

nLighten Sets New Sustainability Benchmark with First ICFEn Scores for UK, German and Spanish Data Centers

European data center provider publishes new Integrated Carbon-Free Energy scores, going beyond industry standards to measure real-time environmental impact

LONDON, UNITED KINGDOM, October 29, 2025 /EINPresswire.com/ -- nLighten, a leading European data center operator, today announced the first ICFEn (Integrated Carbon-Free Energy) scores for its facilities in the United Kingdom, Germany and Spain, marking a significant milestone in data center sustainability measurement. The innovative scoring methodology goes beyond traditional industry standards by capturing hourly carbon-free energy matching, heat recovery, and contributions to grid stability.

Developed in collaboration with the Fondazione Eni Enrico Mattei (FEEM), the ICFEn framework represents a fundamental shift in how data centers measure and report their environmental impact. Unlike conventional metrics that rely on annual averages or focus solely on electricity consumption, ICFEn provides real-time transparency on how facilities contribute to decarbonization through energy reuse and sector coupling.

Understanding ICFEn: A Holistic Approach

The ICFEn score builds upon the 24/7 Carbon-Free Energy concept by incorporating three critical components: hourly-matched renewable electricity mix, heat recovery systems, and grid stabilization contributions. This comprehensive approach captures the full environmental picture of data center operations, aligning with the EU Energy Efficiency Directive and sustainability frameworks including the Greenhouse Gas (GHG) Protocol and Science Based Targets initiative.

“Traditional sustainability metrics have focused on the data centers electrical energy profile, but ICFEn integrates the Data Center into a community energy system accounting both for consumption and contribution,” said Chad McCarthy, Chief Technology Officer at nLighten. “By accounting for heat recovery and real-time renewable energy matching, we’re providing our customers and stakeholders with unprecedented transparency about our actual environmental impact, hour by hour, not just year-end averages.”

Results Demonstrate Industry Leadership

nLighten’s facilities in the UK, Germany and Spain have achieved strong ICFEn scores through innovative procurement strategies in renewable energies and heat recovery programs. Over April

to June 2025 the company's UK data centers achieved an ICFEn score of 94.61%, significantly outperforming the regional CFE grid average of 56.47%.

The company achieves hourly renewable energy matching by integrating renewable energy assets into its portfolio and assigning their different profile production to data center operations in real time. This ensures facilities are powered by clean energy when it's actually being used, maintaining integrity even in regions with less favorable grid mixes.

"We're not just measuring renewable energy consumed, it's more providing for a quantification of environmental improvement through sustainable projects, for which we transparently share the calculation method." said Francesco Marasco, VP Energy Operations and Sustainability at nLighten. "The ICFEn methodology allows us to demonstrate measurable, system-wide benefits that lower community emissions. We're actively encouraging other operators to adopt this framework, because raising awareness of data centers benefits everyone."

Open Methodology Encourages Industry Adoption

In a move designed to drive sector-wide change, nLighten has published the ICFEn methodology under a Creative Commons license, making it freely available for other operators to adopt. The timing is particularly relevant as the GHG Protocol evolves toward requiring hourly-based renewable energy reporting. nLighten's ICFEn scoring provides the commercial and technical infrastructure needed to support customers' future sustainability reporting requirements.

nLighten plans to roll out ICFEn reporting across all its European sites, with third-party verification of hourly energy and heat recovery data planned as a key next step to ensure independent validation.

[Learn more about the ICFEn score here.](#)

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