**Translation\* of the German Energy Efficiency Act**

*\*Not an official translation*

*EUDCA, October 2023*

***Energy Efficiency Act***

*Section 4 -* Energy Efficiency in Data Centres

**§ 11 Climate neutral data centres**

* **Mandatory targets for new DCs**
1. Data centres that commence or have commenced operations before July 1, 2026, shall be constructed and operated in such a manner as to
2. As of July 1, 2027, an energy consumption effectiveness of less than or equal to 1.5; and
3. Achieve an energy use effectiveness of less than or equal to 1.3 as an annual average on a sustained basis beginning July 1, 2030.
4. Data centres that begin operations on or after July 1, 2026, shall be constructed and operated in such a manner as to
5. achieve an energy consumption effectiveness of less than or equal to 1.2, and
6. have a percentage of reused energy in accordance with DIN EN 50600-4-6, November 2020 edition) of at least 10 percent; data centres that begin operations on or after July 1, 2027 must have a planned percentage of reused energy of at least 15 percent; data centres that begin operations on or after July 1, 2028 must have a planned percentage of reused energy of at least 20 percent.

The requirements pursuant to sentence 1 shall be achieved on an annual average on a permanent basis no later than two years after commissioning. When calculating the energy consumption effectiveness in accordance with sentence 1 number 1, the electricity used by systems that serve exclusively to upgrade the waste heat of the data centre shall not be taken into account.

(3) The requirements under paragraph 2, sentence 1, number 2, shall not apply if the operator of the data centre proves that one of the following conditions is met

1. the proportion of reused energy after commissioning, due to subsequent events for which the operator of the data centre is not responsible, no longer meets the requirements of paragraph 2 sentence 1 number 2, or

2. there is an agreement on the use of waste heat concluded between a municipality located in the vicinity or the operator of a heat network and the operator of the data processing centre, according to which the municipality or the operator of the heat network declares its concrete intention to establish or permit one or more heat networks, with which the requirements pursuant to paragraph 2, sentence 1, number 2 can be met within ten years; the agreement must contain an investment plan as well as a provision on bearing the costs of the connection line and on the price for the delivery of the waste heat, or

3. the operator of a heat network located in the vicinity does not accept an offer for the use of reused energy at cost price within six months, although the operator of the data centre provides the necessary infrastructure for the provision of heat, in particular in the form of a heat transfer station.

The operator of the heat network to whom the operator of the data centre submits an offer for the use of reused energy pursuant to sentence 1 number 3 shall be obliged to inform the operator of the data centre about the capacity of the heat network.

(4) The requirements under Section 16 shall apply mutatis mutandis to data centres unless more specific requirements are specified in this section.

(5) Data centre operators shall cover the electricity consumption in their data centres on a balanced basis

1. from January 1, 2024, 50 percent by electricity from renewable energies and

2. from January 1, 2027, 100 percent by electricity from renewable sources.

**§ 12 Energy and Environment Management Systems in Data Centres**

(1) Notwithstanding Section 8, operators of data centres shall be required to establish an energy or environmental management system by July 1, 2025.

(2) As part of the implementation of the energy or environmental management system, 1. continuous measurements of the electrical power and energy demand of the essential components of the data centre shall be carried out and 2. measures shall be taken to continuously improve the energy efficiency of the data centre.

(3) For data centres with a non-redundant rated connected load of 1 megawatt or more and for data centres owned by or operated for public entities with a non-redundant rated connected load of 300 kilowatts or more, there shall be an obligation to validate or certify the energy or environmental management system as of January 1, 2026.

(4) Data centres whose reused energy is taken up for use via a heating network in a proportion of at least 50 percent shall be exempt from the obligation to establish an energy or environmental management system pursuant to paragraph (1) if their annual average total final energy consumption within the last three completed calendar years does not exceed the threshold of 7.5 gigawatt hours.

(5) Operators of information technology shall comply with the requirements under paragraphs 1 and 2 accordingly. For operators of information technology with a non-redundant nominal connected load of information technology from 500 kilowatts, there shall be an obligation to validate or certify the energy or environmental management system from January 1, 2026. For operators of information technology operated on behalf of public bodies, the obligation under sentence 2 to validate or certify shall apply from a non-redundant rated connected load of information technology of 300 kilowatts or more.

(6) The requirements under paragraphs 1, 2, 3 and 5 shall not apply to data centres or information technology that are scheduled to be decommissioned before July 1, 2027. Corresponding evidence shall be provided by the operator of the data centre or information technology.

**§ 13 Reporting Obligations for Data Centre Operators
and Operators of IT equipment; Delegated Act**

(1) Operators of data centres shall be required to publish and transmit to the Federal Government, by the end of March 31 of each year, information about their data centre in accordance with Annex 3 for the preceding calendar year. The transmission shall be made in the electronic template provided by the Federal Government for this purpose. The Federal Government may combine the electronic submission with the electronic submission under section 17(2) to form a single submission.

(2) The Federal Government shall be authorized, by ordinance with the consent of the Bundesrat, to specify additional information requirements to paragraph 1 insofar as these are necessary to improve the comparison of the energy efficiency performance of data centres and information technology.

**§ 14 Energy Efficiency Registry for Data Centres**

* **National reporting platform**

The Federal Government shall establish an energy efficiency register for data centres in which the information submitted by data centres pursuant to Section 13 (1) in conjunction with Annex 3 shall be stored and transferred to a European database on data centres.

**§ 15 Information and Consultation in the Customer Relationship**

If operators of data centres offer services to third parties (customers), the operators are required from January 1, 2024 to present the energy consumption per year directly attributable to the customers to these customers.

*Section 5 – Waste Heat*

**§ 16 Avoiding and Using Waste Heat**

**=> Obligation to re-use waste heat (if reasonably possible)**

(1) Companies shall be obliged to avoid the waste heat generated in their company in accordance with the state of the art and to reduce the waste heat generated to the proportion of technically unavoidable waste heat, insofar as this is possible and reasonable. Within the framework of reasonableness, technical, economic and operational concerns must be taken into account. For the determination of the state of the art, the requirements from the currently applicable conclusions on best available techniques pursuant to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17; L 158, 19.6.2012, p. 25) shall be taken into account with regard to waste heat.

(2) Companies shall reuse the waste heat generated by means of measures and techniques to save energy by using waste heat, insofar as this is possible and reasonable. Within the framework of reasonableness, technical, economic and operational concerns shall be taken into account. To this end, measures for waste heat utilization should not be limited to the respective plant, but should also include possibilities for utilization of waste heat on the plant premises and at external third parties. In order to achieve the greatest possible efficiency gains, the recovered waste heat should be reused several times in cascade, in accordance with its exergy content, as a measure of its energetic quality or working capacity, or in decreasing temperature steps.

(3) The obligation to avoid waste heat pursuant to subsection 1, first sentence, and the obligation to use waste heat pursuant to subsection 2, first sentence, shall not apply to installations requiring a permit pursuant to section 4 of the Federal Immission Control Act in the version promulgated on 17 May 2013 (Federal Law Gazette I p. 1274; 2021 I p. 123), as last amended by Article 12(3) of the Act of 19. October 2022 (BGBl. I p. 1792), are subject to approval, insofar as more specific requirements exist for them in the Federal Immission Control Act or in an ordinance based on an authorization under the Federal Immission Control Act for the prevention and use of waste heat.

(4) Exempted from the obligation to avoid waste heat pursuant to subsection (1), first sentence, and from the obligation to use waste heat pursuant to subsection (2), first sentence, are enterprises which have an annual average total final energy consumption within the last three completed calendar years years of 2.5 gigawatt hours or less.

**§ 17 Platforms for Waste Heat**

1. Upon request by operators of heat networks or district heating supply companies and other potential heat-consuming companies, companies are obliged to provide information on the following with regard to the direct waste heat generated in the company:
	1. Name of the company,
	2. Address of the site or sites where the waste heat is generated,
	3. the annual heat quantity and maximum thermal power,
	4. the time availability in the form of performance profiles over the course of the year,
	5. the available options for controlling temperature, pressure and feed,
	6. the average temperature level in degrees Celsius.
2. Irrespective of the existence of a specific request, companies shall be obliged to submit the information on waste heat generated listed in paragraph 1 to the Federal Agency for Energy Efficiency by March 31 of each year and to update the information submitted without delay in the event of changes. The transmission shall be made in the electronic template provided by the Federal Energy Efficiency Agency for this purpose. The Federal Agency for Energy Efficiency shall make the transmitted information clearly available on a publicly accessible platform for waste heat while safeguarding business and trade secrets pursuant to sentence 1.
3. Exempt from publication pursuant to paragraph 2, sentence 3, shall be information the publication of which is likely to endanger public and national security and the interest in protecting such information outweighs the public interest in its disclosure. Such information shall be included in a non-public area of the platform for waste heat pursuant to subsection (2) sentence 3 and may only be published in aggregate form as part of a report on waste heat supply in a region.
4. Exempted from the obligation to provide information pursuant to paragraph 1 and the obligation to report pursuant to paragraph 2, first sentence, are enterprises that have an annual average total final energy consumption within the last three completed calendar years of 2.5 gigawatt hours or less.

*Section 7 – Final Acts*

**§ 19 Penalties**

1. It is a misdemeanor to intentionally or negligently

1. contrary to Section 8 (1) or Section 12 (1), also in conjunction with Section 12 (5), fails to set up an energy or environmental management system, or fails to do so correctly, completely or in good time,

2. contrary to Section 9 (1) sentence 1, fails to prepare an implementation plan, or fails to prepare it correctly, completely or in good time, or fails to publish it correctly, completely or in good time,

3. contrary to Section 9 (2) sentence 1, fails to have an implementation plan confirmed, or fails to have it confirmed correctly, completely or in good time,

4. violates an enforceable order pursuant to § 10 sentence 2,

5. contrary to Section 11 (1) or (2) sentence 1, fails to set up or operate a data centre properly,

6. in contravention of the first sentence of Section 13 (1), fails to provide information or to provide it correctly, in full or in good time,

7. contrary to Section 16 Paragraph 1 Sentence 1, fails to avoid or reduce waste heat,

8. in contravention of Section 17 (1), fails to provide information or to provide it correctly, completely or in good time, or

9. in contravention of Section 17 (2) sentence 1, fails to provide information or to provide information correctly, in full or in a timely manner or fails to update information correctly, in full or in a timely manner.

(2) The administrative offense may be punished by a fine of up to one hundred thousand euros in the cases referred to in paragraph 1, items 1, 5 and 7, and by a fine of up to fifty thousand euros in the other cases.

(3) The administrative authority within the meaning of Section 36(1)(1) of the Administrative Offences Act shall be the Federal Office of Economics and Export Control, with the exception of paragraph 1(7).

**§ 20 Transition period**

(1) The Länder shall be required to transmit the information pursuant to section 6(7), first sentence, for the first time in 2024 and no later than six months after the competent body pursuant to section 7(1) and (2), numbers 2 and 3, has made the electronic template available.

(2) Data centre operators shall provide the information pursuant to Section 13 (1) sentence 1 for the first time

1. from a non-redundant rated connected load of 500 kilowatts to be transmitted no later than May 15, 2024; and

2. from a non-redundant rated connected load of 200 kilowatts to less than 500 kilowatts, no later than July 1, 2025.

(3) For the year 2023, information technology operators shall be required to provide the Federal Government with information pursuant to Section 13(2) by March 31, 2024; the electronic template provided by the Federal Government shall be used for this purpose.

(4) Companies shall be required to submit the information pursuant to Section 17 (2) sentence 1 for the first time by January 1, 2024.

**Annex 3 (for Article 13 (1))**

**Information by data centre operators**

1. General information about the data centre

(a) Data centre designation,

b) name of the owner and operator of the data centre

c) Size class by information technology connected load (= 100 MW),

d) Postal code in which the data centre is located,

e) Total size of the building area,

f) Nominal connection power of the information technology and the non-redundant nominal connection power of the data centre,

1. General data on the operation of the data centre in the last full calendar year:

a) Total electricity consumption including own generation, total electricity purchases and electricity fed back into the supply network,

b) Share of renewable energies in total electricity consumption according to DIN EN 50600-4-3, November 2020 edition8) ,

(c) Amount and average temperature of measurable or estimable waste heat released to air, water, or soil,

d) Amount of waste heat supplied by the data centre to heat consumers in kilowatt hours per year and its average temperature in degrees Celsius,

e) Amount of data stored and processed in the data centre,

f) Energy consumption effectiveness according to DIN EN 50600-4-2, edition August 20199) , of the entire data centre,

g) Proportion of reused energy according to DIN EN 50600-4-6, edition November 202010) ,

h) Efficiency of the cooling system according to DIN EN 50600-4-7, edition August 2020) ,

i) Water use efficiency index according to DIN EN 50600-9, May 202012 edition) .