

ENERGY STAR® Multifamily New Construction HVAC Grading for HVAC Designers



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 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 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.

Can HVAC Grading be used for the Prescriptive and ASHRAE Paths?

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

What does this mean for me?

As an HVAC designer, you’ll be completing a slightly different HVAC design report, along with the ENERGY STAR supplements. However, it will look very familiar to designers who have previously filled out HVAC design reports for the ENERGY STAR MFNC program.

In addition, because Standard 310 is applicable to any project getting an energy rating, and not just to those being ENERGY STAR certified, the market will greatly expand for properly-designed HVAC systems.

I’ve been using the software-generated design report for Single-Family and then just filling out the other items on the multifamily design report. Will this process be the same with HVAC Grading?

Yes! Check with your HVAC design software to see if they have added the ANSI / RESNET / ACCA / ICC Standard 310 HVAC Design Report and the ENERGY STAR Dwelling Unit supplement. If they have, you can use those reports and fill out information on just the non-graded systems in a shortened version of the multifamily design report, that just covers central hydronic systems (such as water-loop heat pumps on a shared loop), central ventilation requirements, and the common spaces that were not graded. Note that even if one dwelling unit system does not go through HVAC grading you will need to use the full MFNC Design Report.

How much will it cost?

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It should take approximately the same amount of time to complete the new HVAC design report and ENERGY STAR supplement compared to the current ENERGY STAR HVAC design report. Therefore, your costs should be very similar.

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

Yes! The HVAC system still must be properly designed by you. HVAC designers will continue to complete a standard design report along with an ENERGY STAR supplement. It will look very familiar to designers who have previously filled out HVAC design reports for the ENERGY STAR program.

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. Section 5 of the FT Checklist, which is the functional testing of the indoor unit of the unitary HVAC system, must still be completed but this verification can be completed by a Rater in concert with the HVAC grading tests. A Functional Testing Agent is still needed to complete the Functional Testing Checklist for any HVAC systems in the building that are not being graded.

Should the HVAC contractors I work with still be credentialed?

A credentialed contractor is not required to install systems that are being 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 Track A has been used long enough to demonstrate that HVAC systems are consistently well-designed and properly installed. Only then is it recommended that builders / developers discuss with their contractors whether there’s value in maintaining the credential. As a reminder, if a builder or developer is not using HVAC Grading and is 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.

What do I need to do next?

For now, continue completing HVAC design reports just as you’ve been doing. Be on the lookout for the new Standard 310 HVAC Design Report template and ENERGY STAR Dwellings & Units supplement template, which will be added to HVAC design software programs. You should also look for the consolidated Supplement for Common Spaces & Central Systems.

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.