

Intel and Sustainability: Leading with Innovations in Energy Efficiency

Intel's purpose is to create world-changing technology that improves the life of every person on the planet. Driving to the lowest possible environmental footprint while increasing the energy efficiency and lowering the total carbon footprint of products and platforms is a vital way to fulfill that purpose.

To reduce its own Scope 3 greenhouse gas (GHG) emissions, customers' Scope 2 GHG emissions and overall energy consumption, Intel has set a goal to increase product energy efficiency by 10 times for Intel client and server microprocessors by 2030.¹



Cloud: Granulate software autonomously and continuously improves application performance, reducing energy consumption and calculates cost and carbon savings for cloud instances, which can enable up to **21% instance reduction for energy savings.**²



Infrastructure: 4th Generation Intel® Xeon® Scalable processors are Intel's most sustainable data center processors ever, enabling server consolidation that reduces energy consumption and provides for up to **75% total cost of ownership savings.**³



Artificial Intelligence Workloads: 4th Gen Intel Xeon Scalable processors provide up to **14X energy efficiency increase**⁴ for select AI inference workloads. For AI machine learning, Intel Gaudi 2 processors provide up to **1.8X increase**⁵ in energy efficiency over a leading competitor processor.



Network: Intel's Infrastructure Power Manager reference software can deliver up to **30% network power savings.**⁶



Client: 13th Generation Intel® Core™ processors provide a **43% energy efficiency increase**⁷ over 2021 Intel client processors.



FPGA: Intel Agilex provides up to **2X better fabric perf/watt** than other 7nm asics.⁸

Further, Intel is deepening its long-standing collaboration across the ecosystem to lead the industry to a future of more sustainable computing, participating in consortia such as:

- The [Open Compute Project \(OCP\)](#) to advance scaling of data center liquid cooling through industry specifications and standards and to further modular designs to increase the reuse of server elements generation-over-generation.
- The Massachusetts Institute of [Technology's Product Attribute to Impact Algorithm \(PAIA\)](#) consortium to develop a common approach to calculating product carbon footprint for electronics.
- [The Green Software Foundation](#) to reduce the carbon emissions of software.

Intel's holistic approach across products, platforms, software and solutions enables customers to accelerate their sustainability journeys.



¹ Source: 2022-23 Intel Corporate Responsibility Report: csrreportbuilder.intel.com/pdfbuilder/pdfs/CSR-2022-23-Full-Report.pdf.

² Source: [Customer reported by IronSource](#).

³ Source: [Intel Performance Index Claim E1](#).

⁴ Source: [Intel Performance Index Claim E1](#).

⁵ Source: [Intel Energy Efficiency through greater throughput/watt](#).

⁶ Source: download.intel.com/newsroom/2023/5g-communications/2023MWC-5G-Fact-Sheet.pdf.

⁷ Source: 2022-23 Intel Corporate Responsibility Report: csrreportbuilder.intel.com/pdfbuilder/pdfs/CSR-2022-23-Full-Report.pdf, pg 75.

⁸ Source: edc.intel.com/content/www/us/en/products/performance/benchmarks/fpga/.