

Liaison Statement from IEEE 802.11 Working Group to WFA Operator Marketing Segment Task Group

Source: IEEE 802.11 Working Group¹ August 2023

Date: 2023-08-14

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Subject: Reply to WFA re: Energy efficient measures to reduce Wi-Fi device carbon footprint

Dear Consuelo and Operator Market Segment Task Group members,

Thank you for your communication highlighting the challenge that Operators are facing regarding the target of achieving net zero carbon emissions by 2040. We acknowledge your request that improving IEEE 802.11 energy efficiency on both access point and client devices be considered as an objective within Ultra High Reliability (P802.11bn) project.

With this response, we inform you that thanks to the inputs of IEEE 802.11 members, this energy efficiency objective has been included in the IEEE 802.11bn PAR document (see [1]). Specifically:

- For the first time in an IEEE 802.11 project, Access Point power save is included in the scope description of the project:
 - *“This amendment provides a mechanism to reduce power consumptions for Access Point (AP) (including mobile AP) and improved Peer-to-Peer (P2P) operation compared to Extremely High Throughput MAC/PHY operation.”*
- The need for energy efficiency is highlighted in the need description for the project.

¹ This document represents the views of the IEEE 802.11 Working Group and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

- *“Reducing power consumption of WLAN devices is required to prolong the battery life of untethered devices (e.g., non-AP STA, Mobile APs), reduce device cost, and lower energy bills of customers deploying non-AP and AP STAs in most scenarios (e.g., residential, enterprise, industrial, venues).”*
- The explanatory notes further emphasize the following:
 - *“Power saving mechanisms also decrease the carbon footprint of WLAN technology, reduce greenhouse gas emissions, and conform to energy regulatory requirements worldwide. AP Power Save encompasses different scenarios, including periods of low utilization while minimizing the impact on the service.”*

For your reference, [IEEE Std 802.11-2020](#) is the current version of the IEEE 802.11 Standard. See http://www.ieee802.org/11/Meetings/Meeting_Plan.html for future meeting dates of the IEEE 802.11 Working Group.

References

[1] “802.11bn revised PAR”, Laurent Cariou, 07/11/23,
<https://mentor.ieee.org/802.11/dcn/23/11-23-1252-04-0uhr-802-11bn-revised-par.docx>

[2] “UHR draft proposed CSD”, Laurent Cariou, 07/11/23,
<https://mentor.ieee.org/802.11/dcn/23/11-23-0079-10-0uhr-uhr-draft-proposed-csd.docx>

Best Regards,

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