

Neopost comments on the Energy Star Imaging Equipment Specification 2.0 Draft 2.0

2012, July the 18th

Neopost supports Energy Star since the first version of Imaging Equipment Specification

Current design choice and customer requirement

Neopost did the choice to have a sleep mode different from the standby mode. This choice enables both to minimize energy consumption and to provide to the customer a quicker recovery time from sleep mode than from standby mode. Then the machine can switch quickly from sleep mode to active mode without penalizing the productivity. As a consequence, the customer will accept to go more often on sleep mode without any need to set a long delay time.

Today, the recovery time from sleep mode is below 10 seconds, compared to a recovery time from standby mode around 2 minutes, which is not acceptable today for a user/customer standpoint.

This sleep mode with quick recovery time requires more power consumption compared to the current version of Imaging Equipment Specification 2.0 draft 2.0 but at the end of the day the balance is positive in term energy savings compared to a situation where the customer set a long timeout.

As an example, when we consider a current sleep mode around 6.5W with 2 usages per day (Active/Run/Active/Sleep + Active/Run/Active/Sleep), we see a huge improvement in term of energy efficiency:

Product	Current Power consumption in sleep mode	Time Out – 4 hours with Energy star IE Spec 2.0 draft 2.0 – 5W	Time Out – 10 minutes with the current power consumption in sleep mode
IS-350	6.33 W	47.28 kWh/year	39.93 kWh/year
Is-480	6.58 W	59.86 kWh/year	42.67 kWh/year

**calculations made with an internal tool; for more information, we will pleased to share it.*

In order to keep the promotion of an ease of use for Energy Star products, we recommend keeping the power allowance for the base of marking engine of 5W and add the function adder for the power supply.

Rational: Power supply & functional adder

Neopost is using a wide range of power supplies in order to satisfy the different needs for low, middle and high range machines. Then, energy consumption on sleep mode varies between the low and the high range, i.e. consumes more energy for the high range compared to the low range (power consumption for an IS-350 with 60 mppm is lower than an IS-480 with 160 mppm) due to the fact that the energy efficiency depends on the power supply sizing (a 20W power supply is more efficient than a 90W power supply, when using the same design).

For Neopost products, current samples of specification are:

- i/ For the low range product (such as IS-280), envelop thickness : up to 6 mm; mppm : 12 ; max of the power supply: 60W
- ii/ for the high range of product (such as IS-5000), envelop thickness : up to 20mm; mppm : 250; max of power supply: 500W

In order to answer to this issue, we propose to apply the functional adder for power supply for the mailing machine category, already define table 7 – Line 570 page 17.

Another alternative would be from 100 mppm, to apply the following type of calculation as a functional adder, based on the number of mppm : we suggest then to use the following rule as a functional adder for power supply: $0.007 * \text{mppm}$. That means that for a product with a speed of 120 mppm, the functional adder is: +0.84W, in addition to the power allowance for base marking engine.

Monochrome Product Speed, s , as Calculated in the Test Method (ipm or mppm)	Default Delay Time to Sleep (minutes)	Neopost Proposal (W)
$s \leq 50$	20	0
$50 < s \leq 100$	30	0
$100 < s \leq 150$	40	$0,007 * \text{mppm}$
$s > 150$	60	$0,007 * \text{mppm}$

Impact on Remanufacturing

We’d like to thank Energy Star to integrate, in this new specification, some new requirements to avoid the use of some hazardous substances and also on integrating some requirement concerning design for recycling. We believe that we can reduce environmental impact as a whole when we consider the entire life cycle of the product (from cradle to cradle approach or life cycle approach). Through this new concern, the remanufacturing is a key success to decrease the environmental impact on the entire life cycle of the product, when the product has been designed with energy efficiency ie, when the product is conform to the Imaging Equipment specification V1.2 at least.

Remanufactured product shall be considered as same as new product, with the same warranty as a new product. It has to be viewed as a new process to manufacture product (new equal remanufactured), which is far from the refurbishment, where the product is not the same as the new product, without any full warranty as new.

Some of our products have been designed in conformity of the current specification (Imaging Equipment V1.2) and we’d like to continue to promote the Energy Star program and proposing then to our final customer.

We know that the environmental impact for that range will be optimized (= will decrease) if we remanufacture them.

Our concern is : can we still promote the fact that we are Energy Star compliant for remanufacturing product with Imaging Equipment Specification V1.2 ?

If not, we will not be able to follow the latest Energy Star update and our effort done on ecodesign will not be recognized as it should be.

Another option would be to consider our proposal concerning the functional adder linked to the power supply.

We hope that you will consider our remarks and we will continue to support Energy Star program as far as we can.