Ref. #	Topic	Comment Summary	Response
1	Pass rate	Two stakeholders expect that, at current levels, the pass rates will be much higher than 25 percent at effective date. These stakeholders urge EPA to set levels that target a 25% pass rate at the Version 3.0 effective date.	EPA has identified the top quartile of products that meet the proposed requirements at this time using all of the available data. The Agency believes this to be prudent given the limited data available to stakeholders and the changes that are occurring in the market today. EPA will continue to monitor the development of the market and adjust the levels as appropriate. In order to better reflect the current market, EPA has removed products that entered the market before 2014.
2	System Recovery & Resiliency Definition	One stakeholder states that the current definition of 'System Recovery and Resilience' could be understood to imply that items (9) and (10) are combined requirements. The stakeholder suggests removing the "and" at the end of item (9) on line 96 to avoid this confusion.	EPA has changed the language “and” at the end of the B.9 portion of the resilient server definition to “or” to clarify that options (9) and (10) are not to be read as combined but rather separate items in the list.
3	HPC Definition	One stakeholder recommends changing the "and" between deep learning and artificial intelligence on line 129 to "or." The stakeholder comments that, as written, the HPC definition could imply that HPCs must be suitable for all three of the defined applications (high performance, deep learning, artificial intelligence), when in reality HPC systems are only required to be suitable for one of these three applications.	EPA has clarified that HPC products shall be designed to execute highly parallel high performance, deep learning “or” artificial intelligence applications rather than “and” as stated in Draft 3.
4	Storage and Network Server Definitions	One stakeholder recommends including a definition of storage server and network server. The stakeholder recommends including both of these server types in the 'Excluded Products' section of the specification. This stakeholder states that not including the systems in the 'Excluded Products' section may lead to data center operators being unable to acquire storage or network servers if they must procure ENERGY STAR certified servers or requiring them to procure servers with a higher level of processor power and higher deployed power, than would be necessary to meet the performance requirements of the product.	EPA has updated the definition of Network Equipment to align with the latest definition in the ENERGY STAR Large Network Equipment specification. EPA does not believe that computers servers that contain abnormally large amounts of storage or network functionality should be separately defined or excluded from scope, and has not been provided any evidence that these configurations are more efficient than using purpose built equipment (e.g. storage products and network products) for those tasks.
5	Multi-output Power Supply Definition	One stakeholder comments that the multi-output power supply definition (line 183) indicates that the sum of any outputs that are not considered primary or secondary outputs should be greater than or equal to 20 watts. The stakeholder recalls this clause pertaining to single-output PSUs, and recommends either removing this requirement from the multi-output PSU definition, as it is not germane, or modifying the clause to say "outputs shall be no greater than 20 watts." This change would match the single-output definition and reflect the desire to keep the control power feeds to less than 20 watts.	EPA has revised the Multi-output Power Supply definition to remove this obsolete reference.

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6	APA Definition	One stakeholder comments that expanding the APA definition is necessary to acknowledge the fact that APAs can be built with different kinds and number of accelerator devices and dedicated switches. Changing the definition will also position the definition to support specific requirements in future versions of the Computer Server Product Specification. The stakeholder provides a suggested replacement definition in their comments.	EPA has updated the APA definition to account for newer technologies in this space and to clarify that expandable APAs may include multiple accelerators as well as dedicated removable switches in their implementation.
7	Product Family Requirements	One stakeholder comments that if a partially populated server can meet the active efficiency limit, it should be allowed to be certified to the specification. The stakeholder suggests adding a sentence to the product family section of the specification that states that a product family can be defined for a server with only partially populated sockets.	EPA has clarified that product families can be certified using single populated sockets in a two socket server, so long as all the configurations in that family only populate a single socket, and that all configurations in that family meet the applicable single socket active requirements. This family is a separate family for certification purposes in relation to potential certification of the same server with two populated sockets.
8	Certifying Single Configurations	One stakeholder recommends adding a section to the 'Definitions' that states that a manufacturer can designate and certify a single server configuration to the ENERGY STAR requirements.	EPA has clarified in a footnote in the product family definition that products may be certified as a single configuration in the same manner as they were in Version 2.1.
9	PSU Requirements	Three stakeholders encourage EPA to set more stringent PSU requirements for 10% and 20% load, because the average load of typical servers is between 10 and 20 percent of the power-supply maximum rated power. This change would mean that levels were more stringent at loads that servers operate more commonly in real-life.	EPA remains committed to aligning with 80Plus Platinum levels in Version 3.0, and encourages stakeholders to work with the 80Plus program to address any concerns about the existing requirements at lower load levels.
10	Power Management Reporting	One stakeholder states that the reference to 'Power and Performance Data Sheet' should be replaced with 'Computer Servers Qualified Product Exchange Form,' because the Power and Performance Data Sheet is no longer required under the Partnership Agreement.	EPA has removed an outdated reference to the PPDS and clarified that power management feature details are instead submitted through the ENERGY STAR Qualified Product Exchange (QPX) system in the certification process.
11	Active Efficiency Requirements for Product Families	One stakeholder is concerned that the requirements for certifying and representing a product are not sufficiently clear. The stakeholder recommends adding a phrase to the 'Active State Efficiency Requirements' section that explains that the active efficiency requirement should be met by each of the three configurations within a product family submitted for certification and for all other server configurations represented as ENERGY STAR certified by the manufacturer.	EPA has clarified that Section 3.5.3 and the requirements in Table 3 apply to all configurations shipped as ENERGY STAR.

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12	SERT Conversion Tool	One stakeholder requests that EPA add a line to the 'Active State Efficiency Requirements' section that states that data for servers tested to SERT V1.1.1 can be converted to V2.0.1 without re-testing. The calculation must be performed and validated by a Certification Body (CB) that certifies the SERT test data and scores. The stakeholder believes that this conversion should be accepted by EPA due to the analysis the stakeholder provided during the Draft 2 comment period. The stakeholder can provide EPA with a conversion spreadsheet that can be posted on the EPA ENERGY STAR website to facilitate the conversion. This conversion will enable manufacturers to avoid needing to re-test their products to certify to Version 3.	Ultimately, the final decision to accept converted test data is from the Certification Body. However, as EPA shared on the Draft 3 webinar, it is not EPA's intent to require additional testing for ENERGY STAR products that meet the proposed levels. EPA is open to providing guidance on tools that may help CBs come to a decision regarding retesting.
13	SERT worklet efficiency scores	One stakeholder comments that references to "measured" SERT worklet efficiency scores in lines 442-460 should be changed to "calculated", because the SERT worklet efficiency scores are calculated from measured performance and power data.	EPA has changed the references from "measured" SERT worklet efficiency scores in lines 442-460 to "calculated" to reflect that these SERT worklet efficiency scores are calculated from measured performance power data.
14	SERT Tool	One stakeholder urges EPA, in collaboration with stakeholders, to evolve the SERT benchmark to better represent typical operating conditions in data.	EPA believes that the SERT benchmark is the most reliable tool currently available for assessing power and performance together in a realistic data center environment. As with all ENERGY STAR test methods and tools, the program will monitor the benchmark's performance and work with stakeholders to adjust it as needed in the future.
15	APA Testing and Reporting Requirements	One stakeholder recommends adding items to the APA requirements that expand on the testing and reporting requirements for APAs. They recommend adding one item to define exactly how the idle power for the APA and associated switch are measured and calculated. The stakeholder believes it is important to specify the process for reporting APA and switch idle power to ensure consistency of the reported data. This stakeholder also recommends requiring CBs to report details of the APA accessories, which will prevent future SERT analyses from being limited due to lack of detail. Both items recommended by the stakeholder are available in the stakeholder's comments.	EPA has added guidance on how to measure APA card idle power for certification purposes, and welcomes stakeholder feedback on the proposed approach.
16	Active State Efficiency Requirements Equations	One stakeholder comments that an "Equation 7: Calculation Effi" should be added to the 'Active State Efficiency Requirements' section to clearly define how the interval measurements are combined into the worklet efficiency scores.	EPA has included a new equation to clarify how to calculate individual worklet efficiency (Effi) scores which aligns with the guidance provided in SPEC SERT documentation.

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17	Active Efficiency Requirements for Four Socket Rack Servers	One stakeholder is concerned about the active efficiency limit for 4 socket (greater than two installed processors) rack servers. According to the stakeholder, an analysis of the dataset indicates that the average active efficiency score for the low-end and minimum power configurations for 2016 and 2017 product families are below the 4 socket rack server active efficiency thresholds. The overall yield on the low-end and minimum performance configurations against the active efficiency threshold is 7.7%. The stakeholder comments that this will largely eliminate low-end performance 4 socket rack servers from the program. They recommend that the active efficiency limit for greater than two installed processor, rack servers be set at 13, the same as the 2 socket rack servers, to better enable manufacturers to offer greater than 2 socket, lower performance processor servers as ENERGY STAR certified.	EPA has investigated the pass rates of servers with greater than two sockets and feels the active efficiency requirement proposed in Draft 3 appropriately differentiates this sub category. Reducing the requirement in this category any further would allow nearly all products to pass, rather than highlighting the more efficient products as the program is intended. EPA has retained the 4 socket requirements in recognition of the fact that efficiency is the primary objective of such high performance options.
18	Idle reference	One stakeholder comments that there is a reference to idle state power allowance in the 'test methods' section of the specification. The stakeholder comments that the idle requirement was removed in Draft 3.	EPA has removed the reference to idle state power allowance from this section.
19	Energy Savings Analysis	One stakeholder believes stakeholders would benefit from analysis and disclosure of assumptions used in calculating expected energy savings and the cost-effectiveness to the server end user. They encourage EPA to provide consumer facing guidance on interpreting the active efficiency score and using the SERT performance data made available via the qualified products list to characterize expected energy use to the extent practical.	EPA is currently preparing a savings analysis which will provide data on the cost and energy savings resulting from choosing ENERGY STAR V3.0 servers over less efficient servers. EPA will include the final savings figures for the proposed levels with the Final V3.0 specification.