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INTELLIGENCE UPDATE

Remaining EED reporting deficiencies need immediate attention

Jay Dietrich 18 Feb 2025

The second round of the EU's Energy Efficiency Directive (EED) information and key performance indicator (KPI) reporting must be completed by May 15, 2025. Embarking on the 2024 data submittal seems problematic, given that as of January 31, 2025, most countries have not completed data reporting for 2023. Additionally, three countries still have not designated a member state representative to start the 2023 or 2024 reporting processes, which means that operators in those countries cannot report to the EU database. Furthermore, 21 countries have not enacted the national legislation and regulations required for reporting. Data center operators are concerned that national legislation or regulations, such as those previously made by Germany and the Netherlands, will change or add definitions and reporting requirements.

Data center operators have expressed a high degree of frustration with the 2023 reporting process. They see a need for the European Commission to make process adjustments, including clarification of confidentiality requirements, tightening of critical definitions, and issuance of guidance on the measurement and reporting process for the ICT capacity KPIs. Without these and other changes, which are unlikely to be implemented before the May 15th report deadline, the data reported for the 2024 operating year will be incomplete and, as a result, unusable for making actionable decisions on data center labeling and minimum performance thresholds.

Deficiencies within the reporting process

Discussions with data center operators and representatives of European digital infrastructure industry associations reveal uncertainty regarding the best approach to correcting inadequacies in the current process. The interests and positions of hyperscalers, colocation operators and enterprise operators vary, making consensus difficult. As a result, the industry has been unable or unwilling to converge on a single advocacy position that best advances the broader interests of the sector while providing regulators and the public with the information and KPIs they need to make informed decisions on managing the industry's environmental impact and performance. The lack of consensus has fueled behind-the-scenes battles over data confidentiality, definitions and compliance responsibilities.

Data confidentiality

The delegated regulation dictates that the data submitted on data centers will be held in confidence by the Commission (EED Article 12, paragraph 5, Delegated Regulation Article 5,

paragraph 3). In a February 2, 2025 email, the Commission reemphasized the database's confidentiality and cybersecurity, asserting that both were sound and well-managed. However, this ignores that the Netherlands has legislated the public release of the submitted data and posted all the 2024 reporting forms. Operators fear other countries will also require data publication when they pass national legislation.

Several large hyperscalers have refused to report their data to the database or their colocation operators. They are also instructing their colocation operators not to report data for any building where they are the sole tenant. Until these confidentiality concerns are addressed, the reported data will be incomplete.

Contract provisions mandating legal compliance

A colocation operator reported that several hyperscalers and enterprise clients have refused to accept contract clauses requiring IT tenants to provide information and KPI data and assist in implementing operational changes needed for compliance with directives and regulations. This rejection is tied to the previously discussed confidentiality concern and a mistaken belief among some colocation tenants that compliance rests solely with the data center operator. Colocation operators can only meet the EED mandates with the cooperation of their tenants; regulatory compliance is a shared responsibility.

Uptime Intelligence believes that there needs to be three major changes to the Delegated Regulation to address the confidentiality and compliance issues. These changes should facilitate cooperation between data center operators and tenants.

- The responsibility for reporting the ICT capacity indicators should be assigned directly to the operators of the IT equipment. The IT operator should report these indicators directly to the national or EU database under a unique, anonymous identifier. If this change is adopted, a minimum installed energy threshold for IT equipment that necessitates reporting will need to be established: a value between 100 kW and 250 kW may be appropriate.
- The IT operator should disaggregate its server, storage and network capacity data to the individual, anonymous data center identifier(s) in which the equipment is operated.
- National entities should be instructed to confidently hold the reported data in compliance with the EED and Delegated Regulation requirements.

With regards to the necessary operational changes, IT tenants must accept the need to modify their IT infrastructure and work with their colocation operators to meet specific performance requirements. This includes power management deployment and IT space temperature requirements in the Netherlands and PUE performance standards in Germany as well as, in the future, the broader EU (see *EU delegated report due in early May: what's the rush?*). While organizational borders present a challenge, this collaboration needs to become more seamless in a regulated environment.

Undefined ICT capacity indicator reporting requirements

The measurement and calculation methodologies to assess and report the ICT capacity for

servers (Cserv), the ICT capacity for storage equipment (Cstor) and the four data traffic indicators are not defined. This creates confusion among data center operators. The Cserv and Cstor data are only required for equipment installed after June 6, 2024.

Equinix recently issued guidance and a mandate requiring its tenants to provide the ICT capacity indicators but incorrectly defined the data required for Cserv and Cstor. Cserv is defined as an active state performance: transactions per second as measured by the CPU worklets of the Server Efficiency Rating Tool (SERT) or SPECint (a server performance benchmark). However, Equinix advised its tenants to report active state efficiency: transactions per second per watt.

Cstor is defined as the storage capacity of storage devices in dedicated storage equipment, but Equinix advised clients to report the aggregated raw storage capacity of storage devices installed in servers. The data traffic indicators are correctly identified, but no guidance has been provided on how to measure the traffic and aggregate values across a tenant's data center infrastructure.

Another operator indicated that they were considering sending a general letter requesting their tenants' data while hoping no one would respond. Though spoken out of frustration, the lack of an industry consensus on the measurement and calculation methodologies needed to calculate Cserv will result in a heterogeneous data set that is inaccurate.

The data center industry — likely led by the European Data Centre Association or an active country industry association — should convene a working group to develop an industry consensus on the measurements and methodologies required to report these values. Efforts should focus on preparing a consensus by July 2025, allowing operators to collect data for the 2025 reporting period.

Lack of KPI measurement boundaries

Many subtle issues are involved in measuring and reporting the KPI values. For example:

- Does the data center's total floor area include the roof area when cooling systems are installed there?
- How is heat reuse incorporated or not incorporated into the PUE calculation?

These concerns can be easily managed in a company's sustainability report by clearly defining the boundary and measurement points used for a specific KPI, such as PUE. However, a clear regulatory definition of these parameters becomes critical when reporting carries the risk of fines and other severe consequences.

Many operators and regulators prefer a standards-based solution, but reaching a consensus through a standard process will take several years. While a resolution cannot be provided to guide the May 15, 2025 report, efforts should be made to develop guidance for open issues by the end of 2025 to be used for the 2026 report. It would be appropriate for a data center industry association to take on the task of identifying specific measurement locations and boundaries, as well as providing one or more consensus methodologies to address KPI uncertainties where they exist. After review, the Commission could issue these as official guidance. These efforts would go a long way to improving the database's usefulness and demonstrate the industry's commitment to facilitating meaningful data from the EED reporting process.

Lack of attention by enterprise operators

Publicly reported data from the Netherlands indicate that many enterprise data center operators either misunderstand or have been misinformed about their reporting responsibilities under the EED. Due to changes in the reporting deadline and the absence of designated member state representatives that control access to the EED database, many operators may mistakenly believe that the first reporting date moved to May 15, 2025. Given that two of the six established national EED laws (Germany and Netherlands) have penalties for failure to comply, enterprise operators are advised to understand their responsibilities under the EED, collect and submit the available 2023 data, and prepare a submittal for 2024.

Observations

It is incumbent on the data center industry to take the lead in developing guidance that provides measurement and calculation methodologies while establishing a revised reporting framework to address the deficiencies discussed above. Providing industry-backed, consensus guidance that offers one or more acceptable approaches to resolving definitional and process issues would demonstrate the industry's commitment to a successful reporting process. It would also reinforce the industry's credibility in the coming efforts to establish a data center rating system and minimum environmental performance standards for KPIs, including PUE, energy reuse factor, water usage effectiveness, IT equipment utilization, and deployed IT work capacity per megawatt-hour of energy consumption metrics.

The Uptime Intelligence View

The EU's EED reporting mandates are failing to collect meaningful, actionable data. Data center operators need to take the initiative to engage with the Commission and industry association representatives to resolve current ambiguities in the reporting obligations, definitions of the ICT capacity indicators, and confidentiality protection to put the EED reporting process on a solid foundation.

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Jay is the Research Director of Sustainability at Uptime Institute. Dietrich looks beyond the hype to analyze the transformations required in energy and IT systems, data centers and software management systems, and intra-organizational collaboration, both within and between companies, to deliver sustainable data center operations.

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