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1	<p>One stakeholder commented that the definition of Small Network Equipment could cover products listed under Section 2.2 Excluded Products. In order to avoid products falling ambiguously between the definition of Small Network Equipment and Large Network Equipment, the stakeholders suggested that EPA revised the definition of Large Network Equipment to state, "and other networking equipment not included in the definition of Small Networking Equipment."</p>	<p>EPA recognizes that there are certain product segments that may not be covered by the Version 1.0 Small Network Equipment (SNE) or Large Network Equipment (LNE) specifications, for example "enterprise" access point products. EPA aims to cover as much of the network equipment market as possible between the Version 1.0 SNE and LNE specifications, while acknowledging that particular types of products may not be covered until subsequent specification revisions.</p>
2	<p>Two stakeholders suggested that EPA further specify the definition of Small Network Equipment such that enterprise and industrial equipment are excluded by including necessary criteria that the products be designed for "indoor use" or "operation in residential and commercial environments."</p> <p>One stakeholder believes that the Small Network Equipment definition language of "(a) all Network Equipment with integral wireless capability" was an effort to include all access points within the SNE specification. As written, the stakeholder noted that such a definition is overly broad and may include many devices such as cellular base stations, microwave bridges or large-scale routers using Bluetooth/NFC for console connections, which it does not believe is the intent of ENERGY STAR. The stakeholder recommended that the definition be further clarified to define what is meant by Network Equipment with integral wireless capability. For example, the definition could be limited to network equipment with 802.11 Wireless LAN access point capability.</p>	<p>EPA does not intend to change the SNE definition to specifically address products used indoors or which operate in residential and commercial environments. EPA has made minor modifications in the scope exclusion section which do affect some "enterprise" class products.</p> <p>EPA agrees with this suggestion and has proposed a revision to the scope section of the Final Draft specification to provide clarity on various forms of wireless capability.</p>
3	<p>For the definition of Physical Data Port, one stakeholder commented that the term "Ethernet" does not refer to any specific media but may refer to physical network ports that operate over twisted pair cable, fiber optic cable, coaxial cable (or backplanes). Therefore the item "a) Ethernet" should be removed and the other items revised as follows, "a. Twisted pair (Ethernet, DSL, Phone), b. Coaxial cable (DOCSIS), c. Fiber optic."</p>	<p>EPA thanks stakeholders for this feedback and has revised the Physical Data Port definition accordingly.</p>
4	<p>One stakeholder observed that the definition for "Full Network Connectivity" appears to be a definition for some form of "Networked Standby," although it is also muddled with some definitions for "Network Proxy" near the end. In normal parlance, "Full Network Connectivity" should refer to the state of network connectivity; "Networked Standby" should refer to reduced power states where some network connectivity is maintained; and "Network Proxy" should refer to mechanisms by which network connectivity is maintained whilst in reduced power states. The stakeholder suggested that EPA rewrite the section, possibly splitting into separate definitions for separate terms, and noted that the definition for "External Proxy Capability" could be affected (and improved) by this change.</p>	<p>The Full Network Connectivity definition section was taken from the ENERGY STAR Version 6.0 Computers specification definition, and is intended to describe functionality that allows end-point products in sleep mode to remain network connected to the SNE product. This section does not reference standby, and is not intended to address network connected standby of the end-point product or SNE product.</p>
5	<p>Stakeholders commented that the ENERGY STAR Large Network Equipment (LNE) specification is the appropriate specification for addressing enterprise network equipment and that to the degree possible, the SNE specification should focus on consumer grade equipment. One stakeholder recommended that the EPA consider stating in the SNE specification the general intent of the SNE specification to focus on consumer equipment.</p> <p>Another stakeholder suggested that EPA make the Excluded Products criteria more inclusive of other types of modules by revising "Section 2.2.2 i Network Equipment with one or more Small Form-factor Pluggable (SFP) network ports" to "Network Equipment capable to accept interchangeable modules, such as network/line cards or additional power supplies; or with one or more network ports using pluggable or modular media adapters such as Gigabit Interface Converter (GBIC) modules or Small Form-factor Pluggable (SFP) modules." Two stakeholders suggested that the criteria for classifying excluded products include "Equipment powered via POE or providing POE for another devices." and "Equipment that has provisioning for rack mounting." One stakeholder suggested the following revision for Section 2.2.2. iii, "Requires a physical or virtual controller for operation of the access points or networking devices." The stakeholder also proposes that the EPA adopt the following as one additional bullet to the criteria for excluded products:</p> <p>"Products that incorporate the required capabilities or are certified for government or vertical industry specifications such as:</p> <ul style="list-style-type: none"> a) TAA (Trade Agreement Act) b) Section 508 of the Rehabilitation Act c) FIPS 140-2 (Federal Information Processing Standards for Cryptology) d) National Security Agency Suite B Cryptography e) Voluntary Product Accessibility Template (VPAT) Policy & Information f) The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy, Security and Breach Notification Rules g) The Payment Card Industry (PCI)" 	<p>EPA does not have enough data to support the separation of "consumer" vs. "enterprise" in most network equipment product categories, as the products often contain similar functionality. EPA has removed "enterprise" access points from the scope of Version 1.0, as they have particular features which clearly separate "consumer" access points from "enterprise" access points, and require significantly more power consumption. EPA hopes to cover these "enterprise" access points in the Version 2.0 SNE specification with the aid of additional product data.</p> <p>EPA has excluded Power over Ethernet (PoE) from the scope of the Version 1.0 SNE specification, as there is no way to measure in the Version 1.0 SNE Test Method. This exclusion will remove some "enterprise" type network products that are not intended for use by typical consumers, but also may or may not fall into scope of the upcoming Version 1.0 LNE specification depending on their port count.</p> <p>EPA revised the previous Small Form-factor Pluggable (SFP) module scope exclusion in the Draft 3 specification, now excluding products with other module types such as Gigabit Interface Convertors or any other modular media adaptors (with the exception of USB).</p> <p>EPA did not address the exclusions listed to the left as there is no way to test the relevant functionality in the test method. Purchasers who require the specific capabilities listed may purchase those products regardless of their energy efficiency performance if no qualified ENERGY STAR products can provide that capability.</p>

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6	One stakeholder requested that EPA include an additional functional adder of 0.5 W for a back up battery charger.	EPA has no product data to support a functional adder for back up batteries or battery chargers.
7	One stakeholder recognizes the External Proxy Incentive would support the awareness of full network connectivity and devices enabling the function, however, the stakeholder believes the incentive values are quite high and not representative of the additional power consumption of the devices. The stakeholder suggested that the incentive be in the form of required reporting whereby the added benefits of purchasing devices supporting full network connectivity are made public and promoted on the ENERGY STAR website.	<p>EPA will maintain the current External Proxy Incentive to encourage SNE products to allow proxying of attached end-point devices. The system savings potential of allowing end-point devices (computers, imaging equipment products, etc.) to enter network connected sleep can far exceed the small incentive the SNE product may receive for supporting the proxy functionality. As this functionality becomes more mainstream, EPA will discontinue this incentive.</p> <p>EPA will make the level of supported External Proxy available on the ENERGY STAR website along with the other SNE product information.</p>
8	One stakeholder asked if there were requirements for multiple voltage power supplies.	Multi-voltage external power supplies are subject to the power supply requirements in Section 3.2.1 of the Final Draft specification. This includes meeting the level V performance requirements under the International Efficiency Marking Protocol and include the level V marking.
9	In addition, one stakeholder commented that some of the data provided for DOCSIS 3.0 cable modems and cable IADs did not involve uniform test configurations. The stakeholder noted that those vendors that provided data with very low Pavg power consumption may have reported results with the cable modem or cable IAD in DOCSIS 3.0 Energy Management 1x1 Mode (1 downstream channel and 1 upstream channel). Currently, there is a lack of CMTS support for Energy Management 1x1 Mode on commercially available CMTSs and it is unknown when CMTS support will be available on commercially available CMTSs. Other vendors may have provided data in which the CM did not go into Energy Management 1x1 mode which would reflect the additional power consumption of having multiple downstream and multiple upstream channels active. Therefore if these Draft 3 base power allowances are retained, the stakeholder commented that the Test Method must ensure that conditions are such that the CM or cable IAD goes into Energy Management 1x1 Mode, ensuring that a CMTS used in testing supports the feature.	EPA has provided additional testing guidance for products that are capable of operating in DOCSIS 3.0 Energy Management 1x1 mode. This guidance can be found in Section 4.1.3 of the Final Draft specification.
10	One stakeholder suggested indicating the different manufacturers in the EPA dataset in order to understand the distribution between manufacturers per product type e.g. by indicating Company A, B, C, etc.	EPA will release an updated version of the dataset on the SNE product webpage with company identifiers in the form suggested by the stakeholder.
11	One stakeholder submitted data to EPA from reference designs with different configurations to clearly demonstrate the functional adders across different products. The stakeholder noted that these data were not included in the Draft 3 dataset and requested they be incorporated into a revised dataset to determine the base power allowances and additional functional adders.	EPA did not include the aforementioned data in the dataset because the data was based on reference designs, and not actual products currently sold on the market. EPA did consider this data in the internal evaluation of revisions to existing requirements.

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12	<p>One stakeholder noted that the flexibility by the ENERGY STAR program in working with industry to continually revise specifications based on changes and updates in technologies deployed is critical to the ICT industry as 1) network equipment products evolve more rapidly than other equipment typically covered by ENERGY STAR, and 2) there are natural convergence points in ICT equipment where over time various functionalities are consolidated into a single piece of equipment. Products within the SNE specification will likely see rapid evolution over the next decade based on market demand and the proliferation of sensors and other connected devices in the home. Thus the stakeholder commented that the ENERGY STAR SNE specification will require flexibility to adjust to various functionalities being consolidated into products in the SNE specification.</p> <p>Another stakeholder suggested that the following be listed for consideration in future revisions of the specification:</p> <ul style="list-style-type: none"> • Power management: Powering down at low traffic volume, scheduling WLAN in on and off periods and automatic switch off of unused interfaces. • Potential inclusion of professional access point products marketed as enterprise network equipment that are; (1) shipped without a power supply, and/or (2) cannot operate without a separate external access point controller. • Removal of the fast Ethernet adder. The stakeholder believes that already now most products have this feature, and suggested that the intention to remove this adder is listed here and that other adders should be reassessed as well. 	<p>EPA acknowledges that SNE is a rapidly changing product category. EPA will track innovations and product energy efficiency performance upon the completion of Version 1.0 to assess when to start of Version 2.0 development.</p> <p>EPA has added new proposed topics in the "Considerations for Future Revisions" section of the Final Draft specification.</p>
13	<p>For greater accuracy and clarity, one stakeholder recommended that following language revisions throughout the specification:</p> <ul style="list-style-type: none"> - "power consumption" to "power" or "energy consumption" - "maximum requirement for Average Power Consumption PAVG_MAX)" to "Average Power Allowance (PAVG_ALL)" 	<p>EPA has simplified the existing language in the Draft 3 specification, changing "power consumption" to "power" where appropriate. EPA has retained the maximum requirement language in the Draft 3 specification.</p>