

Topic	Subtopic	Comment	Response
Certification	Different Versions	<p>Two commenters requested that language be added to allow models to continue using test results from Versions 1.1/1.2 for qualification under Version 2.0 if the following conditions are met, to reduce testing burden:</p> <ol style="list-style-type: none"> <li>1) The changes to the test method from the previous version to the current do not have substantial effects on the energy consumption of the model; and</li> <li>2) The model meets the requirements of both Version 1.2 and Version 2.0 specifications.</li> </ol>	<p>Although in response to comments on the Draft 2 specification, EPA stated that the "test method has changed significantly from Version 1.2 . . . such that past results cannot be used to certify performance to the Version 2.0 specification", whether to certify products is under the discretion of the Certification Bodies.</p>
Definitions	A3 Adder	<p>Two stakeholders requested a definition for A3 and A4 products. One of them recommended that "standard format" be removed and replaced with separate definitions for A3/Ledger and A4/Letter.</p>	<p>EPA has included definitions for A3-capable products in the specification.</p>
Definitions	DFE	<p>A stakeholder asked about an EPA response to a Draft 2 comment, where EPA stated that ENERGY STAR requirements do not apply to DFEs sold separately from Imaging Equipment products. Another stakeholder asked to clarify the meaning of "optional accessory" in the Type 1 DFE definition and if "optional" DFEs would be required to meet the DFE criteria. Assuming "optional" DFEs are those "considered as optional DFEs on the price list", the stakeholder recommended excluding them from scope and reverting to Version 1.2 DFE definitions.</p> <p>Similarly, another stakeholder asked EPA to clarify what constitutes "time of purchase" when considering which DFEs are sold with an Imaging Equipment product and what happens if a DFE is bundled with an Imaging Equipment product in a manner not intended by the manufacturer.</p> <p>One of above stakeholders requested the sentence in the Type 1 definition that explains how a DFE is sold be removed entirely.</p>	<p>The ENERGY STAR Imaging Equipment program covers only Imaging Equipment—i.e., the DFEs sold with a Imaging Equipment affect the Imaging Equipment's qualification and are not themselves subject to certification and labeling. Therefore, any DFEs sold apart from Imaging Equipment or sold with non-qualified Imaging Equipment are not subject to the DFE requirements in the specification; however, once these same DFEs are sold together with Imaging Equipment, the DFEs must meet the requirements for the Imaging Equipment model to be qualified.</p> <p>To avoid ambiguity, EPA has removed the word "optional" from the Type 1 DFE definition and further specified in Section 3.2.4 DFE Requirements that these apply only to DFEs "sold with an Imaging Equipment product at the time of sale".</p>
Reporting	Qualifying and Reporting Multiple DFEs	<p>A stakeholder provided a proposal for reporting multiple-DFE configurations: Type 1 DFE data can be reported separately from the Imaging Equipment while the data for the highest power consuming Type 2 DFE (that can be integrated into a product) should be reported with the model. This could allow for multiple Type 1 DFEs to be associated with a model because a customer could look up the power consumption of a given Type 1 DFE, without requiring changes to the test method or test reporting template.</p> <p>Another stakeholder, responding to EPA's modified proposal to require reporting of test results for the highest energy-using DFE/Imaging Equipment combination, commented that a high-performance DFE with high Ready and Sleep Mode power may speed up the processing of a job resulting in lower overall energy consumption for the DFE/Imaging Equipment combination. A third stakeholder commented that after a DFE has been tested once, the results could be associated with another Imaging Equipment model without further testing and that DFE test results should not be certified by a Certification Body (CB).</p> <p>Furthermore, one stakeholder asked whether a DFE and Imaging Equipment model must be tested and certified together and whether a non-qualifying DFE, when added to a previously-certified Imaging Equipment model, would affect the certification of that model.</p> <p>Lastly, another stakeholder requested that EPA clarify which DFEs must be tested.</p>	<p>EPA has modified the Specification such that only the highest energy using configuration of Imaging Equipment and Type 1 DFE (and optionally Type 2 DFE) needs to be certified. Additional Type 1 DFEs sold with the Imaging Equipment can be included in the product family represented by the tested configuration by only providing test data on the DFE itself—i.e., without any testing with the qualified Imaging Equipment product and without the need for additional certification.</p>

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Definitions	Product Family	<p>A stakeholder supported the Product Family definition and supporting notebook but proposed a clarification to the specification that if there is a change to a product that could lead to higher power consumption, then the product would need to requalify.</p> <p>Another stakeholder urged EPA to add an "as shipped" requirement for testing because a non-manufacturer could add energy consuming components to a product after installation, which would require requalification. However, these after-market changes cannot be controlled by the manufacturer and should be excluded from requirements.</p>	<p>Section 4.2, Number of Units Required for Testing, specifies that the representative model for qualification of a product family shall be the highest energy using configuration; an even higher energy using configuration would therefore invalidate this requirement and require further testing. Therefore, further changes to the requirements to clarify this situation are not necessary.</p> <p>Section 7.1.A)1)a) of the Test Method specifies that all accessories shipped with the product be installed for test. Although the test method has been finalized and cannot be changed to provide further clarification, EPA intends that models be tested with the base product and any accessories that constitute the particular model, per the definition of Product Model. After-market modifications will not affect qualification of the model</p>
Items for Future Consideration	Dataset	<p>One stakeholder requested that the dataset for analysis be agreed upon from the start of the specification process or that published data from the US, EU, and Japan be used. Furthermore, the stakeholder requested that treatment of the following issues be handled carefully in future specification revisions:</p> <ul style="list-style-type: none"> <li>- errors in the dataset;</li> <li>- duplicate data and models;</li> <li>- treatment of product families, OEM products, and non-qualified products.</li> </ul>	<p>EPA focuses its analysis on models available in the US, but did involve stakeholders in the development of the Version 2.0 dataset (e.g., by asking for non-qualified models) and intends to do so for this and other product categories in the future.</p> <p>EPA will also continue to update the dataset to address any issues identified by stakeholders such as duplicate entries and errors.</p>
Items for Future Consideration	DFE Power Supplies	<p>A stakeholder suggested that EPA set requirements for Type 2 DFE power supplies in a future revision of the specification.</p>	<p>EPA will consider DFE power supply requirements upon development of a suitable test method.</p>
Items for Future Consideration	Duplexing	<p>One stakeholder suggested that EPA signal a future intention to place requirements for integral duplexing on all products above 26 ipm.</p>	<p>EPA will evaluate the relevance of the duplexing requirements in a future specification revision.</p>
Items for Future Consideration	Professional Products	<p>One stakeholder supported EPA's proposal to separate Professional Products.</p>	<p>EPA thanks the stakeholder for the comment.</p>
Items for Future Consideration	Remanufactured Products	<p>One commenter requested recognition of remanufactured models in the next version because these models can reuse parts and materials through recycling technologies thus reducing CO<sub>2</sub> emissions.</p>	<p>EPA welcomes data quantifying the benefits of remanufacturing.</p>
Items for Future Consideration	Requirement Limits	<p>A stakeholder recommended that EPA reconsider the 25% market penetration criterion and that the requirements for some product categories, such as Mono Non-MFD, cannot be reduced further in pursuit of the 25% criterion.</p> <p>Another stakeholder questioned the potential for further improvement in the OM categories, for example Mailing Machines.</p>	<p>EPA will review the performance of Imaging Equipment products once Version 2.0 takes effect. Any further revision to the specification will continue to be informed by the ENERGY STAR guiding principles:</p> <ol style="list-style-type: none"> <li>1. Significant energy savings can be realized on a national basis.</li> <li>2. Product performance can be maintained or enhanced with increased energy efficiency.</li> <li>3. Purchasers will recover their investment in increased energy efficiency within a reasonable period of time.</li> <li>4. Energy-efficiency can be achieved through one or more technologies such that qualifying products are broadly available and offered by more than one manufacturer.</li> <li>5. Product energy consumption and performance can be measured and verified with testing.</li> <li>6. Labeling would effectively differentiate products and be visible for purchasers.</li> </ol>
Items for Future Consideration	Wakeup	<p>A stakeholder commented that wakeup time should be considered in a future specification revision after its measurement has been specified in a future revision to the test method.</p>	<p>EPA welcomes future suggestions on measurement of and requirements for wakeup time.</p>

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Items for Future Consideration	TEC Requirements	One stakeholder commented that a statement should be included regarding a commitment to collapsing the TEC groupings to provide incentive for improving energy efficiency; while another supported decoupling the TEC groupings (e.g., requirements for color MFDs independent from those for mono MFDs).	EPA will consider revising the structure of TEC requirements to provide further incentives for energy efficiency.
Items for Future Consideration	Default Delay Time	One stakeholder noted that Standard and Small Format products have short recovery times and therefore the Default Delay Time should be shortened in future specifications. Another stakeholder requested that EPA insert less-than-or-equal-to symbol ( $\leq$ ) in front of the Required Default Delay Times listed in Table 6 (Required Default Delay Time to Sleep for OM Products) to indicate that these values represent the limit on the default delay time, instead of a mandated value.	EPA has added a footnote to the Requirements Table to avoid confusion and will consider revising the requirement names further in a future specification.
OM Requirements	DFE Standby Mode	One stakeholder requested an explanation of the measurement method for the "standby mode of the DFE".	Section 3.4.2 references the Standby Mode power and Standby requirements of the Imaging Equipment product itself, not the DFE. There are no measurements or requirements for Standby Mode power in DFEs.
OM Requirements	OM DFE Requirements	One stakeholder requested explicit consideration for Type 1 DFEs in the OM requirements, like there is for Type 2 DFEs.	EPA has not included explicit consideration for Type 1 DFEs in OM products, because Type 1 DFEs are already naturally excluded from the OM Sleep Mode measurements because they can be disconnected during OM testing.
OM Requirements	Power Supply Efficiency	One stakeholder suggested that when accounting for power supply losses, the power measured in each mode of the DFE, and not just the Ready Mode, be divided by the assumed 0.6 internal power supply efficiency.	EPA has clarified that if subtracting the Ready Mode power (divided by 0.6) produces negative results, then the Sleep Mode power (again divided by 0.6) shall be subtracted instead, as the DFE must have gone to sleep during the period of Sleep Mode measurement.
OM Requirements	Sleep Mode Requirement	One stakeholder questioned the 2.5 W base allowance for scanners, which was based only on an analysis of qualified models since 2010. Another stakeholder noted that the base allowance for non-Ink Jet MFDs is higher than for Ink Jets, while for Printers the relationship is reversed.  Another stakeholder noted that EPA set the base power allowance levels to achieve a qualification rate of 30/35% rather than the typical 25% and commented that the base allowances should be lowered for Standard and Large Format Ink Jet Printers and MFDs and non-Ink Jet Printers.  Furthermore, the stakeholder expressed concern about using adders because it can be difficult to distinguish between general functions across a product group and brand-specific functions.	The Unit Shipment and Market Penetration Report Calendar Year 2010 Summary indicated that 99% of scanners shipped were ENERGY STAR qualified. EPA therefore based its analysis on qualified model data only, resulting in the 2.5 W base allowance.  Similarly, the allowances for MFD and Printers were based on the range of efficiencies available in the dataset and the differing allowances for Ink Jet and non-Ink Jet models are indicative of the efficiencies of models with these marking technologies in the market.  Lastly, EPA used a 30% qualification rate rather than 25% for setting the Version 2.0 requirements for OM to cushion against the uncertain effects of changes in the test method.
OM Requirements	Standby Power Consumption	A stakeholder suggested including a Standby Power consumption requirement corresponding to proposals from the European Ecodesign regulation, namely 4 W starting in January 2014 and 2 W starting in January 2016, supplemented by power management that automatically switches the product into Networked Standby after 20 minutes or less.	The Version 2.0 specification has similar requirements for OM products, including Sleep and Standby Power and Default Delay Time. There were no further changes to the proposed requirements in the Final Specification.
OM Requirements	Typographical Error	One stakeholder noted that there were two sections numbered "3.4.2".	EPA has corrected this error in the Final Specification.

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Recovery Time	Reporting	<p>One stakeholder noted that Active1 (Imaging Equipment recovery time from Sleep Mode, collected through the TEC test method) is the most important value for a consumer and proposed reporting only the Active1 time on the Qualified Products List. However, another stakeholder noted that Active1 "may be seen only 1x per day and is usually rarely experience by the customer".</p> <p>Alternatively, the first stakeholder recommended reporting a simple average of the three recovery times from various modes: Active0, Active1, and Active2. Several other stakeholders, however, requested that Active0, Active1, and Active2 be reported individually instead of as an average because the result would be confusing.</p>	<p>Based on stakeholder comments, EPA will report Active0, Active1, and Active2 times individually on the qualified product list.</p>
Reporting		<p>A stakeholder commented that the Version 1.2 QPL remain active for 6 months after the Version 2.0 effective date.</p> <p>The stakeholder further commented that due to Federal Procurement requirements, updates to the Qualified Products List (QPL) and underlying database necessary to track A3 versus A4 models be performed at least 3 months prior to the effective date. Another stakeholder supported the change to the QPL and database and further requested that EPA give guidance to CBs on identifying A3 and A4 products.</p>	<p>EPA will post the qualified products list as it will exist just prior to the effective date on the ENERGY STAR website to maintain an archive of models qualified to Version 1.2 for future reference.</p> <p>EPA has clarified the Version 2.0 specification to indicate that documents shall be identified as either A3 or A4 based on their maximum document width; these fields already exist in the Version 1.2 QPX template and so no further changes to allow qualification to the new requirements are necessary.</p>
Scope	Multiple DFEs	<p>Two stakeholders requested that Section 2.2.2.ii (the exclusion of products sold with multiple DFEs) be deleted because it is not clear whether it includes optional DFEs or not. Most high speed Printers are automatically equipped with a standard DFE and offer additional Type 1 DFEs. This commenter provided three examples of these products to demonstrate their availability in the marketplace. They stated that the power consumption, while the system is in Ready State or Sleep Mode, is the sum of the Ready State or Sleep Mode power for all connected DFEs. They mentioned that there can be a case where an external Type 1 DFE is sleeping while the product and internal Type 2 DFE are in Ready State, but this should not be the reason for excluding multiple DFE configurations.</p> <p>Excluding multiple DFE configurations from the scope will cause a drop in third-party DFE sales because few DFEs are sold after the Imaging Equipment purchase. This is because the purchaser wants a single lease and service plan that covers all aspects of the Imaging Equipment.</p> <p>One stakeholder, however, supported the exclusion of products sold with multiple DFEs because of the lack of data. The stakeholder suggested revising the exclusion language to apply to "Products designed for and sold with multiple DFEs" to prevent confusion.</p>	<p>EPA has removed the exclusion of multiple DFEs from the final specification based on the prevalence of Imaging Equipment sold with multiple DFEs in the marketplace.</p>
TEC Requirements	Dataset Errors	<p>Several commenters requested that the dataset be revised to include the QPL from December 12, 2012, to eliminate erroneous data and that Table 5 (TEC Requirements) be adjusted based on the resulting analysis, though even after EPA reanalyzed the dataset, the commenters noted that the dataset still contained errors.</p> <p>Other stakeholders provided examples of duplicated and inaccurate data on the QPL, requesting they be removed.</p>	<p>EPA reanalyzed the dataset based on data from the February 4 QPL. The analysis of this updated dataset did not change the analysis results; the TEC requirements therefore remain unchanged—with the notable exception of the A3 allowance, discussed below.</p> <p>Although the February 4 qualified product list may still contain some erroneous models, EPA did not correct these errors, as there were total number of 12 errors out of a dataset of thousands of models.</p>

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TEC Requirements	Duplexing	<p>Several stakeholders noticed that the titles of Table 3 and Table 4 seemed to be reversed and commented that this should be corrected.</p> <p>One commenter proposed that manufacturers be allowed to select the method of communicating that an Imaging Equipment model will require an additional duplexing tray to meet the duplexing requirement.</p> <p>Another stakeholder supported the duplexing requirements and suggested that they not be relaxed any further.</p>	<p>EPA has clarified the titles of the duplexing requirement tables in the Final Specification but has not changed the requirements themselves. Furthermore, the language that manufacturers shall use to communicate that an Imaging Equipment model will require an additional duplexing tray to meet the requirement had been previously negotiated and has not been discussed during this specification revision. Therefore, it is too late for EPA to make any changes.</p>
TEC Requirements	TEC Requirement Levels	<p>Several stakeholders noted that the 0.2 kWh A3 adder allowance was misrepresented as 0.02 kWh. Separately, three stakeholders stated that the qualification rate for A3 products is under 20% and thus this adder allowance should be increased to ensure a 25% qualification rate.</p> <p>However, two stakeholders commented that the pass rates are too high (38% average across all TEC categories) with one commenting that the specification levels should be revised to bring the qualification rates down to 25% by, for example, independently assessing the TEC product groups (i.e., considering more stringent requirements for color MFD than monochrome MFD, etc.). This stakeholder also suggested limiting the A3 adder allowance to monochrome products below, say, 20 ipm, as other products do not need it.</p>	<p>EPA has increased the A3 adder allowance to 0.3 kWh/week throughout the Final Specification per stakeholder comments that certain speeds of mono printers would not be able to qualify. An analysis of stakeholder data and the latest ENERGY STAR dataset revealed that an allowance of 0.3 kWh/week would address stakeholder concerns without significantly increasing overall qualification rates.</p> <p>Although EPA agrees with the stakeholders that pass rates are high in some TEC categories, EPA has not changed the requirements due to the need to finalize the specification.</p>
Testing	Reference	<p>One stakeholder commented that EPA should update the reference to the test method to read "Test Method for determining Imaging Equipment Energy Use Version 2.0 – Final May 2012".</p>	<p>EPA has updated the reference to read "Test Method for Determining Imaging Equipment Energy Use Version 2.0 – Final, Rev. May-2012"</p>
Timeline	Drafts	<p>A stakeholder recommended another draft be released between the Final Draft and the Final Specification.</p>	<p>EPA released a letter on February 15 proposing modifications to the Version 2.0 Specification in response to stakeholder comments. EPA subsequently held a webinar on February 22 and received comments on March 1. EPA hopes these efforts provided stakeholders with sufficient opportunity to provide input on the limited number of issues that were still under discussion, and will not be publishing any further drafts.</p>
Timeline	Effective Date	<p>One commenter suggested that the effective date should be 9 months after the release of the Final Specification, rather than October 2013, while another stakeholder stated that 9 months between finalization and the effective date is too short a time to retest and qualify current and new products, proposing 12 months instead. Finally, a third commenter expressed support for the current timeline.</p>	<p>The effective date of the Version 2.0 Specification will be 9 months after its finalization, which is standard across ENERGY STAR product categories.</p>

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Toxicity and Recyclability		<p>Two stakeholders opposed adding non-energy requirements to ENERGY STAR because it would dilute the brand message.</p> <p>One stakeholder requested further discussions with partners before including the Toxicity and Recyclability criteria.</p> <p>The other stated that the reference to IEEE 1680.2-2012 Section 4.3.1 is confusing because EPA recognizes "a recycler's automated processes" while Section 4.3.1 does not, and furthermore, Section 4.3.1 has two sets of criteria, one required and the other optional. The stakeholder requested an explanation and proposed removing the reference to the IEEE requirements.</p>	<p>While energy efficiency remains the basis upon which top performers are selected, EPA addresses attributes related to other aspects of product performance in ENERGY STAR specifications as applicable to ensure that overall product performance is maintained relative to a non-qualifying product. By including additional attributes, the ENERGY STAR program seeks to avoid associating the label with models of poor quality or models with features that are not compatible with broadly held consumer or societal interests, thereby preserving the influence of the label in the market. In response to stakeholder concern that placement of toxicity and recyclability requirements in the product eligibility criteria could hinder international harmonization, EPA is proposing that these criteria reside instead in the ENERGY STAR Imaging Equipment Partner Commitment document, which is unique to the US market. Further, in response to feedback, EPA notes that it is the Agency's intention to harmonize with EU RoHS and that the toxicity and recyclability requirements are not subject to third-party certification.</p> <p>EPA has also clarified the reference to IEEE 1680.2-2012 in the Partner Commitments to reference only the required portion of the end-of-life requirements, Section 4.3.1.1, and removed mention of "recycler's automated processes", consistent with Section 4.3.1.1.</p>