



Benchmarking for the Clean Buildings Performance Standard

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Introduction

This document can be used to assist building owners in benchmarking for compliance with the Washington state Clean Buildings Performance Standard.

The [Clean Buildings Performance Standards](#) (CBPS) requires buildings to be benchmarked in [ENERGY STAR® Portfolio Manager®](#) (ESPM). Energy benchmarking is the process of measuring and tracking energy use, of which is the first step towards understanding and reducing energy consumption.

To comply with the CBPS energy accounting requirements, building owners need to benchmark their covered buildings in the Environmental Protection Agency's (EPA) secure online tool ESPM, to measure and document building characteristics and net energy consumption measured as site energy use intensity (EUI).

Although ESPM can provide an energy use intensity target (EUI) the CBPS does not benchmark against this EUI. EUI. Please refer to the Clean Buildings Website for information on EUI development.

Knowing the energy use of your building enables you to compare it to the energy use of other similar buildings, along with your building's energy use in previous years.

For general compliance and to submit an application to the Early Adopter Incentive Program, use [WA State Clean Buildings EUI Calculations, Form C found within ESPM](#).

Refer to [Normative Annex Z6.3](#) of the CBPS for details of energy consumption and building characteristics data shared through this report.

Benchmarking

Energy benchmarking in relationship to the CBPS is the process of assessing and analyzing a building's energy use and comparing it to its past performance and to other buildings or energy use intensity targets.

Benchmarking is an essential process when defining which performance metric to pursue in effort to comply with the CBPS. Possible options to pursue are:

- [Meeting the EUI](#) for the building or
- Compliance through [the investment criteria](#)

Benchmarking *covered commercial buildings* within the CBPS requires the calculation of Weather Normalized site EUI (WNEUI) within the ESPM account using **a minimum of 12 consecutive calendar months of net energy used in the building**.

- *Net energy* shall be measured in a period not to exceed two years prior to the submission of compliance documentation.
- Buildings unable to measure EUI according to Section 5.2 shall pursue compliance according to the investment criteria performance metric and are not required to submit Form C.

Understanding your utility providers' role in compliance will significantly assist you in the benchmarking process (See [RCW 19.27a.170](#)).

ENERGY STAR Portfolio Manager

The U.S. EPA's ENERGY STAR Portfolio Manager (ESPM) is a widely accepted tool for benchmarking without service fees for use. *Net energy* consumption from all building meters, along with non-metered fuels such as propane, must be identified and entered into ESPM for at least 12 consecutive calendar months. Net energy is defined by the CBPS as:

***net energy:** the sum of the metered energy entering the *building* minus metered energy leaving the *building*. The same applies to portions of *buildings* with submetering. Bulk fuels are included using the equation in Section 5.2.2.1.

Measurement of a gross floor area (GFA) is the first step in benchmarking to determine a building's EUI. Gross floor area is measured between the outside surface of the exterior walls of the building. This includes all areas inside the building including supporting areas. GFA is not the same as rentable space, but rather includes all

area inside the building. Additional data entries are: property/building type, fraction of the floor area (if more than one type), and operating shifts (hours of operation).

Property types are defined in ESPM, and can be found in the [ESPM glossary](#). Descriptions are given to assist in identifying your property type. For example, the office property type is described as “buildings used for the conduct of commercial or governmental business activities. This includes administrative and professional offices”. Additional information is given on which areas must be measured, such as offices, break rooms, lobbies, storage areas, elevator shafts, and fitness areas for the office property designation.

Property type(s) selected in ESPM that are used to develop a building’s WNEUI must match the Building Activity Type(s) selected from Table 7-1 of the CBPS and used in the development of a building’s EUI. Note Property Types as defined by ESPM are synonymous with Building Activity Types used in the CBPS for identifying a building’s EUI.

Please note that aspects of ESPM are not relevant to the CBPS such as data inputs pertaining to the Energy Star score and benchmarking of water consumption.

Energy Use Intensity

After entering building information and all energy use data from utility bills, ESPM produces a weather normalized site Energy Use Intensity (WNEUI) metric. This is the metric used for measuring energy use for the CBPS.

The WNEUI expresses a building’s energy consumption as a function of its size – energy per square foot per year for a typical meteorological year. It equalizes the energy use compared between various types of buildings. A WNEUI is similar to comparing a car’s miles per gallon, although cars with greater MPG are more efficient while buildings with a smaller WNEUI are more energy efficient.

WNEUI is calculated by dividing the total weather normalized energy consumed by the building over 12 consecutive months to the total gross floor area of the building. For the CBPS, the metric is calculated as kBtu (thousand British thermal units) per square foot per year.

Energy Use Intensity Targets

Compliance with the CBPS is met when a building’s WNEUI is equal to or less than an *energy use intensity target (EUI_t)*. Energy use intensity targets have been developed for the CBPS using established national and regional energy consumption data. Energy use intensity targets are to be calculated in accordance with the CBPS. Energy Star Portfolio Manager will produce a EUI_t, however, **this figure is not applicable to compliance with the CBPS.**

The Clean Buildings [How to Comply page](#) provides guidance and information on how to calculate the target EUI for your building.

Where to Start- ESPM

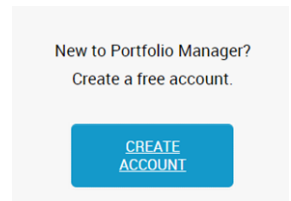
Visit [ENERGY STAR Training page](#) for live and recorded training sessions, short videos, the [Portfolio Manager Quick Start Guide \(energystar.gov\)](#) and additional how-to documents.

1) Gather the following information

- a) **Property type and use details**- use the [ESPM glossary](#) to determine the appropriate property type and also see [ENERGY STAR Portfolio Manager Data Collection Worksheet](#) to determine all data requirements for your building type.
 - i) Property type equates to building activity type per table 7-1 of the CBPS
- b) The aggregate **Gross Floor Area** (GFA) of the building and disaggregated GFA for each unique property type, not including parking area.
- c) Assigned **Commerce Building ID** - this can be found in the building owner notification letter or the [Clean Buildings Portal](#).

2) Create an [ENERGY STAR Portfolio Manager](#) (ESPM) account

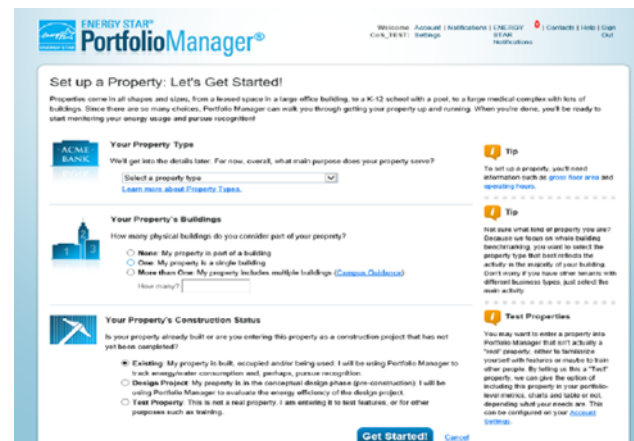
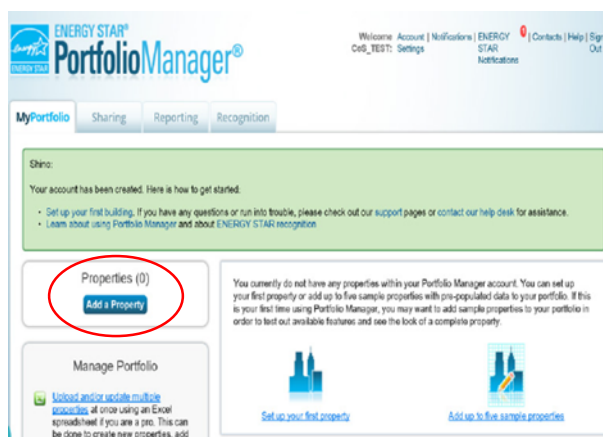
- a) Click **CREATE ACCOUNT**
- b) Each covered commercial building must have a unique ESPM ID.
- c) Fill in the required fields about entity and user(s) creating the account.
 - i) For Reporting Unit use **Conventional EPA Units (e.g., kBtu/ft²)**
 - ii) You must select **Yes** to connect with other users and allow automatic upload of utility data or to share properties.
- d) After creating an account, you will receive an email to activate your ESPM account. The link must be activated within 24 hours before it expires.



Watch [Creating a Portfolio Manager Account and Entering Data](#) training video for more detailed instructions.

3) Add a property

- a) Once verified, re-login with your new credentials, then click on **Add a Property**.



- b) Select the primary property type (**must be consistent with CBPS Table 7-1 Building Activity Type**).

- c) Select One: **My property is a single building.**
 - i) Please refer to the multi-owner building section of this document if applicable.
 - ii) The CBPS will not accept campus benchmarking.
- d) For Your Property(s) Construction Status, select **Existing**
- e) Click on **Get Started!**

4) Enter basic property information

- a) Fill in the required fields regarding the property
 - b) For the [Standard IDs](#), choose **State of Washington Clean Buildings Standard**
 - i) Enter the building ID assigned to your building, this can be found in the building owner notification letter or the Clean Buildings Portal. If you do not have this information, leave this blank and add the building ID once acquired.
 - c) Click **Continue**
 - d) Building use
 - i) Enter the property type details (**must be consistent with CBPS Table 7-1 Building Activity Type**).
 - ii) Add other type of property type, if applicable
- (1) Ensure all information is consistent with information entered into the Clean Buildings Portal.

5) Obtain energy meter usage data

- a) Utilities are required to provide energy consumption data to building owners upon request. Large utilities (greater than 25,000 customers) are required to provide this data using ESPM's automated upload protocol. Smaller utilities are to provide the data to building owners in an excel document for upload by the account holder, meeting ESPM specifications (See [RCW 19.27a.170](#)).
- b) Connect with your utility company and request energy data through ESPM directly
 - i) Find utilities that provide energy data for benchmarking using the [ESPM interactive map](#)
 - ii) Confirm with utility company that data received is net energy data
- c) If a utility provider is not set up on ESPM data exchange, a spreadsheet template can be used. The spreadsheet template used to upload data into ESPM is a custom spreadsheet. View the How to Use Spreadsheet Upload Templates in Portfolio Manager short video at [ENERGY STAR Training](#) web page. To access the template:
 - i) Log into ENERGY STAR Portfolio Manager
 - ii) Bottom left box, click on **Upload and/or update multiple properties**

iii) To the right, click on **Create a Custom Upload Template**

(1) You may need to add meters to existing properties and then add bills to existing meters (i.e. meter consumption information).

iv) Once you've made your selections, click **Create and Download Template**. Review the EPA's "[How to](#)" document or watch this [video](#) for assistance.

v) Open the template and carefully review the instructions each tab.

(1) You may request this information from your utility provider or enter the information using past bills.

vi) To upload the template to ESPM, go back to the Upload Spreadsheets box.

vii) Depending on the size of the file, it may take a while to process. Do not try again while the status is **processing**. This may lead to duplicate data.

My Spreadsheet Uploads

The following spreadsheets have been uploaded to Portfolio Manager. Depending on the size of your spreadsheet, completing the upload to your portfolio may take a while.

<input type="checkbox"/>	File Name	Type of Upload	Date	Status
<input type="checkbox"/>	Add_Bills_to_Meters Jan-May.xlsx	Add Bills to Existing Meters	7/29/2015 10:59 AM	Processing

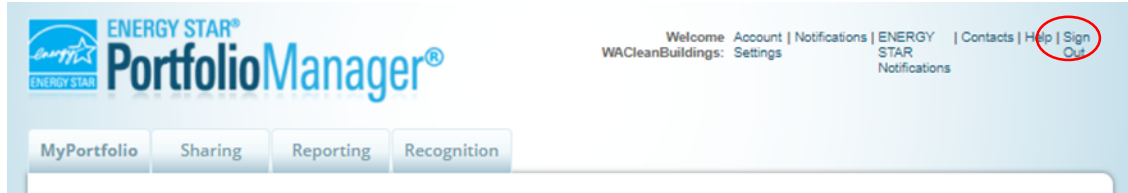
viii) Once you receive confirmation that the upload was successful, you can verify if the information was populated correctly by navigating the **MyPortfolio** tab and clicking on the building for which you entered consumption data.

Form C and Sharing Data with Commerce

The following outlines the steps to complete Form C and share data with Commerce:

1) Add Commerce to your contacts

- a) Click the Contacts link on the top right of the page



- b) Click on **Add Contact**
- c) Search for Commerce by typing **WACleanBuildings** in the Username box
- d) Click **Search**
- e) Click **Connect**

Search Results

The results of your search are listed below. Clicking "Connect" will send a request to the person asking them to confirm your request to add them as your contact. If they accept, you will see them listed as a connected contact in your address book. If they do not accept, or have not accepted yet, you will see them as an unconnected contact in your address book. Connecting with contacts will make it easier to share property information within Portfolio Manager.

The image shows the 'Search Results' page in PortfolioManager. On the left, there is a 'Your Search Criteria' form with fields for 'Name', 'Organization', 'Username' (containing 'WACleanBuildings'), and 'Email Address'. A red circle highlights the 'Search' button at the bottom of this form. On the right, there is a list of search results. The first result is 'Washington Clean Buildings Program Department of Commerce (WACleanBuildings)' with the subtitle 'Energy Division with WA State Department of Commerce'. A red arrow points to the 'Connect' button next to this result. Below the list, there is a pagination bar showing 'Page 1 of 1' and a dropdown menu set to '50'.

- f) Once Commerce has approved your connection, building owners have the ability to share and submit property information in ESPM.

2) Complete Form C

- a) Click on the WA specific report- [WA State Clean Buildings EUI Calculations, Form C](#)
 - i) You may need to log in to access the form
 - ii) If the report does not automatically appear after logging in, click on the **Reporting** tab
 - iii) WA State Clean Buildings EUI Calculations, Form C should be listed

iv) Click on the drop down menu under Action and select **Respond to Data Request**

Name	Status	Action
WA State Clean Buildings EUI Calculations, Form C (Request from Washington Clean Buildings Program Department of Commerce)	No Response Preview Generated	<div>I want to... Respond to Data Request Delete Data Request</div>

First Previous Page 1 of 1 Next Last 10

Create a New Template

b) Select which properties you would like to **Respond to Data Request**

c) Note that the timeframe is locked for the Early Adopter Incentive Program and will be modified for mandatory compliance by July 1, 2023.

d) Click on Generate Response Preview

i) You may view your response preview by selecting **Preview Response** or **Download Preview** in Excel from the action menu below. Large responses may take a long time to prepare. After you have viewed your response, you must select **Send Response** in order for your data to be released.

ii) Please note that each property you include must have 12 consecutive months of utility data for each timeframe. Otherwise, the metrics may not be able to be calculated. When this happens, "N/A" will be displayed in your response.

e) Click on the drop down menu under **Action** and select **Send Response**

i) Prior to submitting reports, the ESPM runs a data quality checker. Click on **errors** found and make all corrections required to complete the report.

f) Confirm Response to Data Request from Washington Clean Buildings Program Department of Commerce (WA State Department of Commerce).

i) Select contacts from your contacts book: Washington Clean Buildings Program

ii) Select the **Excel format**

iii) E-Sign **Data Response**

g) Send Data

h) You will receive a confirmation email if you successfully completed the steps.

3 E-Sign your Data Response, then "Send Data"

☒ I hereby certify that I am releasing data about my properties, or on behalf of someone else, to Washington Clean Buildings Program Department of Commerce with WA State Department of Commerce.

Your username:

Your password:

✓ Signed

Send Data

Cancel

Multi-owner Covered Commercial Buildings

Covered commercial buildings comprised of multiple parcels, such as a shopping mall, shall comply with the CBPS as a single building.

It is advised that individual parcel owners work together and designate a single entity such as a building owners association to manage compliance requirements. This will include developing a property account within ESPM identifying all building property use activity types and associated gross floor area along with all imported and exported energy.

The building's *energy manager* is responsible for reporting energy consumption data for each parcel in accordance with the requirements of the CBPS. Reporting of building characteristics and energy metrics shall be in accordance with Z6.3 Energy-Use Intensity Calculations (Form C).

The ESPM property account for the building can be shared with additional parcel owners. Sharing can allow other parcel owners to view and/or edit data. See the EPA's [How to Share Properties with Other Portfolio Manager Users](#) guide for more information.

The ultimate goal is to report energy performance metrics for the building as a whole in accordance with the CBPS using ESPM as the energy accounting system. If the building is currently configured within ESPM as a parent/child relationship, contact [Commerce](#) for guidance.

The CBPS requires all *covered commercial buildings* comply with the CBPS by the mandatory compliance date to avoid penalty. However, Commerce will not hold individual parcel owners accountable for the compliance of other parcel owners within a *covered commercial building*. When a multi-parcel building does not meet compliance with the standard by the mandatory compliance date, penalties will be assessed to the individual parcel owners found to be out of compliance.

Tenant Space

In accordance with RCW 19.27A.170 (8), for any *covered commercial building* with three or more tenants, an electric or gas utility must, upon request of the building owner, provide the building owner with aggregated monthly energy consumption data without requiring prior consent from tenants.

If there are three or less tenants in the building, the requirements vary depending on the energy provider. Most likely, the energy provider will require a data release form to be completed by each of the tenants in order to release energy usage data. Please connect with the energy provider(s) of the building for further guidance.

For additional questions, complete the [Customer Support Form](#).