

Property managers: How to achieve Energy Star certification

As energy efficiency continues to be an important factor for companies looking to be more sustainable and ensure their buildings are operating at optimal conditions, the Energy Star Building Certification program continues to be a low-cost, effective way to integrate sustainability measures into your new or existing building. Maintaining an ESTAR certification requires you to revisit your building energy use on an annual basis, thus leading to continued energy and monetary savings.

The ESTAR certification process is not nearly as rigorous as others (LEED, for example) but before you begin, it is important to understand the process to ensure your team allocates the resources to successfully complete the certification.

Before beginning the certification process, you should review ESTAR online documentation to determine what building type you qualify to be certified for. Typically, 50 percent or more of the building's leasable area must be dedicated to the building-type usage. For example, to apply for a data center certification, 50 percent or more of the building must be used for data center equipment and data center support staff.

Also, you should review online documentation regarding where and how to meter your energy use. Typically, you will have to meter all energy sources, including electric and gas.

Once you begin your desired certification year, keep current records of your meter and utility bill data for each month. Create and access Portfolio Manager through ESTAR's website, and remember the following:

- You must provide 12 months of meter and utility data for your desired certification year. There is no requirement for when the data



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has to begin; for example, data for certification in 2016 could begin in January or April. The data is valid for 120 days from the last day of the last month of data. Keep this time period in mind to allow enough time for the application verification process.

- If there is an unexpected meter outage during your 12-month period, contact ESTAR to determine if an exception applies. In some cases, you may proceed with your application.

- The square footage of metered spaces must add up to 90 percent or more of your total building square footage.

The assistance of a licensed professional is not required until the application is ready for review. However, it may be advantageous to contact a licensed engineer at this stage, if you are unsure which energy-savings measures would be most beneficial to your building.

If you believe your building's eligibility for ESTAR certification needs a boost, implementing elective energy-efficiency strategies – such as LED light fixtures, interactive building management systems or on-site PV panels – could contribute to a higher ESTAR score.

Completing Certification

Contact an approved licensed professional to initiate the application verification process and schedule a walk-through of the building. The licensed professional will take temperature readings,

measure light levels and review day-to-day building operations with the building representative.

ESTAR requires that the licensed professional review the following codes and prescriptive requirements during the building walk-through:

- **Thermal comfort requirements per ASHRAE 55.** ASHRAE 55 describes a means for achieving maximum occupant comfort during cooling and heating seasons. Does this mean that your licensed professional expects 100 percent of all occupants to be satisfied? No, but the licensed professional will take temperature readings, inspect thermostat settings, ask about hot/cold spots and might even survey a few occupants to get a general sense for comfort in the building.

- **ESTAR prescribed lighting levels.** Online ESTAR certification guidelines detail acceptable light levels for different building-use types. Satisfying these requirements is subject to the discretion of the licensed professional. Any required or recommended lighting changes can be made upon receiving the licensed professional's feedback and does not necessarily disqualify your application.

- **Minimum ventilation requirements per ASHRAE 62.1.** ASHRAE 62.1 is an industry accepted standard for the minimum outside air required to ensure healthy indoor air for the building occupants. There are two ways to determine if your building meets minimum ASHRAE 62.1 requirements.

The first way is to install and maintain carbon dioxide sensors that directly communicate with all central air-handling unit. Carbon dioxide levels should never be greater than 800-900 parts per million. The carbon dioxide sensors can be located in the conditioned spaces or at the exhaust air relief of

the AHU. The licensed professional will want to review the building management system to verify that the sensors are working properly and can correctly override outside air intake in the event that building carbon dioxide levels rise to unhealthy levels.

The other way is through a prescriptive method, which is at the discretion of the licensed professional, but may include any combination of the following measures:

- Review all central air-handling equipment.
- Review building management systems for outside air damper minimum positions.
- Review day-to-day building operations with building representative(s).
- Review most current air balance reports, if available.
- Review mechanical design drawings, if available.
- Perform a basic ASHRAE 62.1 calculation to verify findings during building tour are satisfactory. Total supply air (CFM) to each space use type, number of occupants per space use type, and total sf per space-use type are required for this calculation.

The U.S. Environmental Protection Agency will review the application and may reach out for clarification. Do not hesitate to consult the licensed professional if the question is confusing or you are not sure how to respond. It may take the EPA longer than the 120-day application validity period to review the application, and their comments may cause you to revise and resubmit information. The agency typically honors the submission and revision dates and will not penalize your data based on these unforeseen delays.

Here's to setting and achieving more aggressive energy-saving measures in 2016!▲