

# Solar Master Plan

BERKELEY UNIFIED SCHOOL DISTRICT (BUSD)



## Chapter 1

Benchmarking with ENERGY  
STAR's Portfolio Manager



## Benchmarking with ENERGY STAR's Portfolio Manager

Every school district should know how much energy it is consuming and what its associated costs are. Energy benchmarking is especially important if a district is interested in becoming more energy efficient and should be standard policy for all school districts regardless of whether PV systems are currently contemplated. Knowing where the district is consuming energy and how much this energy costs are the first steps in improving energy efficiency and encouraging energy-conserving behaviors.

Fortunately, the U.S. Environmental Protection Agency and the U.S. Department of Energy offer a free, easy-to-use program from ENERGY STAR called Portfolio Manager.

Portfolio Manager allows a district to track its energy consumption and costs and provides a variety of reports that will help the district to measure the results of its efforts to reduce energy consumption. Getting started with Portfolio Manager is easy enough that an environmental class at a district high school could do it as a project. The major California utilities also offer trainings on Portfolio Manager. To get started, see, [www.energystar.gov/index.cfm?c=evaluate\\_performance.bus\\_portfoliomanager](http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager)

California's major energy utilities provide monthly automated data to Portfolio Manager subscribers, so a participating district will always have up to date information on its energy use. Portfolio Manager can also track water consumption. Although few water utilities currently have the ability to report water data automatically, efforts are underway to encourage them to offer this service in the future.

This chapter shows a Portfolio Manager screen-shot of all district facilities that have been benchmarked. The ENERGY STAR rating accurately reflects the status of K-12 facilities only. Non K-12 facilities, e.g. adult schools, administrative offices, are included in this report so the district has a comprehensive assessment of energy consumption and costs for all its buildings.

Also included in this chapter are the data required to enroll K-12 schools and other building types, and Portfolio Manager's Quick Reference Guide.





## PORTFOLIO MANAGER

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Portfolio Averages	
<b>Baseline Rating: 82</b> Facilities Included: 24	<b>Current Rating: 88</b> Facilities Included: 24
<b>Change from Baseline: Portfolio Adjusted Percent Energy Use (%): -0.1%</b> Facilities Included: 25	
Averages are weighted by Total Floor Space. <a href="#">More about Baselines</a> <a href="#">More about Change from Baseline: Adjusted Energy Use</a>	



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GROUP: All Facilities

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VIEW: Summary: Facilities

Create View | Edit View | View All

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Facility Name	Current Rating (1-100)	Change from Baseline: Adjusted Energy Use (%)	Total Floor Space (Sq. Ft.)	Energy Use Alerts	Current Energy Period Ending Date	Eligibility for the ENERGY STAR	Last Modified
<a href="#">B- Tech Academy</a>	93	-10.4	20,000		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Berkeley Adult School</a>	96	-1.8	82,717		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Berkeley HS</a>	95	13.7	550,000		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/20/2011
<a href="#">Bus Depot</a>	<a href="#">N/A</a>	8.8	13,800		08/31/2011	N/A	10/13/2011
<a href="#">BUSD Admin Offices</a>	32	14.4	33,500		07/31/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Cragmont</a>	95	-19.8	50,000		09/30/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Emerson</a>	96	-3.7	32,000		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Franklin PreSchool</a>	97	-9.2	9,800		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Hillside</a>	100	-67.3	41,000		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Hopkins Childcare</a>	79	-12.1	9,200		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011

<a href="#">Jefferson</a>	100	-32.2	51,800		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">John Muir</a>	69	-4.3	36,800		08/31/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">King Child Dev Ctr</a>	97	4.7	9,800		09/30/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">KING JR HIGH</a>	77	-8.1	144,000		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">LeConte</a>	73	29.6	50,152		08/31/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Longfellow</a>	74	6.1	68,000		07/31/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Maint Yard</a>	52	-0.6	44,100		07/31/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Malcolm X</a>	84	-13.5	70,900		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Old Adult School</a>	100	-73.7	121,000	Data > 120 days old	05/31/2011	Not Eligible: Current period ending over 120 days ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Oxford</a>	94	27.6	32,000		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Rosa Parks Elementary</a>	93	-8.5	51,000		08/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011
<a href="#">Thousand Oaks</a>	68	30.1	50,000		09/30/2011	Not Eligible: Rating must be 75 or above ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Washington Elementary</a>	100	-49.7	45,000		07/31/2011	<a href="#">Continue applying for the ENERGY STAR</a>	10/13/2011
<a href="#">Whittier / Arts Magnet</a>	97	99.6	48,600		07/31/2011	Not Eligible: Eligible again starting with a period ending date of 08/31/2011. ( <a href="#">ENERGY STAR Eligibility Rules</a> )	10/13/2011
<a href="#">Willard</a>	77	23.3	107,000		07/31/2011	<a href="#">Apply for the ENERGY STAR</a>	10/13/2011

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Search Facility Name:

All # A [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

The rating is calculated by using the last day of the latest full calendar month where all meters in the facility have meter entries; the Period Ending date reflects that particular date.



# PORTFOLIO MANAGER QUICK REFERENCE GUIDE

Portfolio Manager is an interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment. Use this Quick Reference Guide to identify opportunities for energy efficiency improvements, track your progress over time, and verify results.

## IDENTIFY ENERGY EFFICIENCY PROJECTS

Use Portfolio Manager to identify under-performing buildings to target for energy efficiency improvements and establish baselines for setting and measuring progress for energy efficiency improvement projects over time.

STEP	ACTIVITY	ACTION
1	Access Portfolio Manager. (step not shown)	Visit <a href="http://www.energystar.gov/benchmark">www.energystar.gov/benchmark</a> . Scroll down to the <b>Login</b> section on the right-hand side in the middle of the page.
2	Access your account: (step not shown) <ul style="list-style-type: none"><li>• Create a new account.</li><li>• Login to an existing account.</li></ul>	<ul style="list-style-type: none"><li>• Click <b>REGISTER</b>, and follow instructions.</li><li>• Enter user name and password, and click <b>LOGIN</b>.</li></ul>
3	Review system updates and enter account. (step not shown)	Click <b>ACCESS MY PORTFOLIO</b> , located below <b>Welcome to Portfolio Manager</b> .
4	Add a new facility. (step not shown)	Click <b>ADD</b> a Property, located in the upper right portion of the screen.
5	Select property type and enter general facility information. (step not shown)	Select the option that most closely resembles your facility and click <b>CONTINUE</b> . Enter general data and click <b>SAVE</b> . For more information on facility space types, see: <a href="http://www.energystar.gov/index.cfm?c=eligibility.bus_portfolio/portfolio_manager_space_types">www.energystar.gov/index.cfm?c=eligibility.bus_portfolio/portfolio_manager_space_types</a> .
6	Enter space use data.	From the <b>Facility Summary</b> page, shown above, go to the <b>Space Use</b> section, located half way down the page, and click <b>ADD SPACE</b> . <ul style="list-style-type: none"><li>• Enter a facility name. In the <b>Select a Space Type</b> menu, select the appropriate space type(s) for your building. If your space is not listed, select <b>Other</b>. Click <b>CONTINUE</b>.</li><li>• Enter building characteristics. Click <b>SAVE</b>. Information required for each space type is listed here: <a href="http://www.energystar.gov/index.cfm?c=eligibility.bus_portfolio/portfolio_manager_space_types">www.energystar.gov/index.cfm?c=eligibility.bus_portfolio/portfolio_manager_space_types</a>.</li><li>• Repeat steps above to add all major spaces in your facility.</li></ul> <p>Use bulk import service to minimize manual data entry of large sets of facility data (10 or more facilities or campuses are required).</p> <ul style="list-style-type: none"><li>• Go back to <b>My Portfolio</b> by clicking on the link in the upper left portion of the page.</li><li>• Click <b>IMPORT</b> Facility Data Using Templates, located below <b>Add a Property</b>.</li></ul>
7	Enter energy use data.	From the <b>Facility Summary</b> page, go to the <b>Energy Meters</b> section, located below the <b>Space Use</b> section, and click <b>ADD METER</b> . <ul style="list-style-type: none"><li>• Enter meter name, type, and units. Click <b>SAVE</b>.</li><li>• Enter number of months and start date. Click <b>CONTINUE</b>.</li><li>• Enter energy use and cost for each month. Click <b>SAVE</b>.</li><li>• Repeat for all energy meters and fuel types.</li></ul>

**PORTFOLIO MANAGER**

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[Home](#) > **My Portfolio**

**Group Averages**

<b>Baseline Rating: 72</b> Facilities Included: 1	<b>Current Rating: 80</b> Facilities Included: 1
<b>Change from Baseline: Group Adjusted Percent Energy Use (%): -14.8%</b> Facilities Included: 2	

Averages are weighted by Total Floor Space.  
[More about Baselines](#)  
[More about Change from Baseline: Adjusted Energy Use](#)

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My Facilities
My Campuses

GROUP: Fire Stations

8

VIEW: Summary View

9a

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Search Facility Name:

Search

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All # A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Facility Name	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.)	Change from Baseline: GHG Emissions (MtCO <sub>2</sub> e)	Total Energy Cost per Sq. Ft. (US Dollars (\$))
Fire Station 1	160.1	-12.3	-6.1	-275.86	\$0.30
Fire Station 2	172.6	-17.2	-10.7	-488.62	\$0.37

[Download](#) in Excel

9b

Search Facility Name:

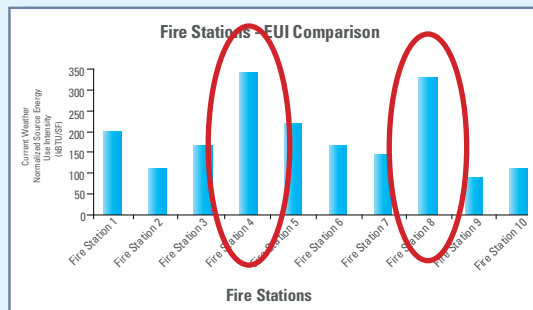
Search

Results 1 - 2 of 2

All # A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The rating is calculated by using the last day of the latest full calendar month where all meters in the facility have meter entries; the Period Ending date reflects that particular date.

STEP	ACTIVITY	ACTION
8	Create custom groups.	<p>Organize facilities into groups (e.g., Fire Stations, Northwest Region). Groups are completely customizable, and each facility may belong to multiple groups.</p> <ul style="list-style-type: none"> <li>From the <b>My Portfolio</b> page, click <b>CREATE GROUP</b>, located directly to the right of the <b>Group</b> drop-down menu.</li> <li>Follow instructions to select buildings and name your group.</li> <li>Once they have been saved, custom groups will be available in the <b>Group</b> drop-down menu.</li> </ul>
9	View and interpret results.	<p>Option 1: Go to <b>My Portfolio</b> and view all buildings to compare performance metrics.</p> <p>Option 2: Export data to Microsoft® Excel.</p> <ul style="list-style-type: none"> <li>On the <b>My Portfolio</b> page, select the view, from the <b>View</b> drop-down menu that will display the data you wish to export. The <b>My Portfolio</b> page will update to display the selected view. (9a)</li> <li>Select the <b>DOWNLOAD IN EXCEL</b> link. A File Download dialog window will open. Follow the steps provided by Excel. (9b)</li> <li>Use Excel functionality to view building energy performance graphically. The example below shows a comparison of Energy Use Intensity for a portfolio of fire stations, identifying under-performing buildings to target for energy efficiency improvements.</li> </ul>





## TRACK PROGRESS OVER TIME

Portfolio Manager comes pre-populated with nine standard summary views of facility data, which are displayed on the My Portfolio summary page. These standard views include:

- Summary: Energy Use
- Performance: Green House Gas Emissions
- Performance: Financial
- Performance: Water Use

Additionally, users can create and save custom downloadable views by choosing from more than 70 different metrics. The default view set by the user will display automatically after logging into Portfolio Manager, and data from all views can be exported to Microsoft® Excel.

PORTFOLIO MANAGER

Home > My Portfolio

GROUP: Fire Stations | Create Group | Edit Group | View All

VIEW: MyView | **Create View** | Edit View | View All

Download in Excel

Results 1 - 2 of 2

Facility Name	Number of Students	% Difference from National Average Source EUI	Baseline Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Current Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Baseline Rating (1-100)	Current Rating (1-100)	Total Floor Space (Sq. Ft.)
Fire Station 1	0	-32.6	180.4	160.1	72	80	300,000
Fire Station 2	0	9.9	208.4	172.6	N/A	N/A	300,000

PORTFOLIO MANAGER

Home > My Portfolio > Create New View

**Create New View**  
How do I use this page?

Number of Facilities to display on each page:  
☐ 25 ☒ 50 ☐ 100 ☐ All (note: larger Portfolios will take longer to load)

To create/edit a custom View of your facilities in Portfolio Manager, select **up to 7** columns from the list below. Use "Preferred Column Order" to set the order in which they will display in the View.

**View Name:**  **Set this View as My Portfolio Default:** ☐

Preferred Column Order	Facility Data	Preferred Column Order	Facility Data
1	ENERGY STAR Rating	1	Water
2	Baseline Rating (1-100) (N/A for Campuses)	2	Indoor Water Cost (US Dollars (\$))
3	Current Rating (1-100) (N/A for Campuses)	3	Indoor Water Use (kGal)
4	Target Rating (1-100) (N/A for Campuses)	4	Indoor Water Use per Sq. Ft. (kGal)
5	Period Ending Dates	5	Outdoor Water Cost (US Dollars (\$))
6	Baseline Energy Period Ending Date	6	Outdoor Water Use (kGal)
7	Current Energy Period Ending Date	7	Total Indoor and Outdoor Water Cost (US Dollars (\$))
8	Water Use Period Ending	8	Total Indoor and Outdoor Water Use (kGal)
9	Site Energy	9	Wastewater/Sewer Cost (US Dollars (\$))
10	Baseline Site Electric Use (kWh)	10	Wastewater/Sewer Use (kGal)
		11	Water Use Alerts (N/A for Campuses)
		12	Performance: GHG Emissions

### CREATE A CUSTOM VIEW

#### STEP ACTION

- From the **My Portfolio** page or the **Facility Summary** page, select the **Create View** link, located directly to the right of the **View** drop-down menu.
- Enter a name for the view. To set as the default view, select the box labeled **Set this View as My Portfolio Default**, located directly to the right of **View Name**. You may include up to 7 (seven) columns in each view.
- Choose each metric to be included in the view by selecting an order number from the **Preferred Column Order** drop-down menu to the left of the **Facility Data** column.
- Click **SAVE** at the bottom of the page. You will be returned to the **My Portfolio** page, and your custom view will be available in the **View** drop-down menu. (step not shown)

## VERIFY AND DOCUMENT RESULTS

Use Portfolio Manager to quickly and accurately document reductions in energy use, greenhouse gas emissions, water use, and energy costs for an individual building or an entire portfolio. This valuable information can be used to provide a level of transparency and accountability to help demonstrate strategic use of funding.

Generate a Statement of Energy Performance that includes valuable information about your building's performance, including:

- Normalized energy use intensity
- National average comparisons
- Greenhouse gas emissions
- Energy performance rating (if available)

In addition, you can also request an Energy Performance Report to see the change in performance over time for selected buildings or an entire portfolio. Available comparative metrics in this report include:

- Normalized energy use intensity
- Total electric use
- Total natural gas use
- Energy performance rating (if available)

OMB No. 2050-0347

### STATEMENT OF ENERGY PERFORMANCE Fire Station 2

4

Building ID: 1642681  
For 12-month Period Ending: December 31, 2008<sup>1</sup>  
Date SEP becomes ineligible: N/A

Date SEP Generated: March 05, 2009

Facility Fire Station 2 000 Blank Street Arlington, VA 22209	Facility Owner N/A	Primary Contact for this Facility N/A
Year Built: 1990 Gross Floor Area (ft <sup>2</sup> ): 300,000	<b>Energy Intensity<sup>5</sup></b> Site (kBtu/ft <sup>2</sup> /yr) 52 Source (kBtu/ft <sup>2</sup> /yr) 173	
Energy Performance Rating <sup>2</sup> (1-100)	<b>Emissions (based on site energy use)</b> Greenhouse Gas Emissions (MTCO <sub>2</sub> e/year) 2,352	
<b>Site Energy Use Summary<sup>3</sup></b> Electricity (kBtu) 15,500,000 Natural Gas (kBtu) Total Energy (kBtu)	<b>Energy Intensity<sup>4</sup></b> Site (kBtu/ft <sup>2</sup> /yr) 62 Source (kBtu/ft <sup>2</sup> /yr) 173 <b>Emissions (based on site energy use)</b> Greenhouse Gas Emissions (MTCO <sub>2</sub> e/year) 2,352	
<b>Electric Distribution Utility</b> Virginia Electric & Power Co <b>National Average Comparison</b> National Average Site EUI 78 National Average Source EUI 157 % Difference from National Average Source EUI 10% Building Type Fire Station/Police Station	Stamp of Certifying Professional Based on the conditions observed at the time of my visit to this building, I certify that the information contained within this statement is accurate. Certifying Professional N/A	
<b>Meets Industry Standards<sup>6</sup> for Indoor Environmental Conditions:</b> Ventilation for Acceptable Indoor Air Quality N/A Acceptable Thermal Environmental Conditions N/A Adequate Illumination N/A	Notes: 1. Application for the ENERGY STAR award is submitted to EPA within 4 months of the Period Ending date. Award of the ENERGY STAR is not final until approval is received from EPA. 2. The EPA Energy Performance Rating is based on total source energy. A rating of 75 is the minimum to be eligible for the ENERGY STAR. 3. Values represent energy consumption, annualized to a 12-month period. 4. Natural Gas values in units of volume (e.g. cubic feet) are converted to kBtu with adjustments made for elevation based on facility zip code. 5. Intensity values are calculated as follows: (kBtu/ft <sup>2</sup> /yr) = (kBtu/yr) / (ft <sup>2</sup> ) 6. Ventilation, and IEQNA Lighting Handbook for lighting quality.	

**ENERGY STAR** **PORTFOLIO MANAGER**

Home > My Portfolio > Fire Station 2

Facility Summary: **Fire Station 2**  
How do I use this page?

Building ID: 1642681  
Level of Access: Building Data Administrator

Electric Distribution Utility: Virginia Electric & Power Co  
Regional Power Grid: [SERC Virginia/Carolina](#)  
Select my Power Generation Plant to calculate my electric emissions rate  
Electric Emissions Rate (lbCO<sub>2</sub>/kWh) 151.7 (what is this?)

**1** Generate a Statement of Energy Performance for uses other than applying for the ENERGY STAR

General Information Edit	
Address: 000 Blank Street, Arlington, VA 22209	
Year Built: 1990	
Property Type: Single Facility	
Baseline Rating: N/A	Current Rating: N/A
Eligibility for the ENERGY STAR	
N/A	

### GENERATE A STATEMENT OF ENERGY PERFORMANCE AND AN ENERGY PERFORMANCE REPORT

STEP	ACTION
1	From your selected building's <b>Facility Summary</b> page, click <b>GENERATE A STATEMENT OF ENERGY PERFORMANCE</b> .
2	On the next page, select a period ending date. (step not shown)
3	Click <b>GENERATE REPORT</b> , located in the bottom right corner of the screen. (step not shown)
4	Save the Statement of Energy Performance, accompanying Data Checklist, and Facility Summary that include information on energy use intensity and greenhouse gas emissions.
5	From the <b>My Portfolio</b> page, click <b>REQUEST ENERGY PERFORMANCE REPORT</b> , located under <b>Work with Facilities</b> , which shows reductions in key performance indicators over a user-specified time period. Specify the type of report, the facilities to be included, and the requested report columns. The report will be e-mailed to a user-specified address within one business day. (step not shown)

# ENERGY STAR® Portfolio Manager Data Collection Worksheet



This worksheet was designed to help building owners and managers collect data to benchmark buildings using EPA's ENERGY STAR Portfolio Manager. The information in this worksheet will be used to establish your building's profile in Portfolio Manager, which is critical to calculate benchmarks of key metrics such as energy intensity and costs, water use, and carbon emissions. **All building types can be entered into Portfolio Manager and receive energy and water benchmarks, as well as a comparison of performance against a national average for buildings of a similar type.**

Some buildings will also receive an ENERGY STAR score. The ENERGY STAR score is a benchmark that indicates how efficiently buildings use energy on a 1-100 scale. A score of 50 indicates that energy performance is average compared to similar buildings, while a score of 75 or better indicates top performance, and means your building may be eligible to earn the ENERGY STAR label. To receive an ENERGY STAR score, the gross floor area of the building must be comprised of more than 50% of one of the following space types: bank/financial institution, courthouse, data center, hospital (acute care and children's), hotel, house of worship, K-12 school, medical office, office, residence hall/dormitory, retail store, senior care facility, supermarket/grocery store, warehouse (refrigerated and unrefrigerated), and wastewater treatment plant.

***Use this worksheet to collect the data for all space types applicable to your facility.***

## **Required Data for ENERGY STAR Benchmarking**

- Portfolio Manager username and password.
- The building street address, year built, and contact information.
- The building gross floor area and key operating characteristics for each major space type. Use this worksheet to collect this information before logging in to Portfolio Manager.
- 12 consecutive months of utility bills for all fuel types used in the building. If you don't have this information readily available, contact your utility provider(s) as most will be able to easily supply this historical information.

## **General Building Information**

Facility name \_\_\_\_\_ Year built \_\_\_\_\_

Building address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

## **Space Use Attributes**

Before compiling the information noted in the boxes below, review the following important information:

- Specific definitions and instructions for each of the data fields listed in the boxes below can be viewed by navigating to [Portfolio Manager Help](#), selecting "Space Type Definitions," choosing the appropriate building type, and selecting "Space Use Information."
- Some buildings may contain multiple space types within a single building (e.g. office, data center, and parking OR K-12 school and swimming pool). Complete the fields below for each applicable major space types within the building.
- For buildings with multiple tenants with the same space type, these spaces should be entered separately only when the number of weekly operating hours among tenants differs by more than 10 hours. For example, in a 100,000 square foot (SF) office building where 75,000 SF operates 60 hours a week and 25,000 SF operates 80 hours a week, please list as two separate spaces – one 75,000 SF space and one 25,000 SF space. As this is most common in office buildings, multiple office space fields are provided below to capture data for multiple tenants if necessary.
- Default values supplied by Portfolio Manager can be used for all space use characteristics with the exception of gross floor area. Using default values will result in an approximate energy performance score which can be a beneficial metric for estimating energy performance. If defaults are used for an initial score, it is recommended that actual data be added later to more accurately measure a facility's energy performance. Facilities using default values are not eligible to apply for the ENERGY STAR label. Leave any of the requested information below blank (except gross floor area) to use a default value for the field.

**Bank/Financial Institution:****Required:**

- \_\_\_\_\_ **Gross floor area (SF)**
- \_\_\_\_\_ Weekly operating hours
- \_\_\_\_\_ # of workers on main shift
- \_\_\_\_\_ # of personal computers
- \_\_\_\_\_ Percent of floor area that is air conditioned  
(>=50%, <50%, or none)
- \_\_\_\_\_ Percent of floor area that is heated  
(>=50%, <50%, or none)

**Courthouse:****Required:**

- \_\_\_\_\_ **Gross floor area (SF)**
- \_\_\_\_\_ Weekly operating hours
- \_\_\_\_\_ # of workers on main shift
- \_\_\_\_\_ # of personal computers
- \_\_\_\_\_ Percent of floor area that is air conditioned  
(>=50%, <50%, or none)
- \_\_\_\_\_ Percent of floor area that is heated  
(>=50%, <50%, or none)

**Data Center:****Required:**

- \_\_\_\_\_ **Gross floor area (SF)**
- \_\_\_\_\_ IT Energy Configuration – Select one from:
1. Uninterruptible Power Supply (UPS) Meter supports only IT Equipment. **(Preferred)**
  2. UPS Meter includes non-IT load of 10% or less.
  3. UPS Meter includes non-IT load greater than 10%. Non-IT load is sub-metered.
  4. UPS Meter includes non-IT load greater than 10%. Non-IT load is **not** sub-metered.
  5. Facility has no UPS Meter.
  6. IT Energy is not current metered at this facility – Apply Estimates.
- \_\_\_\_\_ IT Energy Data – 12 months of measured energy consumption data is required from either the UPS or PDU Meter, depending on IT Energy Configuration

**Meter Type (select 1): UPS Output or PDU Input**

Month	Start Date	End Date	Energy Consumption (kWh)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

**Optional:**

- \_\_\_\_\_ UPS System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)
- \_\_\_\_\_ Cooling System Redundancy (N, N+1, N+2, 2N, greater than 2N, none of the above)

<p><b><u>Hospital (acute care and children's):</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (&gt;20,000 SF)</p> <p>_____ # of licensed beds</p> <p>_____ Maximum # of floors</p> <p>_____ Tertiary care facility – yes or no</p> <p><b>Optional:</b></p> <p>_____ Laboratory on-site – yes or no</p> <p>_____ Laundry facilities on site – yes or no</p> <p>_____ Number of Buildings</p> <p>_____ Ownership Status (drop down of options)</p>	<p><b><u>House of Worship:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (SF)</p> <p>_____ Maximum seating capacity</p> <p>_____ Weekdays of operation</p> <p>_____ Hours of operation per week</p> <p>_____ # of personal computers</p> <p>_____ Presence of cooking facilities - yes or no</p> <p>_____ # of commercial refrigeration/freezer units</p>
<p><b><u>Hotel:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (SF)</p> <p>_____ # of rooms</p> <p>_____ # of workers on main shift</p> <p>_____ # of commercial refrigeration/freezer units</p> <p>_____ On-site cooking – yes or no</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p><b>Optional:</b></p> <p>_____ Hours per day the guests are on-site</p> <p>_____ Number of guest meals served</p> <p>_____ Square footage of full-service spas</p> <p>_____ Square footage of gym/fitness center</p> <p>_____ Laundry processed at site (drop down of options)</p> <p>_____ Annual quantity of laundry processed on-site</p> <p>_____ Average Occupancy (%)</p>	<p><b><u>K-12 School:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (SF)</p> <p>_____ # of personal computers</p> <p>_____ # of walk-in refrigeration/freezer units</p> <p>_____ High school - yes or no</p> <p>_____ Open weekends – yes or no</p> <p>_____ On-site cooking – yes or no</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p><b>Optional:</b></p> <p>_____ Months of use</p> <p>_____ School District</p>

<p><b><u>Medical Office:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ # of workers on main shift</p> <p>_____ Weekly operating hours</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p>	<p><b>General <u>Office 1:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p> <p>_____ # of personal computers</p> <p>_____ Percent of floor area that is air conditioned (&gt;=50%, &lt;50%, or none)</p> <p>_____ Percent of floor area that is heated (&gt;=50%, &lt;50%, or none)</p>
<p><b><u>Multifamily Housing:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p><b>Optional:</b></p> <p>_____ Number of units</p> <p>_____ Number of bedrooms</p> <p>_____ Number of floors</p> <p>_____ Percent of square footage devoted to individual units</p> <p>_____ Number of laundry hookups in each unit</p> <p>_____ Number of laundry hookups in common area</p> <p>_____ Number of dishwashers in each unit</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Affordable or market rate</p>	<p><b>General <u>Office 2:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p> <p>_____ # of personal computers</p> <p>_____ Percent of floor area that is air conditioned (&gt;=50%, &lt;50%, or none)</p> <p>_____ Percent of floor area that is heated (&gt;=50%, &lt;50%, or none)</p>
<p><b><u>Other:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b> (must be less than 10% of gross building floor area in order for the building to be eligible for a rating)</p> <p><b>Optional:</b></p> <p>_____ # of personal computers</p> <p>_____ Weekly operating hours</p> <p>_____ # workers on main shift</p>	<p><b>General <u>Office 3:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p> <p>_____ # of personal computers</p> <p>_____ Percent of floor area that is air conditioned (&gt;=50%, &lt;50%, or none)</p> <p>_____ Percent of floor area that is heated (&gt;=50%, &lt;50%, or none)</p>

<p><b><u>Parking:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area that is enclosed (SF)</p> <p>_____ Gross floor area that is not enclosed with a roof (SF)</p> <p>_____ Gross floor area that is open (SF)</p> <p>_____ Weekly hours of access</p>	<p><b><u>Retail Store:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p> <p>_____ # of personal computers</p> <p>_____ # of cash registers</p> <p>_____ # of walk-in refrigeration/freezer units</p> <p>_____ # of open &amp; closed refrigeration/freezer cases</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Exterior entrance to the public – yes or no</p>
<p><b><u>Residence Hall/Dormitory:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (SF)</p> <p>_____ # of rooms</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p><b>Optional:</b></p> <p>_____ Computer lab on-site – yes or no</p> <p>_____ Dining Hall on-site– yes or no</p>	<p><b><u>Senior Care Facility:</u></b></p> <p><b>Required:</b></p> <p>_____ Gross floor area (SF)</p> <p>_____ # of units</p> <p>_____ Average Number of Residents</p> <p>_____ Total Resident Capacity</p> <p>_____ # of workers on the main shift</p> <p>_____ # of PCs owned by the community (does not include PCs owned by residents)</p> <p>_____ # of commercial refrigeration/freezer units</p> <p>_____ # of commercial washing machines</p> <p>_____ # of residential washing machines</p> <p>_____ # of residential electronic lift systems</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p>



<p><b><u>Supermarket/Grocery Stores:</u></b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ Workers on main shift</p> <p>_____ On-site cooking – yes or no</p> <p>_____ # of walk-in refrigeration/freezer units</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p><b>Optional:</b></p> <p>_____ # of open or closed refrigeration/freezer cases</p> <p>_____ # of registers and/or personal computers</p>	<p><b><u>Swimming Pool:</u></b></p> <p><b>Required:</b></p> <p>_____ Swimming pool size, choose from: Olympic (50 meters x 25 meters) Recreational (20 yards x 15 yards) Short Course (25 yards x 20 yards)</p> <p>_____ Indoor or outdoor</p> <p><b>Optional:</b></p> <p>_____ Months of use</p>
<p><b><u>Warehouse (refrigerated and unrefrigerated):</u></b></p> <p><b>Warehouse (Unrefrigerated):</b></p> <p><b>Required:</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p> <p>_____ # of walk-in refrigerators/freezer units</p> <p>_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)</p> <p>_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)</p> <p><b>Optional:</b></p> <p>_____ Distribution Center – yes or no</p> <p><b>Warehouse (Refrigerated):</b></p> <p>_____ <b>Gross floor area (SF)</b></p> <p>_____ Weekly operating hours</p> <p>_____ # of workers on main shift</p>	<p><b><u>Wastewater Treatment Plant:</u></b></p> <p><b>Required:</b></p> <p>_____ Average influent flow (mgd)</p> <p>_____ Average influent biological oxygen demand (BOD<sub>5</sub>)</p> <p>_____ Average effluent biological oxygen demand (BOD<sub>5</sub>)</p> <p>_____ Plant design flow rate (mgd)</p> <p>_____ Presence of fixed film trickle filtration process – yes or no</p> <p>_____ Presence of nutrient removal process – yes or no</p>
	<p><b><u>Water Treatment and Distribution Utility:</u></b></p> <p><b>Required:</b></p> <p>_____ Average flow (mgd)</p>