



Alternate HVAC Systems & the Need to Use a Credentialed HVAC Contractor

What do the DOE Zero Energy Ready Home Program Specs Actually Require?

The DOE Zero Energy Ready Home program frequently receives inquiries about the need for qualifying projects to use an HVAC contractor who is certified by an H-QUITO¹. The DOE Zero Energy Ready Home program incorporates all of the ENERGY STAR Homes provisions. While commissioning is important for all HVAC systems, Versions 3 and 3.1 of the ENERGY STAR program are focused on using a credentialed contractor to properly commission *the most common* heating and cooling system types. Accordingly, the ENERGY STAR Homes requirement to use a credentialed HVAC contractor also includes some important exemptions, as called out by the ENERGY STAR HVAC checklists. These are summarized below.

Note: in the discussion below we'll first refer to the provisions and terminology found in ENERGY STAR Homes Revision **08**. This updated set of revisions was released on June 29th, 2015. We also address the provisions and key conclusions for projects covered by Revision 07. The key conclusions are the same for both revisions.

In ENERGY STAR Revision 08, many of the provisions in what we used to call the ENERGY STAR HVAC Contractor Checklist are recast as the "HVAC Commissioning Checklist." At the top of this checklist it's noted that "the commissioning contractor must be credentialed by an HVAC oversight organization to complete this checklist." However it's also important to note that Footnote #1 of the HVAC Commissioning Checklist includes the following language:

This Checklist applies to split air conditioners, unitary air conditioners, air-source heat pumps, and water-source (i.e., geothermal) heat pumps up to 65,000 Btu / h with forced-air distribution systems (i.e., ducts) and to furnaces up to 225,000 Btu / h with forced-air distribution systems (i.e., ducts). All other permutations of equipment (e.g., boilers, mini-split / multi-split systems) and distribution systems are exempt.

This clarification is particularly important for projects that heat/cool the home with mini/multi-split systems, radiant hydronic systems, or other systems not listed in the first sentence. If a home uses a system other than those systems to which the checklist applies, then:

¹ "H-QUITO" is an acronym for an EPA-recognized HVAC Quality Installation Training and Oversight Organization (HQUITO). An explanation of this credentialing process and links to H-QUITOs, which maintain lists of credentialed contractors, can be found at www.energystar.gov/newhomesHVAC.



1. the HVAC Commissioning checklist does not apply to the project, and
2. therefore the requirement to use a credentialed contractor to complete this checklist is also nullified.

The Whole-House Mechanical Ventilation (WHMV) system, under Revision 08, falls under the HVAC Design Report. No field commissioning of this system is required by the HVAC contractor. Thus it is separate from the Commissioning Checklist and the requirement for a credentialed contractor.

Under Revision **07** of ENERGY STAR Homes, the requirement to use a credentialed HVAC contractor is also waived if the home's heating/cooling system isn't covered per Footnote #1:

This Checklist applies to ventilation systems; to split air conditioners, unitary air conditioners, air-source heat pumps, and water-source (i.e., geothermal) heat pumps up to 65,000 Btu / h with forced-air distribution systems (i.e., ducts) and to furnaces up to 225,000 Btu / h with forced-air distribution systems (i.e., ducts). All other permutations of equipment (e.g., boilers, mini-split / multi-split systems) and distribution systems are exempt. If the ventilation system is the only applicable system installed in the home, then only Section 1 shall be completed.

In other words, under Revision 07, if a home's heating/cooling system happens to be a mini-split, a hydronic radiant system, or some other system not noted in the applicability statement above, then:

1. the requirement to use a credentialed HVAC contractor does not apply, and
2. the WHMV system section of the HVAC Contractor Checklist (Section 1) must still be completed by the HVAC designer, but there are no specific credential requirements for this individual.

Conclusions:

1. The ENERGY STAR Homes requirement to use an H-QUITO credentialed HVAC contractor may be waived if a project isn't using an applicable heating/cooling system as noted in the checklists. This is true under both ENERGY STAR Revision 07 and 08.
2. The WHMV system must comply with design documentation requirements, regardless of whether a credentialed contractor is required. The HVAC designer is responsible for completing these steps. Under Revision 07, these steps are found in Section 1 of the HVAC Contractor Checklist, while in Revision 08 they're found in Section 2 of the HVAC Design Report.