

INTELLIGENCE UPDATE

EED status update: implications for data centers



The Energy Efficiency Directive (EED) is part of the EU's Fit for 55 initiatives to help speed up the transition towards net-zero greenhouse gas (GHG) emissions by 2050 and achieve GHG reductions of at least 55% by 2030, compared with GHG levels in 1990.

The law has many parts, will be applied in stages, and in some areas, key rules and metrics have yet to be fully defined. It will also be applied in different ways across EU countries, each of which is required to legislate at national level. Therefore, it is not surprising that, as Uptime Intelligence's research suggests, there is considerable confusion around elements of the directive. This report outlines the key parts of the EED, and the status of the legislation as of June 2025.

The legislation may ultimately consist of three steps that are specific to data centers.

Step one

The first step was the European Commission approving laws requiring annual reporting (which started in 2024) to an EU database for data centers with an installed IT power demand of at least 500 kilowatts (kW). This step has been transposed to national law in most EU countries, with Germany and the Netherlands implementing more ambitious national reporting schemes.

Operators self-report information and performance indicators (see <u>EED delegated regulation is</u> <u>finally final</u>) for each data center, on a country-by-country basis. The performance metrics are then calculated in accordance with EN 50600 standards, including PUE, water usage effectiveness (WUE), renewable energy factor (REF) and energy reuse factor (ERF). Some operators prefer to calculate and submit performance metrics directly to the database. The EU plans to make performance metrics data public in various aggregated forms (by country, data center size, data center type, etc.) during the second half of 2025.

The first step of the EED has been plagued by problems, such as the Netherlands releasing data publicly for individual data centers (creating a trust issue), limited data quality checks, tenants

refusing to share data with their colocation hosts, enterprise data centers obliged to report but unknown to the EU, and a large number of data centers not reporting (60% of those identified by <u>datacentermap.com</u>). Uptime Intelligence estimates that establishing a reliable database could take two to three years.

Step two

The second step is currently under way. The Commission aims to develop a rating scheme/label to demonstrate the energy efficiency (and wider sustainability) of each individual data center visually. **Figure 1** shows a work-in-progress rating scheme/label presented by the Commission during a public consultation meeting on June 18, 2025. It includes a section for voluntary information (the area below the purple line on the figure), which allows operators to demonstrate leadership. Related to the rating scheme/label, the Commission is developing a definition of a carbon-neutral data center.



Figure 1 A proposed data center rating scheme/label (June 18, 2025)

This proposal encompasses a broad range of sustainability data, some of which operators (and/or their tenants) are likely to consider confidential. Uptime Intelligence has suggested focusing on fewer data points (see *EU plans introduction of rating system*).

The Commission aims to establish a rating scheme during 2025. The earliest a rating scheme could be implemented and utilised is 2026, as it requires data to be averaged over at least two to three years (minimum 2024 and 2025). However, given the ongoing differences in opinion amongst stakeholders and the paucity of the data from the first year, this timeline may well be extended. In addition, some groups are advocating for a single score for each data center, based on EED data.

Step three

The third step aims to set minimum performance standards (MPS) that data centers must meet, which the Commission views as complementary to the rating scheme. Although the labeling scheme enables companies to demonstrate leadership, the role of the MPS is to eliminate (or improve) the poorest-performing data centers. The Commission proposed a revised set of MPS in a workshop on June 18, 2025:

Timeline	Power usage effectiveness (PUE)	Water usage effectiveness (WUE)	Renewable energy factor (REF)
Existing data centers by 2030	Operational PUE <1.5	<0.4 (regardless of water origin: potable or non-potable)	100%
Data centers commissioned in 2027 and later	Design PUE <1.3 (with operational PUE <1.4 to be achieved within three years of operation)	< 0.4 (regardless of water origin: potable or non-potable)	100% (by 2030)
UPTIME INSTITUTE 2025			

Table 1 Minimum performance standards proposed by the EU Commission (June 18, 2025)

It is uncertain whether the WUE MPS will be valid for all data centers, or only for those located in areas with medium (or high) water depletion. Regarding renewable energy consumption, the MPS on 100%. REF by 2030 should be feasible for most operators to meet because it allows all means of acquisition. Once this target is met, the Commission recommends a further focus on the origin of renewable energy and hourly (24/7) matching.

Other metrics have been discussed, including the cooling efficiency ratio (CER) and carbon usage effectiveness (CUE). However, they are not currently being considered as these metrics would require collecting new data points and, therefore, a political mandate to change alreadyapproved EED legislation. Although heat reuse is referenced in the rating scheme/label, the Commission does not believe that mandating EU-wide criterion (MPS on ERF) is feasible and proposes that it is assessed locally.

Similarly to the rating scheme/label, MPS could be adopted as soon as 2026. However, a political mandate to enact new legislation will be required, which is likely to delay the timeline.

Meanwhile, with the advancement of AI, there is growing concern that energy efficiency regulations could impede the development of the EU's digital infrastructure. Recent analysis by Uptime Intelligence indicates that approximately 40% of data centers in the EU may need significant upgrades or relocation to comply with the proposed MPS (see the soon-to-be-published Uptime report *Are EU data center MPS values creating chaos*?). The rapid growth of AI is straining facility capacity and supply chains, making it challenging to upgrade data centers to new standards without disrupting digital services.

Note: The regulatory analysis provided in this report is the opinion of Uptime Intelligence. Data center operators should validate the interpretations with their legal staff and any relevant regulatory authorities.



Tomas Rahkonen

Dr. Rahkonen is the Research Director Sustainability, Europe at Uptime Institute. Rahkonen has spent the last 25 years in positions within the telecommunications, mobile communications, and data center sectors globally, and most recently served as the CTO of Flexenclosure, where he managed the design and delivery of prefab data centers across four continents. **TRahkonen@uptimeinstitute.com**

About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. Its Tier Standard is the IT industry's most trusted and adopted global standard for the proper design, construction, and operation of data centers – the backbone of the digital economy. For over 25 years, the company has served as the standard for data center reliability, sustainability, and efficiency, providing customers assurance that their digital infrastructure can perform at a level that is consistent with their business needs across a wide array of operating conditions.

With its data center Tier Standard & Certifications, Management & Operations reviews, broad range of related risk and performance assessments, and accredited educational curriculum completed by over 10,000 data center professionals, Uptime Institute has helped thousands of companies, in over 100 countries to optimize critical IT assets while managing costs, resources, and efficiency.