User Guide

OVERVIEW

This guide introduces the features of the ENERGY STAR Portfolio Manager Data Explorer, which enables users to explore aggregated, anonymized data from EPA's ENERGY STAR® Portfolio Manager®. It includes examples (at the end of the guide), demonstrating how to combine specific filters to get the most out of the data.

The Portfolio Manager Data Explorer offers a variety of metrics, and users can quickly see how the energy use of buildings varies based on the type of building, where it is located, its size, and other filters. Users can also download results for further analysis.

Searching for an individual property is not possible and a query must return six or more properties to show aggregated results. For example, the Portfolio Manager Data Explorer will display the median ENERGY STAR score across all courthouses in the state of California, but not show the ENERGY STAR score for each individual courthouse.

Access the Portfolio Manager Data Explorer at www.energystar.gov/dataexplorer

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SHOW ME

Energy Use Intensity (kBtu/sq. ft.)
- ⦿ Site EUI
- ◯ Source EUI
- ◯ Weather Normalized Site EUI
- ◯ Weather Normalized Source EUI

Other Metrics
- ◯ ENERGY STAR Scores
- ◯ Percent Electricity

VIEWED AS

[Table | Chart]

Select which table columns you would like to see
- ☐ 5th Percentile
- ☑ 25th Percentile
- ☐ Mean
- ☑ Median
- ☑ 75th Percentile
- ☐ 95th Percentile

FILTERED BY

Data Year
- ⦿ 2021
- ◯ 2020
- ◯ 2019
- ◯ 2018

Property Type
[Search or select below]
- ›☐ Banking/financial services
- ›☐ Education
- ›☐ Entertainment/publ assembly
- ›☐ Food sales and
Clear selection

Gross Floor Area (sq. ft.)
[Search or select below]
- ›☐ 1,000-24,999
- ›☐ 25,000-499,999
- ›☐ 500,000+
Clear selection

Location
- ⦿ State
- ◯ CBSA
- ◯ Climate Zone

State
[Search or select below]
- ☐ Alabama
- ☐ Alaska
- ☐ American Samoa
- ☐ Arizona
- ☐ Arkansas
Clear selection

ENERGY STAR Certified?
- ◯ Yes
- ◯ No
- ⦿ Show All

Year Built
- ☐ Before 1946
- ☐ 1946-1959
- ☐ 1960-1979
- ☐ 1980-1999
- ☐ 2000-2009
- ☐ 2010 and after
Clear selection

Weekly Operating Hours
- ☐ Fewer than 40
- ☐ 40 - 48
- ☐ 48.01 - 60
- ☐ 60.01 - 84
- ☐ 84.01 - 167
- ☐ Open Continuously
- ☐ Data not available/collected
Clear selection

FILTERING THE DATA – Selecting metrics and view

The panel on the left-hand side of the Portfolio Manager Data Explorer screen shows the different ways to filter the data.

The panel is long (see Figure 1), so to see all of the sections, scroll down within the panel using the scroll bar. The panel is divided into three main sections:

- **SHOW ME:** First, you'll select the metric you wish to explore.
- **VIEWED AS:** Then, you'll choose the "Table" or "Chart" button to make selections about how to view the data.
- **FILTERED BY:** Lastly, you can apply any of the additional filters, each of which will be described in greater detail below:
  - ○ Data Year
  - ○ Property Type
  - ○ Gross Floor Area (sq. ft.)
  - ○ Location
  - ○ ENERGY STAR Certified?
  - ○ Year Built
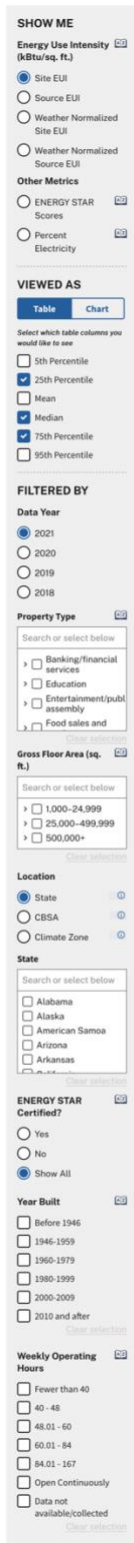 - ○ Weekly Operating Hours

Figure 1 (at left) – The entire filters panel in the Portfolio Manager Data Explorer

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Metrics

The Portfolio Manager Data Explorer defaults to show the Site EUI metric when first opened. To change the metric for a query, use the radio select buttons in the SHOW ME section of the filters panel (Figure 2). More information about what these metrics mean and how they are calculated can be found by clicking on the book icon next to their names. This will open the Portfolio Manager glossary entry for each item in a new browser tab.
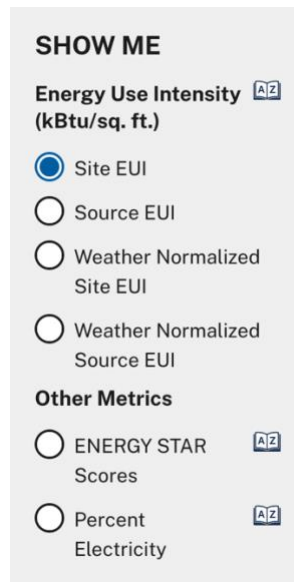

Figure 2 – Metric options under SHOW ME

View

To change how you view the data, use the Table/Chart toggle button in the VIEWED AS section of the filters panel (Figure 3).

- If you have chosen the Table view, use the checkboxes to add or remove columns representing percentiles, mean, and median to/from the table (Figure 3).

- If you have chosen the Chart view, use the radio select buttons to choose between two chart types: bar charts or box-and-whisker plots (Figure 4). The Chart view defaults to bar charts when first opened.
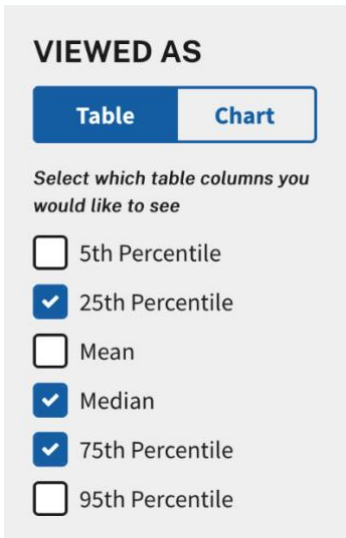
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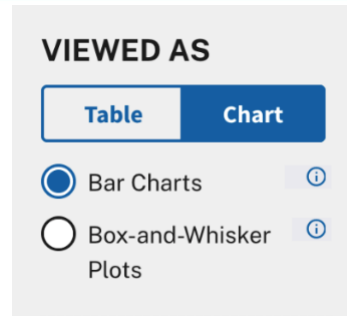Figure 3 – The Table selection with column options under VIEWED AS

Figure 4 – The Chart selection and chart type options under VIEWED AS

In-depth detail on how to adjust the display of results within a view is presented in the section Reviewing results on page 9.

FILTERING THE DATA – Narrowing results by data and property characteristics

To narrow your results, filter the data by using the various options in the FILTERED BY section of the filters panel. Note, you may have to scroll down within the filters panel to see all options.

Data Year

To choose the year of the dataset you want to query, use the radio select buttons in the Data Year filter (Figure 5).
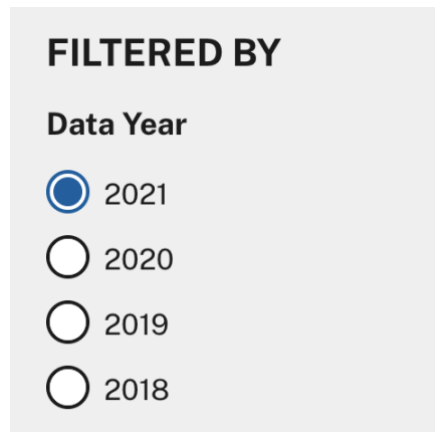
Figure 5 – Data Year filter

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Property Type

To filter the data on property types and/or property type subcategories, use the search/select feature in the Property Type filter (Figure 6). You may select multiple options.

- Use the checkboxes to select property type categories, or
- Click on the small arrows to the left of the checkboxes to reveal and select property type subcategories.
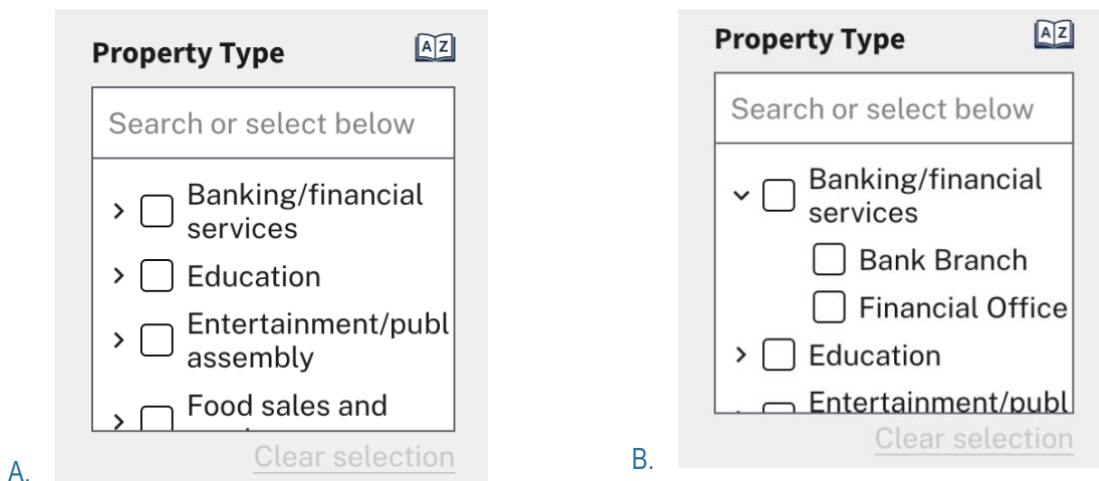

A.   B.

Figure 6 – Property Type filter

A. Property types   *B. Property types with subcategories revealed*

- Use the filter scroll bar or begin typing a name into the text box at the top of the filter to find a specific property type or property type subcategory.
- Click on "Clear selection" at the bottom right to remove all selections.
- Click on the small book icon next to the filter's title to see this filter's glossary definition.

Gross Floor Area

To filter the data on gross floor area/square footage, use the search/select feature in the Gross Floor Area (sq. ft.) filter (Figure 7). You may select multiple options.

- Use the checkboxes to select larger gross floor area (GFA) categories, or
- Click on the small arrows to the left of the checkboxes to reveal and select smaller GFAs.
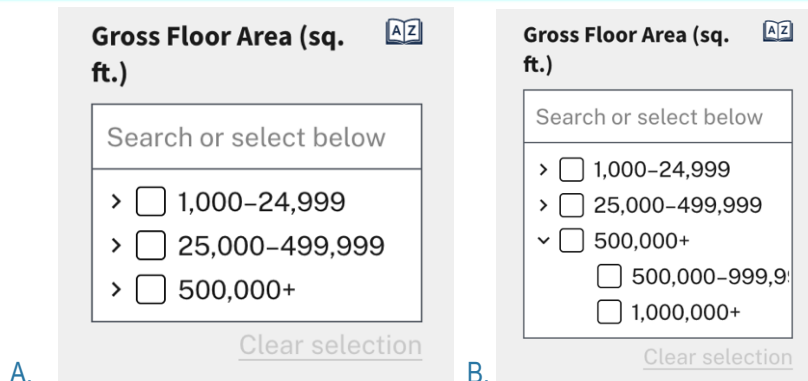
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Figure 7 – Gross Floor Area (GFA) filter

| A. GFA groups | B. GFA groups with sub-groups revealed |

- Use the filter scroll bar or begin typing a number to find a specific range.
- Click on "Clear selection" at the bottom right to remove all selections.
- Click on the small book icon next to the filter's title to see this filter's glossary definition.

Location

To filter the data based on location, you have three options in the Location filter (Figure 8). Note, you can only pick one location type option at a time, but can make multiple selections within each option.
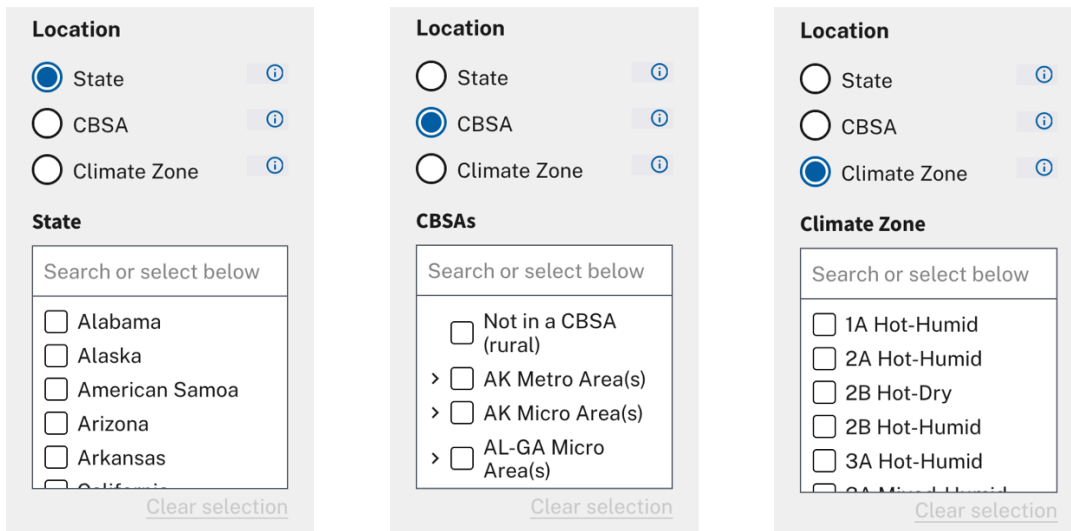
Figure 8 – The Location filter, showing all 3 selection options (State, CBSA, and Climate Zone)

To filter the data on state, select the State radio button and then use the search/select feature.
- Use the checkboxes to select states and/or territories, or
- Type the name of the state/territory into the text box at the top of the filter, then select it.

To filter the data on CBSA, select the CBSA radio button and then use the search/select feature.
- Use the checkboxes to select all micro- or macro-areas within a state, or

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- Click on the small arrows to the left of the checkboxes to reveal and select each CBSA within those Micro and Macro areas, or
- Type the name into the text box at the top of the filter, then select it.

To filter the data on Climate Zone, select the Climate Zone radio button and then use the search/select feature.
- Use the checkboxes to select climate zones, or
- Type the name of a climate zone into the text box at the top of the filter, then select it.

- For all Location options, click on "Clear selection" at the bottom right to remove all selections.

ENERGY STAR Certified

To see results by ENERGY STAR certification status, use the radio select buttons in the "ENERGY STAR Certified?" filter (Figure 9).

Figure 9 – ENERGY STAR Certified? filter

- Click on the small book icon next to the filter's title to see this filter's glossary definition.

Year Built

To filter the data on the year a property was built, use the checkboxes in the Year Built filter (Figure 10). You may select multiple options.
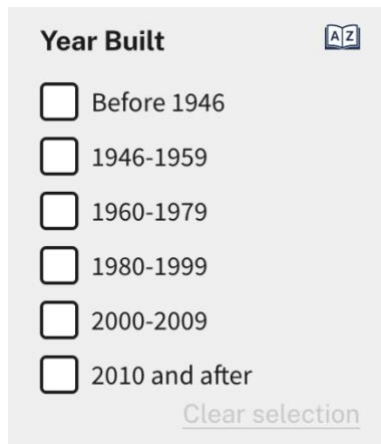

Figure 10 – Year Built filter

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- Click on "Clear selection" at the bottom right to remove all selections.
- Click on the small book icon next to the filter's title to see this filter's glossary definition.

Weekly Operating Hours

To filter the data on the operating hours of a property, use the checkboxes in the Weekly Operating Hours filter (Figure 11). You may select multiple options.
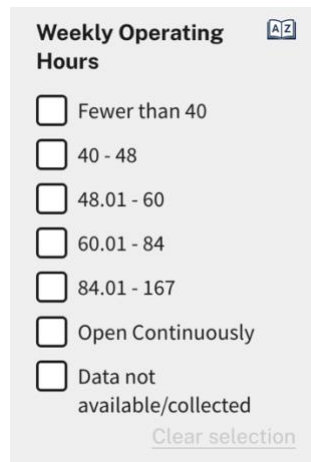

Figure 11 – Weekly Operating Hours filter

- Click on "Clear selection" at the bottom right to remove all selections.
- Click on the small book icon next to the filter's title to see this filter's glossary definition.

Note that choosing the 'Data not available/collected" option will return results for properties that do not have operating hours information entered in Portfolio Manager. These may include properties with actual operating hours within any of the other operating hour ranges.

APPLIED FILTERS

Seeing which filters are applied to the data

The Applied Filters section on the right-hand side of the screen (Figure 12, Box 1) lists which filters have been selected for your query. When you make selections in the filters panel on the left side, the Applied Filters section on the right will update to reflect those selections.

Figure 12 - The Applied Filters section of the Data Explorer page, highlighted in Box 1

REVIEWING RESULTS

There are three ways to view the results returned after applying your desired filters.

The first is to use the default table view (Figure 13, Box 1). In this view, the columns on the far left of the table correspond to the "Display first by" and "Then by (optional)" options chosen (Figure 13, Box 2). The percentile and other statistics selected display in the middle columns of the table. The far-right column is Property Count, which displays a range for the number of properties included in the results. When using the table view, you may need to scroll up-and-down or left-to-right to view all the columns and rows.

- In table view, use the "Display first by" and "Then by (optional)" dropdowns above the table to decide how to group the data (Figure 13, Box 2). The choice you make in the "Display first by" dropdown will determine what rows you see in the table. The choice you make in the "Then by (optional)" dropdown will add sub-rows to the table.
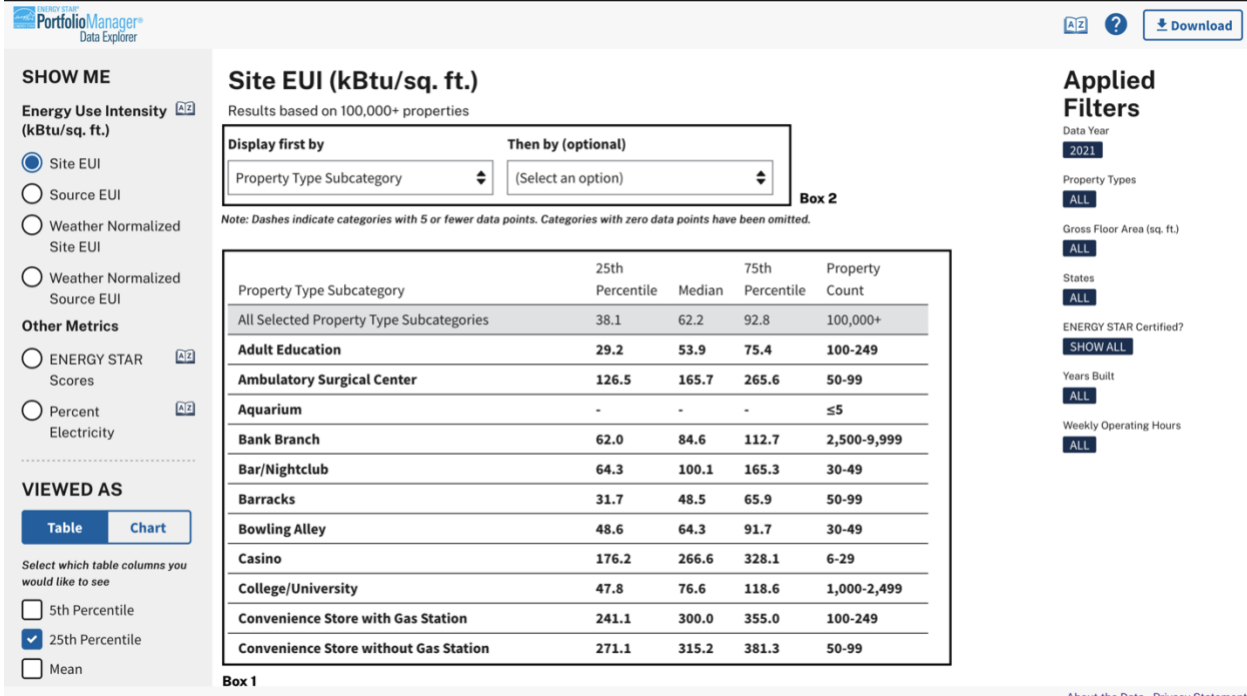
Figure 13 - The table view of the Portfolio Manager Data Explorer page is highlighted in Box 1; the display dropdown options are highlighted in Box 2

The second and third ways to view results come from using the two chart views. Click on the Chart option in the VIEWED AS section in the filters panel and then choose either the bar chart (the default chart, in Figure 14) or the box-and-whisker plot (Figure 15).

- In the bar chart, the bars correspond to the chosen "Y-Axis" option (described below) and represent the median value for the chosen metric and filter(s) combination.
- In the box-and-whisker plot, the individual plots correspond to the chosen "Y-Axis" option (described below) and represent all percentiles, median, and mean for the chosen metric and filter(s) combination. A legend is provided above the plots.
- In either of the chart views, use the "Y-Axis" dropdown above the charts to decide how to group the data. The selection in that dropdown will change the categories the bars or box-and-whisker plots represent.
- In the bar chart view, you can sort the chart alphabetically or by value by using the Name/Value toggle button underneath the Y-Axis dropdown.
- In the box-and-whisker plot view, you can sort alphabetically or by median value using the Name/Median Value toggle button underneath the Y-Axis dropdown.
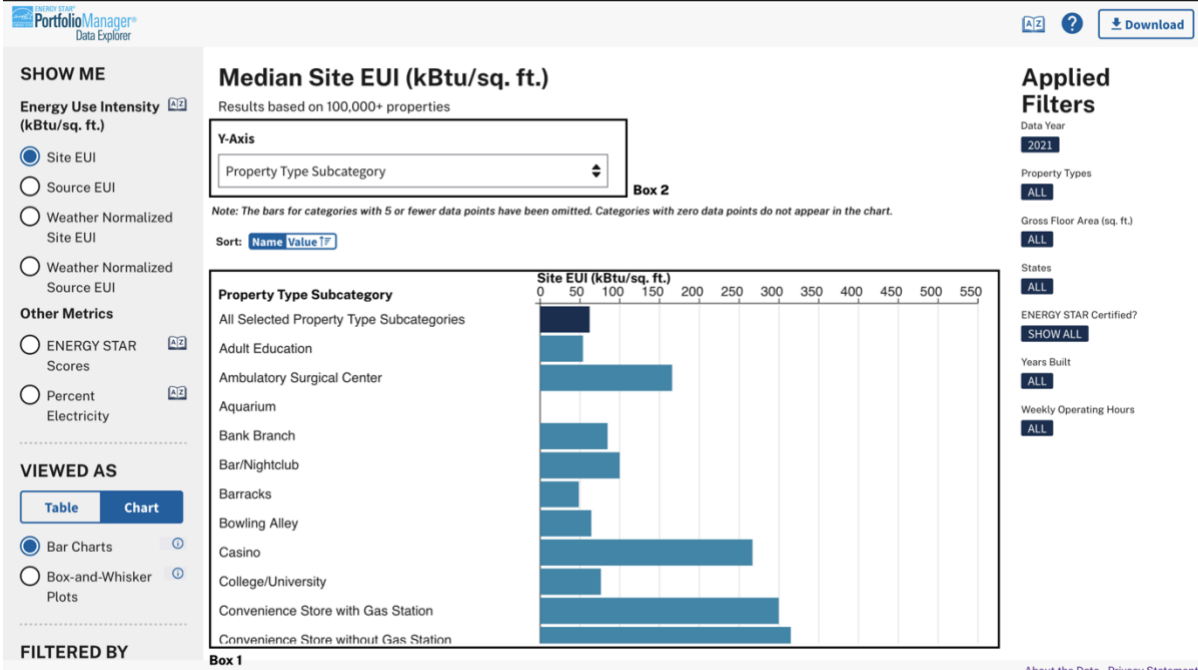
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Figure 14 – The bar chart in the Portfolio Manager Data Explorer is highlighted in Box 1; the Y-Axis dropdown is highlighted in Box 2
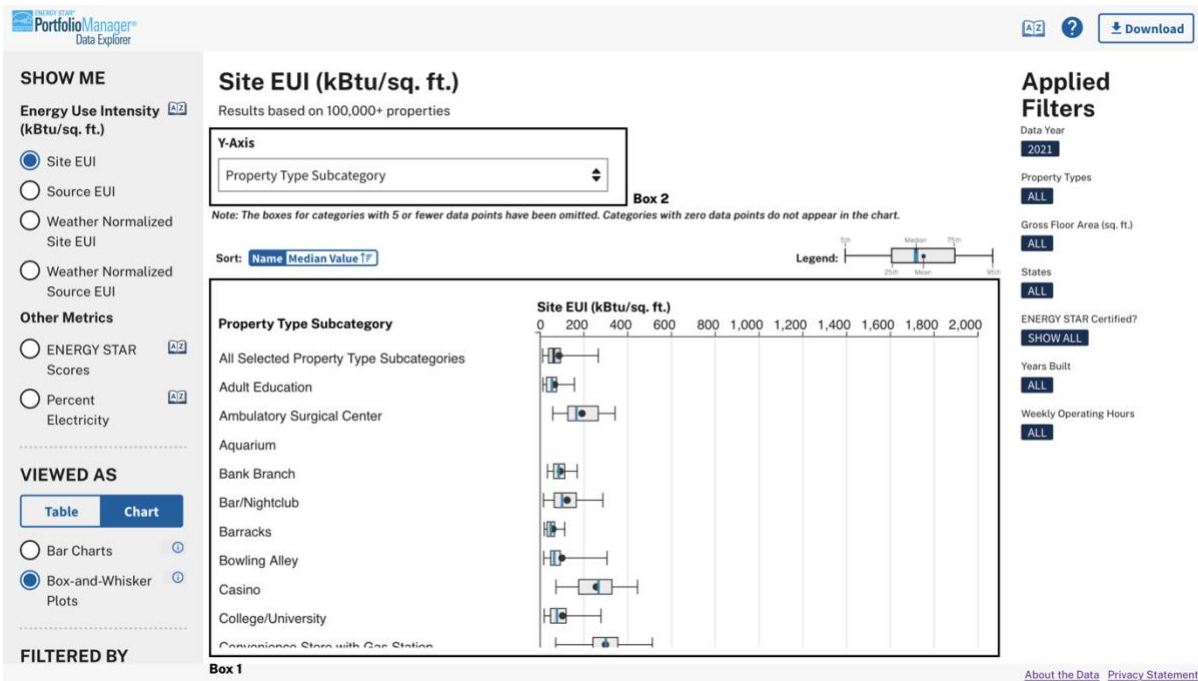

Figure 15 – The box-and-whisker plot in the Portfolio Manager Data Explorer is highlighted in Box 1; the Y-Axis dropdown is highlighted in Box 2

DOWNLOAD THE DATA

To download the results of your query, click on the "download" button in the top right of the screen (Figure 16, Box 1) and follow the instructions (Figure 17). Note, charts cannot be downloaded.
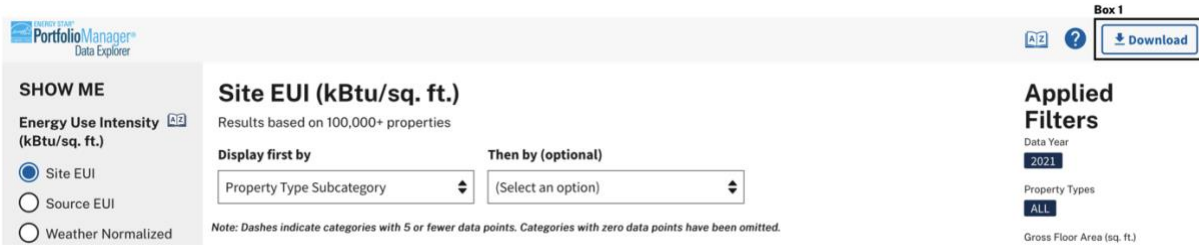

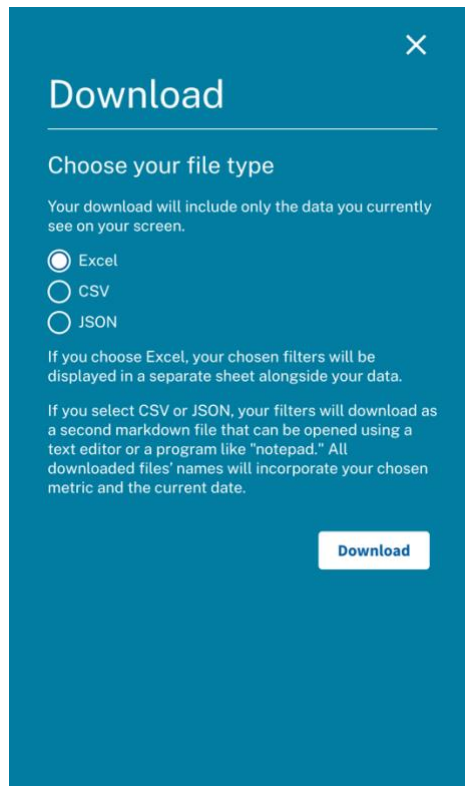*Figure 16 – the Download button (Box 1)*

Figure 17 – The Download options

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LEARN MORE ABOUT THE PORTFOLIO MANAGER DATA EXPLORER

You can access information about terms used in the Portfolio Manager Data Explorer, an in-app tour, and more through links found within the tool (Figure 18).
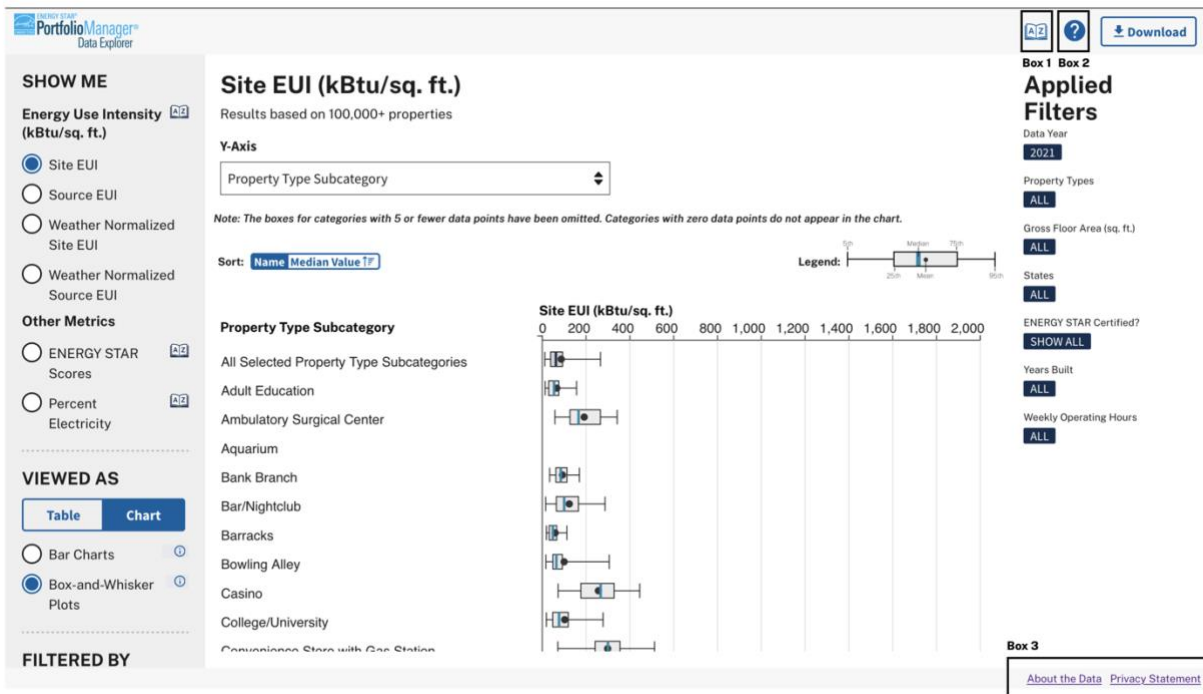

Figure 18 – Links to more information: The Glossary (Box 1), Help drawer (Box 2), and footer hyperlinks (Box 3)

- The Glossary: Click on the book icon in the top right of the page (Figure 18, Box 1, as well as the book icons next to certain filter titles) to open the Portfolio Manager Glossary in a new tab. The glossary can help you understand words and phrases you might encounter in the tool.

- The Help Drawer: Click on the question mark icon in the top right of the page (Figure 18, Box 2) to open a panel on the right side of your screen that contains three options for getting help with the Portfolio Manager Data Explorer (Figure 19):
    - Take an In-app Tour: Click to open a guided tour of the main parts of the tool. You can open or exit the tour at any time.
    - Learn More About this Tool: Click the link to go to the Portfolio Manager Data Explorer descriptive About page.
    - Learn More About Portfolio Manager: Click the link to go to the Portfolio Manager webpage.
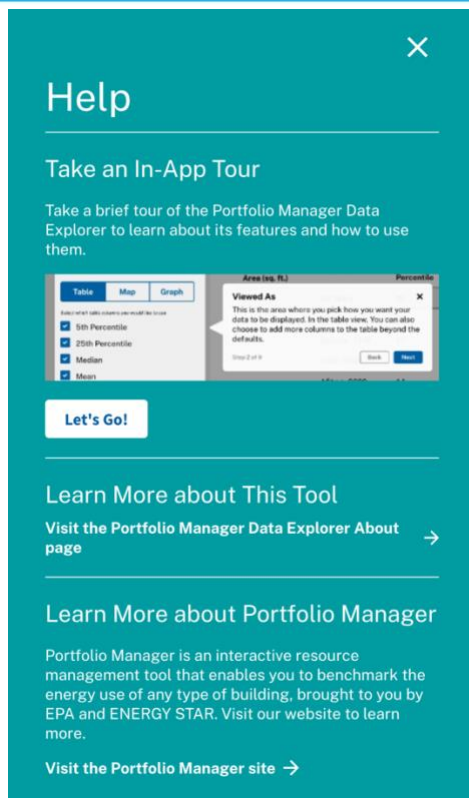
Figure 19 – The Help Drawer once opened

- The footer hyperlinks:
  - At the very bottom of the page, on the right side of the screen, you will find two links (Figure 18, Box 3):
    - About the Data: Click on this link to go directly to the section of the Portfolio Manager Data Explorer About page that describes the data used in the tool.
    - Privacy Statement: Click on this link to go to a page that outlines Portfolio Manager's privacy and security practices.

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EXAMPLE SECTION

The following examples demonstrate how to show more detailed views of data. Note, all examples start from the default filter selections. The default filter selections are active when you first open the tool or you can reload/refresh the page to return to the default selections.

Example 1 – Finding mean ENERGY STAR scores for all property type subcategories by year built, using 2020 data
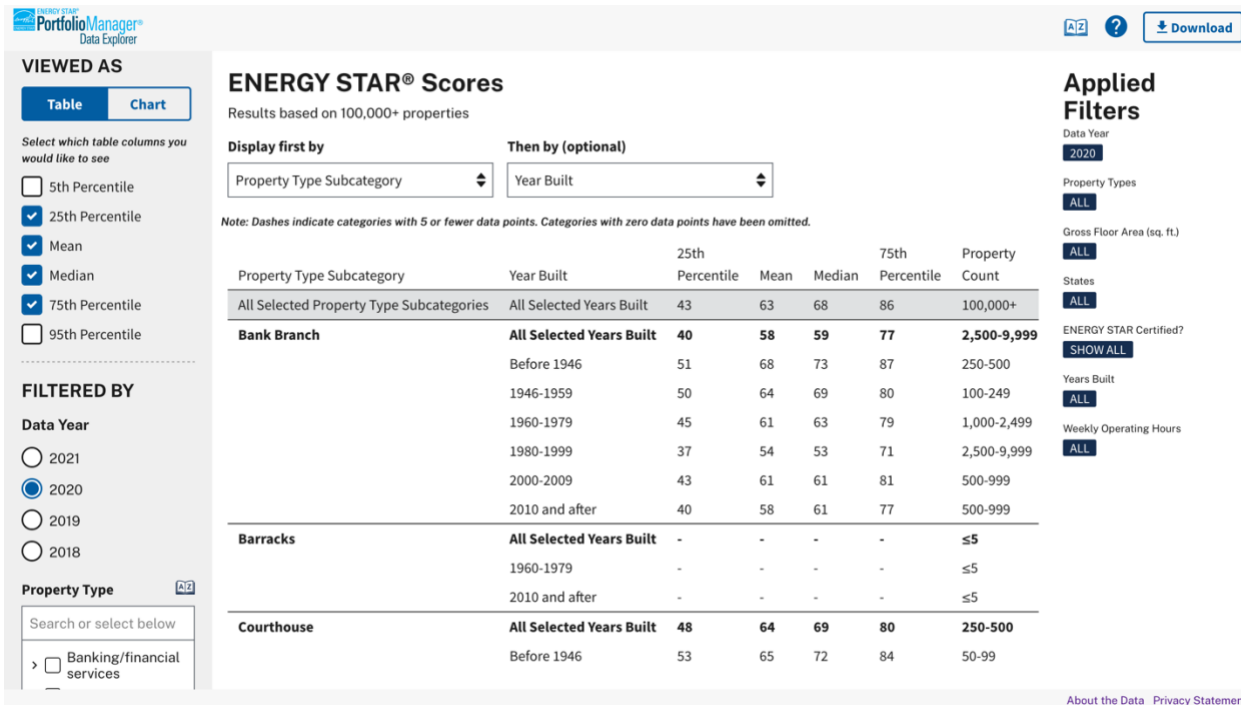

Figure 20 – Example data query showing ENERGY STAR Scores

- Change the metric to "ENERGY STAR Scores" under "SHOW ME" in the filters panel.
- Add the mean column to the table by selecting "Mean" under "VIEWED AS".
- Select the year 2020 under "Data Year" filter.
- Keep the "Display first by" dropdown default of Property Type Subcategory.
- Select "Year Built" from the "Then by (optional)" dropdown above the table.

The resulting data table shows a more detailed breakdown of ENERGY STAR Score for each available property type subcategory based on the year those properties were built. The first, bolded line under the Bank Branch property type subcategory is labeled "All Selected Years Built" and shows the statistics (25th percentile, mean, etc) for all bank branches in the 2020 dataset. Beneath that line, you see statistics for all bank branches in the filtered dataset built before 1946, between 1946 and 1969, and so on. The Property Count column provides the range of the number of properties the results pull from.

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Example 2 – Finding site EUIs in New York state for education property type subcategories, using 2019 data
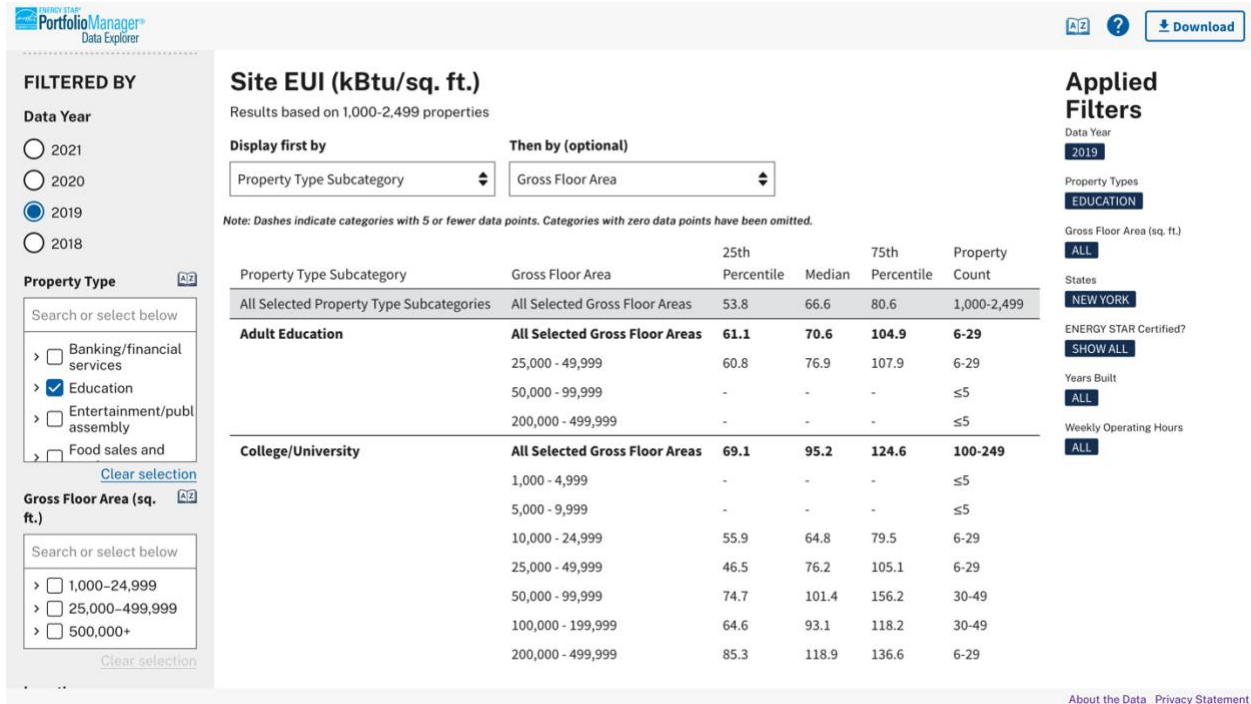

Figure 21 – Example data query showing Site EUI

- Keep the default metric of Site EUI in the "SHOW ME" section.
- Select the year 2019 under the "Data Year" filter.
- Select "Education" under the Property Type filter.
- Select "New York" under the Location (State) filter.
- Keep the "Display first by" dropdown default of Property Type Subcategory.
- Select "Gross Floor Area" in the "Then by (optional)" dropdown above the table.

The resulting table shows site EUI percentiles and medians from New York state education property subcategories grouped by gross floor area ranges.

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Example 3 – Finding median percent electricity by state within a specific climate zone, viewed as a bar chart
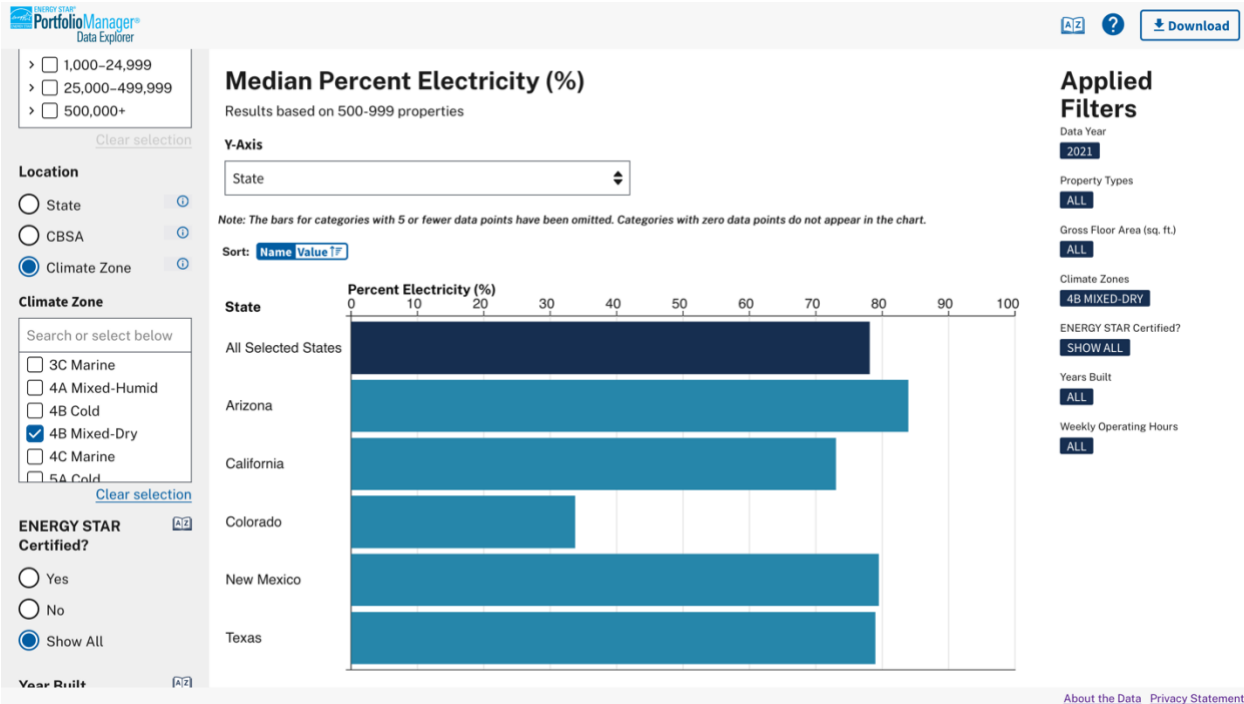

Figure 22 – Example data query showing median percent electricity in a chart

- Change the metric to "Percent Electricity" under "SHOW ME" in the filters panel.
- Change the View from table to chart under the "VIEWED AS" section.
- Keep the default chart option of bar charts, which default to the median result.
- Change the Location filter to "Climate Zone" and select "4B-Mixed-Dry".
- Select "State" from the "Y-Axis" dropdown above the chart.

The resulting bar chart shows the median percent electricity in properties from each of the states that include the 4B-Mixed Dry climate zone. You can sort by state name or by data value using the Name/Value toggle underneath the Y-Axis dropdown.