NRDC Comments on EPA's ENERGY STAR Most Efficient 2020 Proposed Criteria

August 22, 2019

On behalf of the Natural Resources Defense Council (NRDC) and its more than 3 million members and online activists we respectfully submit the following comments on the EPA ENERGY STAR's proposed criteria for the Most Efficient 2020 label. NRDC has been a longtime supporter of the ENERGY STAR program and continues to strongly support the complimentary ENERGY STAR Most Efficient specifications and label for selected product categories. Below we offer general comments on the Most Efficient program and proposed Most Efficient 2020 criteria for some of the product categories.

General Comments on the Most Efficient Program

NRDC strongly supports the continuation of the Most Efficient program. The ENERGY STAR Most Efficient program fills an important role in identifying the best of the best products (roughly the top 5% of the market). The Most Efficient designation provides valuable information to early adopters of highly efficient products, who may be motivated by their environmental benefits. These early adopters play an valuable role in shifting markets towards greater efficiency and the Most Efficient label is an important tool to influence their purchasing decisions. In addition, having a set of recognized higher efficiency levels often serve as a clear target for leading manufacturers to pursue and in some cases, utilities offer higher incentives for products that meet the Most Efficient requirements. This jump starts sales of these very efficient models, can drive down production costs and pave the way for future adoption as Energy STAR specs, resulting in even greater unit sales, energy and carbon savings.

NRDC supports EPA's ongoing commitment to review and update, where warranted, the Most Efficient criteria for each product category annually. Having up to date specifications that continue to reflect the top performers is important to develop and maintain the strength of the Most Efficient brand. EPA should continue to update the levels each year as appropriate to keep the specifications fresh and to selectively add additional product categories in the future.

Comments on Proposed Specifications

Mandatory Refrigerant Reporting

Several of the product categories included in the Energy Star Most Efficient 2020 proposal include refrigerants – central air conditioners and air source heat pumps, room air conditioners, clothes dryers (heat pump models), geothermal heat pumps, and refrigerator/freezers. These refrigerants often have very high global warming potential (GWP) that might be released into the environment, either during the product's usage or disassembly.

For products that include refrigerants, manufacturers should be required to report the name and GWP of the refrigerant used and for ENERGY STAR to include this information in their searchable on-line

qualified products database. EPA currently proposes that refrigerant reporting be included as an option but given the importance of encouraging and supporting low GWP products to reduce the worst impacts of the climate crisis, reporting should be a mandatory requirement. This way purchasers who are interested in selecting models with low GWP refrigerants can easily search for them.

This new reporting requirement does not pose a burden to manufacturers as they already know the type of refrigerant, and its GWP, contained in its products and no product testing by the manufacturer would be required.

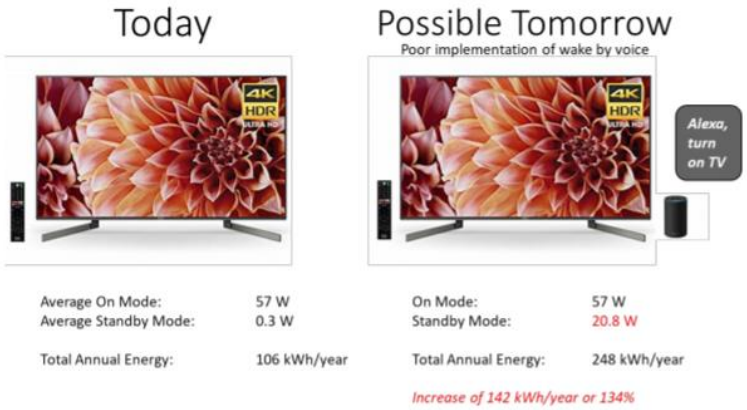
Residential clothes dryers

NRDC recommends ENERGY STAR move towards a technology neutral, performance-based approach that would apply to all clothes dryers covered by Most Efficient criteria. (Discontinue current practice of setting different efficiency targets for electric or natural gas-powered dryers.) The performance criteria should require performance equivalent to that delivered by a heat pump dryer. The levels and test method should be set in such a way that hybrid heat pumps (meaning the dryer can perform in both heat pump and conventional drying modes) would also be able to qualify.

This approach will drive additional energy savings and paves the way for even greater carbon savings as consumers shift from natural gas powered and conventional electric models to super efficient electric heat pump models that are powered by electricity that is getting cleaner over time as the power sector incorporates higher levels of renewables.

Televisions

Recent testing by NRDC and its consultant, Pacific Crest Labs, found that standby power levels for TVs can skyrocket from typical levels of <0.5 Watt to around 20 Watts for certain TV models when the TV is linked to a smart speaker (e.g Amazon Echo, also known as Alexa, or Google Home). In this case, the user can wake and control their TV through their voice, avoiding the hassle of finding and using their remote control. This feature is likely to be found in 2020 model year TVs and beyond, with higher enabling rates as more users learn about this compelling feature. Unfortunately, this high level of standby power use can result in a doubling of the TVs overall energy use as illustrated in the example below. (For more information, see our report.)



As some manufacturers have already launched TVs that have standby power levels around 1 Watt with this feature enabled, we encourage EPA to incorporate criteria that would require TVs capable of supporting voice control for no more than 1 to 2 watts. EPA could quickly develop a supplemental standby power test that requires the feature to be enabled and for the tester to measure the standby power after the device has been connected to a specific Amazon Echo and Google Home model. The smart speaker and TV would both be connected to a live internet connection. (note the high standby power levels we saw are due to the way the TV was designed and not the design of the smart speaker.)

We think it would be totally inappropriate for a TV model that has poor implementation of this wake by voice feature to qualify for ENERGY STAR Most Efficient. If left unaddressed, some consumers would unknowingly be purchasing a model with the ENERGY STAR Most Efficient model that uses twice as much annual energy as other models on the ENERGY STAR Most Efficient QPL or worse yet, much higher annual energy levels than models that don't even qualify for ENERGY STAR. In the above case, the consumer might be saddled with almost $200 dollars of additional electricity costs over the TV's 10 year life due to the unnecessarily high standby power levels their TV consumed when it's just sitting there waiting for a command from the smart speaker.

Absent the limited testing done by NRDC/Pacific Crest Labs, there is no public information available about TV standby power levels when linked to smart speakers. <u>As such, its critical for ENERGY STAR to request testing and reporting of this data, and to establish criteria that ensure the new TVs that are connected to a smart speaker (or have this feature built directly into the TV itself) achieve the low standby levels that are readily achievable through effective power management.</u>

Heat Pump Water Heaters

Electric heat pump water heaters provide dramatic energy savings, lower utility bills and the potential for significant carbon savings when compared to conventional or tankless natural gas water or electric resistance water heaters. The efficiency levels for electric heat pumps in ENERGY STAR's current hot water heater specification are not very ambitious and we encourage EPA to update those levels and/or to establish an ENERGY STAR Most Efficient category for heat pump water heaters.

As water heating represents one of the biggest remaining energy uses and potential energy savings in the home, we urge EPA to evaluate its options in advance of developing the draft criteria for ENERGY STAR Most Efficient 2021.

Refrigerators

NRDC supports maintaining the efficiency criteria specified by EPA for refrigerators. The Most Efficient criteria or side-by-side and bottom freezers are aligned with the Consortium for Energy Efficiency (CEE) Tier 3 standard. We also support the addition of a Most Efficient designation for freezers and compact refrigerators and freezers, as proposed by EPA.

We appreciate the opportunity to submit these comments and please do not hesitate to contact me directly at nhorowitz@nrdc.org if you wish to discuss them further.

Sincerely,

Noah D. Horowitz