

**Final Draft Version 2.0 ENERGY STAR Light Commercial HVAC Specification - Comments Summary**

Topic	Stakeholder Comment	EPA Response
Transition Period for New Product Listings	<p>Two stakeholders requested that EPA initiate the transition or "blackout" period on March 1, 2010 (instead of October 31, 2009). Both stakeholders mentioned that the 2-day notification was not adequate for complying with this requirement. Stakeholders cited that concerns are due to upcoming regulation changes, including new minimum energy efficiency standards and refrigerant phase-out, and the ineligibility of many new products for ENERGY STAR qualification during the EPA-proposed transition period.</p>	<p>Due to new federal minimum efficiency standards taking effect on January 1, 2010 that are equivalent to or more stringent than current ENERGY STAR specification levels, EPA plans to discontinue accepting new product qualifications under ENERGY STAR Version 1.0 prior to the Tier 1 Version 2.0 effective date. EPA appreciates that stakeholders have requested more lead time for complying with this decision, and therefore has amended the October 31 blackout date proposed in the Final Draft specification. Current partners that already have tested products and confirmed their qualification under ENERGY STAR Version 1.0 may submit qualified product data to EPA up until December 31, 2009.</p>
	<p>One stakeholder recommended that EPA defer consideration of variable refrigerant flow (VRF) equipment in the ENERGY STAR specification citing that it is not appropriate to use the same efficiency levels for VRF and packaged products, there is no certification program for VRF, and no directory of VRF data.</p>	<p>AHRI has finalized AHRI Standard 1230 for VRF multi-split equipment. The standard is now available on the AHRI website. AHRI's certification program for VRF equipment is expected to begin in early 2010.</p> <p>EPA has included VRF multi-split equipment under the Tier 1 requirements of the Version 2.0 specification for light commercial HVAC equipment. EPA will review VRF performance data beginning in 2010 to determine if Tier 1 performance levels are appropriate for VRF equipment.</p>

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VRF Multi-Split Equipment	<p>One stakeholder recommended that the last sentence in the definition be changed to read: "The system shall be capable of operating as either an air conditioner, a heat pump <b>or a heat pump with heat recovery.</b>"</p>	<p>The definition of VRF multi-split systems in the Version 2.0 Final Draft specification is consistent with AHRI Standard 1230. AHRI Standard 1230 requires that VRF heat recovery multi-split equipment be tested to a performance descriptor—Simultaneous Cooling and Heating Efficiency—that is in addition to EER and IEER. Moreover, AHRI's certification program for VRF multi-split equipment, which is scheduled to begin in 2010, will initially not include VRF heat recovery equipment. For the reasons cited above, EPA has not modified the text for the definition of VRF equipment in the Final specification. EPA may, however, consider the inclusion of VRF heat recovery products in a future specification revision once robust performance data are available.</p>
	<p>One stakeholder recommended that EPA include VRF products as part of the light commercial HVAC program and not as a separate product class as "VRF products represent about 5% of the unitary light commercial market above 65,000 Btu/h." Also, commenter noted that VRF products could be "best in class" category and should not be confined to a separate product category.</p>	<p>In this Final specification, EPA has continued to include VRF products in the Light Commercial HVAC program. Once robust performance data become available in 2010, EPA plans to conduct a review to determine Tier 2 performance levels for all light commercial HVAC equipment.</p>
	<p>One stakeholder recommended that EPA hold a meeting in October 2010 with VRF manufacturers to discuss performance data and Tier 1 levels.</p>	<p>As always, EPA welcomes manufacturer input on and discussion of performance data and specification levels. The timing of any VRF discussions will be determined later pending the compilation and analysis of performance data.</p>
	<p>For Tier 2, one stakeholder recommended a 0.2 EER deduction for VRF heat pumps that also perform heat recovery functions due to the additional pressure drop and small electrical usage.</p>	<p>Once robust performance data become available in 2010, EPA intends to review/confirm Tier 1 performance levels and determine appropriate Tier 2 requirements for VRF equipment.</p>

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Lead Time/Effective Date	<p>Two stakeholders requested adherence to the nine month time period for lead time in implementing a revised specification. One stakeholder mentioned the accelerated implementation period is contrary to the nine month lead time as prescribed by the Energy Policy Act of 2005 and the adherence to the nine month lead time is especially important for Tier 2 levels, which are unknown at this time.</p>	<p>EPA has already extended the effective date to May 1, 2010 to provide additional time for manufacturers. Further delays, as suggested by some stakeholders, are problematic given the new US mandatory standards effective on January 1, 2010. These standards will raise the bar for all products and thus call for a new definition of a leadership product. Also, in these types of cases, there is precedence for implementing revised specifications with fewer than nine months lead time (e.g., ENERGY STAR Version 2.0 External Power Supply specification).</p> <p>The Energy Policy Act of 2005 states that the appropriate lead time shall be 270 days, <b><i>unless the Agency or Department determines otherwise</i></b>. For the reasons cited above, EPA has maintained the effective date of May 1, 2010.</p> <p>EPA intends to finalize Tier 2 requirements nine months in advance of their effective date.</p>
Standard Reference Dates	<p>One stakeholder requested that EPA reference a specific year for the AHRI standards, as there are periodic changes to the standards. The stakeholder recommended referencing AHRI Standard 210/240-2008 and AHRI Standard 340/360-2007.</p> <p>Another stakeholder had similar comments: Given that AHRI 1230 is currently under revision, the changes being made to the standard will have an impact on the energy efficiency rating of these products. The stakeholder recommended that EPA specify that VRF must be tested to the latest version of AHRI 1230 as published on the AHRI Web site and should be extended to the other product categories as well.</p>	<p>EPA references specific years for AHRI standards in this Version 2.0 specification: AHRI Standard 210/240-2008 and AHRI Standard 340/360-2007.</p> <p>AHRI Standard 1230 has been finalized. EPA references AHRI Standard 1230-2009 as the most recent version of the test standard for VRF equipment.</p>

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Test Procedure	<p>One stakeholder suggested that the wording in the Test Procedure section of the specification may lead to confusion. After explaining that manufacturers self-certify to AHRI that their products meet the efficiency requirements to list them in the AHRI directory, stakeholder asked: Is there a requirement that products must be AHRI-certified to be eligible for ENERGY STAR qualification? Can products that are not AHRI-certified be ENERGY STAR qualified?</p>	<p>Products are required to be tested to appropriate AHRI standards, but AHRI certification is not necessary for ENERGY STAR qualification for Tier 1. To clarify EPA's intent, EPA has modified the text to remove "shall certify" and replace it with "shall qualify." EPA is incorporating third-party certification (both for initial qualification testing as well as ongoing verification testing) as a mandatory requirement for Tier 2. Please see EPA's response to the Third-Party Certification stakeholder comment below.</p>
<65,000 Btu/h AC/HP - Single Package	<p>One stakeholder recommended that EPA increase EER to 11.6 for packaged AC &lt;65,000 Btu/h to align with performance levels promoted by many energy efficiency program administrators. This stakeholder provided the following rationale: 1) it will increase KW savings across the country and kWh savings in regions with relatively high outdoor temperatures; and 2) aligning the requirement will increase the success of the ENERGY STAR brand by uptake from utility programs.</p>	<p>Based on EPA's review of the AHRI Directory of Certified Products, while the compliance rates for &lt;65K Btu/h single package equipment are similar at 11.0 and 11.6 EER, EPA has aligned with ENERGY STAR levels for residential single-phase AC/HP rated below 65K Btu/h for Tier 1 (11.0 EER). EPA will conduct another review of performance data beginning in 2010 to determine appropriate requirements for Tier 2 for this product category.</p>
IEER Performance Levels	<p>One stakeholder recommended that EPA not specify IEER values in the specification at this time given the lack of IEER data and analysis.</p>	<p>EPA has incorporated IEER levels that are 0.1 higher than EER values in the Version 2.0 specification. These levels will be reviewed and confirmed when IEER data become available in 2010.</p>

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Third-Party Certification Program	<p>One stakeholder supported EPA in the recent proposal of third-party certification requirements for other specifications. Stakeholder recommended that EPA consistently follow these requirements and incorporate language from the ENERGY STAR geothermal heat pump specification into the light commercial HVAC specification.</p>	<p>EPA will not be requiring third-party certification for ENERGY STAR qualification under Tier 1. EPA intends to include third-party certification requirements under Tier 2. When revisiting the specification in 2010, EPA will invite stakeholders to participate in a stakeholder process specific to verification testing. Like with ENERGY STAR specification development stakeholder processes, EPA will share proposals with stakeholders, seek their feedback, and through a series of documents and discussions, develop final plans for verification and enhanced qualification procedures.</p>