

Sustainability solutions

Carbon calculators: a smarter way to measure your trial's footprint

Why it matters

Clinical trials are critical for advancing human health, but they also leave a significant environmental footprint:

- A single Phase III trial can generate CO₂ emissions equal to powering 100+ U.S. homes for a year.
- Patient travel, investigator meetings, shipping kits, and energy use at trial sites are some of the biggest contributors.
- With increasing pressure from regulators, investors, and patients, sponsors are being asked to deliver innovative therapies sustainably.

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100+ homes powered for a year



(Source: BMJ Open, 2022)

What is a carbon calculator?

A carbon calculator is a modeling tool that estimates the carbon footprint of a clinical trial. Instead of measuring every real-world data point (e.g., how many miles each patient drove), the calculator uses historical trial data, emissions factors, and operational models to identify where and how a study is generating emissions.

WHAT YOU CAN LEARN



Hotspots

- Spot the operational areas of your trial that are driving the highest emissions (e.g., travel, shipping, investigator meetings)
- Focus your sustainability efforts where they can make the biggest impact



Efficiencies

- Highlight excesses such as kit wastage, product overage, or unnecessary assessments
- Reduce not only emissions but also study costs



Optimize

- Model the impact of digitization and decentralization on patient travel and site burden
- Explore alternatives like remote monitoring, at-home sampling, and virtual investigator meetings



Benchmark

- Compare trial designs against emissions benchmarks
- Iterate study planning for continuous sustainability improvements

What you'll gain

- Environmental, Social and Governance (ESG) alignment
- Reduced cost through efficiency
- Stronger reputation with patients and stakeholders



Advance research. Protect the planet.

[Access our carbon calculator now.](#)

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