



# Licensed Professional's Guide to the ENERGY STAR Multifamily High Rise Program V1.3

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## OVERVIEW

The U.S. Environmental Protection Agency has established the certification requirements for new or substantially rehabilitated multifamily high rise (MFHR) buildings. To protect the integrity of the ENERGY STAR brand, a Licensed Professional (See Appendix A for qualifications) working on behalf of the ENERGY STAR MFHR Developer Partner, must provide EPA or its designated agent with program specific submittals. These submittals are used to demonstrate that the program's requirements have been met, that all prerequisites are included, and that each energy conservation measure is installed to specification.

The Licensed Professional engaged by the developer for this purpose must possess a current license in any U.S. state, and should follow the guidance provided in this document. Licensed Professionals are bound by ethical standards imposed on them by state licensing boards and are expected to only certify documents that fall within their range of expertise. EPA expects these standards to be upheld when verifying a building for the ENERGY STAR label.

## REQUIRED DOCUMENTATION FOR EARNING THE ENERGY STAR

To meet certification requirements, EPA or its designated agent must approve a complete Proposed Design Submittal and a complete As-Built Submittal. EPA or its designated agent will not approve incomplete submittals, but will communicate with Developer Partners and Licensed Professionals on which requirements must be met to bring the submittal into compliance with program requirements.

### Proposed Design Submittal

The Proposed Design Submittal is used to ensure that the project design meets the requirements based on the certification path selected and that they have been included in the construction documents. The Licensed Professional is responsible for submitting a Proposed Design Submittal, with an *ENERGY STAR MFHR Submittal Validation Form* to EPA, or its designated agent for approval, prior to beginning construction. See Table 1 for a list of documents required for the Proposed Design Submittal.

### As-Built Submittal

The As-Built Submittal is used to ensure that the energy conservation measures chosen by the design team are installed to specification. After the final inspection, the Licensed Professional is responsible for submitting an As-Built Submittal, with an *ENERGY STAR MFHR Submittal Validation Form*, to EPA or its designated agent for approval. Once EPA has determined that the project has fulfilled all of the program requirements, the Developer Partner will be notified that the units in the building have earned the ENERGY STAR and that they can be marketed and promoted per the ENERGY STAR Logo Identity Guidelines. See Table 1 for a list of documents required for the As-Built Submittal.



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**Table 1 – ENERGY STAR MFHR Submittals** (Note: There are two paths that may be followed by the Developer Partner to ensure program requirements are met; the Performance Path and the Prescriptive Path. These paths are considered equivalent; however, the Prescriptive Path is not available in California or states that have adopted either the 2012 or 2015 IECC)

Performance Path	Prescriptive Path
<b>Proposed Design Submittal</b> - Each of the documents below must be submitted to EPA or its designated agent for approval	
<ul style="list-style-type: none"> <li>- Proposed Design Performance Path Calculator</li> <li>- Testing and Verification Worksheets</li> <li>- Statement of Energy Design Intent</li> <li>- ENERGY STAR MFHR Submittal Validation Form</li> </ul>	<ul style="list-style-type: none"> <li>- Proposed Design Performance Path Calculator (Basic Info &amp; Lighting)</li> <li>- Testing and Verification Worksheets</li> <li>- Statement of Energy Design Intent</li> <li>- ENERGY STAR MFHR Submittal Validation Form</li> </ul>
<b>As-Built Submittal</b> - Each of the documents below must be submitted to EPA or its designated agent for approval	
<ul style="list-style-type: none"> <li>- As-Built Performance Path Calculator</li> <li>- Testing and Verification Worksheets</li> <li>- Photo Template</li> <li>- ENERGY STAR MFHR Submittal Validation Form</li> <li>- Accepted PDS Review document</li> </ul>	<ul style="list-style-type: none"> <li>- As-Built Performance Path Calculator (Basic Info &amp; Lighting)</li> <li>- Testing and Verification Worksheets</li> <li>- Photo Template</li> <li>- ENERGY STAR MFHR Submittal Validation Form</li> <li>- Accepted PDS Review document</li> </ul>

By signing and stamping the *ENERGY STAR MFHR Submittal Validation Form*, the Licensed Professional is not guaranteeing performance of the operating building nor does it require that the Licensed Professional certify that the building or units will perform to any specified level. By validating the submission, the Licensed Professional is certifying that the information contained within the submitted documents is accurate and in accordance with the program's guidelines, based on the conditions observed. To assist the Licensed Professional as they review the files prior to submission, [optional checklists](#) are available online to identify common issues for both the Proposed Design and As-Built submittals.

The ENERGY STAR MFHR Developer Partner or the Licensed Professional working on their behalf may engage a third party, who is not a Licensed Professional, to conduct some or all of the inspections and diagnostic testing required per the ENERGY STAR MFHR Testing and Verification Protocols. However, the ENERGY STAR MFHR Submittal Validation Form must



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bear the seal and signature of the Licensed Professional, who remains responsible for all work performed by others under his or her direction and control.

## PROPOSED DESIGN SUBMITTAL DOCUMENTS

### **Performance Path Calculator (Performance and Prescriptive Path)**

The *Performance Path Calculator* ensures consistency among energy modelers by providing the exact calculations described by the *ENERGY STAR MFHR Simulation Guidelines*. While the software used and the Path followed ultimately determine which worksheets will be reviewed, the entire Excel file must be included as part of the Proposed Design Submittal. For the Performance Path, submission of the Excel file, with Basic Info, Reporting Summary, and the three lighting worksheets completed, is mandatory. For projects using eQUEST, all worksheets are expected to be completed, except the SIR by Measure worksheet. For projects using the Prescriptive Path, only the Basic Info, In-Unit Lighting, Interior Lighting, and Exterior Lighting worksheets are required to be completed and submitted, in order to verify compliance with lighting requirements of the Prescriptive Path.

### **Testing and Verification (T&V) Worksheets (Performance and Prescriptive Path)**

The *T&V Worksheets* are used in the Proposed Design Submittal to demonstrate that program prerequisites or Prescriptive Path requirements are specified in the construction documents. Depending on which path is chosen for earning the ENERGY STAR, in addition to the Project Info, ERM and green protocol worksheets, the Licensed Professional should ensure that the Prerequisites Checklist or Prescriptive Checklist is complete. Using the T&V Worksheets to document compliance with the *ENERGY STAR MFHR T&V Protocols* is mandatory.

- **Proposed Design Prerequisites Checklist (Performance Path Only)**

The Proposed Design Prerequisites Checklist is used to demonstrate that all of the program prerequisites have been properly specified within the construction documents. The checklist is included as part of the Testing and Verification Worksheets.

- **Proposed Design Prescriptive Checklist (Prescriptive Path Only)**

The Proposed Design Prescriptive Checklist is used to demonstrate that all of the program prerequisites and Prescriptive Path requirements have been properly specified within the construction documents. The checklist is included as part of the Testing and Verification Worksheets.

Before submitting the Proposed Design Submittal, the Licensed Professional should verify the 'Verified in Plan Review' column of the appropriate checklist to ensure there are no cells highlighted in red. A cell highlighted in red indicates that either a prerequisite or prescriptive measure has not been specified in the construction documents. All prerequisites and prescriptive measures should be specified in the construction documents.



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## Statement of Energy Design Intent (Performance and Prescriptive Path)

The Statement of Energy Design Intent (SEDI) is a two-page summary in PDF format of the design energy inputs and results data that can be generated using Portfolio Manager.

Information in the SEDI includes:

- Property and contact Information
- Estimated annual energy use for all fuel types
- EPA's 1-100 Score for multifamily properties
- Your Portfolio Manager building identification number
- Other key performance metrics for your property

More information on how to generate a Statement of Energy Design Intent in Portfolio Manager is available in Appendix B.

### Designed to Earn the ENERGY STAR

Although Developer Partners may not promote the units in their project as ENERGY STAR until they have an approved As-Built Submittal, eligible projects with an approved Proposed Design Submittal and a Portfolio Manager 1-100 score of 75 or higher, as demonstrated on their SEDI, may promote the project as Designed to Earn the ENERGY STAR throughout the construction phase.

Note: A copy of the SEDI must be submitted with the Proposed Design Submittal even if the project is not eligible for the Designed to Earn the ENERGY STAR designation or the project is pursuing certification through the ENERGY STAR MFHR Prescriptive Path.

## ENERGY STAR MFHR Submittal Validation Form (Performance and Prescriptive Path)

The Submittal Validation Form is used by the Licensed Professional to validate submittals. This form must be signed and stamped by a professional engineer or registered architect and submitted to EPA for approval with each submittal.

## AS-BUILT SUBMITTAL DOCUMENTS

### Performance Path Calculator (Performance and Prescriptive Path)

For Performance Path projects, the *As-Built Performance Path Calculator* summarizes the modeling results of the completed building, and is used to demonstrate achievement of the Performance Target. For Prescriptive Path projects, it is used to demonstrate that lighting in the completed building complies with all requirements. Any modifications to the project's energy conservation measures during construction must be reflected in the *Performance Path Calculator*.



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## Testing & Verification Worksheets and Photo Template (Performance and Prescriptive Path)

The *Testing and Verification Worksheets* and *Photo Template* are used to demonstrate that each prerequisite and each energy conservation measure (or prescriptive measure) is included in the completed building and meet all requirements of the *ENERGY STAR MFHR Testing and Verification Protocols*. Once the Licensed Professional, or Developer Partner, has completed 3 approved As-Built Submittals, the *Photo Template* requirement is waived.

Before submitting the As-Built Submittal, the Licensed Professional should verify the 'Verified by Inspector' column of the appropriate checklist to ensure there are no cells highlighted in red. A cell highlighted in red indicates that either a prerequisite or prescriptive measure has not been verified per the *ENERGY STAR MFHR Testing and Verification Protocols*. EPA or its designated agent will not approve As-Built Submittals where all prerequisites or prescriptive measures have not been verified.

## ENERGY STAR MFHR Submittal Validation Form (Performance and Prescriptive Path)

The Submittal Validation Form is used by the Licensed Professional to validate submittals. This form must be signed and stamped by a professional engineer or registered architect and submitted to EPA for approval with each submittal.

## HOW TO SUBMIT DOCUMENTS

To ensure that EPA or its designated agent has a complete file for each project participating in the program, the Proposed Design and As-Built Submittals should be submitted as indicated below.

1. The following documents must be submitted in Portable Document Format (PDF)
  - ENERGY STAR MFHR Submittal Validation Form
  - The Statement of Energy Design Intent
2. The following documents must be submitted in their entirety
  - Performance Path Calculator Excel file (Performance and Prescriptive Path)
  - Photo Template
  - Testing and Verification Worksheets Excel file

All files should be emailed as an attachment to [mfhr@energystar.gov](mailto:mfhr@energystar.gov) with the following subject line, **[Proposed Design] or [As-Built] Submittal (Project Name, Address, City, State)**.

## Contact information for questions:

- **Email:** [mfhr@energystar.gov](mailto:mfhr@energystar.gov)
- **Website:** [www.energystar.gov/mfhr](http://www.energystar.gov/mfhr)



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## Appendix A: Qualifications for Licensed Professionals

To validate the documents in the Proposed Design and As-Built Submittals, a Licensed Professional must be a professional engineer or registered architect and possess a current license and be in good standing. The Licensed Professional should also have:

- A license in a discipline related to residential and/or commercial building systems (e.g. mechanical engineering or commercial/residential architecture)
- Working knowledge of building systems, ASHRAE Standard 90.1, ASHRAE Standard 62.1, and ASHRAE Standard 62.2.

Territorial engineering and architecture licensure laws and regulations vary from jurisdiction to jurisdiction. Before offering or performing services, it is recommended that professional engineers and registered architects understand the professional practice of their respective disciplines and the ethics requirements contained in the state and territorial laws and regulations.



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## Appendix B: How to Generate a Statement of Energy Design Intent

Follow the steps below to get a Statement of Energy Design Intent for your MFHR project.

### 1 Sign-In to your Portfolio Manager Account or Register for a New Account

**Sign-in** to an existing account at <https://portfoliomanager.energystar.gov/pm/login.html> or **register** for a new account at <https://portfoliomanager.energystar.gov/pm/signup>,

### 2 Add a Property

**Add a Property:** On the **MyPortfolio** tab in Portfolio Manager, click **Add a Property** to enter information about your design project. On the **Set Up Your Property** page, select **Multifamily Housing** as the property's primary function and indicate whether it is a single building or it contains multiple buildings. Select the **Design Project** radio button in the **Your Property's Construction Status** section, and then click **Get Started!**

### 3 Enter Property Information

1. **About Your Design Project:** Complete all information in this section. Be sure to include total gross floor area for all primary and secondary building functions for the project. Parking (lots and garages) must be included as a separate building function and NOT included as part of the gross floor area.
2. **Property Use Details:** Complete the property use details for the primary function you selected. If your project has multiple functions, select them from the drop-down menu and complete the requested information. If not all values are known, select default values. While a score will still calculate, to apply for [Designed to Earn the ENERGY STAR](#), you cannot have default values in your property use details. For mixed-use properties, see endnote for more information.<sup>1</sup>

**NOTE:** Be sure that the total square footage of all property functions (except parking) sums to the total gross floor area you entered in the **About Your Design Project** section.

3. **Estimated Design Energy:** Enter the estimated annual energy use and units of measure for all types of energy/fuel that will be consumed at the property. Electricity must be included as an energy type. If you do not enter energy cost per unit, Portfolio Manager will use a national average rate to calculate cost metrics.

**NOTE:** Prescriptive Path projects and projects that did not model the entire building do not need to enter an estimated design energy. These projects are not eligible for Designed to Earn the ENERGY STAR.

**Target:** Choose **Target ENERGY STAR Score**

**NOTE:** While the selection of a target is required, it is the actual score for your design that will determine whether or not your property qualifies for the Designed to



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Earn the ENERGY STAR recognition.

4. Select **Create Design** to see the score for your design. If your property type is eligible to receive a 1-100 score, but you receive a value of **N/A**, review all alert messages from the tool and make any necessary changes. If you receive a score of 75 or higher, but you have used default values or have not included the energy use from the whole property, your project is not eligible for Designed to Earn the ENERGY STAR.

## 4

### Generate Statement of Energy Design Intent (SEDI)

5. If you are not on the **Design** tab for your property, select your property from the **MyPortfolio** tab, and then click the **Design** tab for the property.
6. Click **Download & Print Statement**. All inputs and results for your design will appear on the SEDI.

**NOTE:** Completing the application checklist and providing signatures on the SEDI is **not** required for multifamily properties. The SEDI must be included in the ENERGY STAR MFHR Proposed Design Submittal even if the building is ineligible or not pursuing the Designed to Earn the ENERGY STAR designation.

7. Print and/or save the SEDI to your computer and submit with the ENERGY STAR MFHR Proposed Design Submittal.

Email [mfhr@energystar.gov](mailto:mfhr@energystar.gov) if you have questions while entering and creating the SEDI.

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<sup>i</sup> For mixed-use buildings, use the following guidelines. (Note: these do not apply to parking lots and garages which should always be a separate use type and NOT included in the gross floor area.)

- 1) If commercial space is less than 25% of the gross floor area (not including parking)
  - a. If the space is completed as a “core and shell”, then the space can be included under the main property type (multifamily housing)
  - b. If the space is built out, AND the space type CAN get a score, then the space needs to be added as a separate property use. The full list of property types that can get a score is [here](#), but common types are office and retail. Note: [Retail](#) can only get a score if it is at least 5,000 sq. ft.
  - c. If the space is built out, but the space type CANNOT get a score, then the space can be included under the main property type (multifamily housing).
- 2) If the commercial space accounts for more than 25% of the gross floor area
  - a. If the space is completed as a “core and shell”, the space is added as a separate type under “other” even if it is modeled as “office” in the energy model.
  - b. If the space is built out, then the most appropriate property use type is selected.