

ENERGY STAR Version 3.0 Final Draft Specification Comment Response Document

Topic	Subtopic	Stakeholder Comment	EPA Response
General	References to ASTM	A stakeholder requested that EPA reference the amended ASTM F11696 and F1920 standards once balloted.	EPA updated the respective amended ASTM test standards in the Final V3.0 specification.
Definitions	Heat Recovery Machine (Section 1.D.a.)	<p>A stakeholder noted that allowing up to 5% of hot water use without penalty, the specification will favor machines designed for using a portion of hot water as opposed to 100% cold water. It was suggested that all energy required for the dishmachine washing process (domestic water energy, booster energy (if applicable), and machine energy) should be accounted for, which would ensure a level playing field and allow the most efficient machines to achieve the best performance without the need to over constrain individual inputs to the energy model.</p> <p>A stakeholder expressed support of the maximum 5% hot water limit for eligible machines when applying the offset.</p> <p>One stakeholder asked if the maximum 5% of water volume from the hot-water inlet for the wash and rinse cycle includes make-up hot water supply that feeds the machine during extended periods of wash use due to wash process removal (i.e., residual water on the wash ware or racks moving through the machine) or evaporation. Is that make-up hot water volume part of the 5% maximum allowance for high temperature heat recovery machines?</p>	<p>EPA acknowledges that heat recovery machines should use a cold water inlet only but that some heat recovery machines have a cold water and a hot water inlet. As such, EPA recognizes that by allowing up to 5% of the supplied domestic water be heated, there is a slight disadvantage for machines with 100% cold water supply. The intention for allowing minimal hot water supply was to allow eligibility for the credit offering to heat recovery machines that have limited hot water supply. The Agency capped that allowance at 5% so as not to overextend the offset eligibility to machines that don't offer the same savings. The 5% cap seems to be a reasonable amount, recognizing there may be "top-off" supply.</p> <p>Regarding the make-up hot water, if at any point during the wash and rinse cycles hot water is supplied to the machine, it is part of the allotted maximum 5% volume, per the definition in Section 1.D.a. of the final specification.</p>
	Heat Recovery Machine (Section 1.D.b.)	<p>A stakeholder expressed disagreement with the exclusion of low temperature dishmachines from the Heat Recovery Machine definition, noting that energy savings should be pursued across all dishmachine types, including low, single, and high temperature machines and pointed out there is a strong market for non-high temperature machines. It was also noted that high temperature machines generally use more energy and by limiting scope to high temperature only for heat recovery machines may result in unintentional promotion of high temperature models over low temperature, regardless of heat recovery solutions.</p> <p>A stakeholder expressed support of applying the energy offset to high temperature machines.</p>	<p>Throughout this revision process, EPA worked with stakeholders to evaluate which applications offer the greatest savings for heat recovery technologies and acknowledged greatest savings opportunities with high temperature machines. As such, EPA proposed the definition for heat recovery machines for purposes of this ENERGY STAR specification to maximize the applications with the greatest savings potential. Based on stakeholder feedback in response to the Final Draft, the Agency recognizes that low temperature machines with heat recovery technologies can offer additional savings as well. As such, the heat recovery definition parallels the ASTM definition; and, is further bifurcated to clearly demarcate requirements needed to obtain the hot water energy offset, which still only applies to high-temp heat recovery machines. Any further changes to the heat recovery machine definition will be considered in a subsequent version of this specification.</p>
	Power Rinse (Section 1.C.a.)	A stakeholder supported the change replacing "power rinse" with "wash."	EPA appreciates the stakeholder's support of this change.
Certification Criteria	Hot Water Energy Offset	A stakeholder supported the revised heat recovery offset calculation, but suggested lab validation be included in the next revision to determine the need for an additional adjustment to the offset. The stakeholder also suggested EPA continue collaboration with ASTM F26.	EPA will continue to investigate processes and methodologies to enhance the comprehensive capture of total energy savings through heat recovery technologies in support of a subsequent version of this specification. Additionally, EPA will continue to collaborate and remain engaged with ASTM F26.

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	User-Adjustable Conveyor Machine	A stakeholder mentioned there is a provision that the water consumption using the slowest conveyor speed shall also be reported to EPA. It was suggested that the washing energy consumption is more important than the water on slowest speed and that if the intent is to report both water consumption and washing energy consumption at the slowest conveyor speed selectable by the user, this must be clearly stated.	As outlined in the specification, EPA has a requirement that the maximum conveyor speed shall be used for the wash energy metric, not the slowest. It was not intended to have both speeds tested for washing energy. EPA will reconsider this during the next specification revision.
	Dual-Purpose Door Types	It was noted the criteria for dual-purpose door type machines states that they shall meet the performance requirements for both of those subcategories. However, it does not indicate what establishes dual-purpose classification. Is it the manufacturers claim or a 3rd-party certification to the PPU category?	The determination for dual-purpose door type classification would be verified by the 3rd-party Certification Body (CB). If the machine operates as defined in the specification and is marketed and sold as such, it is up to the discretion of the CB to make that determination.
Reporting Requirement	Heat Recovery Feature	One stakeholder encouraged EPA to identify heat pump dishmachines on the QPL due to their substantial energy savings.	The QPL will provide specific heat recovery features for eligible machines, including a <i>Supplemental Heat Pump</i> option.
	Drainwater	A stakeholder requested that water use by a drainwater tempering device and drainwater outlet temperature should be reported on the QPL.	Drain water heat recovery will be included as an option as a heat recovery feature on the QPL; however, EPA does not collect or report drainwater outlet temperature, but this may be considered in a subsequent version of this specification.