

ENERGY STAR® Multifamily New Construction HVAC Grading for Builders and Developers



Overview

An exciting new option for meeting ENERGY STAR HVAC design and functional testing requirements is here. This option, called “Track A - HVAC Grading by Rater,” leverages ANSI / RESNET / ACCA / ICC Standard 310 for grading the installation of HVAC systems. Standard 310 integrates an HVAC design review and four sequential field tasks into a standard energy rating. Properly installed HVAC systems will be rewarded with better ERI scores, which can help meet the ENERGY STAR ERI Target for projects using the ERI certification path.



The Five Key Sequential Tasks in Standard 310

Task 1	Task 2	Task 3	Task 4	Task 5
Design Review	Total Duct Leakage	Blower Fan Airflow	Blower Fan Watt Draw	Refrigerant Charge

This new option can be used, but is not required for ENERGY STAR certification. Partners can continue to follow the original design and functional testing requirements if desired, which have been rebranded “Track B - HVAC Testing by Functional Testing Agent.” However, for projects using the new option, stepping up from an ERI to ENERGY STAR certification will be easier than ever.

HVAC grading makes it easier to certify ENERGY STAR MFNC buildings:

- Integrates most ENERGY STAR HVAC requirements into an ERI
- For systems that are eligible for grading, a credentialed HVAC contractor or a Functional Testing Agent is not required
- Rewards proper installation with ERI points and helps meet the 45L tax credit

FAQs

ENERGY STAR Timeline: Can I use it now? When do I have to use it?

The “Track A - HVAC Grading by Rater” option can be used now. Note, though, that Raters will need to complete additional training and evaluation before using Standard 310. In addition, new HVAC design report templates that will streamline certification are being programmed into HVAC design software programs.

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Partners who want to continue using the original requirements, rebranded “Track B - HVAC Testing by Functional Testing Agent,” may do so. While Track A offers many benefits, partners will not be forced to use it.

What does this mean for me?

You now have a new option for assessing the quality of your HVAC systems. Proper design and installation translate to higher efficiency, greater comfort, and fewer owner or resident complaints.

In addition, the added savings can help you meet the 45L federal tax credit for efficient new residential construction, as well as improve ERI scores, which will make it easier and more cost-effective to certify ENERGY STAR projects through the ERI certification path. For projects doing an energy rating only, the incremental cost to reach ENERGY STAR certification may be much smaller than before.

What HVAC systems are eligible for HVAC grading?

ANSI / RESNET / ACCA / ICC Standard 310 is applicable to unitary HVAC Systems including air conditioners and heat pumps up to 65 kBtuh and furnaces up to 125 kBtuh in dwelling units and sleeping units that have their own HVAC system separate from other units. For the MFNC program, HVAC grading may also be completed on these systems where they serve a single common space. Systems that do not meet the sizing limits or systems that serve multiple dwelling units or common spaces are not eligible for HVAC grading.

Do I need a Functional Testing Agent for the building? Does any part of the Functional Testing Checklist need to be completed?

If all systems in the building are eligible for HVAC Grading, then a Functional Testing Agent is not required. Raters must still complete Section 5 of the FT Checklist, which is the functional testing of the indoor unit, but this verification can be completed in concert with the HVAC grading tests.

Should the HVAC contractors I work with still be credentialed?

A credentialed contractor is not required to install systems that are using Track A - HVAC Grading by Rater. However, it is recommended that a credentialed contractor still be used, or that the team is prepared to have a Functional Testing Agent (such as the project’s MEP) verify those systems, at least until your Rater has used Track A long enough to ensure that your HVAC systems are consistently well-designed and properly installed. Only then is it recommended that you discuss with your contractors whether there’s value in maintaining the credential. As a reminder, for any systems not using HVAC Grading and instead using Track B - HVAC Testing by Functional Testing Agent, then the Functional Testing Agent must meet all the qualifications, same as before Track A was available.

Can I use HVAC Grading for the Prescriptive and ASHRAE Paths?

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Yes! You can use this HVAC Grading if your Multifamily Review Organization allows that option; however, you will not get any extra modeling credit for the ASHRAE model.

How much will it cost?

Your Raters' labor costs will increase somewhat because the three new field tests take approximately 30 minutes per system. However, this added time will be rewarded with a better ERI score for quality-installed HVAC systems. Therefore, HVAC grading can be used instead of measures that might be more expensive (e.g., higher efficiency HVAC equipment) to meet the ENERGY STAR ERI Target. Overall, this has the potential to lower the cost of certification.

Do HVAC designers or HVAC contractors have to do anything under this new path?

Yes! The HVAC system still must be properly designed and installed by them in order to meet ENERGY STAR requirements and achieve the lower ERI score.

The key difference is that Raters will be verifying key elements of the design and installation quality for the purpose of the rating. This is very similar to tight ducts – HVAC contractors must seal the ducts to achieve low leakage, while Raters are responsible for verifying their tightness.

What do I need to do next?

Check with your Rater to see if they're prepared to use Track A - HVAC Grading by Rater. If so, have them evaluate several projects to see whether the HVAC systems meet the ENERGY STAR requirements using this track. If so, consider developing a plan to use Track A on all projects.

Learn more by reading Std. 310 at www.resnet.us/resnet-ansi/. To see how ENERGY STAR integrates the HVAC grading option into its program, visit: www.energystar.gov/newhomesrequirements and review the national program requirements under the Multifamily New Construction tab.