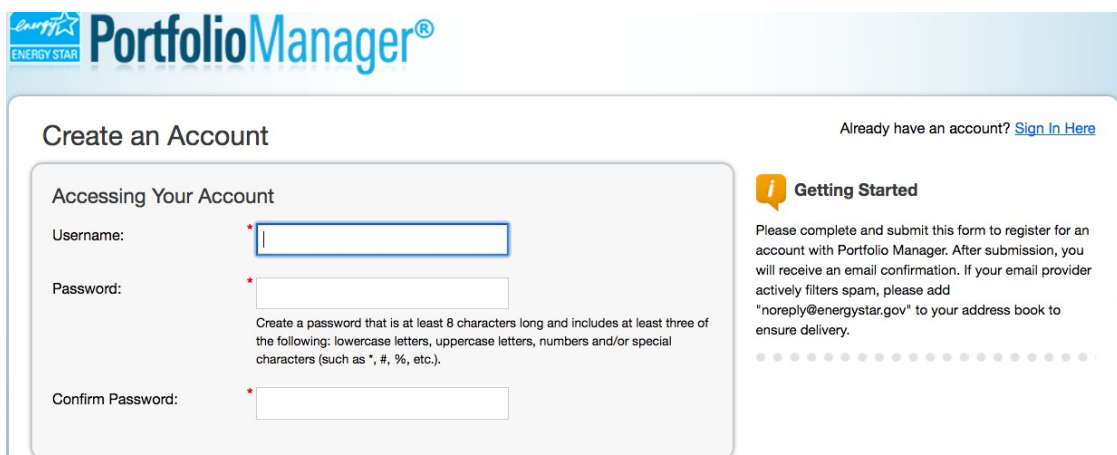Visit the Portfolio Manager welcome page
https://portfoliomanager.energystar.gov/pm/login.html

Either click Create a New Account, or, if you already have a User Name and Password, enter it below and Sign In.

To Create a New Account: Fill out the requested information. Your Username can't be changed later, so be deliberate with your selection.

Continue filling out the required fields. Portfolio Manager's default selection of Yes for Searchability allows others to search for your account, to facilitate making Contact Connections. Don't change this default setting if you intend to enroll in SMUD Web Services, an automated energy data upload option.

When finished, click Create My Account.

About Yourself

First Name: *

Last Name: *

Job Title: *

Email: *

Confirm Email: *

Note: We never share your email address with third parties.

Phone: *

Country: * [Select Country]

Language: [English]

Reporting Units:
- ● Conventional EPA Units (e.g., kBtu/ft²)
- ○ Metric Units (e.g., GJ/m²)

Street Address: *

City/Municipality: *

State/Province: * [- - - Select - - -]

Postal Code: *

[i] Accounts for Organizations

If you are creating an account that you intend to use as your organization's account, then you may want to consider entering your organization name in the first and last name fields in order to make it easier for other Portfolio Manager users to find your organization. Example: First Name: Company ABC, Last Name: Web Services Division

About Your Organization

Organization Name: *

Primary Business or Service of Your Organization: * [Select Primary Business or Service]

Is your organization an ENERGY STAR Partner?
- ○ Yes
- ● No

[i] Primary Business or Service

If you have more than one "primary business," just pick the best option. Portfolio Manager will determine your category for a score based on the information, like square footage, that you enter for each of your property uses.

Searchability in Portfolio Manager

Can other people search for you and send you a connection request?
- ● Yes
- ○ No

[i] Connecting with Others in Portfolio Manager

You can connect with other people in Portfolio Manager to easily share information. Your account must be searchable in order for others to send you a connection request.

Create My Account | Cancel

Once you have created your account, visit the ENERGY STAR homepage
https://www.energystar.gov/, and click on Portfolio Manager.
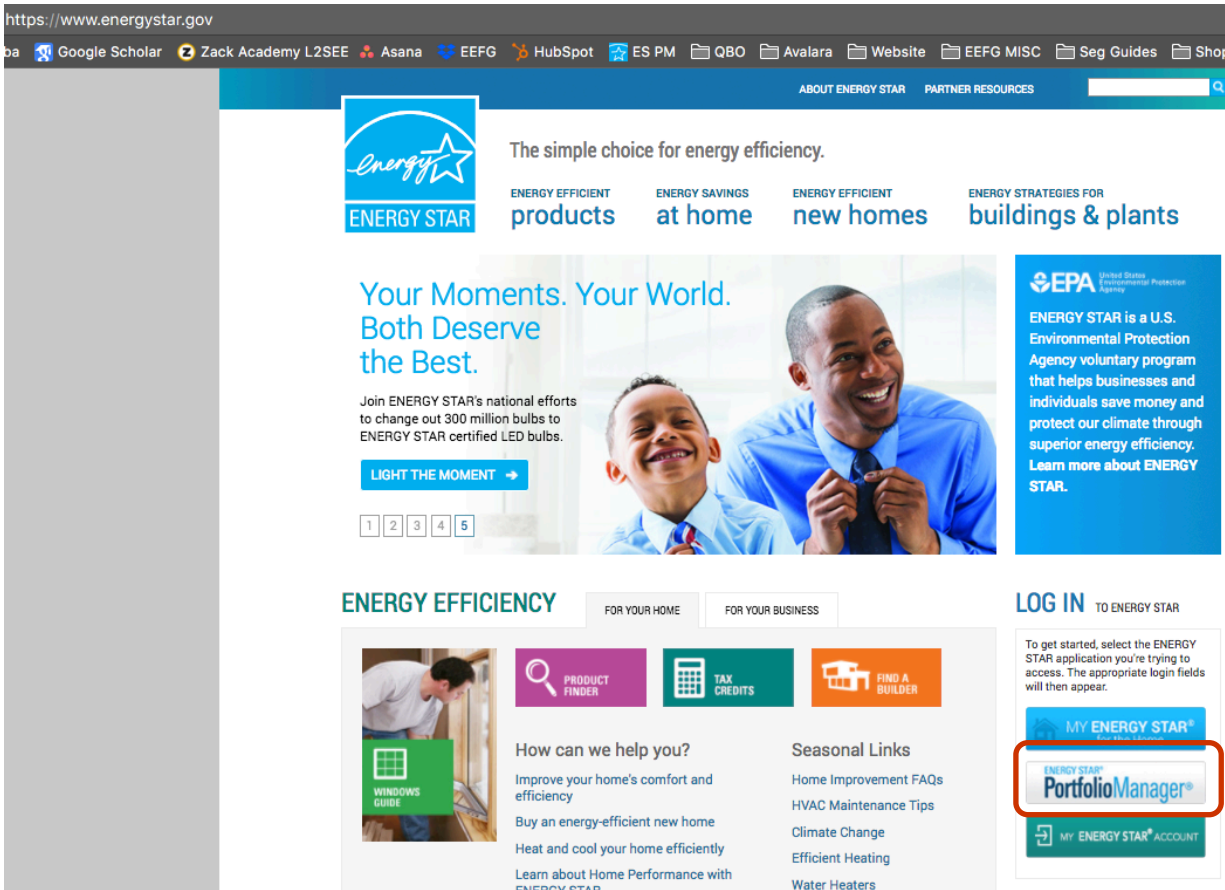
Now enter your new User Name and Password to Log In.

Section 2 – How to Create a Property Profile

To benchmark your facility in ENERGY STAR Portfolio Manager, you will need to create a profile that has basic information about the property, how it is used, and the energy meters serving it. Have the basic information describing your building ready before proceeding. Refer to the Data Collection Worksheet for help determining 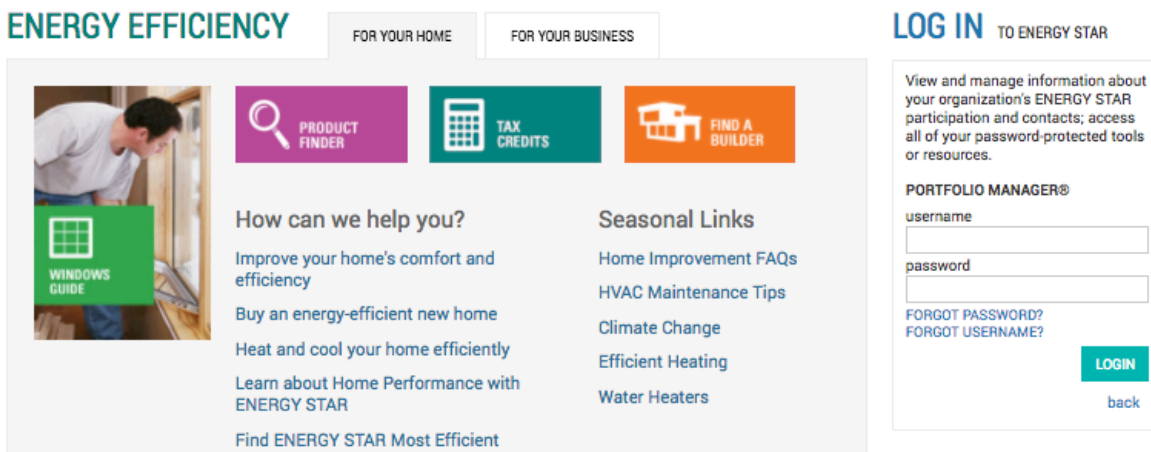what information to collect. You will need details such as Gross Floor Area (not rentable square feet), year built, number of meters of each energy type, and how you would classify your building's primary use. The Portfolio Manager Glossary can be referenced throughout your set up for definitions, or you can hover over any blue text for further information.

To begin, from the My Portfolio tab, add a property by clicking the blue "Add a Property" box to get started.
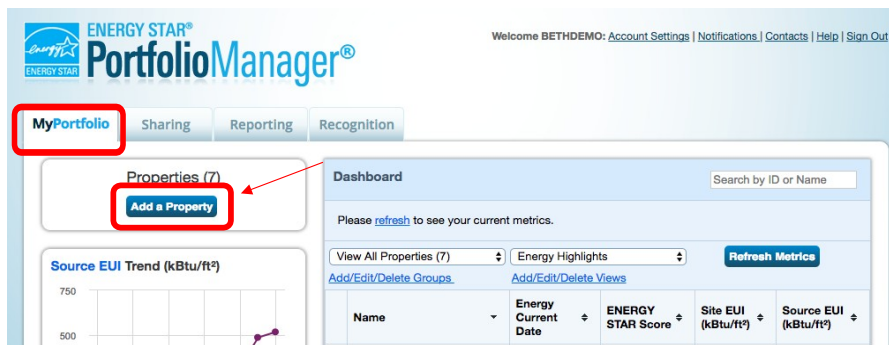
Enter your property's primary function, number of buildings, and construction status. Then click "Get Started!"

Enter the property's name, and full address carefully.

TIP: Make sure the city name is accurate and spelled correctly, with no abbreviations (i.e. use Mount, not Mt.) to avoid an error connecting with SMUD's Web Services later. Avoid the use of hashtags (#) and ampersands (&).

Set Up a Property: Basic Property Information

Tell us a little bit more about your property, including a name that you will use to look up your property and its address.

About Your Property

Field	Value
Name:	Demo Office Building
Country:	United States
Street Address:	100 Main Street
City/Municipality:	Sacramento
State/Province:	California
Postal Code:	95838
Year Built:	1995
Gross Floor Area:	20,000 Sq. Ft. ☐ Temporary Value

Gross Floor Area (GFA) is the total property floor are... surfaces of the building(s). **Do not include parking.**

| Irrigated Area: | 0 Sq. Ft. |
| Occupancy: | 100 % |

Tip

The name you choose for your property does not have to be unique. But, it may make it easier for you to work with properties in your portfolio if you do not use the same (or similar) names.

Temporary Data flag
Temporary Data Flag is a Yes/No flag that indicates whether temporary values have been applied to any of the Property Use Details (such as hours, workers, or computers).

- Yes - One or more temporary value was used in the Property Use Details.
- No – There are no temporary values for any Property Use Details.

You can view this metric for all properties in.... (Click to view the full term in the glossary)

Do any of these apply?
- ☑ My property's energy consumption includes parking areas
- ☐ My property has a Data Center that requires a constant power load of 75 kW or more
- ☐ My property has one or more retail stores
- ☐ My property has one or more restaurants/cafeterias

Tip

Answering these simple questions will help us guide you in entering your property correctly.

Back   **Continue**   Cancel

Finish entering the building data, then click Continue.

If you need to make corrections after finalizing your entries, click "Edit".

Set up a Property: How is it used?

Based on what you've told us so far, Portfolio Manager has set up your property. Fill in the tables below to provide more detailed information on how your property is used.

Basic Information

Name:	Demo Office Building	Country:	US
Property Type:	Office	Address:	100 Main Street Sacramento, CA 95838 Map It
Year Built:	1995		
Property consists of:	1 building with parking		

Edit

The information requested next will vary depending on the Primary Function selected. For example, if you your building's Primary Function is Office, you would be asked to supply the Gross Floor Area, Weekly Operating Hours, Number of Computers, Number of Workers on Main Shift, and Percent that can be Heated, and Cooled. If your building is a school, you would need to enter additional details, such as Number of Students.

If your site has parking, enter those details.

When finished, click "Add Property" to finalize your building profile.

▼ **Building Use**   ✎ Edit Name

Office refers to buildings used for the conduct of commercial or governmental business activities. This includes administrative and professional offices.

Gross Floor Area (GFA) should include all space within the building(s) including offices, conference rooms and auditoriums, break rooms, kitchens, lobbies, fitness areas, basements, storage areas, stairways, and elevator shafts.

If you have restaurants, retail, or services (dry cleaners) within the Office, you should most likely include this square footage and energy in the Office Property Use. There are 4 exceptions to this rule when you should create a separate Property Use:

- If it is a Property Use Type that can get an ENERGY STAR Score (note: Retail can only get a score if it is greater than 5,000 square feet)
- If it accounts for more than 25% of the property's GFA
- If it is a vacant/unoccupied Office
- If the Hours of Operation differ by more than 10 hours from the main Property Use

More on this rule.

| Property Use Detail	Value			Current As Of	Temporary Value
⭐ **Gross Floor Area**	* 20,000	🔢	Sq. Ft. ⬍	1/1/1995 📅	☐
⭐ **Weekly Operating Hours**	65	☐ Use a default		1/1/1995 📅	☐
⭐ **Number of Workers on Main Shift**	46	☐ Use a default		1/1/1995 📅	☐
⭐ **Number of Computers**	40	☐ Use a default		1/1/1995 📅	☐
⭐ **Percent That Can Be Heated**	50 % or more ⬍	☐ Use a default		1/1/1995 📅	☐
⭐ **Percent That Can Be Cooled**	50 % or more ⬍	☐ Use a default		1/1/1995 📅	☐

⭐ This Use Detail is used to calculate the 1-100 ENERGY STAR Score.

▼ **Parking Use**   ✎ Edit Name   **Delete**

Parking refers to buildings and lots used for parking vehicles. This includes open parking lots, partially enclosed parking structures, and completely enclosed (or underground) parking structures. Parking structures may be free standing or physically connected to the property.

Property Use Detail	Value			Current As Of	Temporary Value
Open Parking Lot Size	* 0		Sq. Ft. ⬍	1/1/1995 📅	☐
Partially Enclosed Parking Garage Size	* 5000		Sq. Ft. ⬍	1/1/1995 📅	☐
Completely Enclosed Parking Garage Size	* 0		Sq. Ft. ⬍	1/1/1995 📅	☐
Supplemental Heating	No ⬍	☐ Use a default		1/1/1995 📅	☐

Back   **Add Property**   Cancel

A green banner confirms your success in creating your new property profile.
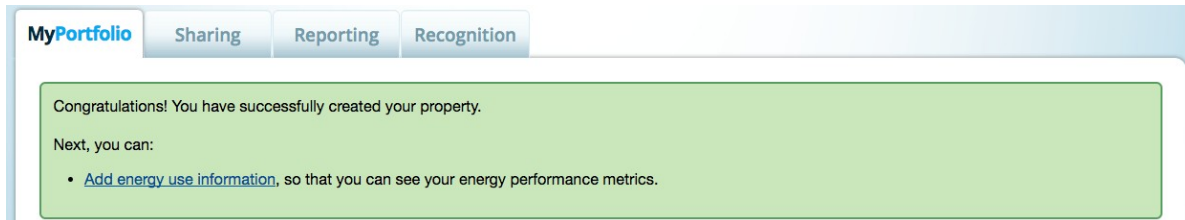
Before you move on to the energy use section, be sure you have fully described your building by including a "Use" for each of the functions your building provides. Not sure if you need to add a use? Read more about the rules at SMUD's Benchmarking Help website.

Adding Another Type of Use

Portfolio Manager uses the phrase "Type of Use" to characterize the various spaces within a building. Your building may have one or more space types. For example, an office building might have occupied office space, a retail space, and parking. Each of these should be entered as a separate "Type of Use" and will require different inputs. If more than 10% of a building's gross floor area is vacant, the vacant square footage should be entered as a distinct space type.

To add another space use to your facility, go to the Details tab of your building, and look for the Add Another Type of Use dropdown. Select the type of space you would like to add, then click Add.
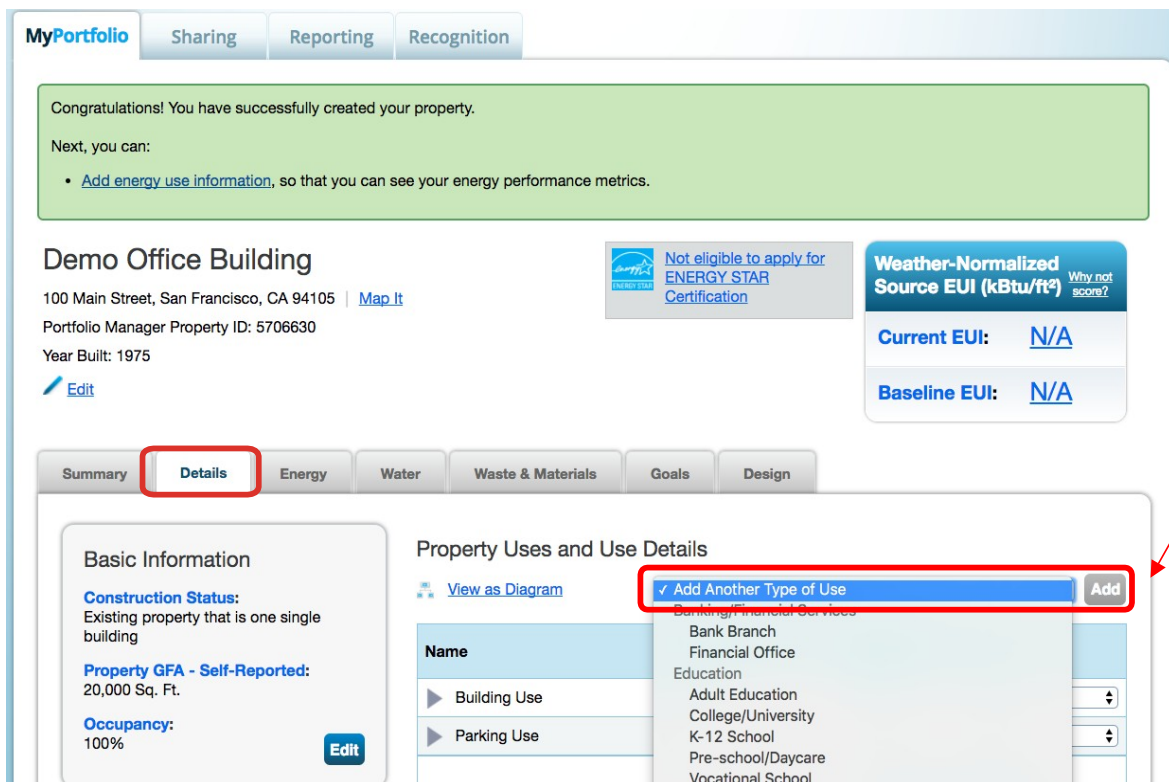
Enter the necessary data, using a zero to indicate none, as needed. When complete, click Save Use.

Add Property Use For Demo Office Building

Retail Store refers to individual stores used to conduct the retail sale of non-food consumer goods such as clothing, books, toys, sporting goods, office supplies, hardware, and electronics. Buildings containing multiple stores should be classified as enclosed mall, lifestyle center, or strip mall.

Gross Floor Area should include all space within the building(s), including sales areas, storage areas, offices staff break rooms, elevators, and stairwells.

To receive an ENERGY STAR score, a Retail Store must be a *single store* that is at least *5,000 square feet* and has an *exterior entrance* to the public. The ENERGY STAR score applies to: Department Stores, Discount Stores, Supercenters, Warehouse Clubs, Drug Stores, Dollar Stores, Home Center/Hardware Stores, and Apparel/Specialty Stores (e.g. books, clothing, office products, toys, home goods, and electronics). Eligible store configurations include: free standing stores; stores located in open air or strip centers (a collection of attached stores with common areas that are not enclosed); and mall anchors.

Retail configurations not eligible to receive an ENERGY STAR score include: enclosed malls; individual stores located within enclosed malls; lifestyle centers; strip malls; and individual stores that are part of a larger non-mall building (i.e. office or hotel).

Convenience Stores, Automobile Dealerships, and Restaurants are not eligible to earn an ENERGY STAR score as Retail. Supermarkets are eligible for an ENERGY STAR score under the Supermarket property type.

Note: In order to be eligible to earn ENERGY STAR certification, your building must be located in the US or its territories, or owned by the US government outside of the US.

Name: * Retail Store Use

Property Use Detail	Value		Current As Of	Temporary Value
⭐ Gross Floor Area	* [ ]	Sq. Ft. ⬍	1/1/1995 📅	☐
⭐ Weekly Operat	[ ]	☐ Use a default	1/1/1995 📅	☐
⭐ Number of Wor	[ ]	☐ Use a default	1/1/1995 📅	☐
⭐ Number of Con	[ ]	☐ Use a default	1/1/1995 📅	☐
⭐ Number of Cas	[ ]	☐ Use a default	1/1/1995 📅	☐
⭐ Number of Open or Closed Refrigeration/Freezer Units	[ ]	☐ Use a default	1/1/1995 📅	☐
Length of All Open or Closed Refrigeration/Freezer Units	[ ]	Ft. ⬍	1/1/1995 📅	☐
⭐ Number of Walk-in Refrigeration/Freezer Units	[ ]	☐ Use a default	1/1/1995 📅	☐
Area of All Walk-in Refrigeration/Freezer Units	[ ]	Sq. Ft. ⬍	1/1/1995 📅	☐
⭐ Single Store	[⬍]	☐ Use a default	1/1/1995 📅	☐
⭐ Exterior Entrance to the Public	[⬍]	☐ Use a default	1/1/1995 📅	☐
Cooking Facilities	[⬍]		1/1/1995 📅	☐
⭐ Percent That Can Be Heated	[⬍]	☐ Use a default	1/1/1995 📅	☐
⭐ Percent That Can Be Cooled	[⬍]	☐ Use a default	1/1/1995 📅	☐

Gross Floor Area
The Gross Floor Area (GFA) is the total property square footage, measured between the outside surface of the exterior walls of the building(s). This includes all areas inside the building(s) including supporting areas. GFA is not the same as rentable space, but rather includes all area inside the building(s).
Include in GFA: lobbies, tenant areas, co... (Click to view the full term in the glossary)

⭐ This Use Detail is used to calculate the 1-100 ENERGY STAR Score.

Save Use   Cancel

Continue with this "Add a Use" procedure until your building's gross floor area is completely entered. Be sure the sum of all space uses is equal to the total gross floor area of the facility.

After saving each of your Use entries, you will see a green banner at the top of the Details tab, confirming you have successfully added each Use.
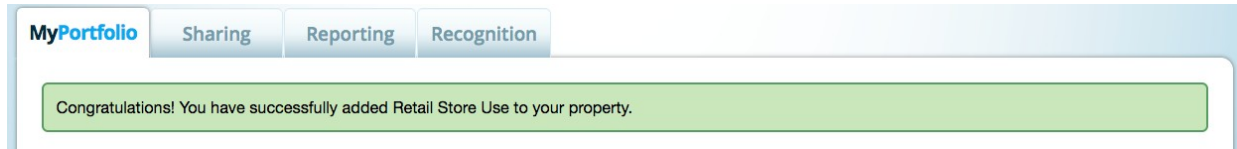
Notes about the data integrity of the values entered for your space attributes:

- Some fields give you the option to "Use a Default" (which inserts the national average for that attribute). Or, it is possible to check the "Temporary Value" box, to indicate that you used an estimate for that attribute.

- Neither of these kinds of values are intended to be an accurate representation of your property.

- While it is okay to use a default or temporary value as a placeholder, a true value must be added before submitting a benchmarking report for official purposes.

- Be sure to collect and enter actual data for your facility as soon as you can, and remove the default and temporary notations.

- Adjust default or temporary values by using the "Correct Mistakes" feature. See the FAQ section of SMUD's Benchmarking Help website for more information on clearing temporary or default data.

Setting up Energy Meters

Overview:

As you add meters, be sure to include all meter types required to fully describe the site's energy consumption. As you chose different fuels, additional fields requesting more data may appear. For SMUD electric meters, you should select "purchased from the grid".

You may also track your property's water usage and waste generation, but these metrics are not required by Portfolio Manager to accurately benchmark your property. Water consumption and waste generation do not factor into your benchmarking score.

If you skip a meter and need to add it later, you can easily go back and add another meter in the future. If you accidentally select the wrong units for your meter, additional steps are required to fix this inaccuracy *only if* data has already been added to the meter. If no energy data has yet been added to the meter, you can adjust your unit selection without issue.

If there is renewable energy generation such as solar or wind at the site, refer to the FAQs section of SMUD's Benchmarking Help website for guidance adding green meters.

If you don't intend to set up Web Services automated meter uploads because you prefer to add your energy consumption data to Portfolio Manager by hand, add one electric grid meter to Portfolio Manager for each SMUD electric meter at the site.

If you do intend to enroll in Web Services, the next section contains very important information for you.

Setting up Energy Meters – Web Services User Notes

If you enroll in Web Services, SMUD will provide an automated upload of site energy consumption data into Portfolio Manager in one of two formats. You can request either individual meter data*, or aggregated (summed) whole building data. *The energy meter set up is different for each of these options.*

Individual meter data is not available to large SMUD accounts on Campus Billing. These customers may only receive aggregated usage data.

For individual meter data: For each SMUD meter that you are enrolling in Web Services, add one electric grid meter to Portfolio Manager. Obtain a recent SMUD billing statement, and note the Account Number and Location Number associated with each meter at the site. Each SMUD meter will have a unique Meter Number, but may share a Location Number and Account Number with other meters.

Individual meter data is updated by SMUD monthly, after an initial transfer of up to 24 months of historical data.

For aggregated, whole building data: For SMUD meters that you are enrolling in Web Services, add one electric grid meter to Portfolio Manager for each Location Number at the site. If the site has multiple addresses, there may be a distinct Location Number for each address. SMUD will aggregate data for meters associated with each Location Number separately. Obtain a recent SMUD billing statement, and note one Meter Number associated with each Location Number at the site.

Aggregated Data is provided in a one-time transmission of up to 24 months of historical, calendarized data. Monthly updates of aggregated data are not available.

Refer to the next section for more information on locating the Account Number, Location Number and Meter Number(s) on your SMUD Energy Statement.

Please see the rcompanion SMUD document How to Enroll in Web Services for full details about obtaining automated data uploads from SMUD.

Sample SMUD Billing Statement:

Please locate the Account Number, Location Number, and Meter Number.

CUSTOMER BILL
Phone Inquiries 1 (888) 742-7683
Power Outages 1 (888) 456-7683

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SMUD
P.O. Box 15830, Sacramento, CA 95852-0830
smud.org

Account Number: 123456
SUSAN L CUSTOMER
Issue Date: 02/14/14
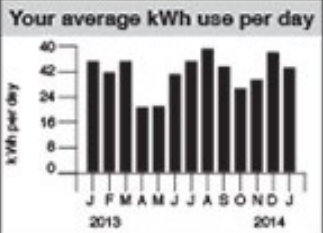
Past Due Balance - Due Immediately	$159.56
Current Charges, Due 03/25/14	$123.54
Total Amount	$283.10

Location: 123 ANY STREET SACRAMENTO 90000
Rate: RSGH: Standard Residential Rate
Cycle: 08   Location Number: 876543

Usage History	Dates	Days	kWh / Day	$ / Day
Billing Period	01/23/14 - 02/21/14	30	29.3	$4.12
Last Year	01/24/13 - 02/22/13	30	27.0	$3.70
Last Month	12/20/13 - 01/22/14	34	31.0	$4.64

Meter No.	Current Mtr. Read	Previous Meter Read	Difference	Multiplier	Usage	Usage Type
3456789	29998	29119	879	0	879	kWh

Your average kWh use per day

ELECTRIC SERVICE CHARGES/CREDITS	USAGE	TYPE	RATE	TOTAL
Base Usage	690	Winter kWh @	0.095500	65.90
Base-Plus Usage	189	Winter kWh @	0.177100	33.47
System Infrastructure Fixed Charge*				14.00
Solar Surcharge	879	kWh @	0.001500	1.32
Sacramento County Tax*				8.60
State Surcharge*				0.25
A) TOTAL ELECTRIC SERVICE CHARGES / CREDITS				$123.54

ACCOUNT ACTIVITY SINCE LAST STATEMENT

Beginning balance from last Statement	159.56
B) PREVIOUS BALANCE	$0.00
C) TOTAL DUE (A+B)	$283.10

About the Location Number(s) on your Energy Statement

- A SMUD Location Number is associated with an individual postal address, and is tied only to meters associated with that address.

- A building may have more than one Location Number if it has more than one postal address.

- Those seeking whole-building aggregated data should determine if their site has more than one Location Number. Contact benchmark@smud.org for assistance if needed.

Setting up Energy Meters

To begin adding meters, go to the Energy tab and click "Add A Meter".

Click a meter type, like Electric or Natural Gas, to get started. Here we are adding one of each of the most common types of meters, Grid Electric, and Natural Gas, but all SMUD meters are electric. Indicate the sources of your property's energy. As you select different fuels, additional fields will appear. For SMUD electric meters, you should select "purchased from the grid".

Once you have selected the number and types of meters that account for the total energy consumption at your site, click "Get Started" to continue.

Indicate the Units for each fuel type by clicking in the field under Units and selecting from the drop-down menu that appears. Then, enter the date each meter was first billed in the format MM/DD/YYYY. This is normally the date the building went into service. (Use January 1 of the year the site was built if you are not sure).

You can rename any meter by clicking into the meter name text field. It may be helpful to use "Aggregated Electric Meter - Location Number" for your Meter Name, to remind you that these meters contain summed site data.

Finally, click "Create Meters".

Tip: For SMUD meters, the units should be kWh. For natural gas meters, use therms.

You will see a green banner indicating you successfully created your meters, noting options for adding meter data.

Data Entry Options:
- To add monthly meter entries manually, select "Click to add an entry". You will then need to type in the billing Start Date, End Date, and Usage as shown on your energy statements (cost is optional).

- Or, you can upload an Excel spreadsheet to add multiple meter entries at once by using the "spreadsheet template". There are help resources on the page to support this method of data entry.

- However, if you intend to enroll in SMUD's Web Services to upload your meter's usage automatically, simply click "Continue".

Next you will "Configure Your Meters", to let Portfolio Manager know which meters to count toward the total site energy use.

Selecting Energy Meters for Performance Metrics

Using the checkboxes, indicate which meters should count toward your total site energy consumption. Then, indicate whether the meters you selected account for all the energy consumed at the site. Finally, click "Apply Selections".

Tip: To accurately benchmark you building, you must account for all sources of energy consumed at the site. If you are benchmarking for official purposes, your Benchmarking Report will be rejected if you select "These meters do not account for the total energy consumption for your site".

Indicating which meters should be used to calculate your building's energy metrics, and whether the selected meters account for the building's entire energy consumption, is also known as "configuring your meters". This step is critically important, because these parameters are used by ENERGY STAR to determine your score.

Note: Submeters tracking tenant energy use should not be applied toward the total site energy consumption in cases where this energy use is also being tracked by a Master Meter.

At left you can review the total number of meters you entered, and the number of meters being used by Portfolio Manager to compute the site's performance metrics

The data you add to your meters in the next steps can now be used by Portfolio Manager to compute your site's EUI or ENERGY STAR score accurately. To adjust which meters which are being counted toward your site metrics in the future, from the Energy tab, click on "Change Meter Selections."

Your property profile set-up is complete! See the "How to Enroll in Web Services" User Guide for next steps in setting up automated data uploads from SMUD, if desired.

Section 3 – Additional Resources

How can I improve my ENERGY STAR score?

SMUD wants to help you save energy and improve your score! To find out more about the many programs that can help you save energy and money, check out:

- SMUD's Business Solutions page: https://www.smud.org/en/Business-Solutions-and-Rebates/Manage-My-Energy

- SMUD's Rebates, Financing, and Workshops page: https://www.smud.org/en/Rebates-and-Savings-Tips

Where can I get more help with Benchmarking and Web Services questions?

- Visit this SMUD-sponsored website for helpful hints and troubleshooting tips to help you benchmark your building and connect with Web Services: https://smudbenchmarkinghelp.com/
- ENERGY STAR Portfolio Manager offers extensive help resources to assist users. Explore resources designed to empower you to find solutions on your own.
- ENERGY STAR encourages users to explore the Portfolio Manager Frequently Asked Questions (FAQs) archive here: https://portfoliomanager.zendesk.com/hc/en-us .
- To access answers to many Frequently Asked Questions, visit https://smudbenchmarkinghelp.com/pages/benchmarking-faqs If you have a question you would like to see answered here, please feel free to submit it to info@sellingenergy.com. The benchmarking expert will be happy to help!
- You can contact SMUD at Benchmark@SMUD.org or (916) 732-7399.

Helpful Websites:

ENERGY STAR Portfolio Manager Login page: www.energystar.gov/portfoliomanager

California Energy Commission Benchmarking Mandate:

To keep up to date about the CA benchmarking mandate via email, subscribe to the "Benchmarking" list serve by completing the subscription box found on the right of this webpage. (http://www.energy.ca.gov/benchmarking/)

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