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Cable Associations' Additional Comments

Additional submitted attachment is included below.

BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the matter of: Phase 2 Appliance Efficiency Regulations & Roadmaps	Docket No. 17-AAER-12 Low-Power Mode & Power Factor

ADDITIONAL COMMENTS OF THE CALIFORNIA CABLE & TELECOMMUNICATIONS ASSOCIATION AND NCTA – THE INTERNET & TELEVISION ASSOCIATION

The California Cable & Telecommunications Association ("CCTA")[1] and NCTA – The Internet & Television Association[2] (together, the "Cable Associations") respectfully submit these comments in response to the Commission staff's February 12, 2019 Request for Additional Public Comment in the above-referenced docket.

At the January 24, 2019 webinar held in this proceeding, the Commission staff confirmed that set-top boxes are excluded from the scope of this docket. When asked whether other categories of equipment could be excluded, staff responded that additional exclusions would be warranted where inclusion of the equipment category in a new Commission-prescribed test method was not likely to lead to significant additional energy savings.

An exclusion of small network equipment ("SNE"), which includes modems, routers and other equipment used by consumers to connect to broadband Internet access services, is plainly warranted under this standard for at least three reasons:

- There is already a widely-implemented, effective ANSI test method for SNE idle mode power;
- Standby mode is not a productive focus for modem and router energy usage because these devices must always be instantly available for emergency communications and other applications intended to be readily available; and

[1] CCTA is the nation's largest state cable television association, with member companies that have invested more than $40 billion in California since 1996 to build interactive broadband networks that are available to 98 percent of all California households.

[2] NCTA is the principal trade association of the cable television industry in the United States, which is a leading provider of residential broadband service to U.S. households. Its members include owners and operators of cable television systems serving nearly 80 percent of the nation's cable television customers, as well as more than 200 cable program networks. Cable service providers have invested more than $290 billion over the last two decades to deploy and continually upgrade networks and other infrastructure—including building some of the nation's largest Wi-Fi networks.

- The Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Small Network Equipment ("SNE Voluntary Agreement") is already delivering consistent, audited test results as well as the energy efficiency that is the ultimate objective of this proceeding.

I. A Standards-Body Approved Test Method Already Exists for SNE.

Inclusion of SNE in a new test method could not provide helpful new information for energy savings strategies because there is already widespread use of an effective, national standard test method for SNE that includes measurement in idle mode: the American National Standards Institute's ANSI/CTA-2049, Determination of Small Network Equipment Energy Consumption. As the Cable Associations explained in their initial comments, every new model of SNE purchased by the major Internet Service Providers ("ISPs") in California and many more models sold at retail are already tested under this ANSI test method, reviewed by an independent auditor, and reported to the public on the website for the SNE Voluntary Agreement.

ANSI/CTA-2049 is also superior to the contemplated one-size-fits-all horizontal test method because it was designed specifically for SNE. As discussed in the next section below, there are significant differences from other electronics in how SNE is used by consumers and how it operates. Staff appears to be trying to accommodate these differences by considering special terms specific to SNE, but that specialized treatment only begs the question of why the existing, tailored test method should not be used in the first place.

It would be unnecessary and counterproductive to require burdensome and duplicative new testing of SNE models using a second test method that is inconsistent with the existing data available to the Commission. The Commission would be better informed through study of a longer history of test results representing nearly the entirety of the market that used the existing ANSI test method.

II. A Focus on Standby or Other Artificial Hypothetical Modes for SNE Would be Misplaced.

Many stand-alone consumer electronics devices can be turned off or placed into a standby mode when not in use because the consumer does not need them to interact with other devices or services or to be readily available on demand. For example, a game console can be in standby or off mode when a game is not being played, and consumers are conditioned to be sufficiently patient to expect the console to require some time to become available when turned on or awakened from sleep.

But the nature of the use of many devices, and consumers' reliance on such devices for safety and other critical needs, require their immediate availability. Even in the middle of the night, Voice-over-IP telephone service needs to be instantly available to place a call to 911 or to receive an evacuation order during a wildfire or other emergency. Modems, routers and other SNE must also always be available to security systems and cameras, thermostats and home monitoring systems, medical monitoring, personal assistants such as Amazon Alexa and Google Home, Internet-of-things (IoT) devices, and general Internet access. If the underlying SNE were

in standby or off mode, these communications would be delayed critical seconds while the customer waited for their devices to awaken and re-establish a secure, authenticated Internet connection. For this reason, device manufacturers and ISPs focus on the energy efficiency of SNE in idle mode, in which the device is on and ready for immediate communication.

At the webinar, Commission staff described "low-power mode" (LPM) as any mode other than active mode, with active mode defined by the device performing its primary function. One of the many challenges of a one-size-fits-all horizontal approach is that these terms may have very different practical meanings when applied to different categories of appliances. If SNE in idle mode qualifies as LPM,[3] then LPM test measurements are already available to the Commission under the Voluntary Agreement and the ANSI/CTA-2049 test method. On the other hand, it would not make sense to develop a test method focused on measuring the power usage of SNE in an artificially-induced standby or sleep mode that is not relevant to a real-world analysis of SNE energy use. There is no sound reason to expect that inclusion of SNE in such a new test method would be helpful to consideration of policies that could lead to significant additional energy savings, because the test results would be disconnected from the reality of how SNE is used and needs to be used in the home. SNE therefore meets the staff's standard for exclusion from this proceeding because its inclusion would not be practical or productive.

III. The Voluntary Agreement Has Already Secured Even More Rigorous Energy Efficiency Commitments for SNE in 2020.

The energy efficiencies that can be achieved with SNE (without undermining functionality and readiness for consumers) are already being secured by the SNE Voluntary Agreement. Since 2015, the Voluntary Agreement has secured robust energy efficiency commitments from each of the major ISPs in California along with major manufacturers that sell SNE at retail. In earlier comments to the Commission, the Cable Associations have thoroughly demonstrated that the Voluntary Agreement has been accomplishing the objectives of the Warren-Alquist Act and promoting energy efficiency and innovation more effectively than could traditional regulation.

An independent auditor found that the current Voluntary Agreement levels improved the efficiency of SNE by nearly 20% compared to typical, previously deployed devices, and a four-year extension of the Voluntary Agreement signed in 2018 is implementing commitments to even more rigorous energy allowances beginning in 2020 that are on average 11% more efficient than the original agreement. The Voluntary Agreement is therefore a more effective vehicle for continued improvement in the energy efficiency of SNE.[4] SNE should accordingly be excluded from the proposed test method.

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[3] Idle mode is the low-power mode for SNE because it reflects the lowest power state in real world conditions. Unlike most devices that are, in the big picture for energy purposes, either on or off, SNE, by contrast, scales power use with workload. In most households, IP traffic is low for many hours a day, and during those times, power usage approximates idle mode.

[4] The Cable Associations have explained in their prior comments that the U.S. Supreme Court, Congress, and the FCC have each made clear that states are preempted by federal law from regulating the energy consumption of SNE used with cable systems. Congress made clear that

IV. Responses to Commission Questions

The Commission staff sought feedback on an appropriate definition of SNE. Should the Commission adopt a new test method, it should define SNE, if at all, only for the purpose of defining equipment that should be tested using ANSI/CTA-2049 instead of the Commission's horizontal test method. In that event, it should use the definition set forth in the SNE Voluntary Agreement:

> "Small Network Equipment" means the following types of devices for use by a consumer for residential access to broadband Internet access services:
>
> a. "Broadband Modem." A simple network device that enables high speed data service with a WAN (Wide Area Network) interface to a service provider wired or optical network, and typically a single LAN (Local Area Network) interface for the customer premise network. The Broadband Modem category does not include devices with integrated router or IEEE 802.11 (Wi-Fi) wireless access point functionality.
>
> b. "Integrated Access Device" ("IAD"). A network device that enables high speed data service with a WAN interface to a service provider wired or optical network and one or more of the following functions on the LAN interface: multiport routing, IEEE 802.11 (Wi-Fi) wireless access point functionality, and/or VoIP.
>
> c. "Local Network Equipment" ("LNE"). The following local network devices that do not have a direct interface to a Service Provider wired or optical network:
>
> 1. Wireless Access Point: A device that typically includes one or more Ethernet interfaces, and that provides IEEE 802.11 (Wi-Fi) wireless network connectivity to multiple clients as its primary function.
>
> 2. Router: A network device that forwards packets from one network interface to another based on network layer information (typically IP destination address). Devices fitting this definition may provide both wired and wireless network connectivity.

"No state or franchising authority may prohibit, condition or restrict a cable system's use of *any type of subscriber equipment* or any transmission technology." 47 U.S.C. § 544(e) (emphasis added). The FCC has consistently applied this law to preempt state regulation of cable subscriber equipment and technology. The Commission cannot require the use of a test method for such equipment as part of a roadmap toward regulations that it ultimately lacks authority to impose.

3. Switch: A network device that filters and forwards frames based on the Ethernet destination MAC address of each frame as its primary function.

4. Network Extender: A device that bridges or extends a local area network beyond its physical limitations using one or more transmission media such as twisted pair, coax, Wi-Fi, or powerline.

SNE excludes enterprise equipment, service provider network equipment, and multi-service gateway set-top boxes with video as one of the primary functions.

Commission staff also requested data demonstrating the power consumption of devices with wireless versus wired network connections. This data for every new model of SNE purchased by the major ISPs or sold at retail by signatories is already available in the SNE Voluntary Agreement annual reports posted at www.energy-efficiency.us. This data includes a description of the features of each model.

Conclusion

SNE should be excluded from this proceeding, both for purposes of any new test method and also for any roadmap for low-power mode across a broad range of devices. SNE devices are more similar to set-top boxes, which the Commission has already excluded from the scope of this docket. Moreover, as with set-top boxes, an existing ANSI test method already provides a procedure that supports consistent and repeatable test results, and the Voluntary Agreement already assures that test results using that test method are conducted and publicly reported for all new models used by major providers in California.

Respectfully submitted,

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