

# ENERGY STAR Most Efficient 2012 Proposal for Appliances: Stakeholder Comments and EPA Responses

Comment	EPA Response
<p>Two stakeholders expressed support for EPA's proposal to establish different efficiency levels for clothes washers based on volume.</p> <p>However, one of these stakeholders encouraged EPA to increase the minimum MEF for small washers. The stakeholder expressed concern that the specification for clothes washers smaller than 2.5 ft<sup>3</sup> is too lenient, since their analysis suggests that 45% (10 products) of ENERGY STAR qualified clothes washers in this size range would meet this minimum MEF. The stakeholder commented that this leniency does not align with Most Efficient's goal to identify and recognize the top performing products on the market. Thus, the stakeholder recommended that EPA increase the minimum MEF to 2.4 for clothes washers with volumes less than 2.5 ft<sup>3</sup>, which would reduce the number of currently qualified ENERGY STAR products that would meet the Most Efficient criteria to 5, or roughly 22% of ENERGY STAR products.</p>	<p>EPA appreciates these comments and support for the proposed clothes washer approach. EPA recognizes that a larger selection of smaller washers will be recognized; however, in the broader context of all washer options on the market, each of these products offer consumers significantly lower energy and water use.</p>
<p>A set of stakeholders noted that the Most Efficient recognition criteria for clothes washers exclude certain products. In particular, the proposed Modified Energy Factor and Water Factor levels preclude high-efficiency top load washers from the Most Efficient program. Along the same lines, another stakeholder expressed concern that there are no separate criteria for high-efficiency top load washers.</p>	<p>EPA's recognition principles for the Most Efficient program have guided product category selection and criteria development to help ensure the program highlights products with truly exceptional efficiency performance. As part of those principles, EPA noted it was not the goal of the Most Efficient program to ensure that there were qualifying models in all sizes or configurations. Consistent with this, EPA's criteria for clothes washers recognize the most efficient models on the market, irrespective of loading configuration.</p>
<p>One stakeholder noted that refrigerators without freezers consume less energy than combination refrigerator/freezer models and noted that if a homeowner does not need a freezer they will maximize their energy savings by purchasing a refrigerator only. Given these savings benefits, the stakeholder suggested that refrigerator only models be included in the scope of the Most Efficient program.</p> <p>Similarly, another stakeholder stated that there is no justification for excluding all-refrigerators and freezers from the Most Efficient program.</p>	<p>EPA specified that all-refrigerators are not currently eligible for Most Efficient recognition after noting that the majority of high-efficiency refrigerators are modular columns, designed to be used with a separately-sold refrigeration unit (e.g., freezer or wine chiller). While EPA commends the high efficiency of these units, given the likely energy use of the installed refrigeration system, EPA believes they are not a good fit for the Most Efficient program. EPA does not have data on how many consumers purchase and use a refrigerator only (no freezer), but believes it is likely a small fraction of the market.</p>

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<p>One stakeholder supports the new proposed annual energy use cap of 481 kWh/year, which just captures all of the Top Ten extra-large models. With the previous ENERGY STAR Most Efficient 2011 cap of 403 kWh/year, none of the TopTen USA extra-large refrigerators would have been recognized. The stakeholder supports the concept that efficiency standards should be more stringent for large refrigerators. Whereas the current ENERGY STAR specification requires refrigerators to be 30 percent more efficient than the federal standards, refrigerators above a certain size would be held to a higher percentage improvement above the federal standard in order to be recognized as Most Efficient.</p> <p>Conversely, another stakeholder recommends that separate maximum energy thresholds be established for each refrigerator product type, in lieu of establishing a maximum energy consumption ceiling that applies to all refrigerator product types. The stakeholder applauds the intent of EPA to increase leniency on maximum annual energy consumption for larger refrigerator freezers to allow more of models to achieve Most Efficient status. However, the stakeholder recommends that separate maximum kWh caps be established for each refrigerator product type. For instance, for side-by-side refrigerator-freezers with through-the-door ice, which represent roughly 25% of the market, the stakeholder suggests that EPA consider establishing the new maximum threshold at 473 kWh/year (as opposed to 481kWh/year) since 3 of 8 third party certified ENERGY STAR side-by-side refrigerator-freezers would meet Most Efficient. Ultimately, ENERGY STAR should encourage manufacturer innovation in this large market by setting the bar equally high for each of these refrigerator-freezer types. To ensure that 'Most Efficient' represents only the top models available, this stakeholder recommends that EPA revisit the maximum energy consumption cap on a product-type basis for refrigerators.</p>	<p>EPA appreciates this feedback on the changes proposed to the refrigerator-freezer eligibility criteria for the 2012 pilot period. A goal of the Most Efficient program is to recognize products with truly superior energy performance, irrespective of configuration. The approach of establishing a separate caps for different product types/configurations is not consistent with this goal. Further, EPA believes the proposed approach strikes an important balance, i.e. being stringent enough to credibly designate truly top performing refrigerators while establishing a reasonable target for manufacturers of more energy intensive configurations to strive for. If Most Efficient continues past 2012, EPA will plan to further consider how the approach of establishing criteria for different configurations fits within the program as it evolves out of a pilot program.</p>
<p>One stakeholder suggested that the product classifications used in the recognition criteria for refrigerator-freezers should be exactly consistent with the most recent version of DOE's regulation (10 CFR 430.32), including any clarifications in the agency's recently promulgated Final Rule (76 Fed. Reg. 57516) that are applicable. By citing DOE's regulations there will be no confusion over which products are included or not included, such as all-refrigerators, basic refrigerators, automatic or manual defrost products.</p>	<p>The proposed recognition criteria for refrigerator-freezers use the product classes currently found in the ENERGY STAR Version 4.1 Residential Refrigerator and Freezer Program Requirements. While EPA is not aware that the current Version 4.1 product class descriptions have caused any confusion in practice, in response to this comment, EPA has incorporated additional clarification to the recognition criteria that unless otherwise noted, a refrigerator-freezer product class is assumed to have automatic defrost.</p>

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<p>A set of stakeholders believes that there is an unintended consequence as a result of the criteria proposed for refrigerator-freezers. The industry group commented that EPA's proposed recognition criteria for refrigerator-freezers will make it extremely challenging for products with through-the-door ice to obtain the Most Efficient designation. Refrigerator-freezers with through-the-door ice have a higher measured energy under the DOE test procedure than products without that feature because, due to their design, they have a higher heat leak. And the impact of that heat leak on measured energy is greater under the test conditions than it is in the field due to differences in ambient temperature (90 degrees Fahrenheit under the test procedure as compared to an estimated average of about 70 to 75 degrees Fahrenheit in a consumer's home).</p> <p>These stakeholders also note that it has long been industry's position that in practice, refrigerator-freezers with through-the-door ice (and water) make it so that consumers open the refrigerator or freezer door less frequently. This difference between products with and without through-the-door ice is not accounted for in the refrigerator/freezer test procedure, which is a closed door test, meaning that it does not incorporate door openings. Door openings contribute significantly to energy use in the home. DOE's energy efficiency standards for refrigerator-freezers recognize these design differences and test procedure limitations through less stringent standards for products with through-the-door ice than for products without that feature. This stakeholder group commented that EPA should encourage consumers to open and close the refrigerator or freezer door less frequently because that behavior ultimately uses less energy. Accordingly, the stakeholders recommend that EPA set eligibility recognition levels for refrigerator-freezers with through-the-door ice that are more lenient than those proposed so that those products may be designated as Most Efficient. Another stakeholder similarly expressed general concern that there are no separate criteria for through-the-door ice refrigerators.</p>	<p>For 2012, EPA has eased the eligibility requirements for refrigerator-freezers. These new criteria recognize a number of highly efficient models, offered by different manufacturers, with through the door ice. EPA welcomes stakeholders to share data that would enable the Agency to further consider how the presence of through the door ice affects energy use. EPA agrees with the comment that consumers may open the door less frequently if they have through the door ice, but also notes there may be additional usage patterns that should be accounted for, such as the frequency and volume of ice/water used. EPA also notes that stakeholders may want to recommend changes to the test procedure so that any difference in energy use associated with through the door ice can be considered and further characterized through testing.</p>