# MDE Draft Guidance for Benchmarking in ENERGY STAR® Portfolio Manager®

## September 2024

This guidance explains how owners of covered buildings under the Maryland BEPS can benchmark their properties and share data with the Maryland Department of the Environment (MDE) using the Environmental Protection Agency's ENERGY STAR Portfolio Manager® no-cost benchmarking tool.

ENERGY STAR Portfolio Manager helps building owners to measure and track their buildings' energy, water use, waste generation, and greenhouse gas emissions, all in a secure online environment. You can use the results to identify underperforming buildings, set investment priorities, verify efficiency improvements, and receive EPA recognition for superior energy performance.

## Contents

1DE Guidance for Benchmarking in ENERGY STAR® Portfolio Manager®	1
Create an Account in Portfolio Manager	2
2. Add a Property to Portfolio Manager	3
3. Exclusions	5
a. Food Service Facilities	5
a. Parking	7
b. EV Charging	9
4. Add Meters and Enter Utility Data	11
a. Web Services Entry By Electric and/or Gas Company	11
b. Manual Entry	12
c. Spreadsheet Uploads	13
5. Connect and Share Property with MDE	14
a. Connect	14
b. Share	15
c. Transfer a Building into Another Portfolio Manager Account	16
6. Manage Shared Properties	16
7. Third Party Verification of Benchmarking Data	17
a. Adding a Licensed Professional for Data Verification	17

## 8. ENERGY STAR Portfolio Manager Resources

## 1. Create an Account in Portfolio Manager

To gain access to the benchmarking tool, property owners can create an account at <a href="Portfolio Manager Login">Portfolio Manager Login</a> | <a href="ENERGY STAR">ENERGY STAR</a> at no-cost.

The name of the Portfolio Manager account does not have to be associated with the property entity. However, MDE requests than an active email address and organization name are entered so MDE may reach out for data validation.

NOTE: The username of the account cannot be changed so it is highly encouraged that the username is related to or associated with the property/organization.



18

**Flowchart** 

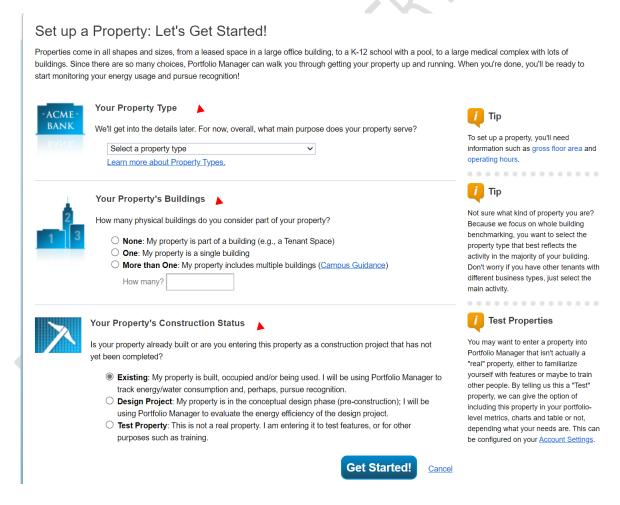
# **Benchmarking Process for Maryland BEPS Covered Buildings** No ENERGY STAR Portfolio Manager (ESPM) Current User of ENERGY STAR Portfolio Manager account (ESPM) Create an account in Portfolio Start from Step #2: add property to ESPM Manager Add property to ESPM Connect with MD-BEPS Account Connect with MD-BEPS Account Receive approval from MD-BEPS Account Receive approval from MD-BEPS Account Share data with MD-BEPS Account Share data with MD-BEPS Account

## 2. Add a Property to Portfolio Manager

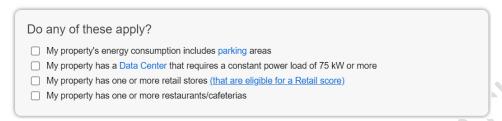
1. After logging into your Portfolio Manager account, Click Add a Property on the MyPortfolio tab.



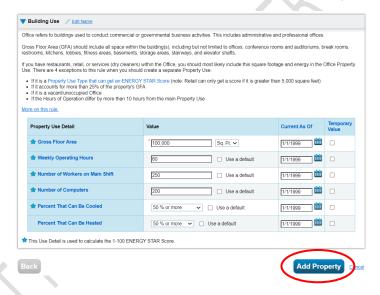
- 2. Complete the **Set up a Property** page.
  - a. Select Property Type.
  - b. Input the number of physical buildings you consider to be part of your property and construction status. Click **Get Started**!



- 3. Enter **Basic Property Information** and select the boxes next to the statements that apply to your property. Note the following important point:
  - a. Select appropriate boxes under "Do any of these apply?" section. Click Continue.



- 4. On the next page, "Set Up a Property: How is it used?", enter building use details such as Gross Floor Area (GFA), operating hours, and number of workers for each property use type. Avoid using default or temporary values and enter accurate data for your property. **NOTE: Hover the mouse over blue font section names to see a definition of that field.**
- Click Add Property. Once you have successfully added your property, you will see the property's Summary tab.



If your Building has additional types of uses on the property, you can add them at any time using the following steps:

Click the property's **Details tab**, and then select a Property Use Type from the **Add Another Type of Use** dropdown menu. Click **Add**.

2. Enter Use Details for the property and then click **Save Use**.

## **Properties with Multiple Use Types**

Some properties include multiple-use types, such as restaurants in hotels, salons in senior living communities, and cafeterias in hospitals. As a general rule, if a certain use commonly occurs in the type of property being benchmarked, do not break it out as a separate Property Use Type. Simply include its square footage with the building's primary use.

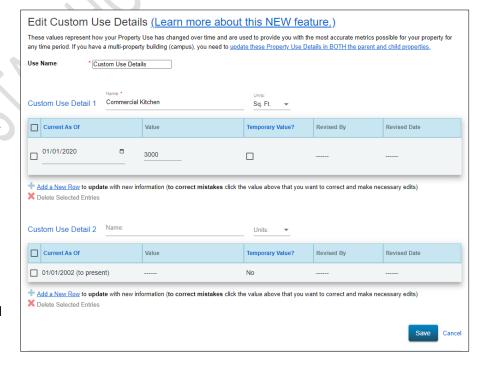
If a building meets the definition of a campus under the MDE regulation, they can submit a BEPS Campus Level Compliance Pathway Selection Form to benchmark as a campus. Even if benchmarking as a campus, if building-level data is available, the individual buildings can be benchmarked and linked together into a campus for reporting to MDE. See the <a href="How to Benchmark a Campus">How to Benchmark a Campus</a> | ENERGY STAR guide to learn more. NOTE: While building-level reporting for campuses is not required by MDE, adding individual buildings allows owners to compare the energy use intensity of each building on their campus, providing valuable insights for optimization.

## 3. Exclusions

## a. Food Service Facilities

If your building has a Food Service Facility space, enter it in the "Property Uses and Use Details" box. See screenshot below.

- 1. On the Details tab, locate
  "Custom Use Details" in the
  "Property Uses and Use
  Details" box and select "Edit
  Use Details" from the
  dropdown menu adjacent to it.
- 2. Enter "Commercial Kitchen" as the name of Custom Use Detail 1 and select the units "Sq. Ft.".
- 3. Enter the "Current As Of" date, the value that represent the square footage of the Commercial Kitchen space, and leave the "Temporary Value" box unchecked.
- 4. Click Save.



When you report energy data for the food service facility, you will exempt the energy used by this space by creating a negative meter in Portfolio Manager. There are two options:

- b. Subtract actual metered consumption (if metered separately)
- c. Subtract calculated consumption, per the formulas in A.2.1.4.1 of the TM 24-01.

To create a negative meter, navigate to the Energy tab and click **Add a Meter**. On the next page, select the type of energy that the space consumes. Next, select the units and the date that the meter became active. **NOTE: Consider renaming this meter to "Food Service Facility Excluded Energy."** 

On the next page, enter meter entries as negative values.

- If you have monthly consumption values, enter this data with actual start and end date. Enter the usage value as a negative number.
- If you have an annual consumption value, divide the total consumption by 12 and enter the calculated values as negative monthly entries.

In order for ENERGY STAR Portfolio Manager to calculate weather-normalized values, all meters must cover periods no longer than 65 days, hence the requirement for monthly data. All consumption values should be marked with a (-) so that the meter(s) function as **negative meters**.

A warning box will appear indicating that negative values have been entered. Select the third justification option, "I am subtracting energy that I produced at my property..."

Usage

	Start Date	End Date	kWh (thousand Watt-hours)	Total Cost (\$)	Estimation	Power	(kW)	(\$)
	1/1/2024	1/31/2024	-250					
			Negative Consumption J	ustification				
<u> </u>	usage values. Dep may be required. explanation of you My utility bil I am subtra e Ene I am subtracon site, or el	pending on your situated on your meter is negative regative meter. It shows negative value to ting energy that I pure pure being sent to another you hergy being used for partiting energy that I property from an onsite Cergy being sent to another your pergy from an onsite Cergy being sent to another your meters.	t of my property that I want to exclude (educed at my property using a central phenogeneration system).	ther negative reac erent reason entire cplain why. ctricity). .g., cell tower or pa ant on site (such a	lings off your lly, please sele arking garage) s chilled water	meter – ct "Other"	additional of to provide	calculations an
	Technical R	Reference on Negative	performed before entering negative of Energy Consumption and download the our building, please consult EPA's guidel	Negative Energy C	onsumption C	alculator.		
	<ul><li>Subtracting meter. See this F</li></ul>	0,	NOT a valid reason for a negative meter	entry. Enter Solar/\	Wind energy e	xported in	the Solar/V	Vind
	Other							
	If you are a	applying for ENERGY	STAR certification, all negative values m	ust be based on ac	tual meter/sub	-meter re	adings.	

Green Demand Demand Cost

## a. Parking

When you report energy data for parking areas, you will exempt the energy by creating a negative meter. There are three options:

- a. Do not report the consumption (if metered separately)
- b. Subtract actual metered consumption (if metered separately)
- c. Subtract calculated consumption, per EPA guidance, noted below.

Before creating a negative meter, you will need to adjust the Metrics Summary table on your property's Summary tab to include Parking metrics.

- 1. Locate the Metrics Summary table in on the right hand side of the property's Summary tab. Click **Change Metrics**.
- 2. In the Selected Information & Metrics list, deselect "Total Waste (Disposed and Diverted) (Tons)."
- 3. In the Property Use Details section, scroll down and select "Parking Portfolio Manager-Estimated Site Energy (kBtu)." Click Apply Selections.

		✓ Change T	ime Periods
Metrics Summary			
Metric /	Dec 2024 (Other)	Mar 2024 (Energy / Current)	Change 2
ENERGY STAR Score (1-100)	Not Available	78	N/A
Source EUI (kBtu/ft²)	Not Available	118.6	N/A
Site EUI (kBtu/ft²)	Not Available	43.1	N/A
Energy Cost (\$)	Not Available	Not Available	N/A
Total (Location-Based) GHG Emissions Intensity (kgCO2e/ft²)	Not Available	3.8	N/A
Parking - Portfolio Manager-Estimated Site Energy (kBtu)	224,196.4	224,196.4	0.00 (0.00%)

- 4. The Metrics Summary table will now present an estimated value for both the "Energy Baseline" year and the "Energy Current" year. Ensure that the "Energy Current" year reflects the appropriate reporting timeframe. This value can be changed by clicking the pencil icon next to "Energy Current." Select **Other Year** and "Dec 31" and "2024" from the dropdowns.
- 5. The "Parking Portfolio Manager-Estimated Site Energy (kBtu)" value for the "Energy Current" year will be used when entering data for the negative meter.

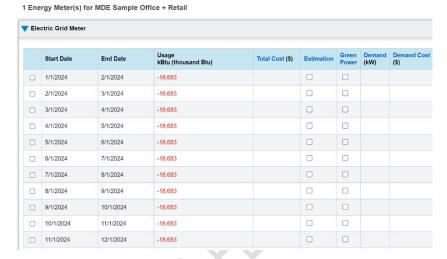
To create a negative meter, navigate to the Energy tab and click **Add a Meter**. On the next page, select the type of energy that the space consumes. Next, select **kBtu** for units and the date that the meter became active. **NOTE: Consider renaming this meter to "Parking Excluded Energy."** 

Change Metrics

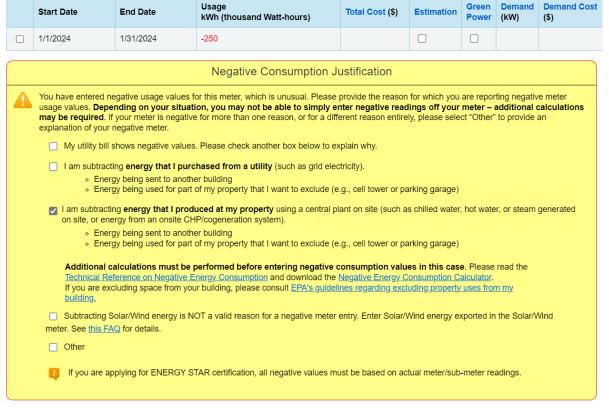
On the next page, you will enter meter entries as negative values. Using the "Parking – Portfolio Manager-Estimated Site Energy (kBtu)" annual consumption value from the Metrics Summary table,

divide the total value by 12 and enter the calculated values as negative monthly entries.

In order for ENERGY STAR Portfolio Manager to calculate weather-normalized values, all meters must cover periods no longer than 65 days, hence the requirement for monthly data. All consumption values should be marked with a (-) so that the meter(s) function as negative meters.



A warning box will appear indicating that negative values have been entered. Select the third justification option, "I am subtracting energy that I produced at my property..."



Review the <u>ENERGY STAR Portfolio Manager Parking and the ENERGY STAR Score Technical Reference</u> for more information.

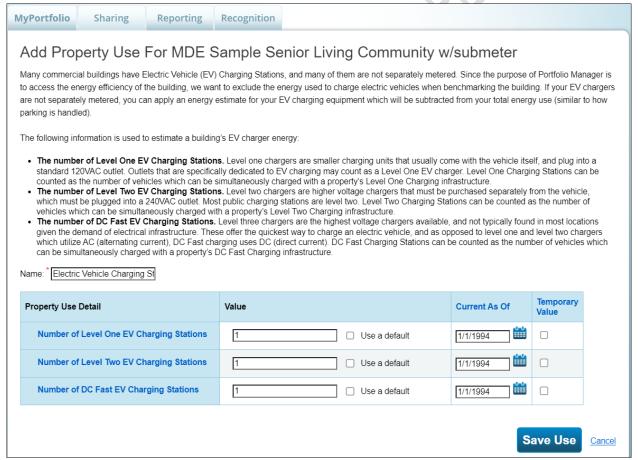
## b. EV Charging

When you report energy data for an EV charger, you will exempt the energy by creating a negative meter. There are two options:

- a. Actual metered consumption (if metered separately)
- b. Calculated consumption following the steps below.

Energy use from Electric Vehicle Charging Stations can be excluded. If the Electric Vehicle Charging Stations are separately metered (not submetered), then the usage can be left out of the data entered into Portfolio Manager altogether. Otherwise, it can be excluded following the steps below:

- 1. On the Details tab, click the "Add Another Type of Use" dropdown and select "Electric Vehicle Charging Station." Click **Add**.
- 2. Enter the number of EV chargers by type, referencing the definitions provided for Level One, Level Two, and DC Fast Chargers.
- 3. Click Save Use.



- 4. Next, create a negative electric meter to exclude the EV charging station's energy use. Enter consumption values for the EV charging station(s) based on:
  - a. Metered consumption (in at least monthly intervals)
  - b. Calculated consumption, following the steps below.

Before creating a negative meter, you will need to adjust the Metrics Summary table on your property's Summary tab to include EV Charging metrics.

Change Metrics
Change Time Periods

- 1. Locate the Metrics Summary table in on the right hand side of the property's Summary tab. Click **Change Metrics**.
- 2. In the Selected Information & Metrics list, deselect "Total Waste (Disposed and Diverted) (Tons)."

Metrics Summary						
Metric /	Dec 2023 (Energy Baseline)	Dec 2024 (Other)	Change 2			
ENERGY STAR Score (1-100)	100	Not Available	N/A			
Source EUI (kBtu/ft²)	-5.3	Not Available	N/A			
Site EUI (kBtu/ft²)	-1.9	Not Available	N/A			
Total (Location-Based) GHG Emissions Intensity (kgCO2e/ft²)	-0.2	Not Available	N/A			
Electric Vehicle Charging Station - Portfolio Manager-Estimated Site Energy (kBtu)	42,875.0	42,875.0	0.00 (0.00%)			

- 3. In the Property Use Details section, scroll down and select "Electric Vehicle Charging Station Portfolio Manager-Estimated Site Energy (kBtu)." Click **Apply Selections**.
- 4. The Metrics Summary table will now present an estimated value for both the "Energy Baseline" year and the "Energy Current" year. Ensure that the "Energy Current" year reflects the appropriate reporting timeframe. This value can be changed by clicking the pencil icon next to "Energy Current." Select **Other Year** and "Dec 31" and "2024" from the dropdowns.
- 5. The "Electric Vehicle Charging Station Portfolio Manager-Estimated Site Energy (kBtu)" value for the "Energy Current" year will be used when entering data for the negative meter.

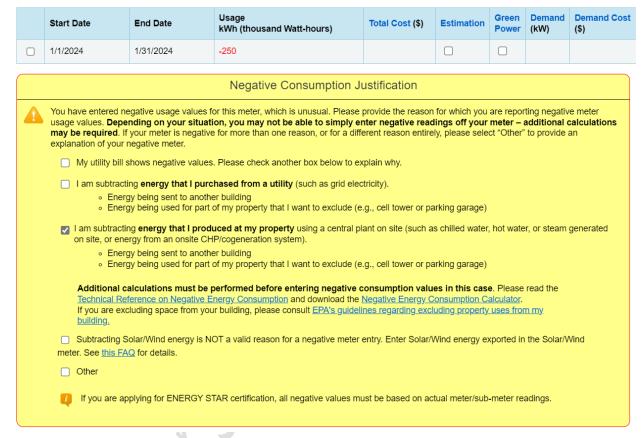
To create a negative meter, navigate to the Energy tab and click **Add a Meter**. On the next page, select the type of energy that the space consumes. Next, select the units and the date that the meter became active. **NOTE: Consider renaming this meter to "EV Charging Station Excluded Energy."** 

On the next page, you will enter meter entries as negative values. Using the "Parking – Portfolio Manager-Estimated Site Energy (kBtu)" annual consumption value from the Metrics Summary table, divide the total value by 12 and enter the calculated values as negative monthly entries.

▼ Electric Grid Meter								
	Start Date	End Date	Usage kBtu (thousand Btu)	Total Cost (\$)	Estimation	Green Power	Demand (kW)	Demand Cost (\$)
	1/1/2024	2/1/2024	-3,573 <b>!</b>					
	2/1/2024	3/1/2024	-3,573 <b>!</b>					
	3/1/2024	4/1/2024	-3,573 <b>!</b>					
	4/1/2024	5/1/2024	-3,573 <b>!</b>					
	5/1/2024	6/1/2024	-3,573 <b>!</b>					
	6/1/2024	7/1/2024	-3,573 <b>!</b>					
	7/1/2024	8/1/2024	-3,573 <b>!</b>					
	8/1/2024	9/1/2024	-3,573					
	9/1/2024	10/1/2024	-3,573					
	10/1/2024	11/1/2024	-3,573					
	11/1/2024	12/1/2024	-3,573					
	12/1/2024	1/1/2025	-3,573					

In order for ENERGY STAR Portfolio Manager to calculate weather-normalized values, all meters must cover periods no longer than 65 days, hence the requirement for monthly data. All consumption values should be marked with a (-) so that the meter(s) function as **negative meters**.

A warning box will appear indicating that negative values have been entered. Select the third justification option, "I am subtracting energy that I produced at my property..."



Review the ENERGY STAR Portfolio Manager EV Charging Technical Reference for more information.

## 4. Add Meters and Enter Utility Data

To meet the BEPS requirements, you must tell Portfolio Manager how much energy your building consumes. Follow the steps below to add meters and enter energy data for your building.

- a. Web Services Entry By Electric and/or Gas Company
  - 1. Click on your property on the MyPortfolio tab, then, select the Energy tab.
  - 2. Click Add a Meter.
    - a. If your building is located in a <u>utility company territory</u> that is required to use Portfolio Manager web services (automated data exchange services), a note at the top of the Energy tab, similar to the snapshot below, will appear. Follow the instructions to learn more about how to set up this connection with your utility company.

Your utility, Pepco, may be able to send energy data directly to this building record, using Portfolio Manager web services. Click here for additional information and to see if this option is right for you. If this is what you would like to do, you can connect with Pepco to get the process started.

Remind me Later

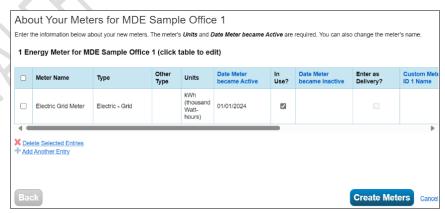
Don't show me this again

b. Or, use ENERGY STAR's <u>interactive map</u> to see if your building is located in a participating utility company territory. Enter a zip code or click on the map to see if a utility provides their customers with access to the data needed to benchmark in ENERGY STAR Portfolio Manager.

Note: if your utility is providing aggregated data from multiple meters/tenants in your building and something changes with the arrangement, building owners should ensure all energy use is still accounted for.

## b. Manual Entry

- 1. Click on your property on the MyPortfolio tab, then, select the Energy tab.
- Click Add a Meter.
- 3. Select the type of utility used and the number of meters to create and click Get Started!
  - a. Make sure to include all fuel types for your building. For example, if you have a diesel generator that has delivered fuel, you will record this as a "Meter" to track your deliveries over time. All energy types used in your building must be entered.
- 4. On the **About Your Meters** page, click to select the type of units your meter uses and the date the meter became active.
  - a. If this meter reflects a bulk fuel purchase for an energy meter, select the Enter as Delivery? checkbox.



- 5. Click Create Meters.
- 6. Click the blue arrow next to each meter to expand the section on the **Your Meter Entries** page. Click **Add Another Entry** under the meter and enter the Start Date, End Date, and Usage. You may also choose to record the cost here, too. Once you're finished adding entries, click **Continue**.
- Select the boxes of the meters that total your property's energy or water use on the Select Meters to Include in Metrics page. Click Apply Selections.

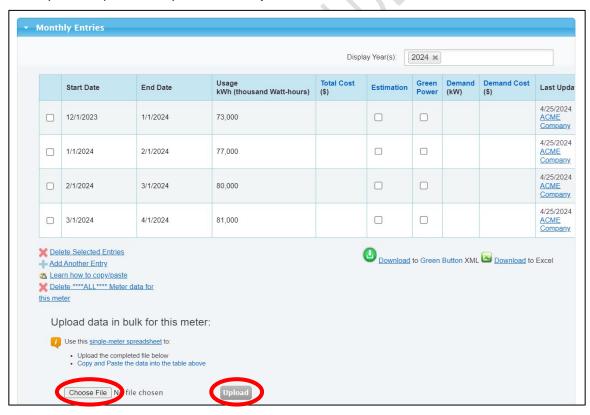
## c. Spreadsheet Uploads

If energy consumption data is provided to you by your utility, it will likely be in spreadsheet format. It is a requirement of Maryland utilities that the format of these spreadsheets align with what is necessary to upload to Portfolio Manager. To upload an energy usage spreadsheet, follow the steps below.

1. Confirm that the spreadsheet you received matches the Portfolio Manager formatting requirements.



- 2. Navigate to the Energy tab of the property you would like to upload data for. Select the meter that the data corresponds to.
- 3. On the meter entries page, click **Choose File**. Select the file you would like to upload from your computer library. Then, click **Upload**.



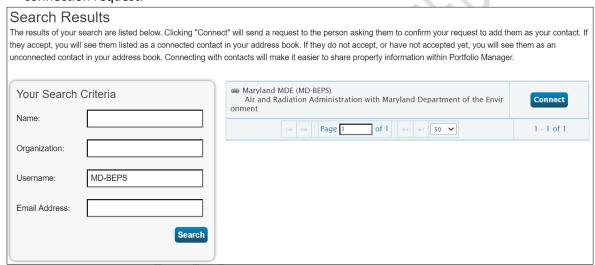
4. The table will populate with the data from your spreadsheet. Confirm that start and end dates, usage values, and units are correct.

## 5. Connect and Share Property with MDE

To share a property with MDE in Portfolio Manager, you must first be "connected" with MDE as a contact.

## a. Connect

- To send a connection request, go to the Contacts page in the upper righthand corner of Portfolio Manager. The directory shows the current list of contacts, including those you are currently "connected" with.
- 2. Click Add New Contacts/Connections.
- 3. Type MD-BEPS (dash & no spaces) account name in the username area and click Search.
- 4. Once the username is found on the **Search Results** pane, click **Connect** to send them a connection request.



When a connection request is sent, the MDE account will receive a Notification. Once MDE accepts the connection request, confirmation will be received on your Portfolio Manager Contacts page. **NOTE:**Owners must receive MDE's confirmation in their account before proceeding to the next steps.



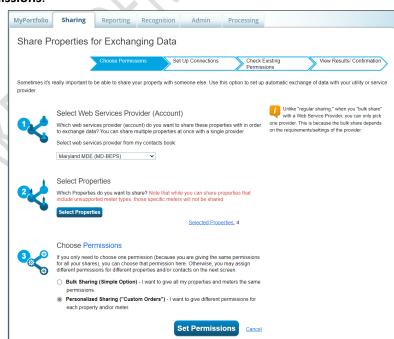
## b. Share

Once the connection between the two accounts is established, users can share the property(ies) with MDE's account. To start sharing, go to the Sharing tab.

- On the Sharing tab, click share with Share with your Utility or Service Provider for exchanging data.
- Under Select People (Account) section, select the MD-BEPS contact. If you do not see MD-BEPS listed in this dropdown, confirm that you have connected with them and that they have accepted your connection request on the contacts page.
- Select the properties you want to share by clicking the Select Properties button. You can select a single property, multiple properties, a group of properties or all properties in your account. Click Apply Selection.



- 4. Under Choose Permissions section, select Personalized Sharing & Exchange Data ("Custom Orders") option and click Set Permissions.
  - a. On the next Select
     Permissions for Each
     Contact page, check the
     Read Only Access and
     Exchange Data radio
     buttons.
  - b. On the next Choose
    Permissions screen,
    select Exchange Data
    Read Only Access (with
    read only access to all
    properties and meters)
    option and click Apply
    Selections & Authorize
    Exchange.

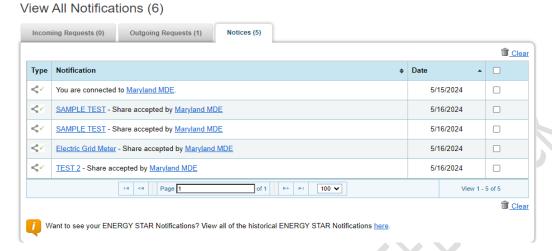


After you share your property, you will receive two (2) alerts in the Notification section:

When a share request is sent to MDE (See screenshot below) and



2. When the MDE account has accepted your sharing request (See screenshot below).



Once the MDE account has accepted your sharing request, compliance with the BEPS regulation will be determined based on the information in your Portfolio Manager account on June 1.

## c. Transfer a Building into Another Portfolio Manager Account

This step is only applicable if you recently acquired a building that is already benchmarked in Portfolio Manager and would like to acquire the historical data. The building can be transferred in Portfolio Manager. If you would like to start benchmarking your building from scratch (start from Section 1 above), this step can be skipped.

To transfer a building into another account, the owner will need to work with the prior owner (property data administrator in Portfolio Manager) to <u>transfer the property into your account</u>. To transfer a building into another account, click the Transfer Ownership link under **MyPortfolio** tab, select the building(s) to be transferred, select the new account owner (new building owner) and click the **Transfer Property** button.

# 6. Manage Shared Properties

Review the properties you have shared. On the Sharing tab:

- View sharing requests in the Sharing Notifications section.
- Ensure that all data shared with MDE has Read Only Access.
- View your sharing contacts and the properties you have shared in the table at the bottom of the page.
  - Click on a contact's name to view their account information and the list of properties that you both have access to.
  - Click on a property name to go to the property's Summary tab. The Sharing this Property table, located at the bottom of the Summary tab, shows a list of all users with access to the property. NOTE: everyone who has access to a property will be able to see the names of all others who have access, regardless of their permission levels.

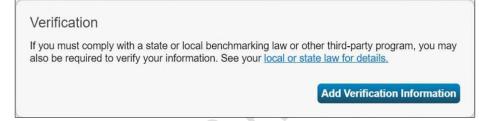
## 7. Third Party Verification of Benchmarking Data

In 2026 and every 5 years thereafter, verification of accuracy of the data entered into Portfolio Manager is required. This verification must be performed by a third-party verifier meeting the qualifications outlined in Appendix A: TM 24-01. This process ensures the credibility of your building's energy benchmarking data.

## a. Adding a Licensed Professional for Data Verification

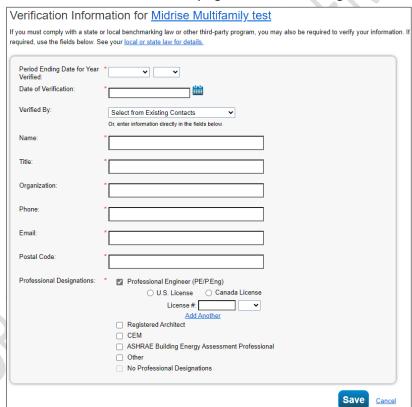
2. To add the verification professional's information to a property, navigate to the Details tab in

Portfolio Manager and scroll to the bottom of the page to the Verification section.



3. Click Add Verification Information.

4. Enter the information for the verifying individual, including the license number, and click Save.



NOTE: If you are unsure of where to find a Licensed Professional, please review the <u>Licensed</u> Professional Finder | ENERGY STAR page.

## 8. ENERGY STAR Portfolio Manager Resources

ENERGY STAR offers training on a range of topics, including Portfolio Manager guidance as listed below.

#### **Basic Functionality**

- Benchmark Your Building With Portfolio Manager | ENERGY STAR
- Training | ENERGY STAR
- An Overview of Portfolio Manager | ENERGY STAR
- Portfolio Manager Quick Start Guide | ENERGY STAR

## **Data Entry**

- How to Get Utility Data into Portfolio Manager | ENERGY STAR
- Demo Videos | ENERGY STAR
- Portfolio Manager Data Collection Worksheet | ENERGY STAR
- What constitutes a campus? (site.com)
- How do I benchmark a campus? (site.com)
- How do I benchmark a campus of buildings that receive energy from a shared heating/cooling system? (site.com)

### **Upload Templates**

- How do I use the simple spreadsheet upload? (site.com)
- How do I add properties in bulk using spreadsheet upload templates? (site.com)

#### **Sharing Data**

• How to Share Properties with Other Users in Portfolio Manager | ENERGY STAR

## **Onsite Renewable Energy Tracking**

- How to Benchmark Onsite Renewables in Portfolio Manager | ENERGY STAR
- How do I enter onsite green power (solar/wind)? Part 1- Create Meters
- How do I enter onsite green power (solar/wind)? Part 2 Enter Data
- How do I enter onsite green power (solar/wind)? Part 3 Net-Metering
- How do I enter onsite green power (solar/wind)? Part 3a Net-Metering without the needed data
- How do I enter onsite green power (solar/wind)? Part 4 Net-Metering for utility updated meters

#### Water Use Tracking

- How is water tracked in Portfolio Manager? (site.com)
- How do I enter my water bills that I only pay quarterly (or bi-monthly)? (site.com)
- What is irrigated area? (site.com)

## **Greenhouse Gas Emission Tracking**

- How Portfolio Manager Calculates Greenhouse Gas Emissions | ENERGY STAR
- Portfolio Manager Technical Reference: Greenhouse Gas Emissions | ENERGY STAR
- Tracking Greenhouse Gas Emissions in Portfolio Manager | ENERGY STAR