

**COMMONWEALTH OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU**

In Re:

INTERCONNECTION REGULATIONS

Case No. NEPR-MI-2019-0009

**Subject: Enphase Energy, Inc. Comments
on Default Smart Inverter Settings**

In response to the Resolution and Order published by the Puerto Rico Energy Bureau (“PREB” or “the Energy Bureau”) on Friday June 28, 2024, Enphase Energy, Inc. (“Enphase”) respectfully submits the following comments regarding the implementation of specific smart inverter functions in accordance with IEEE 1547-2018 and UL 1741-SB.

I. Enphase Background

1. Enphase is a market leading manufacturer of residential and commercial clean energy technologies including solar photovoltaic microinverters, battery energy storage systems, and electric vehicle service equipment.
2. A significant majority of all Puerto Rico residential solar installations use Enphase microinverters.
3. Enphase products are certified by UL 1741-SB to meet IEEE 1547-2018 requirements and are available to channel partners for installation across North America, including Puerto Rico.
4. Enphase products can support the requirements set forth by LUMA and under review by the Energy Bureau.
5. Enphase is a member of the Solar and Energy Storage Association of Puerto Rico (“SESA”), contributed to its May 3, 2024 filing in this docket,¹ and generally supports the recommendations made therein.

II. Recommendations

6. Enphase strongly agrees with and reiterates SESA’s prior recommendations that:
 - a. The effective date of default smart inverter settings should be three months following an Energy Board order on the matter,² and

¹ Solar and Energy Storage Association of Puerto Rico, *Reply to LUMA’s April 22, 2024 Response to Urgent Request*, filed May 3, 2024. <https://energia.pr.gov/wp-content/uploads/sites/7/2024/05/20240403-MI20190009-Response-to-Motion-Filed-By-LUMA-of-April-22-2024.pdf>

² *Ibid.*, Attachment 2, at pdf p. 28. “Commented [U1]: Replace “June 1” with “October 1.” Reason: Industry needs at least a 3-month implementation window, AFTER the specific Smart Inverter Settings are finalized by PREB. The October 1st date assumes that PREB issues final Smart Inverter Settings by July 1st, 2024.”

- b. “Voltage – Active Power (Volt/Watt)” smart inverter functionality should be deactivated upon LUMA’s initial implementation of IEEE 1547-2018 requirements.³
- 7. The Volt-Watt smart inverter function can significantly curtail customer solar generation when the distribution grid experiences high voltages, leading to commensurate negative financial impacts to the customer.
- 8. LUMA has not publicly disclosed how it expects to resolve persistent high voltage excursions on its distribution network that routinely curtail energy generation from a customer’s solar system.
- 9. Enphase believes resolution is needed on several relevant issues before LUMA implements Volt-Watt functions. Enphase thus recommends that the Energy Board initiate a follow-on working group process or related procedural activity to:
 - a. Establish a process and timeline for LUMA to address persistent high grid voltages within their distribution network through grid upgrades or other measures, to mitigate customer generation losses due to Volt-Watt settings.
 - b. Establish a process for customers to report, and the industry to track, the occurrence of high voltage issues on the grid that would activate Volt-Watt settings and lead to generation losses.
 - c. Implement a structure to compensate customers for lost energy generation when persistent occurrences of high grid voltage routinely curtails solar generation due to Volt-Watt settings.
- 10. Upon resolution of the above issues, Enphase recommends that implementation of Volt-Watt functionality be enabled only by mutual agreement between LUMA and the customer when voltages above ANSI C84 requirements are recorded, and remain engaged until the grid voltage can be brought into compliance with ANSI C84 requirements.

III. Conclusion

In closing, Enphase supports the IEEE 1547-2018 standard and the general implementation of smart inverter functions. Nevertheless, implementation of such functions must consider the impact on distributed generation and seek to mitigate any negative impact on a system owner’s return on investment. Enphase thanks the Energy Board’s consideration of our comments and urges it to adopt the recommendations herein, which will support the long-term adoption of renewables in Puerto Rico in pursuit of its goal to achieve a 100% renewably-powered grid.

³ *Ibid.*, Attachment 2, at pdf p. 31: “Commented [U12]: Activating Volt-Watt triggers concerns about curtailment of export of solar power to the power grid, which reduces customer compensation of Net Metering credits on their bill. Because of this chance of loss of customer compensation, we are opposed to the Volt-Watt setting being Activated, unless it’s accompanied with clear assurances of LUMA performing grid upgrades within a pre-established, reasonable amount of time.”



Respectfully submitted,

I hereby certify that these comments were filed using the electronic filing system of the Puerto Rico Energy Bureau and that a copy of these comments was delivered by electronic mail to: Agustin.Irrizary@upr.edu, javrua@sesapr.org, hrivera@jrsp.pr.gov, contratistas@jrsp.pr.gov, aconer.pr@gmail.com, john.jordan@nationalpfg.com, lionel.santa@prepa.pr.gov, arivera@gmlex.net, mvalle@gmlex.net, laura.rozas@us.dlapiper.com, valeria.belvis@us.dlapiper.com, julian.angladapagan@us.dlapiper.com, cfl@mcvpr.com, and mgs@mcvpr.com.

A handwritten signature in black ink, appearing to read 'M-M'.

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