



Federal Office
for Economic Affairs
and Export Control



Regulating Energy Efficiency in Data Centres: Experience from Germany

Christopher Niederelz

Federal Energy Efficiency Center (BfEE)

Federal Office for Economic Affairs and Export Control (BAFA)

26. June 2026

Content

1. Presenter's Note
2. The Status Quo in Germany
3. Building a National Registry – The RZReg
4. Summary

Presenter's Note

This is an update to our presentation from the Concerted Action in March 2024.

For reference, please find that presentation here:

<https://www.ca-eed.eu/ia-document/implementing-the-eed-data-centers-and-the-german-energy-efficiency-act-germany/>

The Status Quo in Germany

Data Centres in Germany



Germany has second highest number of DCs worldwide,
- only US has more



Distribution by installed IT-Power
- More than 3.000 DCs > 40 kW
- Trend rising



Total energy consumption in 2024: 20 TWh/a
- Estimated rise to 30 TWh/a by 2030

The Energy Efficiency Act (EnEfG) in Germany

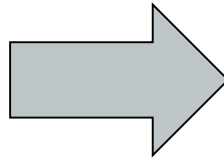
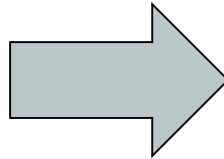
- First legal framework to improve energy efficiency in GER across sectors (18th of November 2023)
- Implementing other requirements from EED, e. g. Art. 5 EED, Art 8 EED
- **§ 12 – § 15 EnEfG regulate DCs**
- Scope beyond current Art 12 EED, e.g.
 - efficiency-requirements, renewable energy and national reporting
 - data-points beyond EED-requirements

Energy efficiency requirements § 11 EnEfG

Starting operation:
before July 2026

PUE requirements:
PUE 1,5 from July 2027
PUE 1,3 from July 2030

Waste heat usage:
Not mandatory



Starting of operation:
from July 2026

PUE requirement:
PUE 1,2

Waste heat usage of at least (ERF):
10% from July 2026
15% from July 2027
20% from July 2028

Further requirements in EnEfG

- § 11: Renewable energy usage: 50% starting 2024 / 100% from 2027
- § 12: Energy management systems (EMS):
 - Implementation of EMS/UMS until July 2025;
 - certification necessary from 2026 for DCs > 1 MW
- §§ 13 and 14: Reporting obligation and national registry
- § 15 EnEfG: Operators of DCs must tell customers their individual energy consumption

Data points from and beyond the EED

- Annex VII EED and Annex 3 EnEFG include data points
- Examples:
 - Basic data: Name & adress of DC operator, starting date of operation, etc.
 - General specifications: floor area, installed power, etc.
 - Energy /performance data: energy consumption, renewable energy use, amount and temperature of waste heat, PuE value, non-redundand connected load etc.
- i.e. implementation of Delegated Act from Art. 33 Sec. 3 EED

Building a National Registry

The German Registry for Data Centers (RZReg)



- Operators of DCs are obliged to report specific data points to the national registry
- The German registry „RZReg“ has been in **operation since June 2024**
- second report DCs >500kW by March 2025
- first wave of DCs >300kW ends in July 2025
- **Public Database Q3 2025**

Challenge I – Building a Dataset

Assessment of Status Quo based on best-possible estimates of an incomplete dataset

- academic studies,
- professional associations (bitkom, GDA)

Challenge: Identification and inclusion of all DCs into the German reporting-scheme

How we tackle it:

- Legal Obligation
- Transparent Information
 - Static: Website, Technical Guidance, FAQs
 - Flexible: Webinars, Hotline

Challenge II – The Case of Co-Location Data Centres

Co-Location DCs around half of all DCs in Germany

Challenge: Gathering complete data from co-location DCs

- Hurdles are contractual and/or practical
 - non-disclosure agreements between DCs and clients
 - technical inability to measure certain data points

How we tackle it:

- legal obligation,
- advising data-sharing agreements between DC operators and clients

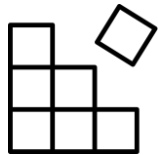
Summary

Summary



Growing DC sector in the world's second biggest DC market

German DC registry in operation



- Growing dataset beyond the scope of the EED
- Challenge I – including an unknown total population
- Challenge II – gathering good data from Co-Locations



Public data accessible soon

Thank you for your attention.

Contact

Federal Energy Efficiency Center (BfEE)

Federal Office for Economic Affairs and Export Control (BAFA)
Frankfurter Straße 29 – 35
65760 Eschborn

Contact:
Christopher Niederelz

rzreg@bafa.bund.de
www.bfee-online.de
Tel. +49 6196 908-2677

