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460 to qualify as ENERGY STAR. The Version 5.0 effective date is covered in Section 5 of this  
461 specification.

462  
463 **(A) Power Supply Efficiency Requirements** - Requirements are applicable to all product categories  
464 covered by the ENERGY STAR Computer Specification:  
465

466 **Computers Using an Internal Power Supply:** 85% minimum efficiency at 50% of rated output and  
467 82% minimum efficiency at 20% and 100% of rated output, with Power Factor  $\geq 0.9$  at 100% of rated  
468 output.

469  
470 **Computers Using an External Power Supply:** Must be ENERGY STAR qualified or meet the no-  
471 load and active mode efficiency levels provided in the ENERGY STAR Program Requirements for  
472 Single Voltage External Ac-Ac and Ac-Dc Power Supplies, Version 2.0. The ENERGY STAR  
473 specification and qualified product list can be found at [www.energystar.gov/powersupplies](http://www.energystar.gov/powersupplies). Note: This  
474 performance requirement also applies to multiple voltage output external power supplies as tested in  
475 accordance to the Internal Power Supply test method referenced in Section 4, below.  
476

477 **(B) Efficiency and Performance Requirements:**

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479 **1) Desktop, Integrated Desktop, and Notebook Levels:**

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481 **Desktop Categories for TEC Criteria:** For the purposes of determining TEC levels, desktops  
482 and integrated desktops must qualify under Categories A, B, or C as defined below:  
483

484 **Category A:** All desktop computers that do not meet the definition of either Category B or  
485 Category C below will be considered under Category A for ENERGY STAR qualification.

486  
487 **Category B:** To qualify under Category B, desktops must have:

- 488
- Greater than or equal to 2 Cores.

489 In addition to the requirement above, models qualifying under Category B must be  
490 configured with a minimum of 1 of the following 2 characteristics:

- 491
- Greater than 2 gigabytes (GB) of system memory; and/or
  - A Discrete GPU.

492  
493  
494 **Category C:** To qualify under Category C, desktops must have:

- 495
- Greater than 2 Cores; and
  - Greater than 2 gigabytes (GB) of system memory; and
  - A Discrete GPU.

498 Note: EPA received comments from stakeholders on the Draft 2 three-tier proposal for desktop categorization both at  
499 the September 26 meeting and in comments since Draft 2 release. Among the suggestions, the Information Technology  
500 Industry Council (ITI) membership provided an alternative proposal with different hardware characteristics determining  
501 the three categories. EPA closely evaluated this proposal in development of the Draft 3 requirements. EPA supports  
502 the industry's desire to ensure that a binning system accurately describes entry-level products, midrange, and high-end  
503 performance systems. The proposal above was developed to balance bins based on the previously-mentioned  
504 characteristics with the need to create meaningful delineations for the life of the Version 5.0 specification.  
505

506 The option provided in Category B represents a balance between integrated graphics (which rely on shared system  
507 memory for graphics capability) with lower-end discrete graphics cards. Category C, again reflecting presence of  
508 Discrete GPU, represents performance systems both in the near-term and through the life of the specification, when  
higher core count processors and 64-bit operating systems allowing for utilization of increasing amounts of system  
memory become increasingly mainstream. All proposed characteristics were supported by characteristics present in the  
stakeholder-supplied dataset used for level setting.











































