Summary and Response to Stakeholder Comments Recieved on the
ENERGY STAR Program Draft 2 Version 1.0 Clothes Dryer Specification that are addressed by the Supplemental Proposal

REF NO.	Topic	Comment Summary	ENERGY STAR Response
1	Automatic Termination	Supports EPA's decision to remove the automatic termination criteria as testing dryers using Appendix D2 of the DOE test procedure will incentivize manufactures to design their products with automatic termination.	As discussed in the supplemental proposal, EPA agrees that using Appendix D2 will recognize products with more effective automatic termination controls, providing an incentive for manufacturers to design sensor/controls that reduce waste energy at the end of the cycle that over dries clothes.
2	Drying Time	What is the variation, if any, of the procedure proposed by DOE for the measuring and reporting of drying time? Stakeholder notes that It is important that the variation be minimal in order of the drying time to have any value to consumers.	DOE's testing of 19 clothes dryers (with 3 repeat tests for each dryer) conducted as part of the most recent test procedure rulemaking showed that the average cycle time was approximately 42 minutes for the Appendix D2 test method, and the variation in cycle time for a given dryer (expressed as percent standard deviation) was on average 2.85%. DOE believes this variation is minimal and is not considering changes to the test method for measuring the drying time.
3	Drying Time	Lab testing has shown clothes dryer efficiency can be dramatically improved by turning down the heat and lengthening the drying cycle time. The inherent relationship between clothes drying efficiency and low-heat, longer drying cycles opens up a significant opportunity for manufactures to achieve an ENERGY STAR rating while delivering very little in the way of real energy savings in the field. EPA could mitigate the gaming potential in its specification by adopting the CA IOU recommendation to have a time dependent CEF energy efficiency levels.	Test data shared with EPA indicates that significant efficiency gains (at least 25-30%) could be achieved with conventional clothes dryers through little modification other than lower-heat and longer cycles. However, this could come at the expense of significantly longer drying times—approximately two hours—over twice as long as the 'normal' cycles that most consumers use today. In order to address this concern in as straightforward a manner as possible, EPA is re-introducing a maximum drying time requirement, i.e. a certain amount of time to complete the cycle tested under the U.S. Department of Energy (DOE) test procedure in 10 CFR Part 430 Appendix D2 (herein Appendix D2). EPA acknowledges there is limited data available on what consumers will find to be an 'acceptable' dry time for most loads, or on the difference in dry time of the test load in Appendix D2 and a typical consumer load. Given this, the objective for this proposal is to identify a time that is long enough to accommodate various drying technologies and afford manufacturers
4	Drying Time	Supports EPA's proposal to remove the drying time requirement as written in Draft 1 noting it could hinder the adoption of advanced clothes dryer technology, and supports the Draft 2 proposal to require the reporting of drying time. Stakeholder further encourages EPA to investigate the issue of extending drying time for the purposes of meeting ENERGY STAR certification criteria presented by Ecova on behalf of the California IOU's.	

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5	Drying Time	Agrees with EPA's proposal to replace the drying time requirement in Draft 1 with a requirement to report drying time under the automated termination procedure, noting that gathering drying time will enable EPA to gain an understanding of efficient dryers' performance.	maximum flexibility, while maximizing consumer acceptance of efficient cycles. EPA's data set shows that the average cycle time under Appendix D2 is 45 minutes for conventional dryers and 83 minutes for heat pump dryers (with a range from 64 to 107. EPA is proposing a 80 minute maximum cycle time and is seeking stakeholder input on this proposal.
6	Alternative Approach to Specification	Recommends that EPA consider a sloped specification line, for full sized dryer products, that is dependent on product cycle time in order to prevent units from meeting ENERGY STAR criteria by only extending the length of the cycle rather than adopting energy efficient technology.	
7	Test Method	Strongly opposes referencing Appendix D2 as the test procedure for ENERGY STAR qualification in Version 1.0, instead proposing that EPA reference Appendix D1. Stakeholder does not support EPA utilizing a test method that varies from the approach being taken by DOE to regulate products and notes that the early use of Appendix D2, while allowed by DOE, is not in the spirit of DOE guidance on early use noting that required use of Appendix D2 is 6 to 9 years early. Stakeholder is also concerned over the potential for consumer confusion as certification data is available on the ENERGY STAR website and on the DOE certification database. In comparing the two data sets consumers may note that the reported CEF values are drastically different.	EPA's proposal to update the test method reference in the Draft 2 specification was developed through careful consideration. As noted in Draft 2, the test better reflects the way consumers use the clothes dryers, will more accurately measuring energy consumption, and allows for greater differentiation among models. The Appendix D2 test results have also shown that the relative efficiency of models can change in a substantive way when the cycle is permitted to run until the automatic cycle most commonly used by consumers, terminates. This—absent a way to separately identify dryers with better automatic termination controls—necessitates use of Appendix D2 in order for ENERGY STAR to effectively differentiate models. While some stakeholders have noted the potential the possible use of two test methods to create consumer
8	Test Method	Strongly supports the use of Appendix D2 as the basis for ENERGY STAR certification concluding if EPA were to revert to using Appendix D1 there would be no utility-based efficiency programs or initiatives.	

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9	Test Method	Supports the Draft 2 proposed use of Appendix D2 for measuring clothes dryer energy consumption, noting that the use of this test method will support the development of a robust market of qualified clothes dryers with a range of different performance levels, technologies, and price points. The stakeholder further supports EPA in harmonizing all ENERGY STAR program designations to measure performance using Appendix D2 of the DOE test procedure.	potential the possible use of two test methods to create consumer confusion, EPA believes the likelihood is small as clothes dryers energy use or efficiency is not communicated on the retail floor and online in any standardized method due to the lack of an EnergyGuide labeling requirement. In fact, broader use of Appendix D2 would create greater standardization and thereby may reduce consumer confusion resulting from the prevalence of different manufacturers' marketing claims about dryer and/or paired laundry energy-savings that often depend upon assumptions noted in fine print, making them more difficult for consumers to understand and compare consistently. While there are publicly available sources of U.S. dryer energy efficiency data available online (e.g. the DOE Certification Database and the California Energy Commission Appliance Database), these data sets are not necessarily geared to a typical consumer. EPA believes that consumers are ultimately best served by an easy-to-use label that reflects the effectiveness of auto termination. That said, EPA welcomes further feedback with specific information that should be considered during this specification process.
10	Test Method	Stakeholder supports EPA's proposal to use the Appendix D2 test method, but notes that the Appendix D2 test method results in measuring significantly more energy consumption due to the change in final RMC (2% versus 5%), therefore, is recommended that EPA perform additional analysis regarding the proposed levels in Draft 2 Table 1 before finalizing.	
11	Test Method	Stakeholder supports EPA's decision to use Appendix D2, as the stakeholder notes that the procedure relies on automatic termination, which represents an extremely cost effective and consumer-friendly method of saving energy by reducing wasted energy at the end of the drying cycle.	

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12	Alternative Approach to Specification	Recommends requiring products be tested in multiple modes to ensure that energy savings promised by ENERGY STAR are preserved in day-to-day operations which utilize different operational settings based on load size and composition. Stakeholder recommends the use of a 'fast', 'medium', and 'slow' mode for multiple mode testing, with each mode have efficiency requirements reflecting energy efficient performance in that mode	EPA has considered stakeholder concerns about the potential consumer use of alternate, shorter, more energy intensive cycles. The Agency believes an important first step is to track the extent to which products are providing consumers with faster cycle setting to dry a typical load and if so, what the associated energy use and drying time is. This will provide some information about the consequences of consumer using shorter, more energy intensive cycles instead of the default cycle tested in Appendix D2. To this end EPA is proposing that manufacturers test and report the per-cycle energy consumption and duration of the manufacturer-defined fastest cycle, if different than that tested under Appendix D2. EPA is seeking stakeholder feedback on this proposal.