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Secretary Rosemary Chiavetta
Pennsylvania Public Utilities Commission
Commonwealth Keystone Building
2nd Floor, 400 North Street
Harrisburg, PA 17120-0211

April 15, 2019

Re: Docket No. M-2019-3006867, 2021 TRM Update Tentative Order

TrickleStar, Inc., a manufacturer of energy-monitoring devices and Advanced Power Strips (“APS”) suitable for both residential and commercial applications, thanks the Pennsylvania Public Utilities Commission (“Commission”) for your continued support of Tier 1 and Tier 2 APS in the Proposed 2021 Technical Reference Manual (“TRM”) Volume 2 and Volume 3. The residential measure for APS is 2.5.2 in Volume 2, and the commercial measure for APS is 3.9.3 in Volume 3. After review of the Proposed 2021 TRM, we present to the Commission the following suggestions to improve technical accuracy and promote clarity in understanding.

Residential Measure 2.5.2 (Volume 2)

- Advanced Power Strips are surge protectors, not “power strips.” All Advanced Power Strips on the market today provide surge protection and are listed or certified to UL 1449, “standard for surge protective devices.” Therefore, we respectfully request that the Commission make the following change:
 - Existing language: “Advanced Power Strips (APS) are power strips that contain a number of power-saver sockets.”
 - Proposed language: “Advanced Power Strips (APS) are **surge protectors** that contain a number of power-saver sockets.”
- Not all televisions or home entertainment device remote controls use infrared signals. Some television remotes use Bluetooth. Some devices such as the Amazon Fire Stick or Google Chrome Cast use a Wi-Fi remote system. Set top box units such as DirecTV, DISH Network, or Comcast Xfinity use radio frequency remotes. Therefore, we respectfully request that the Commission make the following change:
 - Existing language: “Tier 2 Infrared (IR) detect signals sent by remote controls to identify activity, while Tier 2 Infrared-Occupancy Sensing (IR-OS) use infrared signals as well as an occupancy sensing component to detect activity and sense for times to shut down.”
 - Proposed language: “Tier 2 Infrared (IR) detect signals sent by **infrared** remote controls to identify activity, while Tier 2 Infrared-Occupancy Sensing (IR-OS) use infrared **remote** signals as well as an occupancy sensing component to detect activity and sense for times to shut down.”
- The “Eligibility” section of this measure still makes reference to “smart strip plugs” and “smart strips.” As a part of the 2021 TRM Update Tentative Order, the commission states that a terminology change to “Advanced Power Strip” will be applied to measures 2.5.2 and 3.9.3. Therefore, we respectfully request that the Commission make the following change:
 - Existing language: “This protocol documents the energy savings attributed to the installation of smart strip plugs. The most likely area of application is in residential spaces, i.e. single-family and multifamily homes. However, commercial applications are also appropriate for smart strips (see Volume 3, Section 3.9.3 Advanced Power Strip Plug Outlets [[WEBSITE LINK TBD](#)]). The protocol considers usage of smart strips with home office systems and home entertainment systems.”

- Proposed language: “This protocol documents the energy savings attributed to the installation of **Advanced Power Strips**. The most likely area of application is in residential spaces, i.e. single-family and multifamily homes. However, commercial applications are also appropriate for **Advanced Power Strips** (see Volume 3, Section 3.9.3 Advanced Power Strip [[WEBSITE LINK TBD](#)]). The protocol considers usage of **Advanced Power Strips** with home office systems and home entertainment systems.
- The “Algorithms” section of measure 2.5.2 still makes reference to “Tier 1 Smart Strip” and “Tier 2 Smart Strip.” As a part of the 2021 TRM Update Tentative Order, the commission states that a terminology change to “Advanced Power Strip” will be applied to measures 2.5.2 and 3.9.3. Therefore, we respectfully request that the Commission use the terms “Tier 1 Advanced Power Strip” and “Tier 2 Advanced Power Strip” or “APS unit.”
- Footnote #63 erroneously states, “Tier 2 strips are typically installed only in home entertainment center applications.” Tier 2 APS units are frequently installed in home-office applications; however, there are no field studies available that have quantified the energy savings potential of Tier 2 APS units used in a residential, home-office application. Tier 2 APS units for home-office applications are designed and operate differently than those used in home-entertainment applications. Therefore, we respectfully request that the Commission make the following change:
 - Existing language: “Tier 2 strips are typically installed only in home entertainment center applications.”
 - Proposed language: “There are no field studies available that have quantified the energy savings potential of Tier 2 APS units used in a residential, home-office application.”
- The “Sources” section of this measure identifies Version 2 of RLPNC 17-3 dated 05 Oct 2018 as one of the supporting studies (“Source 1”) for residential-use Advanced Power Strips. This study was superseded by Version 3 of RPLNC 17-3 dated 18 Mar 2019 and available here: http://ma-eeac.org/wordpress/wp-content/uploads/RLPNC_173_APSMeteringReport_Revised_18March2019.pdf

Commercial Measure 3.9.3 (Volume)

- Advanced Power Strips are surge protectors, not “power strips.” All Advanced Power Strips on the market today provide surge protection and are listed or certified to UL 1449, “standard for surge protective devices.” Therefore, we respectfully request that the Commission make the following change:
 - Existing language: “Advanced Power Strips (APS) are power strips that contain a number of power-saver sockets.”
 - Proposed language: “Advanced Power Strips (APS) are **surge protectors** that contain a number of power-saver sockets.”
- Tier 2 APS units for either residential, home-office use or commercial application do not detect or respond to infrared, remote-control signals. Therefore, the descriptive language for this measure must change. There are two different technologies used in commercial use, Tier 2 APS units. One type uses software installed on the workstation computer to track mouse movement and keyboard strokes as a proxy for user engagement. Another type uses localized motion detection as a proxy for user engagement. Therefore, we respectfully as that the Commission make the following change:
 - Existing language: “Active power consumption is managed by the Tier 2 unit by monitoring a user’s engagement or presence in a room by either or both infrared remote signals sensing or motion sensing.”
 - Proposed language: “Active power consumption is managed by the Tier 2 unit by monitoring a user’s engagement or presence in **the workstation area** by either **localized motion detection or the use of installed software to monitor keyboard strokes and mouse movement.**”



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- The “Algorithms” section of measure 3.9.3 still makes reference to “Tier 1 Smart Strip” and “Tier 2 Smart Strip.” As a part of the 2021 TRM Update Tentative Order, the commission states that a terminology change to “Advanced Power Strip” will be applied to measures 2.5.2 and 3.9.3. Therefore, we respectfully request that the Commission use the terms “Tier 1 Advanced Power Strip” and “Tier 2 Advanced Power Strip” or “APS unit.”
- As mentioned in one of our previous comments for measure 3.9.3, Tier 2 APS for commercial applications operate using different technologies for user engagement detection and monitoring. One type uses software installed on the workstation computer to track mouse movement and keyboard strokes as a proxy for user engagement. Another type uses localized motion detection as a proxy for user engagement. Therefore, we respectfully request that the Commission remove reference to “occupancy sensor” in tables 3-172 and 30173.

Thank you for allowing us an opportunity to comment on the Proposed 2021 TRM. We appreciate your willingness to address our concerns and suggestions. Again, we commend the Commission for your continued support of Tier 1 and Tier 2 APS in your residential and commercial portfolios of energy-saving measures.

Sincerely,

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