



October 1, 2019

To: computers@energystar.gov

From: Information Technology Industry Council (ITI)

Re: Addendum to ITI comments on Final Draft, Version 8.0 ENERGY STAR Computer specification and test method

The Information Technology Industry Council (ITI) appreciates the opportunity to provide additional comments for EPA’s ENERGY STAR® for Computers, v8 Final Draft specification. Per our earlier comments ITI is submitting the following proposal on switchable graphics adder.

Issue Summary: The ITI working group is providing comments on the need to increase the base TEC for Category 1 integrated desktops (iDT1) from 9 kWh to a minimum of 14 kWh. The current base TEC of 9 kWh is not sufficient for iDT1; this base TEC is lower than the energy used by many notebooks. If the base TEC is not increased, it will have the unintended consequence of forcing the manufacturers to look at adding components (storage, memory and/or graphics) to platforms to get them to qualify. We are providing comments at this stage in the development of ENERGY STAR v8, because the base TEC proposal for this category was somewhat up in the air until the final draft. A base TEC of 14 kWh would mean a pass rate of ~28% for Category 1 integrated desktops (Table 1), similar to the pass rate of other categories.

Table 1:

	New Proposed BASE TEC	System Count	Pass count with new switchable graphics adder	Pass Rate
Integrated DT 1	14	144	41	28.5%

As a trade-off for an increase in the base TEC for iDT1, the switchable adder for the graphics cards which are used in category iDT1 (FB_BW < 128 GB/s) could be decreased from 14.4 kWh/year to 9.65 kWh/year, a reduction of 4.75 kWh/year.

A review of the switchable graphics adder was completed for desktops and integrated desktops. Based on this review, the switchable graphics adder can be reduced from 14.4 kWh to 9.65 kWh/year for dGPUs with FB_BW less than 128 GB/s, but would remain at 14.4 kWh/year for dGPUs ≥ 128 GB/s.

1. **Representative Data – Higher-end card (defined as ≥ 128 GB/s)**

TEC: 17.66 kWh/year

Industry recommends staying with 14.4 kWh/year

2. **Representative Data “Typical” card (defined as < 128 GB/s)**

TEC: 9.65 kWh/year

Industry recommends changing from 14.4 kWh/year to 9.65 kWh/year

3. **Analysis of cards Used in Cat 1 & 2 iDTs, from Dataset**

We looked at iDT platforms in the industry dataset, that have graphics category or FB_BW reported for Categories 1 and 2, to get a better understanding of what cards are being used (Table 2):

Table 2:

dGPU Category	# Category 1 integrated DTs	# Category 2 integrated DTs
G1, FBBW <= 16	5	1
G2, FBBW <= 32	42	10
G3, FBBW <= 64	12	6
G4, FBBW <= 96	8	10
G5, FBBW <=128	---	8
G6 & G7, FBBW > 128	----	9

Conclusion:

Industry has unanimously agreed that there is a need to reassess base TEC for iDT1 category. The current base TEC is not sufficient and will have the unintended consequence of forcing the manufacturers to look at adding components (storage, memory and/or graphics) to platforms to get them to qualify. Industry recommends increasing the base TEC for iDT1 from 9 kWh/year to 14 kWh/year.

To account for the iDT1 base TEC increase, the switchable graphics adder can be reduced from 14.4 kWh to 9.65 kWh/year for dGPUs with FB_BW less than 128 GB/s. Industry recommends staying with 14.4 kWh/year for dGPUs with FB_BW ≥ 128 GB/s.

Industry is open to meeting with EPA for further discussions as needed.