Comments on ENERGY STAR Imaging Equipment Eligibility Criteria Draft2 Version2.0

July 30, 2012　JBMIA Copier-MFD technology WG

Line 327:

Request:

Concerning Duplex requirement, please reconsider to revisit Version 1.2.

Reason:

If the optional duplex is not allowed for Energy Star product, the higher price of the product will be forced due to the embedded duplex unit. This is not appropriate for general customers.

Also, manufacturer's product line-up cannot meet user needs without optional Duplex. For instance, some work flow does not match/allow duplex printing. If no optional duplex is allowed, such users are forced to pay for unnecessary duplex function.

Line 412:

The proposed Maximum TEC Requirement for Monochrome Non-MFD seems to assure a certain qualification ratio as a whole. However, in a significant areas, the specified line is determined by the low (=good) TEC values of Copiers (auto-off), Fax and stencil products, whose number on installed base is fairly limited. The methodology of defining one Maximum TEC Requirement for different products with different energy saving characteristics becomes a big problem, particularly where energy saving has advanced so much that there remains almost no room for improvement. Thus the majority of Energy Star EP printers (no auto-off, but sleep) might be forced out of Energy Star qualification. This is not fair. Copier, Fax and stencil products may be energy-efficient but cannot replace the product performance of printers. If the proposed Draft2 limit should be determined, there would be a problem that no user can find a necessary EP printer with Energy Star mark.

Also, examining used data base, it is clear that the share of qualified product against Version1.2 is almost 100%. This, we believe, does not reflect the real situation of the market, i.e. the number of unqualified products is too small, making the Maximum TEC Requirement inappropriately too stringent.

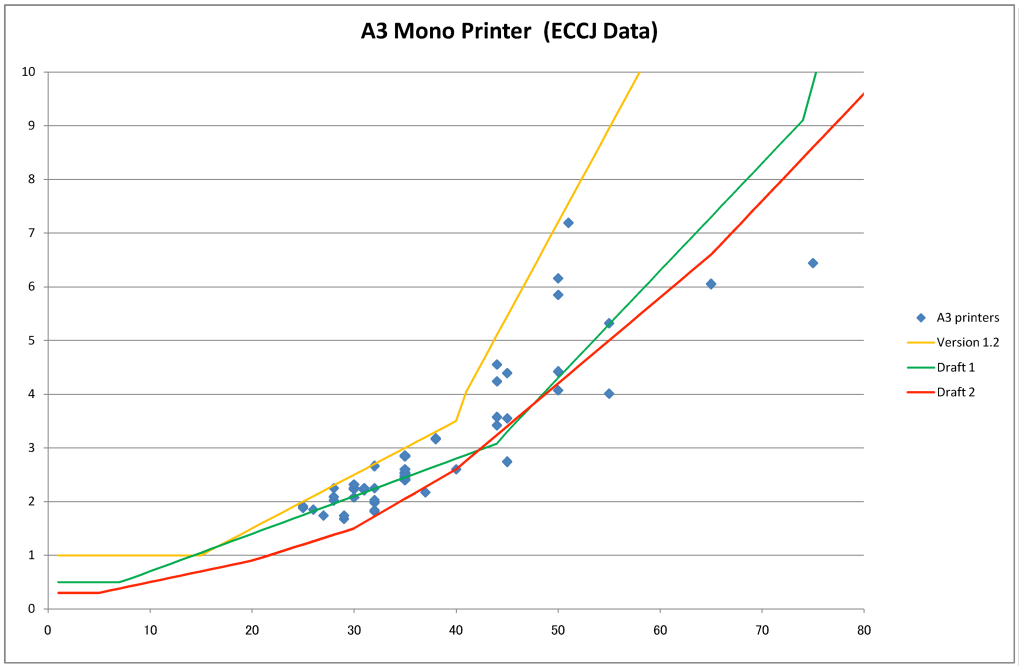
- In the lowest speed area for less than 5ipm only Fax products exist, whose TEC value determines the specification (0.3kWh/week).
- The specified value for high-end products is determined by stencil products, making the Maximum TEC inappropriately severe for EP printers.
- The qualification ratio of EP A3 printers is zero for the speed area 20ipm to 40ipm. This is a symbol problem, which illustrates the too low qualification rate for EP printers in general.

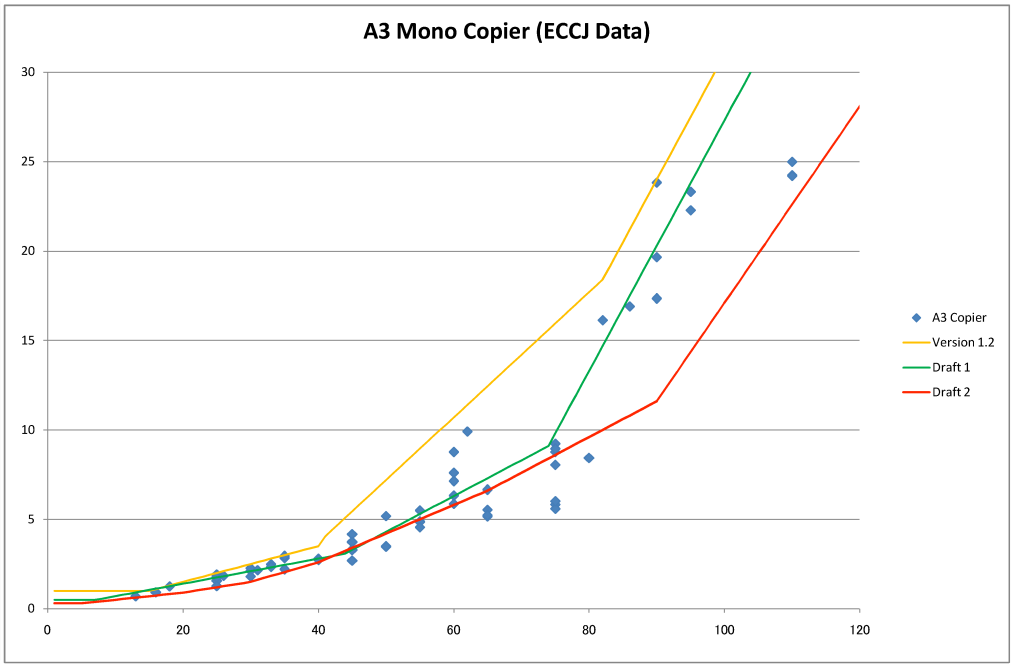
EPA Dataset Qualification Ratio

		Copier		Printer	
ipm	TEC	A3	A4	A3	A4
<5	0.3	-	100%(2/2)	-	-
5<s<20	(sx0.04)+0.1	0%(0/6)	100%(5/5)	-	13%(5/40)
20<s<30	(sx0.06)-0.3	35%(9/26)	100%(1/1)	-	38%(38/100)
30<s<40	(sx0.11)-1.8	25%(5/20)	-	0%(0/4)	18%(16/91)
40<s<65	(sx0.16)-3.8	18%(7/39)	-	33%(4/12)	27%(25/94)
65<s<90	(sx0.2)-6.4	30%(9/30)	-	40%(2/5)	-
90<	(sx0.55)-37.9	20%(1/5)	-	21%(3/14)	-

ECCJ Data Qualification Ratio

		Copier		Printer	
ipm	TEC	A3	A4	A3	A4
<5	0.3	-	100%(4/4)	-	-
5<s<20	(sx0.04)+0.1	0%(0/3)	0%(0/1)	-	100%(4/4)
20<s<30	(sx0.06)-0.3	0%(0/10)	0%(0/2)	0%(0/19)	7%(2/27)
30<s<40	(sx0.11)-1.8	0%(0/9)	100%(1/1)	6%(2/32)	24%(5/21)
40<s<65	(sx0.16)-3.8	33%(8/24)	-	36%(8/22)	0%(0/1)
65<s<90	(sx0.2)-6.4	38%(5/13)	-	50%(3/6)	-
90<	(sx0.55)-37.9	14%(1/7)	-	44%(7/16)	-





Request:

1. EPA is requested to consider modifying the Maximum TEC Requirement toward Draft 1 level.
2. Additionally the lower limit line, which used to be 1.0kWh/week for printers/1.5kWh/week for MFD, should be kept and adopted also for Ver2.0 specifications.

Reason:

1. As stated above, Draft2 specification expels a significant part of A3 printers out of Energy Star qualification. Since A3 printers have distinct features that cannot be covered by A4 printers, the coming specification should be created, so that main A3 printers are included in Energy Star products. See the following tables/figures as to the qualification status of A3 printers.
2. 1.0kWh/week is the energy amount consumed by a printer with 6W in sleep mode only, with no print output. This can be referred to as limit value for EP printers, whose TEC value includes printing energy. The energy efficiency of the product under 1.0 kWh/week is comparable to that of inkjet printers.

   The lower limit line exists in Ver1.1. The coming revision of Japan Energy Conservation Law has adopted the lower limit line of 1.0 kWh/week. Also, revised Blue Angel is going to adopt the lower limit of 1.0 kWh/week to ensure the reasonable qualification ratio for monochrome EP printers.

   The proposed 0.3kWh/week corresponds to what is consumed by a printer with 1.7W sleep mode only, with no print output. This energy consumption may be

attained with Fax products but is not acceptable for EP monochrome printers.

Line 428:

In the response to Draft1 comments, EPA describes Active1 (=First Print Out Time from sleep mode) will replace Recovery Time, since the measured data of Active0 (=First Print Out Time from ready mode) are not reliable. As the measuring procedure, EPA described that Active0 measurement starts from the time where ready lamp is ON. This method may well give rise to unreliable Active0 data. Considering this, JBMIA has proposed an improved method to measure Active0 in the comments on Draft1, as follows:

As EPA has raised the problem in its discussion material on March 11, 2011, there are a number of apparently incorrect data of recovery time. Should recovery time data be provided to consumers, the reliability of the data must be ensured. Since the existing test method is not reliable enough to measure an accurate recovery time, JBMIA has proposed the following revision in the previous comments;

Option1 =Add a note

When a set-up sequence is carried out before the first print after power on, or, when it is ambiguous as to the start point of ready, carry out the second job immediately after the completion of the first job to measure and record time to first sheet exiting unit.

Option2=Modify the description of Step 3 as follows:

According to Table 11, carry out the specified job twice without intervention. The first job is a dummy copying (printing). At the second job, measure and record the time to first sheet exiting unit.

Please consider the above proposal.

By the way, Blue Angel also specifies recovery time. The test procedure to measure the time corresponding to Active0 and Active1 is given there. It is stressed in the text of the standard that recovery time itself is not measureable directly. The recovery time specification of Blue Angel is created based on Energy Star Ver1.1, giving reliable data. The following is an excerpt from Blue Angel Annex document E-M2.

As described in paragraph 1.4.6.3 of the Award Criteria, □ return time is defined as the time required by the device to switch over from an □ electric power saving mode Z_i to ready mode. The return time is to be determined as the difference between

a) the time required by the device to complete a specific print job from □ ready mode Z_a ($t_{print,a}$) and

b) the time required by the device to complete the same print job from the considered □ electric power saving mode Z_i ($t_{print,i}$).

This means: $t_{iR} = t_{print,i} – t_{print,a}$

2. Measurement of the time $t_{print,a}$ (ready mode Z_a):

This time is to be measured starting from step 3 as defined by Energy Star version 1.1b3, table 1. The print job has to be initiated two minutes after the end of the last printing process. Should the device switch over from one idle mode to another exactly at this point in time, the print job is to be initiated a few seconds before this switch occurs.

Request:

1. Active0 time should be measured not relying on ready lamp turning ON. An improvement example is found in Blue Angel specification, which measures Active0 time from the ready state, which appears after the previous printing is completed.
2. The definition of recovery time as Active1 – Active0 (positive value, not negative) should be reconfirmed.

Line 624:

From the stand point of Color Universal Design (CUD), the color specification of IEEE1621 includes problematic color combinations, that color-blind people cannot perceive its difference. Blue Angel RAL UZ-171 has withdrawn the recommendation of IEEE1621 color specification, after examining JBMIA's comment. EPA is requested likewise to delete the recommendation of IEEE 1621 color specification.

http://www.cudo.jp/e/

Line 628:

The period of 9 months between the finalization of Version 2.0 and the effective date is too short. Since all qualified products need retesting, it is easily foreseen that CB's work will be full of retesting and its normal procedure will be retarded. Instead of 9 months, 18 months is necessary.

Request:

EPA is requested to allow registering Version 1.2 with the test results of Version 2.0 Test Method before the Effective Date of Version 2.

Reason:

During the period between October 2012 (Version 2 finalization) and July 1, 2013 (Version2 Effective Date) CB certification according to Version 2 is deemed possible along with CB certification according to Version 1.2., which is effective during this period.

For example, a new product may be tested against Ver1.2 and qualified by CB for attaching Version 1.2 Energy Star mark. After July 1, 2013 this same model will be required to be tested once more against Version 2.0 and qualified by CB for attaching Version 2.0 Energy Star mark. Manufacturers would like to avoid testing two times for the purpose of reducing burden and requests EPA to consider the following;

- The registration for Version 1.2 Energy Star should be allowed for products tested and qualified by CB against Version 2 before Effective Date of Version 2.
- After the Effective Date of Version 2.0, this same model may be registered for Version 2 without testing again.

Comment on Partner Commitment

Request:

1. Delete the third requirement under Qualifying Products.
2. If this should not be accepted, add the following sentence:
   "In case the model is qualified for EU RoHS, this model is regarded as satisfying the third requirement under Qualifying Products."

Reason:

1. EPEAT for imaging equipment is going to adopt the same specification as the third requirement. EPEAT is a standard for public procurement, just like Energy Star. Energy Star should focus on the reduction of power consumption and improvement of energy-efficiency

END