

August 3, 2017

Mr. Ryan Fogle
United States Environmental Protection Agency
ENERGY STAR Program
1200 Pennsylvania Ave NW
Washington, DC 20460

Subject: 80PLUS® Comments on ENERGY STAR Computers Version 7.0 Draft 1 Specification

Dear Mr. Fogle,

The 80 PLUS program for certifying Computer internal power supplies (IPS) to efficiency performance levels submits the following comments on ENERGY STAR Computers Version 7.0 Draft 1 Specification, January 27, 2017.

The 80 PLUS website currently lists over 6,000 desktop IPS designs that meet the efficiency levels and power factor criteria for listing. Over the past 12 years the 80 PLUS criteria has evolved to include performance categories that recognize designs for higher performance. Those categories now include efficiency and power factor data capture from 10% loading to 100% loading of the IPS rating. The data base collected puts the 80 PLUS program in a unique position to assess current state of design for the power supply industry and to comment on ENERGY STAR Computers Version 7.0 Draft 1 Specification.

Comment Summary:

The 80 PLUS program supports the initiative of the EPA to revise the ENERGY Star Specification for computers. Based on the 80 PLUS web site, the current design capabilities for IPS's supports an increase in Energy Star requirements for recognition based on efficiency and power factor.

Current industry interest in power supply performance at low power draw levels is a concern. Short-idle mode power draw can be very low and the impact on the IPS efficiency and PF is dramatic. The IPS manufacturers will need to focus their design efforts on low power efficiency. Energy Star is a leader in setting future direction and without a requirement for low power efficiency performance there will be no incentive to address low power performance. 80 PLUS strongly recommends EPA include a "Test and list" requirement in Version 7 to focus attention on low power performance and give IPS design teams time to address the issue. The "Test and List" data can then be a basis for setting a performance level for low power efficiency in Version 8 of the specification.

Detail comment:

In early 2016 80 PLUS performed low power testing on 12 IPS designs. The testing revealed that at very light loading the units were very inefficient, had no active power factor control and a very high total harmonic distortion. In addition, at no load some units drew more than more than 10 Watts of power and did not present any voltage at the output terminals.

While the use of modern Standby in some future software systems offers a way to reduce power draw from the IPS, the IPS is drawing significant power and creating significant current harmonics on the ac input. To assess the capability of the current IPS designs 80 PLUS recommends a Specific load condition

and test protocol be established. With the addition of a “test and List” requirement to Version 7.0 a data base can be established that will guide the decision on addition of a low power performance requirement into Version 8 of the ENERGY STAR computer Specification.

Thank you for the opportunity to comment on the draft specification and for your consideration of our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug McIlvoy". The signature is fluid and cursive, with a large loop at the end.

Doug McIlvoy
Technical Consultant
80 PLUS Program

Jason Boehlke
Business Channel Manager
80 PLUS program