The EU's Energy Efficiency Directive and Its Impact on Datacenters

April 2025

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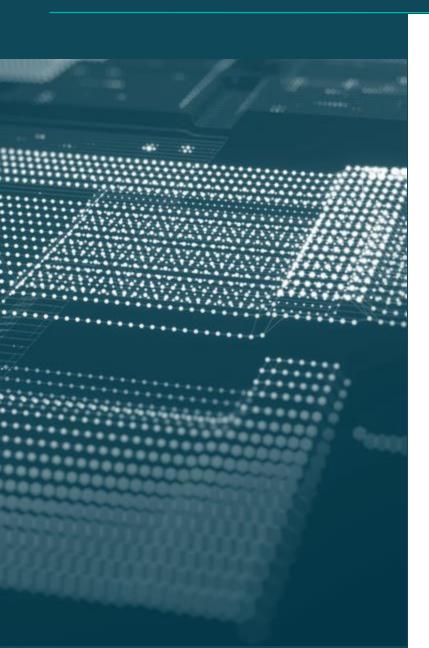
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The Energy Efficiency Directive 2024/1791 ("EED")

- Replaces the Old Energy Efficiency Directive 2012/27
- Imposes on Member States a collective energy consumption reduction target of at least 11,7% in 2030 compared to the projections of the EU reference scenario for 2020
 - Overall EU energy consumption by 2030 should not exceed 992.5 million tons of oil equivalent (Mtoe) for primary energy and 763 Mtoe for final energy
- To achieve such targets, the EED imposes requirements on the public sector (including on public procurement), energy suppliers, and companies consuming energy (e.g., audits)
 - It also imposes specific requirements on operators and owners of datacenters (disclosure of KPIs; WHR requirements)
- EED entered into force in October 2023
 - But Member States must implement the EED's different requirements, which are subject to different deadlines
- Energy consumption reduction targets on Member States may also impact the permitting of datacenters





Main EED Requirements for Datacenters and Companies Providing Data Center Services

- Requirements on datacenters to disclose (publication/reporting) sustainability KPIs
- Waste Heat Reuse (WHR) requirements on datacenters
- Energy audit and energy management system requirements on enterprises
- Public procurement requirements affecting datacenter services

EED Publication and Reporting Requirements

The EED requires owners and operators of datacenters in the EU with an installed IT power demand of at least 500kW to make the information set out in Annex VII publicly available as of May 15, 2024

Annex VII information: (a) general information on the datacenter (name of the datacenter, the owner and operators, the starting date of the datacenter operations, location); (b) technical information – potentially sensitive (datacenter floor area, installed power, incoming and outgoing data traffic, amount of data stored and processed); (c) energy performance indicators – potentially sensitive (energy consumption, power utilization, temperature set points, waste heat utilization, energy consumption, water usage and renewable energy usage)

- In addition, a Commission Delegated Regulation requires datacenter operators to communicate to Member States or directly to a European Database information and KPIs of Annex I and II to the Delegated Regulation as of September 15, 2024, and by May 15, 2025, and every year thereafter
 - Annex I: General information on the datacenter and information on the operation of the datacenter (see above)
 - Annex II: Detailed technical information and detailed energy performance indicators, including potentially sensitive data
 - On the basis of the information reported, the European Commission must calculate "sustainability performance indicators" (i.e., PUE, WUE, ERF, REF) and publish it in an aggregated manner

The EED also requires:

- Member States to encourage owners and operators of datacenters with a power demand of the installed IT equal to or greater than 1 MW to take into account the best practices referred to in the most recent version of the European Code of Conduct on Data Centre Energy Efficiency.
- The European Commission to assess, by May 15, 2025, the data and report to the EU Parliament and Council, potentially proposing further energy efficiency measures, including minimum performance standards and a feasibility assessment for transitioning to net-zero emission datacenters. These proposals, developed in consultation with relevant stakeholders, may also set a timeframe for existing datacenters to meet performance requirements. Proposals may result in a datacenter labelling scheme.

Transposition of Publication and Reporting Requirements in the Member States

- Most of the Member States have transposed the EED only partially (i.e., publication and reporting obligations of Article 12)
- Some Member States impose requirements that go beyond what is required by the EED



Transposition of Article 12 EED: National Variations

Publication requirement in the Member States

No publication vs publication of all or some information of Annex VII EED vs publication of all information of Annexes I and II Delegated Regulation

Publication on the datacenter's website *vs* publication on a national platform

Reporting requirement in the Member States

Reporting directly to the EU Commission *vs*

Reporting to EU Commission through national authorities *vs*

Reporting in parallel to national authorities and the EU Commission

Publication and Reporting Requirements: Issues of Confidentiality

The EED exempts from publishing "information subject to Union and national law protecting trade and business secrets and confidentiality"

Delegated Regulation introduces additional guarantees

- The Delegated Regulation requires "[t]he Commission and Member States concerned [to] keep confidential all information and key performance indicators for individual datacentres that are communicated to the database [...]"
- The Commission and Member States may only publish information reported to database in aggregated manner
- Colocation lessors may use an anonymous internal reporting mechanism to report
- In case of FOIA requests, reported information cannot "reactively" be disclosed. However, confidentiality cannot be guaranteed

Implementation in Member States

- Some Member States require publication of the same information that must be reported to the database
- Some Member States, e.g., Germany, do not "explicitly" provide confidentiality protection for reported information

Challenges:

- Under EU/Member State law, once information is disclosed, it is no longer confidential (e.g., FOIA request)
- Ensure consistency of publication and reporting across all EU Member Staes
- Ensure that reporting and publication is consistent with other datacenter-related obligations (e.g., permitting)

Requirements on Waste Heat Reuse (WHR)



- Datacenters with a total rated energy input exceeding 1MW must utilize the waste heat or other waste heat recovery applications unless they can show that it is not technically possible.
- In that context, newly planned or substantially refurbished datacenters with a total rated energy input exceeding 1 MW must perform a cost-benefit analysis ("CBA") that addresses technical feasibility, cost-efficiency and the impact on energy efficiency and local heat demand of utilizing waste heat to satisfy demand, and of the connection of the installation to a district heating network or an efficient/RES-based district cooling system or other waste heat recovery applications
 - The CBA must consider cooling system solutions that allow removing or capturing the waste heat at useful temperature level with minimal ancillary energy inputs
 - Datacenters whose waste heat is or will be used in district heating networks or directly for space heating or other uses in buildings or facilities are exempted
- Member States must apply the WHR requirements as from October 11, 2025

Example of Implementation of WHR Requirements – Germany



- WHR requirements of the EED have been transposed into German law through Sections 11 and 16 of the German Energy Efficiency Act (<u>EEA</u>).
- Section 16 of the EEA outlines general obligations for companies to avoid and reuse waste heat. It introduces a hierarchy of duties, prioritizing the avoidance, reduction, and ultimately the reuse or recovery of waste heat.
- Section 11 imposes specific obligations on datacenter operators concerning energy use efficiency and energy reutilization. This includes detailed provisions on WHR for datacenters that commence operations on or after July 1, 2026.
- Section 11(2) requires datacenters that begin operations on or after July 1, 2026, to use a minimum share of reused energy (which includes waste heat), as defined by DIN EN 50600-4-6, according to the following schedule:
 - At least 10% for datacenters commencing operations on or after July 1, 2026;
 - At least 15% for datacenters commencing operations on or after July 1, 2027;
 - At least 20% for those commencing operations on or after July 1, 2028.
- Datacenters are only exempt from the WHR requirement where one of the following exceptions applies:
 - There are unforeseen events beyond the datacenter operator's control that prevent the reuse of waste heat;
 - There is an agreement with a local municipality or heating network operator for waste heat reuse; or
 - An offer to reuse waste heat made by the datacenter operator is not accepted by the local heating network operator.

Audit and EMS Requirements

Requirement 1

Enterprises (legal entities) with an average annual consumption higher than **10 TJ** of energy must perform an **energy audit** if they do not implement an energy management system

- The requirement applies to "enterprises" in an EU Member State, which may control operators of datacenters or their colocators and other businesses
- The consumption threshold of 10 TJ must be calculated on the basis of the consumption of all "linked" enterprises within the territory of the EU
- First audits (under the new EED) are due by October 11, 2026
- Audits must include an Action Plan identifying measures to implement audit recommendations
- Action Plan and implementation rates must be made publicly available "subject to Union and national law protecting trade and business secrets and confidentiality"

Requirement 2

Enterprises with an average annual consumption higher than **85TJ** of energy must implement an energy management system by **October 11, 2027**

Requirement 3

Enterprises must **notify Member State** authorities if in a given year they reach the **10 TJ or 85 TJ** threshold

Need to consider relation with EU CSRD reporting

Public Procurement of Datacenter Related Services

- When purchasing datacenter related services meeting specific economic thresholds, public contracting authorities and entities must "make best efforts to purchase only products and services that respect at least the technical specifications set at "core level" in the relevant Union green public procurement criteria or available equivalent national criteria including among others for datacenters, server rooms and cloud services [...]"
 - See Commission Guidance on Green Government Procurement Criteria for Datacenters
 - Unless it is not technically feasible
 - Obligation applies to public contracting authorities and entities as of October 11, 2025
- Non-compliance with EED requirements may also disqualify providers of datacenters services from public procurement tenders





Relevant Links

- Directive (EU) 2023/1791 on Energy Efficiency (available <u>here</u>)
- Directive 2012/27/EU on Energy Efficiency ("Old Directive") (available here)
- Delegated Regulation (EU) 2024/1364 on the First Phase of the Establishment of a Common Union Rating Scheme for Datacenters (available <u>here</u>)
- Recommendation (EU) 2024/2002 Setting out Guidelines for Interpretation of Article 11 (available <u>here</u>)
- Recommendation (EU) 2024/2395 Setting out Guidelines for the Interpretation of Article 26 (available <u>here</u>)
- EU green public procurement criteria for datacenters, server rooms and cloud services (available <u>here</u>).

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