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ARRIS U.S. Holdings, Inc. Comments -- Test Procedure Discussion Document -- Docket No. 17-AAER-12 (Low-Power Mode)

Additional submitted attachment is included below.

September 14th, 2018

California Energy Commission
Docket Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 17-AAER-12 – Request for Public Comment on Low Power Mode Test Procedure Discussion Document

ARRIS U.S. Holdings, Inc. (ARRIS) hereby submits comments in response to the California Energy Commission's Request for Public Comment on the Low Power Mode Test Procedure Discussion Document. ARRIS shares the Commission's goal of achieving greater energy efficiency for household appliances and is committed to developing innovative energy-efficient equipment solutions.

As ARRIS explained in its initial comments in this proceeding, the success of industry-led, voluntary initiatives to enhance energy efficiency demonstrates that regulatory oversight is unnecessary and may impose significant costs and impede innovation.[1] For example, the small network equipment (SNE) Voluntary Agreement[2] has resulted in substantial reductions in energy use by modems and other SNE. The Voluntary Agreement has improved the efficiency of SNE by nearly 20 percent compared to previously-deployed devices, with 99.2 percent of SNE devices purchased or sold at retail by participants in 2017 meeting the Agreement's energy efficiency levels.[3] The SNE Voluntary Agreement also includes reporting requirements (with accuracy verified by independent audits for each signatory) and makes energy efficiency data available to the public.[4] The parties to the Voluntary Agreement announced a renewal in July, with signatories committing to meet new, more rigorous energy efficiency levels by 2020 that are on average 11 percent lower than the Agreement's current levels.[5]

For these reasons, ARRIS encourages the Commission to refrain from adopting low-power mode (LPM) standards, and instead to endorse the SNE Voluntary Agreement. Should the Commission nonetheless decide to move forward with low-power standards, ARRIS provides the below feedback in response to certain specific questions posed in Attachment B of the Test Procedure Discussion Document.

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1 *See* Comments of ARRIS Group, Inc., Docket No. 17-AAER-12 (filed Jun. 16, 2017).

2 Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Small Network Equipment (as amended, effective Jan. 1, 2018), https://www.energy-efficiency.us/library/pdf/SNE-VoluntaryAgreement2018.pdf.

3 Press Release, NCTA, *Home Internet Devices More Efficient Than Ever as Industry Renews Energy Agreement* (July 26, 2018).

4 *See* 2017 Annual Report – Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Small Network Equipment (Jul. 26, 2018), https://www.energy-efficiency.us/library/pdf/SNE-AnnualReport-2017.pdf.

5 Press Release, NCTA, *Home Internet Devices More Efficient Than Ever as Industry Renews Energy Agreement* (July 26, 2018).

Question 1.1

It would be challenging and impractical for the Commission to mandate a minimum or typical amount of time for products to update and provision software before LPM measurements are taken for those products given the diverse range of products that Commission proposes to include in the scope of this proceeding. Some products automatically download an operating system on install, while others already have a full system installed and only check for updates during or after first installation, and still others update periodically throughout the life of the product. In some instances, a network provider may "push" updated software onto already-installed products, with or without the knowledge of the product user. These software updates may change the energy profile of the product after shipment and affect LPM measurements.

It is worth noting that the SNE Voluntary Agreement requires signatories to ensure the ongoing compliance of their products and to update their reports if measured consumption increases, thus ensuring that reports will capture any changes to the energy profile of a product caused by software updates.

Question 2.1

Because the Commission proposes to include a diverse range of products in the scope of this proceeding, it will be difficult to adopt a standardized approach to testing. While the approach outlined in Section 2 of the test procedure could work for some products, it would not be appropriate for others. For example, Section 2 calls for the primary function of the product to be discontinued prior to testing – but it is not possible to discontinue the primary function of some products, such as wireless access points, as this would prevent other products that rely on the access point from functioning.

Question 2.3

The period of time between the discontinuation of user interaction and the beginning of measurement should vary depending on the product type. The EU's network standby regulations specify that the time shall be "the shortest possible period of time appropriate for the intended use."[6] If the Commission does proceed with a roadmap, it should follow the EU's approach, because it recognizes that some products can enter LPM almost instantaneously, while others need to remain active for a number of hours after the last user interaction. Voluntary

[6] Regulation 1275/2008/EC, Annex II, 2d, https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:339:0045:0052:en:PDF; Regulation 801/2013/EC, Section 7(b), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0801&from=EN.

Agreements in the EU, for example, provide that the accepted general delay for printers is typically less than 15 minutes[7] but for set-top boxes is typically 4 hours.[8]

Question 3.4

The proposed configuration instructions draw from the Energy Star program requirements for SNE. The Energy Star requirements are now out of date and do not accurately reflect current and emerging networking technologies. The Commission should instead reference the SNE Voluntary Agreement and the associated CTA2049 test method, as these are more pertinent.

Question 3.10

We would recommend that the Commission use the CTA2049 test method. This test method is widely understood and adopted by the affected industry.

Question 3.11

As 3-phase networking equipment is typically only deployed in commercial or industrial applications, it should be outside the scope of the Commission's proposed roadmap proceeding, which is directed at consumer electronics and appliances.

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ARRIS appreciates this opportunity to comment and looks forward to further discussions with the Commission. Please contact me if you have any questions regarding this matter.

Sincerely,

/s/ Jason E. Friedrich
Jason E. Friedrich
Vice President, Government
& Regulatory Affairs
ARRIS U.S. Holdings, Inc.
101 Tournament Drive
Horsham, PA 19044

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[7] Industry Voluntary Agreement to Improve the Environmental Performance of Imaging Equipment Placed on the European Market, v. 52, Section 4.1(a) (Apr. 2015) (noting that products shall comply with Energy Star specifications), http://www.eurovaprint.eu/fileadmin/eurovaprint_files/pdfs/VA_version_5.2_April.pdf; Energy Star, Program Requirements for Imaging Equipment, 13 (Oct. 2014), https://www.energystar.gov/sites/default/files/FINAL%20Version%202.0%20Imaging%20Equipment%20Program%20Requirements%20%28Rev%20Oct-2014%29.pdf.

[8] Voluntary Industry Agreement to Improve the Energy Consumption of Complex Set Top Boxes within the EU, Annex A, A.4 (2013), http://cstb.eu/index.php/documents/.