IEEE P802.11
Wireless LANs

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| Liaison statement from Wi-Fi Alliance re: energy efficiency |
| Date: 2-03-06-07 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
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This document contains a liaison received from the Wi-F Alliance (WFA) Operator Market Segment Task Group related to energy efficiency and prioritization of measures to reduce power consumption within the Wi-Fi Access Point for future Wi-Fi standards. The received liaison is embedded below and copied on the following pages.



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Date: 24 May 2023

To: Dorothy Stanley, Chair Wireless LAN Working Group (C/LM/WG802.11) From: Wi‐Fi Alliance - Operator Market Segment TG

RE: Energy efficiency measures to reduce Wi-Fi carbon footprint for Wi-Fi 8

Dear Dorothy Stanley,

The Wi-Fi Alliance Operator Market Segment Task Group (OMTG) are writing to you in support of prioritization of measures to reduced power consumption within the Wi-Fi Access Point for future Wi-Fi standards. Several operators have signed up to targets of achieving net zero carbon emissions by 2040. These ambitious Scope 3 targets include emissions generated by suppliers and customers, including delivering Wi-Fi around the home.

Further measured to improve energy efficiency will have significant environments benefits as well as lower energy costs for customers.

Please find the attached presentation from the OMTG. The OMTG group ask is for this concern to be strongly considered as part of Wi-Fi 8 feature prioritisation within the IEEE Ultra High Reliability WLAN study group.

Best Regards,

Wi‐Fi Alliance

Communication to IEEE 1


# The need for energy efficiency mechanisms in 802.11

Communication to IEEE

May 10, 2023

## Summary

Request to IEEE to consider energy efficiency in Wi-Fi 8 and future standards

Need to improve the energy efficiency of their infrastructure and networks to reduce emissions

This includes Wi-Fi equipment

Supported by operators that are developing their sustainability narrative and strategies

Operator MSTG collected inputs on their sustainability and net-zero or carbon neutral roadmap

## Operators working towards net zero and carbon neutral

* Operators are investing in fast networks and new technologies to improve our lives
* They are also committed to decarbonize their networks to become a net zero or carbon neutral business in 10 to 15 years.
* As part of this goal some are targeting net zero for their supply chain and carbon emissions
* Of the Customer Premises Equipment (CPE), it is estimated that Wi-Fi accounts for a portion of emissions footprint of CPE (example [here](https://omdia.tech.informa.com/OM028768/An-Analysis-of-Telecom-Operator-Energy-Consumption-and-CO2-Emissions))
* Distinction between net zero and carbon neutral can be found [here](https://www.nationalgrid.com/stories/energy-explained/carbon-neutral-vs-net-zero-understanding-difference) and [here](https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf) and [here](https://www.wri.org/initiatives/greenhouse-gas-protocol)

## Conclusion - Call to IEEE

* Many operators have committed to Net Zero or carbon neutral by 2040
* Wi-Fi CPE equipment contributes towards carbon emissions
* Need energy efficiency mechanisms for the Wi-Fi devices (Access Points and Subscriber Stations) that maintain Wi-Fi connectivity and interoperability with a reduction of power consumption while limiting the impact on the quality of service


# Additional information

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## Green House Gas (GHG) emissions scope classification

A company's greenhouse gas emissions are classified into three scopes. Scope 1 and 2 are mandatory to report, whereas scope 3 is voluntary and the hardest to monitor.

* Scope 1: direct emissions
	+ Direct emissions from company-owned and controlled resources.
* Scope 2: indirect emissions - owned
	+ Indirect emissions from the generation of purchased energy, from a utility provider. In other words, all GHG emissions released in the atmosphere, from the consumption of purchased electricity, steam, heat and cooling.
* Scope 3: indirect emissions - not owned
	+ are all indirect emissions - not included in scope 2 - that occur in the value chain of the reporting company. This means all emissions linked to the company's operations including product life cycle emissions

## Sustainability reports

* [https://www.bt.com/bt-plc/assets/documents/digital-impact-and-sustainability/our-](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf) [report/report-archive/2022/2022-manifesto-report.pdf](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)
* [https://www.libertyglobal.com/wp-content/uploads/2022/07/Liberty-Global-](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)

[\_Environmental-Statement-2022-signed.pdf](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)

* [https://www.libertyglobal.com/liberty-global-commits-to-net-zero-by-2030/](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)
* [https://www.orange-business.com/en/corporate/corporate-social-responsibility](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)
* [https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf) [Picture-2022-Sustainability-Report.pdf](https://exchange.telstra.com.au/wp-content/uploads/2022/08/Telstra-Bigger-Picture-2022-Sustainability-Report.pdf)