Sustainability benefits of laptops POWERED BY SNAPDRAGON® PROCESSORS

Does selecting a laptop with a particular processor make a substantial difference to energy use, costs and emissions? New research by independent specialist Px³ for Qualcomm Technologies, Inc. suggests it does.

Key Findings

ENERGY SAVINGS

Laptops powered by **Snapdragon 8cx Gen 3 processors** use substantially less energy across common use cases.

PRODUCTIVITY TASKS

Snapdragon uses 58% less energy than Intel

Snapdragon uses 33% less energy than AMD

CONTENT STREAMING

Snapdragon uses 62% less energy than Intel

Snapdragon uses 54% less energy than AMD

VIDEO CONFERENCING

Snapdragon uses 45% less energy than Intel

Snapdragon uses 57% less energy than AMD

SUMMARY

The study **examined the power consumption of three Lenovo ThinkPad X13 notebooks running Windows 11**. The machines were identical except for the processor inside which were made by AMD, Intel, or Qualcomm Technologies. A set of workloads was run on each device, including typical productivity tasks, content streaming, and video conferencing.

The tests proved that **a device powered by Snapdragon 8cx Gen 3 consumes 45% less electricity than one with an Intel Core i5-1240P, and 24% less than one with an AMD Ryzen 5 PRO 6650U processor**. The results highlight potential savings in power consumption, customers' related energy costs, and carbon emissions.

Given the increased use of video-based collaboration tools such as Microsoft Teams and Zoom, it was notable that the power savings on Snapdragon were particularly high in this area. **The notebook with the Snapdragon processor consumed up to 57% less electricity**.

Taking a 1,000 user impact example over 5 years demonstrates that laptops offered by **Snapdragon offer a substantial scope 2 GHG emissions saving of 21,847 kgCO2e**.

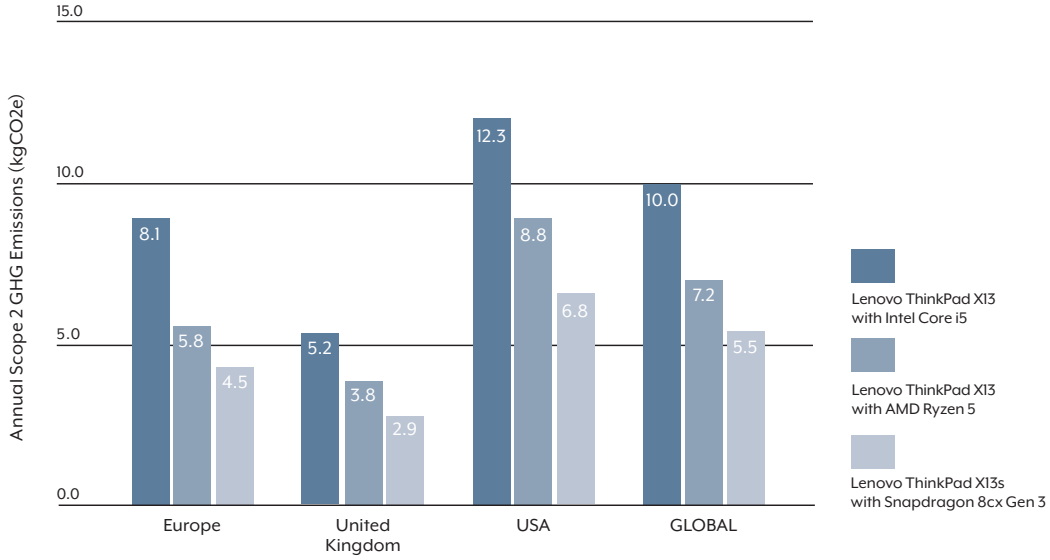
Key Benefits

EMISSIONS REDUCTION

Laptops powered by Snapdragon **reduce scope 2 GHG emissions because they consume less electricity**.

Energy-based GHG emissions **will differ depending upon the location of use because national electricity grids exhibit different levels of carbon intensity**.

ANNUAL SCOPE 2 GHG EMISSIONS ($kgCO_2e$) RESULTS FOR 3 DEVICES BY LOCATION OF USE



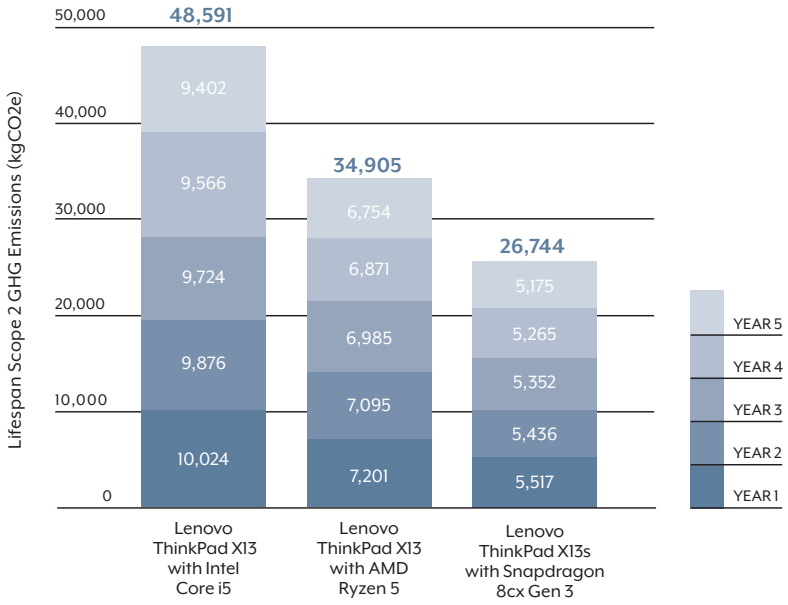
SAVINGS AT SCALE

Over 5 years, **an enterprise using 1,000 laptops powered by Snapdragon will save 60,900 kWh compared to an identical laptop with an Intel processor (or 22,750 kWh less than AMD)**.

That example would **reduce scope 2 GHG emissions by 21,847 kgCO2e**.

Put another way, **that's like avoiding the pollution from driving around the earth more than three times**.

LIFESPAN SCOPE 2 GHG EMISSIONS ($kgCO_2e$) RESULTS FOR 3 DEVICES IN A BUSINESS ENVIRONMENT



To complete the savings **there is also a feasible utility cost saving of $7,321 for the 1,000 devices** based on a global average electricity price during a 5-year period.