ENERGY STAR® Notes on Small Network Equipment Dataset

Revised: 5/20/2013

This document describes the recent Small Network Equipment Dataset analysis. The most recent version of the dataset, with manufacturer names masked, is available on the ENERGY STAR website at www.energystar.gov/newspecs.

I. Analysis Overview

The Draft 3 ENERGY STAR Version 1.0 Small Network Equipment Specification continues to use the Average Power Consumption (P_{AVG}) structure as the primary energy efficiency metric. In this approach, an average power value, P_{avg}, for a product is derived from the following as applicable:

- PWAN_TEST: Measured power consumption in Wired Network – WAN test, at 1.0 kb/s (W);
- PLAN_TEST: Measured power consumption in Wired Network – LAN test, half of available wired LAN ports populated, at 1.0 kb/s (W); and
- PWIRELESS_TEST: Measured power consumption in Wireless Network – LAN test, at 1.0 kb/s (W).

A limited list of functional power adders are included in the Draft 3 Specification in order to allow proposed levels to account for the following:

- Scaling by Ethernet Port
- Presence of single band and simultaneous dual band Wi-Fi in categories where it is present in some, but not all, devices.
- Presence of Plain Old Telephone Service where it is present in some, but not all, devices, and cannot be powered down due to 911 service regulations.

II. Dataset Overview:

A. EPA review

EPA has combined the data from the previous versions of the Small Network Equipment Dataset, and added new product data received in response to the Draft 2 Specification, as well as data collected during the final data assembly effort in March 2013.

B. Dataset

The charts in this section present data in each product category where modifications to the dataset led to revisions in base power allowances in the Draft 3 Specification. The vertical axis in each chart is the adjusted P_{AVG} (calculated P_{AVG} minus appropriate adder values); the horizontal axis represents products in the ENERGY STAR dataset file.

EPA has removed the Broadband Modem – VDSL product type category after closer examination of these products' features revealed that they had features that put them in the IAD - VDSL category. As a result, there is no graph to represent this category.

Figure 1: Adjusted P_{AVG} – Cable Modems

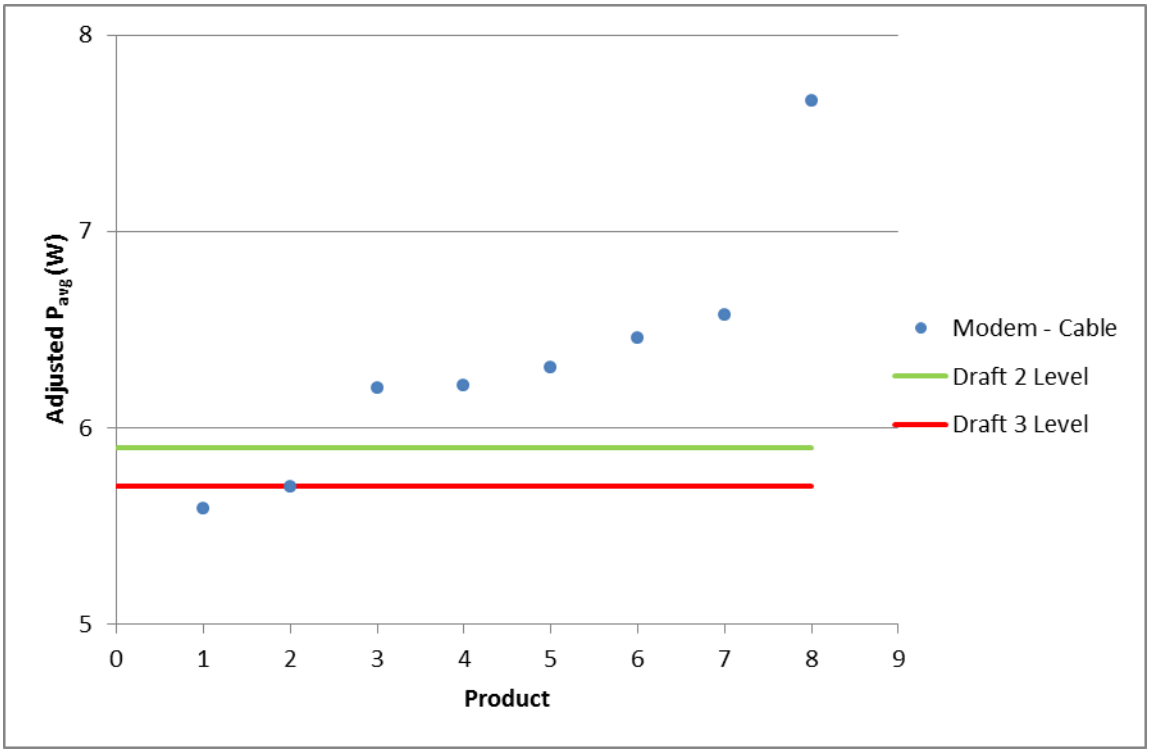

Figure 2: Adjusted P_{AVG} - ONTs

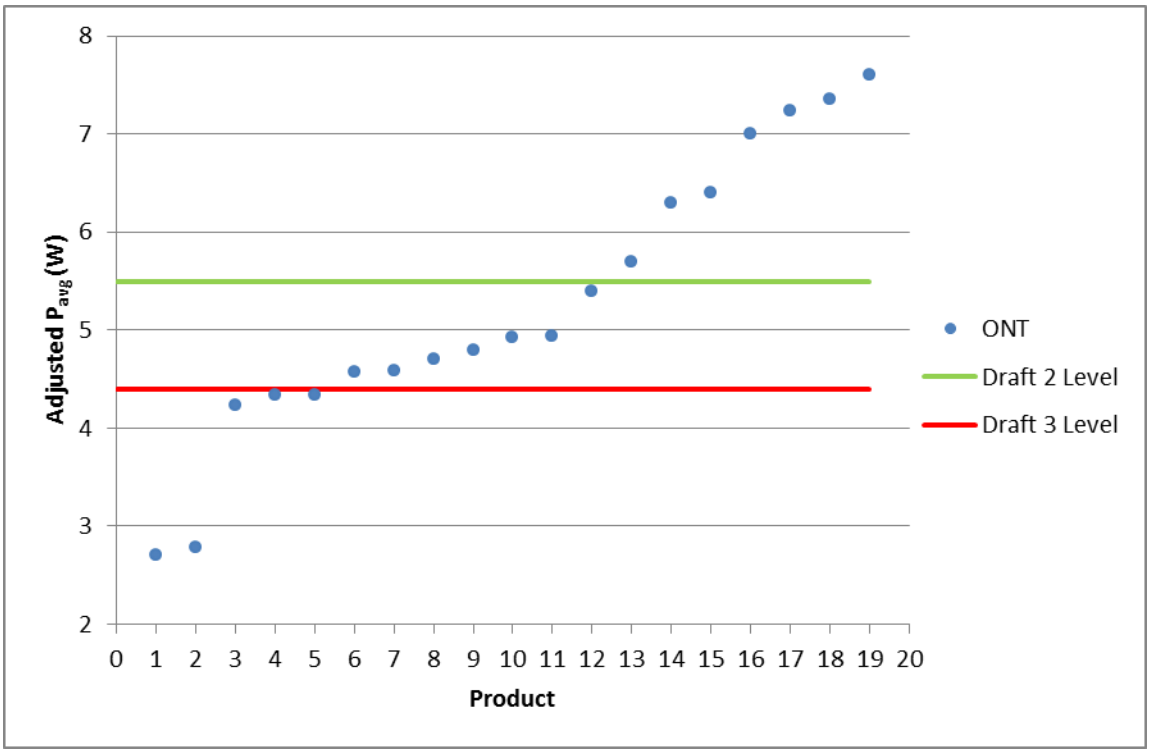

Figure 3: Adjusted P_{AVG} – Cable IADs

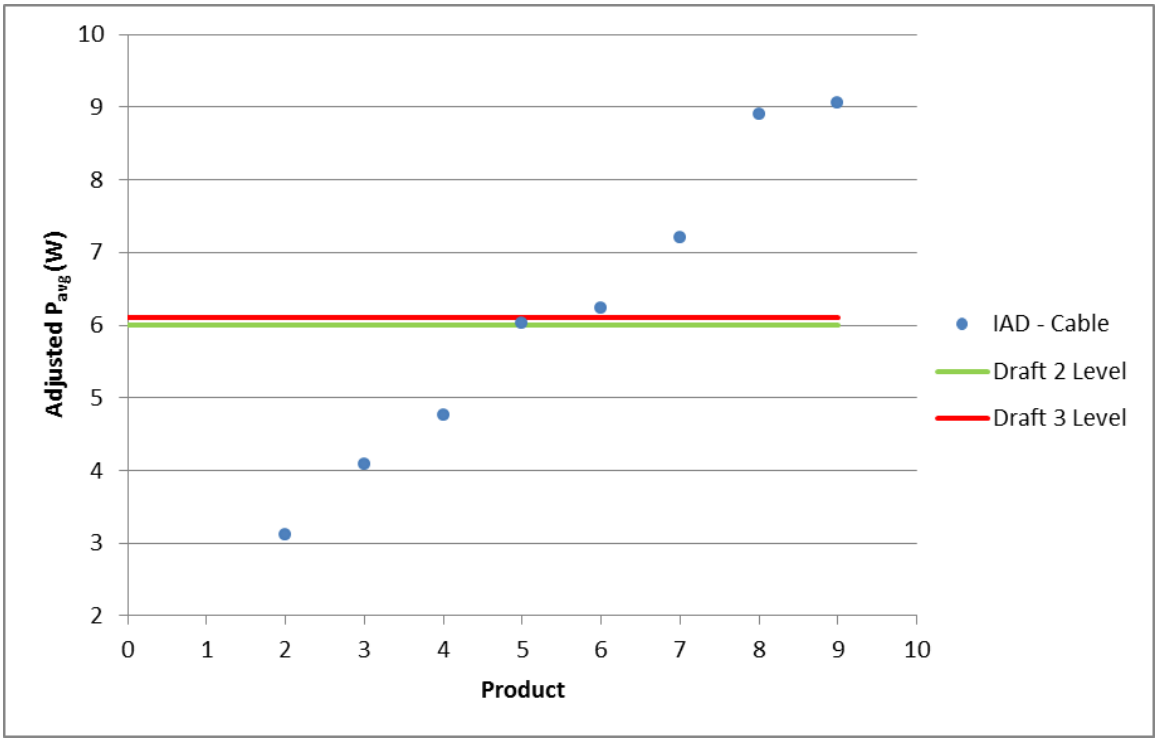

Figure 4: Adjusted P_{AVG} – VDSL IADs

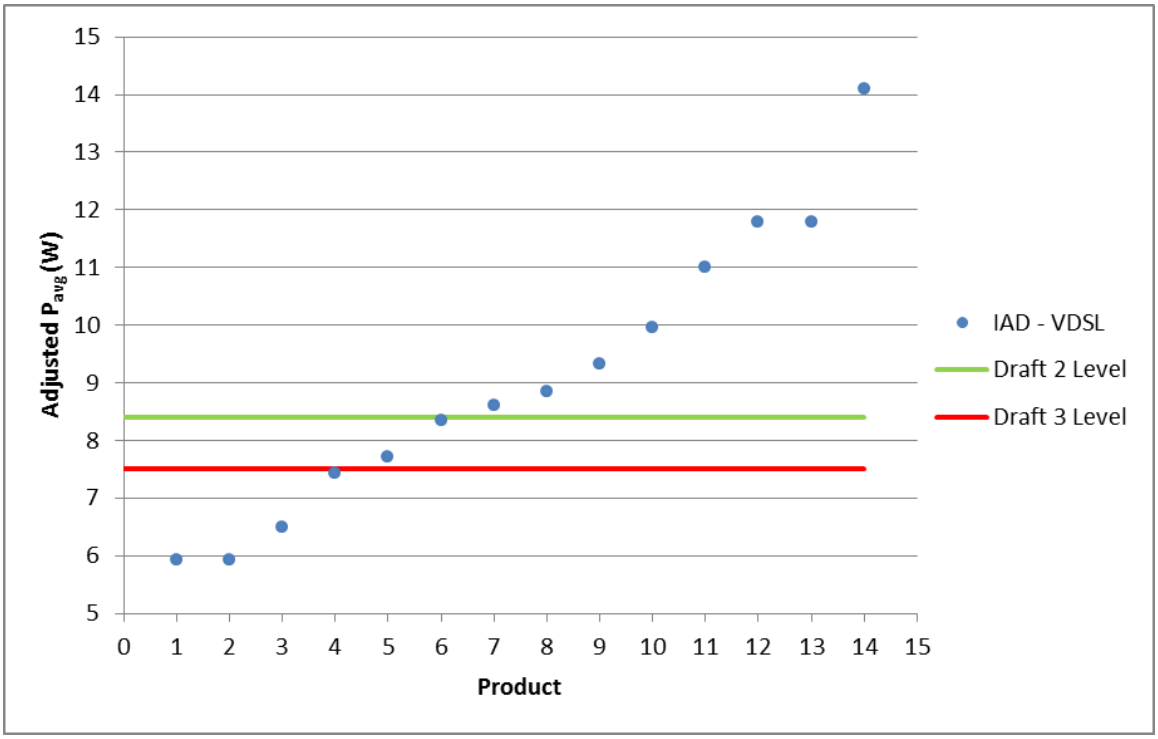

Figure 5: Adjusted P_{AVG} – Routers