

General Comments

1. Dataset

As defined in Guiding Principle (published in May 2012), EPA's aim is to establish specification to reflect top 25% of models available on the market when the spec goes into effect. However, the dataset to establish Draft 2 TEC specification includes products introduced as early as 2004, and we believe this dataset would not reflect products in current market place. On the other hand, the dataset to establish Draft 2 OM specification excludes products registered prior to 12/31/2009. RICOH believes it is important to harmonize the scope of such datasets. By considering industry's average sales period (less than 3 years), RICOH recommends removing products registered prior to July 1, 2009, which coincide with the implementation of Version 1.1 of ENERGY STAR Imaging Equipment program.

2. Inconsistency of qualification rates among product categories

When comparing TEC values between print-capable MFD and Printer, due to the fact that test method is identical, TEC values should be comparable (if their engine/platform is the same). However, because MFD and printer have to meet different user needs/requirements, those products are often developed with different engines/platforms (majority of MFD are A3-capable, service technician-replaceable photoconductor/drum, and user-replaceable toner bottle, while Printer are typically limited to A4, user-replaceable all-in-one toner cartridges). Therefore, we support EPA's decision to separate MFD and Non-MFD under Draft 2 specification.

When evaluating products (introduced in the market after July 1, 2009) with the Draft 2 specification, qualification rate for Color MFD is much higher than other product categories (overall qualification rate for color MFD is 70%). We assume this is because MFD spec was designed not to be more stringent than those of non-MFD. However, because they are designed to meet different customer demand/requirements, TEC for MFD and non-MFD should be designed independently, based on "top 25%" guiding principle.

3. Professional products

With its recent popularity growth of on-demand printing, more “professional products” are increasingly purchased by Governments’ printing & copy centers. However, at the same time, not sufficient numbers of “professional products” sold by various manufacturers are meeting Draft 2 specification. While RICOH agrees that we have a room for TEC improvement for general office use products, we believe such professional products should be given more lenient TECmax as current Draft 2 does not take such professional products into consideration (because this is not yet recognized product category). We recommend establishing a quantifiable/verifiable definition of professional products, and creating appropriate “allowance” to accommodate such products. This way, we can establish appropriate specification setting for both general office and professional products.

Technical Comments

Page/Line	Proposed change	Reasons of our change, comments
Page 12 Line 412	RICOH recommends revising TECmax formula for Color MFD as follows: $S \leq 27, \quad 1.5$ $27 < S \leq 36 \quad (S * 0.057) - 0.095$ $36 < S \leq 45 \quad (S * 0.082) - 0.98$ $45 < S \leq 59 \quad (S * 0.139) - 3.62$ $S > 59 \quad (S * 0.427) - 20.72$	Color MFD category has much higher qualification rate (70%) compared with other product categories, based on the products listed on QPL after July 1, 2009. In order to correct this problem, it is necessary to revise the formula for color MFD category to reach for the “top 25%” line.
Page 5 Line 185	Definition for “GPU” should be included in Section 1(E)	In Table 2 (P9), GPU is included in the “category description” section under DFE category B. However, there is no definition for GPU in Section 1 (E), making it difficult to evaluate what is considered as GPU (under ENERGY STAR Computer Specification V6.0, definition for GPU is left as “TBD”).
Page 5 Line 185	Include the following in definition section: 15) Professional products For those TEC products meeting all of the following conditions, we define as a “professional product”: 1. Copy/Print Speed (letter or A4 size ipm): Color-capable product: 60 ipm or higher (color output speed) Monochrome product: 90 ipm or higher 2. Paper Weight Compatibility: Single-sided printing: at least 300 gsm Double-sided printing: at least 200 gsm 3. Print (paper) Size Capable of handling SRA3 (13 inch x 19 inch) paper	By defining professional products separately from general office products, we would be able to establish appropriate specification for each of the categories.

<p>Page 12 Line 413</p>	<p>Requirement for Professional Products:</p> <p>1) TECmax</p> <p>Monochrome MFD/Non-MFD $S \geq 90$ $S * 0.6 - 36.15$</p> <p>Color MFD/Non-MFD $S \geq 60$ $S * 0.75 - 35.05$</p> <p>2) Judgment of TEC</p> <p>The total of the professional product's TEC result and its DFE's TEC result shall not exceed the total of TECmax for professional products and Table2 for DFE.</p> <p>3) Color TEC declaration</p> <p>In addition to TEC values (measured with monochrome printing mode), Professional color products shall declare the TEC measure with color printing mode.</p>	<p>1) To secure sufficient numbers of qualified professional products for procurement, TECmax for professional products should be set separately from general office products.</p> <p>2) Judgment of total TEC (product and DFE) allows manufactures broader design alternatives without sacrificing total energy efficiency of the system.</p> <p>3) Color ratio for Professional color-capable products are around 70%. The actual energy consumption data for color products should be informed to customers. Furthermore, color TEC data can be utilized in the next revision of the ENERGY STAR specification for professional products.</p>
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