

Case study: Delivering Product Carbon Decision Support for Engineering Teams

Product Sustainability Delivery · Carbon Modelling · Engineering Design Support

Challenge

The client needed to be able to quickly calculate use-phase CO₂eq emissions of different product options when specifying a solution for their customers. Full lifecycle assessment was too slow.

Solution

Sentec developed a lightweight operational carbon calculator that allows teams to generate use-phase analysis, reports and comparisons using product performance data, application assumptions and regional electricity factors. The tool translated technical product data into decision-ready carbon outputs specific to the customer use-case, supporting faster and better decisions.

Lightweight CO₂ Model



5-minute excel-based decision-support tool for use-phase carbon assessment.

Decision-Ready Outputs



Identification of the lowest carbon footprint product option for a client in the specified use-scenario.

“Understanding product function and output was critical to creating a like-for-like comparison that goes beyond face-plate efficiency and power.”

– Matt Boxall , Senior Product Sustainability Engineer, Sentec

Energy consumption comparison for defined task

