

**DOCKETED**

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*Docket Number: 17-AAER-12*

**Cable Associations (CCTA and NCTA) 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

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

The California Cable & Telecommunications Association (“CCTA”)<sup>1</sup> and NCTA – The Internet & Television Association<sup>2</sup> (together, the Cable Associations) respectfully submit these comments in response to the Commission staff’s June 20, 2018 Request for Public Comment in the above-referenced docket.

The Commission should exclude small network equipment (SNE) from any new broadly-applicable “low power mode” test procedure.<sup>3</sup> SNE includes modems, routers, and network extenders that consumers use to connect their homes to the Internet. Most consumers obtain at least some of their SNE from service providers, but SNE that is compatible with the service provider’s network and services can also be purchased at retail. These devices are extensions of complex service provider networks with significant differences in consumer expectations and network connectivity requirements from the many other retail consumer devices that appear to fall within the scope of this proceeding.

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<sup>1</sup> CCTA is the nation’s largest state cable television association, with its members serving more than 5 million video subscribers, 6.4 million broadband subscribers, and 3.4 million competitive telephone service subscribers. The cable industry has invested more than \$36 billion in California since 1996 to build interactive broadband networks that are available to 98 percent of all California households. The cable industry in California employs more than 65,000 people, contributes \$850 million in taxes and fees, and supports more than 212,000 workers in California alone.

<sup>2</sup> NCTA is the principal trade association for the U.S. cable industry, representing cable operators serving approximately 85 percent of the nation’s cable television households, more than 200 cable program networks, and others associated with the cable industry.

<sup>3</sup> The Cable Associations assume that set-top boxes would also be excluded from the scope of any new test method or reporting or other requirement established in this docket since the Commission did not reference the pending separate docket for set-top boxes in the Request for Comment. Set-top boxes should be excluded from any new test method for many of the same reasons as described in these comments. Set-top boxes are tested and reported publicly using the ANSI/CTA-2043 test method.

## **I. Consistent and Repeatable Test Results for SNE Are Already Available Under the American National Standards Institute SNE Test Method, ANSI/CTA-2049**

The Request for Comment proffered that a new test procedure is “necessary to ensure that products are tested in a consistent and repeatable manner.” But that is incorrect with respect to SNE. Consistent and repeatable test results for nearly all new SNE deployed in California for the past three years are already publicly available. These tests are performed using the American National Standards Institute standard test method for SNE adopted and published in ANSI/CTA-2049, Determination of Small Network Equipment Average Energy Consumption. The Request for Comments makes no reference to the ANSI test method and provides no evidence of any alleged shortcoming in the standard. ANSI is the nationally-recognized forum for standards and the official U.S. representative to the International Organization for Standardization (ISO). The standard test method is regularly reviewed under the standards process by representative experts from across the industry to assure that these procedures continue to reflect best practices and changes in technology and therefore enable consistent and repeatable results.

Since 2015, all new SNE models purchased by the service providers representing nearly 90% of the U.S. residential broadband Internet access market, or sold at retail by most major manufacturers, have been tested under the ANSI test method and reported in public annual reports issued by an independent auditor, D+R International, pursuant to the Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Small Network Equipment.<sup>4</sup> Under the Voluntary Agreement’s audit and verification program supervised by D+R, each year at least one of the models from each party is re-tested in a third-party lab or under a supervised testing program with an accredited observer. D+R’s reports, which include the test results from each of these SNE models, are readily available at [www.energy-efficiency.us](http://www.energy-efficiency.us). It would be unnecessary and counterproductive to require burdensome new testing of SNE models using a new Commission test method that is not consistent with the existing data available to the Commission from prior years. Any roadmap 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.

Test results under the Voluntary Agreement are guaranteed to be available to the Commission and the public for years to come, as the Voluntary Agreement was recently extended through 2021. The continuation of the Voluntary Agreements will assure ongoing public access to comprehensive information about the energy usage and characteristics of SNE. There is no need for duplicative testing under a separate test method or reporting under a separate regulatory roadmap.

The Voluntary Agreement’s uniform use of the ANSI test method for all testing is premised on the fact that “consumers and stakeholders are best served by the consistent use of the same test method to measure the energy use of SNE.”<sup>5</sup> Any Commission requirement to

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<sup>4</sup> In earlier comments to the Commission, the Cable Associations have thoroughly demonstrated that the Voluntary Agreements for SNE and set-top boxes have been accomplishing the objectives of the Warren-Alquist Act and promoting energy efficiency and innovation more effectively than could traditional regulation.

<sup>5</sup> SNE Voluntary Agreement, Section 5.3.

perform duplicative testing under a second test method would unnecessarily impose significant cost and resource burdens on industry, in conflict with the Warren Alquist Act's emphasis on cost-effectiveness.<sup>6</sup> Moreover, inconsistent test results between the two test methods would unnecessarily confuse consumers. There is no evidence of any benefit from the use of the proposed new outline of a test method that would offset these harms, nor is there any evidence that the existing ANSI test method fails to ensure that SNE can be tested in a consistent and repeatable manner.

## **II. SNE Networked Devices Have Unique Characteristics and Requirements that Make them Ill-Suited to the Proposed Horizontal, One-Size-Fits-All Test Method**

Even if the Commission were to find some basis for exploring a new test method for SNE, it would be a mistake to lump SNE in with the broad swath of other retail-oriented, consumer-owned and -managed devices that may be under consideration in this docket. SNE devices operate as extensions of complex service provider networks with significant differences in consumer expectations and network connectivity requirements from retail consumer devices. This distinction is true even of SNE that is purchased at retail; typically, consumers can only use retail modems and routers that meet their service provider's detailed technical specifications.

SNE does not and cannot even operate in the low power modes that are the focus of this proceeding, so it is puzzling why SNE is even included in this docket. The Request for Comments acknowledges that SNE is substantially different from these other devices because it "must always be available to move network traffic." In addition to Internet access, SNE supports numerous devices and services that consumers need and expect to be available rapidly at all times, such as 911 and other telephone calls, security systems and cameras, thermostats and home monitoring systems, medical monitoring, and personal assistants such as Amazon Echo (Alexa) and Google Home. Any rule that forced SNE to support lower power modes that delayed access to these otherwise always-available devices and services would undermine the efficacy of SNE and the services it supports for consumers, a factor that the Commission is required to consider under the Warren-Alquist Act.<sup>7</sup>

For this reason, among others, the concept of a standard test method for a "broad range" of consumer devices would inevitably fail as one size that does not fit all. The discussion draft asks parties to "Explain other approaches that would be preferable/superior to the [proposed] approach ... for testing state that is applicable to a broad range of products." But the question itself is wrong in presupposing that the best course is to sweep network-operator-supplied SNE devices together with dissimilar consumer products at all. Even though the proposed test method

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<sup>6</sup> Cal. Pub. Resources Code § 25402(c)(1) ("The standards adopted or revised pursuant to this subdivision shall not result in any added total costs for consumers over the designed life of the appliances concerned. When determining cost-effectiveness, the commission shall consider the value of the water or energy saved, impact on product efficacy for the consumer, and the life cycle cost to the consumer of complying with the standard. The commission shall consider other relevant factors, as required by Sections 11346.5 and 11357 of the Government Code, including, but not limited to, the impact on housing costs, the total statewide costs and benefits of the standard over its lifetime, economic impact on California businesses, and alternative approaches and their associated costs.").

<sup>7</sup> *Id.*

outline attempts to formulate a few SNE-specific additional procedures, it falls short of the specific tailoring that is needed for SNE – a tailoring that has already been done in ANSI/CTA-2049. That existing test method standard is the “other approach” that the Commission should follow for any testing of SNE.

If the Commission does further consider any test method and/or roadmap for SNE, it should be done in conjunction with set-top boxes rather than broad review of low-power modes and power factor for retail devices. The market for SNE and the issues that would be raised by consideration of SNE bear more similarity to set-top boxes than the diverse range of devices apparently under consideration for a low-power and power factor roadmap. The latter docket is designed to address products that are not already governed by another energy-efficiency regime. In contrast, SNE is already subject to the energy-efficiency standards and reporting requirements established by the SNE Voluntary Agreement.

### **III. The Proposed Test Method Outline is Flawed**

The discussion draft suggests that each test must separately measure each “network technology” in a device, one at a time. Such a requirement would greatly increase the time and cost required to test, and would deliver flawed results that have no resemblance to actual use in customer homes. Consumers use the multiple SNE connectivity technologies simultaneously, such as 2.4 GHz Wi-Fi, 5 GHz Wi-Fi, Ethernet and/or MoCA LAN ports, and a WAN connection to the service provider network, so testing each of these in isolation would not serve any useful purpose or provide any real-world data. It is more accurate and informative to use the ANSI/CTA-2049 test method that better approximates actual consumer experience.

It also would be pointless to test SNE devices after the “user has not interacted with the product for a defined amount of time,” as proposed by the discussion draft. In a world with more and more connected devices and appliances every year, SNE will increasingly be continuously engaged in communicating with devices around the home even when the residents are away.

Given that the proposed approach is ill-suited to SNE and an effective test method for SNE already exists, the Cable Associations have not answered many of the discussion draft’s questions since they should be inapplicable to SNE in any event.

### **IV. The Voluntary Agreement Can Serve as an Effective Roadmap for SNE**

It is premature for the Commission to consider the imposition of a mandatory test method or other regulatory burdens without first establishing that regulation is warranted under the standards of the Warren-Alquist Act in the first place. There is already plenty of existing verified, comprehensive data with respect to SNE from the annual reports on the Voluntary Agreement that can be used for any initial evaluation.

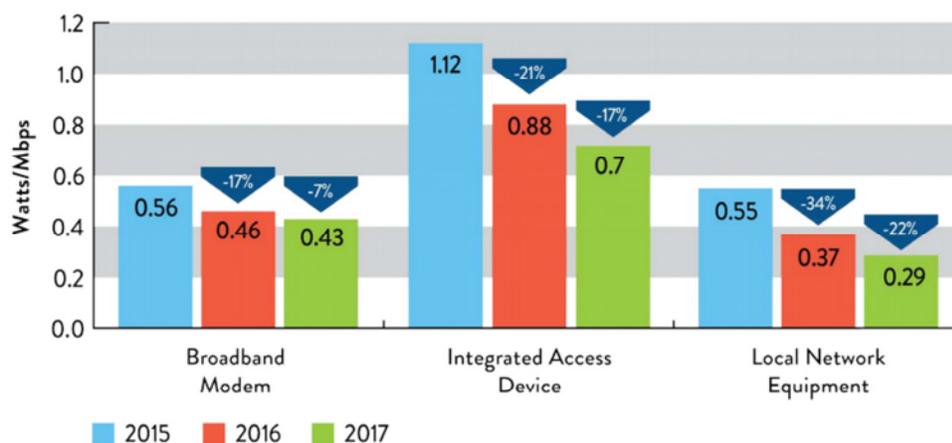
Under the Voluntary Agreement, the signatories committed that at least 90% of all SNE purchased by each service provider or sold by each manufacturer at retail after December 31, 2015 will meet the energy efficiency levels established under the Voluntary Agreement. Overall, in 2017, 99.2% of SNE purchased or sold by the signatories met these levels, up from 98.3% in

2016, and all of the signatories met the 90% commitment individually. These figures were confirmed by an independent audit and report released by D+R International in August 2018. D+R’s findings were supported by additional lab verification testing of a randomly selected model from each commercial signatory using the ANSI/CTA-2049 test method, and by a successful audit of one randomly selected signatory’s records, which D+R found to be consistent with the annual report data submitted by the party.

As noted above, the signatories of the Voluntary Agreement recently extended the Agreement for an additional four years through the end of 2021. The revised Voluntary Agreement includes new, more rigorous energy levels for SNE that will become applicable to the signatories’ 90% procurement and sales commitments in 2020. D+R reported that these new levels are on average 11% more efficient than the current Voluntary Agreement levels that have already improved the efficiency of SNE by nearly 20% compared to typical, previously deployed devices.

These savings are significant in light of consumer demands for faster broadband services and improved Wi-Fi signal strength and capacity for more devices at higher speeds within the home. While products that provide more functionality to meet these increased consumer demands sometimes use more energy than less capable devices, D+R found that the signatories are delivering these more advanced functionalities more efficiently. Even as consumers demanded more robust devices to support higher-speed services and better Wi-Fi coverage, the signatories nonetheless increased the percentage of devices meeting the target energy levels of the Voluntary Agreement in every category. Moreover, while the demand for SNE to support higher speeds and better Wi-Fi coverage resulted in slightly higher overall energy usage in 2017, the average energy usage of the equipment relative to broadband speed delivered once again decreased significantly from 2016 to 2017, as shown in this figure from D+R’s most recent annual report:

**Figure 1: Energy Usage by Equipment Type, Weighted by Broadband Speed**



The above figures were calculated by dividing the average idle power of each equipment type as verified by D+R in this report by the average broadband speed for that year reported the Akamai State of the Internet reports.

These results demonstrate one of the most valuable characteristics of the Voluntary Agreement: its effectiveness in improving energy efficiency without undermining innovation that supports new features and capabilities in SNE and the broadband services they support. Better and faster broadband enabled by SNE in turn saves even more energy across the economy by promoting the use of greener, less energy-intensive practices and business models, such as e-commerce, telecommuting, distance learning, medical monitoring, and smart thermostats, lighting and other appliances. The Voluntary Agreement’s flexible approach to new features is well designed to ensure that service providers can continue to improve their Internet services that support these and future capabilities.

Under the terms of the Voluntary Agreement, the test results for every new model of SNE purchased or sold by the major service providers and retailers are available to the public and the Commission at [www.energy-efficiency.us](http://www.energy-efficiency.us) and in D+R’s annual reports. The availability of this comprehensive information, provided in a consistent format dating back to 2015, makes unnecessary any new test method or roadmap for SNE.

## **V. Federal Law Preempts the Commission from Imposing a Test Method or Testing Requirements on Equipment Used in Cable Systems**

The Cable Associations have explained in their prior comments that the U.S. Supreme Court, Congress, and the Federal Communications Commission have all made clear that states are preempted by federal law from regulating the energy consumption of set-top boxes and small network equipment used with cable systems. Congress made clear that “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.”<sup>8</sup> The FCC has consistently applied this law to preempt state regulation of cable subscriber equipment and technology.<sup>9</sup> Since, as a matter of law, the Commission is preempted from imposing technical limits on set-top boxes or small network equipment used by a cable system, it 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.

### **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

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<sup>8</sup> 47 U.S.C. § 544(e) (emphasis added). *See also* 47 U.S.C. § 556(c) (“Except as provided in section 557 of this title, any provision of law of any State, political subdivision, or agency thereof, or franchising authority, or any provision of any franchise granted by such authority, which is inconsistent with this chapter shall be deemed to be preempted and superseded.”).

<sup>9</sup> *See, e.g., Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996*, Report and Order, CS Docket No. 96-85, 14 FCC Rcd 5296 at ¶¶ 131-32 (“uniformity of technical standards ... is essential to prevent the inefficiency and confusion that threatened the cable industry during the period when local authorities ... could set stricter standards than those promulgated by the Commission.”); *In Re Committee on Science, Technology and Energy of the New Hampshire House of Representatives and Town of Chapel Hill, North Carolina*, Memorandum Report and Order, CSR-4291-Z, 11 FCC Rcd 10250, 10251 at ¶ 2 (1996).

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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