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COMMISSION DELEGATED REGULATION (EU) …/...

of XXX

on the first phase of the establishment of a common Union rating scheme for data centres

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

EXPLANATORY MEMORANDUM

CONTEXT OF THE DELEGATED ACT

The Communication on the European Green Deal[1] stresses the role that energy efficiency can play in achieving climate neutrality by 2050. Energy efficiency helps reduce overall energy consumption and is therefore central to achieving the EU's climate ambition, while enhancing present and future energy security and affordability. To ensure that the EU's 2030 target of reducing greenhouse gas emissions by at least 55% (compared to 1990) can be met, Directive (EU) 2023/1791 on energy efficiency (recast EED)[2] was adopted on 13 September 2023, and the revision of other energy and climate rules has been completed or is progressing.

The recast EED raises the EU energy efficiency target – also as a response to the need to decrease the EU's dependency on fossil fuels imports from Russia – and includes provisions with measures compatible with the increased ambition by 2030.

The Information and Communication Technology (ICT) sector is an important sector and increasingly a topic of focus regarding its sustainability and increasing energy footprint. In 2018, the energy consumption of data centres in the Union was 76,8 TWh. This is expected to rise to 98,5 TWh by 2030, a 28% increase. This increase in absolute terms in its energy footprint can also be seen in relative terms: within the Union, data centres accounted for 2,7% of electricity demand in 2018 and will reach 3,21% by 2030 if development continues at the current trajectory. These projections are already expected to be revised upwards considering the strong growth of emerging services and technologies such as streaming, cloud gaming, blockchain, artificial intelligence, machine learning and virtual reality[3]. The Union's Digital Strategy[4] already highlighted the need for highly energy-efficient and sustainable data centres and calls for transparency measures for telecommunication operators on their environmental footprint.

The recast EED introduces in Article 12 an obligation for Member States to require data centres to publish information on their energy performance and sustainability. Member States shall require data centres on their territory to make publicly available the information set out in Annex VII to the directive. An EU-level database will collect this information and other information and publish it in an aggregated form.

In accordance with Article 12 and Annex VII, and pursuant to the delegated power included in Article 33(3) of the recast EED, the Commission is establishing a common Union scheme to rate the sustainability of data centres.

The aim of the rating scheme is to allow for comparisons between data centres and promote new designs or appropriate efficiency interventions in new or existing data centres that can result not only in a considerable reduction of energy and water consumption, but also in the promotion of the use of renewable energy, an increase in the efficiency of the grid, or in the reuse of waste heat in nearby facilities and heat networks.

Relevant stakeholders, including industry, consumers, Member States and the Commission, need reliable information from data centres. This delegated regulation sets out what information should be reported by data centres, based on defined key performance indicators

[1] https://ec.europa.eu/info/publications/communication-european-green-deal_en

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_231_R_0001&qid=1695186598766

[3] https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks

[4] https://commission.europa.eu/publications/european-commission-digital-strategy_en

and the methodology to measure them. It also defines the first sustainability indicators that will be used for the rating of data centres.

In accordance with Article 33(3) of the recast EED, this delegated regulation is the first of a series of delegated regulations that the Commission may adopt to supplement the recast EED and serves as the first phase of the establishment of a common EU rating scheme for data centres.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

The decision to establish a common Union scheme to rate the sustainability of data centres and the respective reporting has been subject to a thorough consultation process. This process has been vital in identifying the necessary steps to prepare the common Union scheme, the details of the reporting scheme that will introduce it and the sustainability indicators that will lead from the latter to the former.

To prepare this delegated regulation, a technical study (November 2022 to December 2023) was launched, and extensive dedicated stakeholder consultations were held. Three stakeholder workshops (with more than 150 participants in average for each one) took place from December 2022 to June 2023. Moreover, stakeholders were systematically consulted in the different stages of the preparatory work. More than one hundred items (position papers, white papers, feedback, etc.) were received by the Commission. Many meetings with private and public stakeholders were held in the frame of this consultation. The first report of the technical study that refers to the information and indicators that the reporting scheme should cover has been published[5].

A non-exhaustive list of existing initiatives and standards relevant to the common Union scheme includes the European Code of Conduct for energy efficiency in data centres[6], the EU Green Public Procurement criteria for data centres[7], the CEN/CENELEC 50600-4 framework[8], the CLC/TS 50600-5-1 Maturity Model[9] and the work of the European standardisation organisations in general[10], the Data Centers (DE-UZ 228) scheme[11], the French Decree n° 2019-771[12], the proposal for a German Energy Efficiency Act[13], the work of IEA-4E and EDNA[14], the work of The Green Grid[15], and the Climate Neutral Data Centres Pact[16].

Member States were also consulted both as part of the above-mentioned workshops and in bilateral meetings. Finally, an ad-hoc group of experts (the Expert Group on the Energy Efficiency Directive) gave feedback on this delegated Regulation.

5 https://op.europa.eu/s/y5vh
6 https://joint-research-centre.ec.europa.eu/scientific-activities-z/energy-efficiency/energy-efficiency-products/code-conduct-ict/european-code-conduct-energy-efficiency-data-centres_en
7 https://publications.jrc.ec.europa.eu/repository/handle/JRC118558
8 https://ictfootprint.eu/en/en-50600-4-factsheet-0
9 https://www.cencenelec.eu/news-and-events/news/2022/eninthespotlight/2022-05-30-a-new-standard-for-the-green-deal/
10 https://www.cencenelec.eu/media/CEN-CENELEC/AreasOfWork/CEN%20sectors/Digital%20Society/Green%20Data%20Centres/standardizationlandscapegdc_edition8_2021.pdf
11 https://www.blauer-engel.de/en/productworld/data-centers
12 https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000038812251
13 https://www.bundesregierung.de/breg-en/federal-government/the-energy-efficiency-act-2184958
14 https://www.iea-4e.org/edna/
15 https://www.thegreengrid.org/
16 https://www.climateneutraldatacentre.net/

3. LEGAL ELEMENTS OF THE DELEGATED ACT

In accordance with Article 33(3) of the recast EED, the Commission is empowered to adopt delegated acts to establish a common Union scheme for rating the sustainability of data centres located in its territory. This first delegated regulation is the first phase in establishing the common Union scheme and sets out the information and key performance indicators needed from data centres as well as the first sustainability indicators that can be used for the assessment of the sustainability of data centres.

This delegated regulation includes six articles. They cover subject matter and scope, definitions of terms, the reporting mechanism for the sustainability of data centres (further detailed in the first two annexes to this regulation), the data centre sustainability indicators (defined in the third annex to this regulation) and the specifications of the European database on data centres (the fourth and last annex describes the data that will be publicly available in an aggregated form).

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955[17], in particular Article 33(3) thereof,

Whereas:

(1) Directive (EU) 2023/1791 addresses energy efficiency by setting energy efficiency targets at Union level and establishing a common framework of measures to promote energy efficiency within the Union. Moreover Directive (EU) 2023/1791 aims to contribute towards achieving a modern, resource-efficient, and competitive economy in the Union, including by the establishment of a common Union scheme for rating the sustainability of data centres.

(2) The Information and Communication Technology (ICT) sector is increasingly important in terms of energy consumption. The electricity demand of data centres is expected to be 3.2% by 2030, a 28% increase since 2018[18]. The Union's Digital Strategy[19] highlighted the need for highly energy-efficient and sustainable data centres and called for transparency measures for telecommunication operators on their environmental footprint.

(3) Pursuant to Article 12 of Directive (EU) 2023/1791, Member States are to require owners and operators of data centres to make publicly available the information regarding their data centres set out in Annex VII to that Directive.

(4) The common Union scheme should establish data centre sustainability indicators on the basis of information and key performance indicators and should set out the key performance indicators and the methodology to measure them.

(5) Existing legislation, initiatives, and standards in the sector of data centres should be taken into account when establishing the key performance indicators and the sustainability indicators.

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17 Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (recast) (OJ L 231, 20.9.2023, p. 1, ELI: http://data.europa.eu/eli/dir/2023/1791/oj)

18 Communication of 9 March 2021 entitled '2030 Digital Compass: the European way for the Digital Decade'

19 Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030 (OJ L 323, 19.12.2022, p. 4, ELI: http://data.europa.eu/eli/dec/2022/2481/oj)

(6) The owners and operators of data centres should submit a report for each data centre regardless of whether there is one structure or a group of structures at the same location. Owners or operators of data centres in different physical locations should submit a separate report for each data centre even if such data centres are located in the territory of the same Member State.

(7) In order to establish the Union scheme for rating the sustainability of data centres, the Commission needs information on their sustainability. Therefore, a reporting mechanism for data centres should be established specifying what information and key performance indicators should be reported as well as the methodologies for monitoring and measuring that information and those indicators.

(8) Pursuant to Annex VII, point (c), to Directive (EU) 2023/1791, the key performance indicators are to measure the energy consumption, power utilisation, temperature set points, waste heat utilisation, water usage and use of renewable energy of data centres.

(9) To ensure uniform reporting and the availability of the data to the public in aggregated form and to properly inform the subsequent analysis of the information, the Commission is to establish, in accordance with Article 12(3) of Directive (EU) 2023/1791, a European database on data centres that includes the information and key performance indicators made public by the reporting data centres. In order for the information and key performance indicators to be communicated to the database, the European database on data centres should provide a common user interface.

(10) Member States should ensure that the information and key performance indicators made public by the reporting data centres in their territory are inserted in the European database on data centres. For that purpose, the European database should provide a common user interface.

(11) The information and key performance indicators should be used to provide a basis for transparent and evidence-based planning and decision making and assess certain key elements of a sustainable data centre, including how efficiently it uses energy, how much of that energy comes from renewable energy sources, the reuse of any waste heat that it produces, the effectiveness of cooling and the use of water. To that end the Commission should set out, based on the reported information and key performance indicators, a first set of data centre sustainability indicators.

(12) The Commission has carried out a study, particularly on the necessity of a reporting scheme on the energy performance and sustainability of data centres, in order to establish the common Union rating system. From that study the main elements that should define the scope of reporting on the energy performance and sustainability of data centres have emerged.

(13) The Commission has consulted the experts designated by each Member State in accordance Article 34 of Directive (EU) 2023/1791, the relevant stakeholders and Member States representatives and gathered evidence, remarks and good practices on the scope, elements and information that should be included in the common Union rating scheme.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

This regulation sets out data centre sustainability indicators, key performance indicators and the information to be monitored, and communicated by data centres, as well as a common measurement and calculation methodology, for the establishment of a common Union scheme for rating the sustainability of data centres in the Union with an installed information technology power demand of at least 500 kW.

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

(1) ‘data centre’ means data centre as defined in Annex A, point 2.6.3.1.16, to Regulation (EC) No 1099/2008;

(2) ‘enterprise data centre’ means a data centre operated by an enterprise, the sole purpose of which is the delivery and management of information technology services to the employees and customers of that enterprise;

(3) ‘colocation data centre’ means a data centre in which multiple customers install and manage their own network or networks, servers and storage equipment and services;

(4) ‘co-hosting data centre’ means a data centre in which multiple customers are provided with access to network or networks, servers, and storage equipment on which they operate their own services and applications and where both the information technology equipment and the support infrastructure of the building are provided as a service by the data centre operator;

(5) ‘enterprise data centre operator’ means a physical or legal person who manages the entire data centre, including the building and the use of the information technology services delivered;

(6) ‘colocation data centre operator’ means a physical or legal person who manages and sells space, power and cooling capacity in the entire co-location data centre to customers who install and manage their own network or networks, servers and storage equipment and services;

(7) ‘co-hosting data centre operator’ means a physical or legal person who manages the data centre space, power, cooling, network or networks, servers, and storage equipment, and part of the necessary software to deliver information technology services to customers, including information technology outsourcing;

(8) ‘colocation customer’ means a physical or legal person who owns and manages one or more networks, servers and storage equipment located in a colocation data centre in which they purchase managed space, power, and cooling capacity;

(9) ‘co-hosting customer’ means a physical or legal person who obtains access to a network or networks, servers, and storage equipment in a co-hosting data centre on which they operate their own services and applications;

(10) ‘information technology outsourcing’ is the use of external service providers to deliver information technology enabled business processes, application service and infrastructure solutions for business outcomes;

(11) ‘data centre total floor area’ means the total floor area of the structure or group of structures that constitute the data centre;

(12) ‘data centre computer room floor area’ means the total floor area within the data centre that accommodates the data processing, data storage and telecommunication equipment that provide the information technology services of the data centre;

(13) ‘data centre redundancy’ means the duplication of certain sets of components or functions of a data centre in such a way that if one set fails or needs to be taken down for maintenance, the other set or sets can take over;

(14) ‘installed information technology power demand’ means the sum of the nominal power demand, in kW, of the network or networks, servers and storage equipment installed in the data centre computer room floor area;

(15) ‘rated information technology load’ means the maximum load, in kW, of the network or networks, servers, and storage equipment that the data centre infrastructure for power distribution and environmental control is capable of handling while providing the desired service availability.

Article 3

Reporting mechanism for the sustainability of data centres

1. Member States shall ensure that the information set out in Annex I is communicated to the European database on data centres.

2. Member States shall ensure that the key performance indicators set out in Annex II are monitored and communicated to the European database on data centres.

3. The information and key performance indicators referred to in paragraphs 1 and 2 shall cover the calendar year immediately preceding the reporting year. Where a reporting data centre has been in operation for less than a year, it shall report only for the time it has been in operation and it shall indicate that fact accordingly.

4. Enterprise data centre operators shall monitor and communicate to the European database the information and key performance indicators set out in Annex I and Annex II, respectively, regarding the enterprise data centres they operate.

5. By 15 May 2026 colocation and co-hosting data centre operators shall, gather, publish, and communicate to the European database on data centres the information and key performance indicators referred to in paragraphs 1 and 2, covering all their co-location and co-hosting customers at the co-location or co-hosting data centres they manage.

Where a colocation and co-hosting data centre operator cannot gather the information and key performance indicators referred to in paragraphs 1 and 2, it shall indicate the percentage of the data centre computer room floor area covered by the information communicated.

Article 4

Data centre sustainability indicators

1. The data centre sustainability indicators and the methodology to measure and calculate them are set out in Annex III.

Article 5

European database on data centres

1. The European database shall consist of a common user interface ensuring that all reporting data centres are able to input, in the same way, the information and key performance indicators referred to in Annexes I and II.

2. The information and key performance indicators shall be made public in an aggregated manner, at Member State and Union level, in accordance with Annex IV.

3. Member States shall have access to all information and key performance indicators communicated to the European database in their territory pursuant to Article 3.

4. The Commission shall have access to all information and key performance indicators communicated to the European database pursuant to Article 3.

5. The aggregated data collected under this Regulation can be reused for European statistics in line with the principles defined in the Regulation (EC) 223/2009.

Article 6

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission
The President
Ursula VON DER LEYEN