Federal Ministry
for Economic Affairs
and Energy

# 2026 Update on Data Center Policy

22 October 2026 – CA EED Vilnius – BMWE, BAFA

Paul Papenbrock, BMWE, Deputy Head of Unit, IIB4

Christopher Niederelz, BAFA, Unit 512

# Germany overview

## Chancellor Friedrich Merz



Source: https://www.bundesregierung.de/breg-de/bundesregierung/bundeskanzleramt

### Economy

- Economy: **3rd** largest in the world; only G7 Member with **AAA-Rating**
- Population: **83.6 million** (1% of global population)
- GDP per capita: **54,989 USD**

### Electricity Sector

- Total installed capacity: **252.2 GW** (71.3% renewable)
- Gross consumption: **512 TWh** (54.5% renewable)

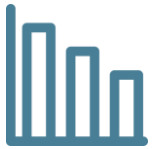
### Greenhouse Gas Emissions

- Total $CO_2$ eq. emission: **649 Mt**
- Per capita emissions: **7.8 t $CO_2$ eq.**

→ Germany accounts for ~1,5% of global emissions and ranks 12th worldwide

Source: GIZ based on Bundesnetzagentur 2025, UBA 2025, Destatis 2025

# GER has a strong DC Infrastructure



Highest amount of DCs in Europe (only behind US and CHN)



Number of DCs in accordance with installed IT-Power

- More than 2.000 DCs > 100 kW
- 100 DCs > 5MW



Total energy consumption: **21,3 TWh/a (2025)**

Icons: flaticon.com

# Investment is fueled by AI Trend

**INVEST IN GERMANY**
SUMMIT 2026

Source: https://invest-in-germany.com/

**Amazon announces plan to invest €16 billion in Germany in 2027**

Source: Amazon News; aboutamazon.com/company-news/amazon-germany-investment

**German giant data center from Microsoft Azure can process 520 megawatts**

Microsoft is investing 3.2 billion euros in Germany, including in a data center cluster in NRW. Half a gigawatt of power is available for this.

Source: Heise; https://www.heise.de/en/news/German-giant-data-center-from-Microsoft-Azure-can-process-520-megawatts-11216864.html

# Holistic policy approach is needed

**National Data Center Strategy**

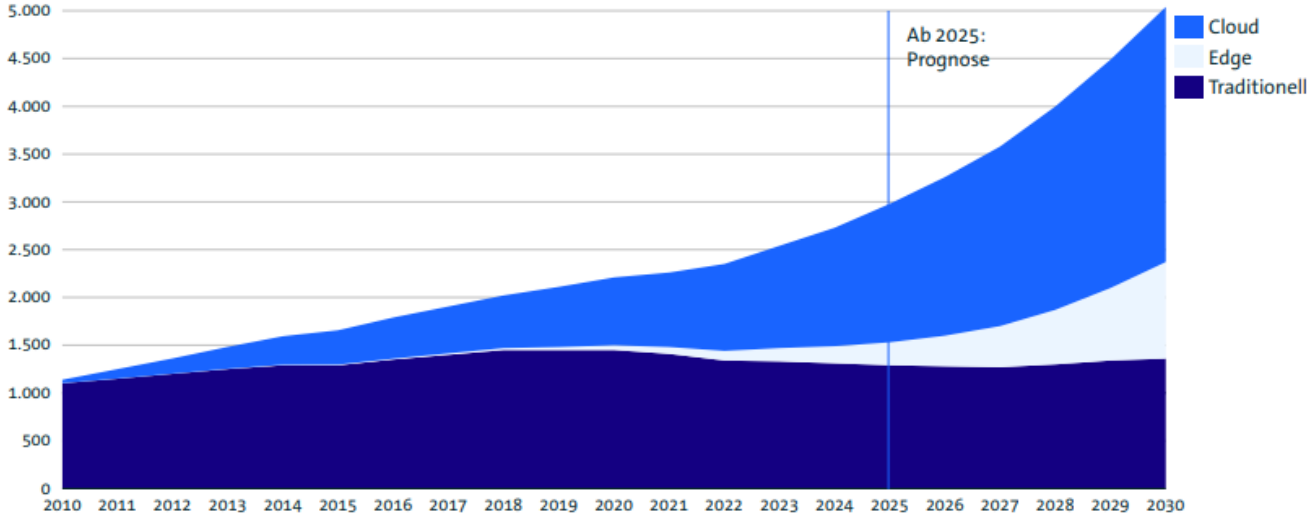
released in March 2026

1. Energy and Sutainability
    - Grid Connections
    - System Stability
    - Efficiency
2. Location and Area
3. Technology and Sovereignity




Federal Ministry
for Economic Affairs
and Energy

# Demand for IT-Capacity is rising exponentially



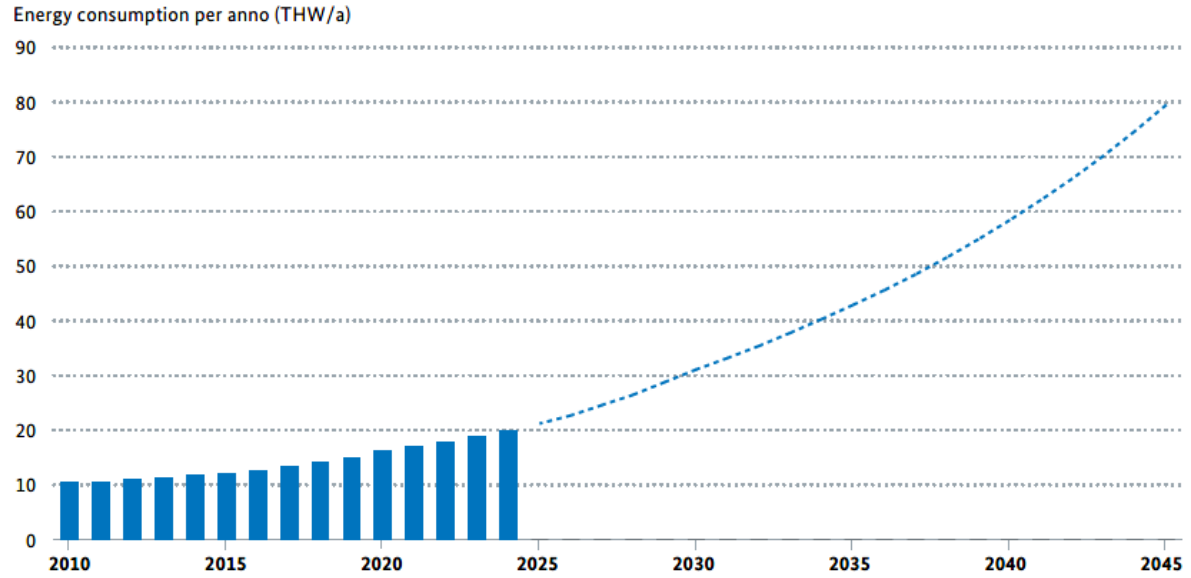

Source: Borderstep (2026)

Current projection: 5 GW IT-capacity by 2030; National Data Center Strategy aims for 6 GW

Federal Ministry
for Economic Affairs
and Energy

# Energy Consumption of DCs is rising exponentially

Figure 4: Development of the electricity needs of data centres and smaller IT installations in Germany in the years 2010 through 2024, and long-term prediction through 2045.




Source: Calculations by Borderstep

Federal Ministry
for Economic Affairs
and Energy

# Introduction of strong MEPS in 2023

## Starting operation before July 2026

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

**No waste heat usage mandatory**

## Starting of operation from July 2026

**PUE requirement:**
**PUE 1,2**

**Mandatory waste heat usage of at least (ERF):**
**10% from** July 2026,
**15% from** July 2027
**20% from** July 2028

Federal Ministry
for Economic Affairs
and Energy

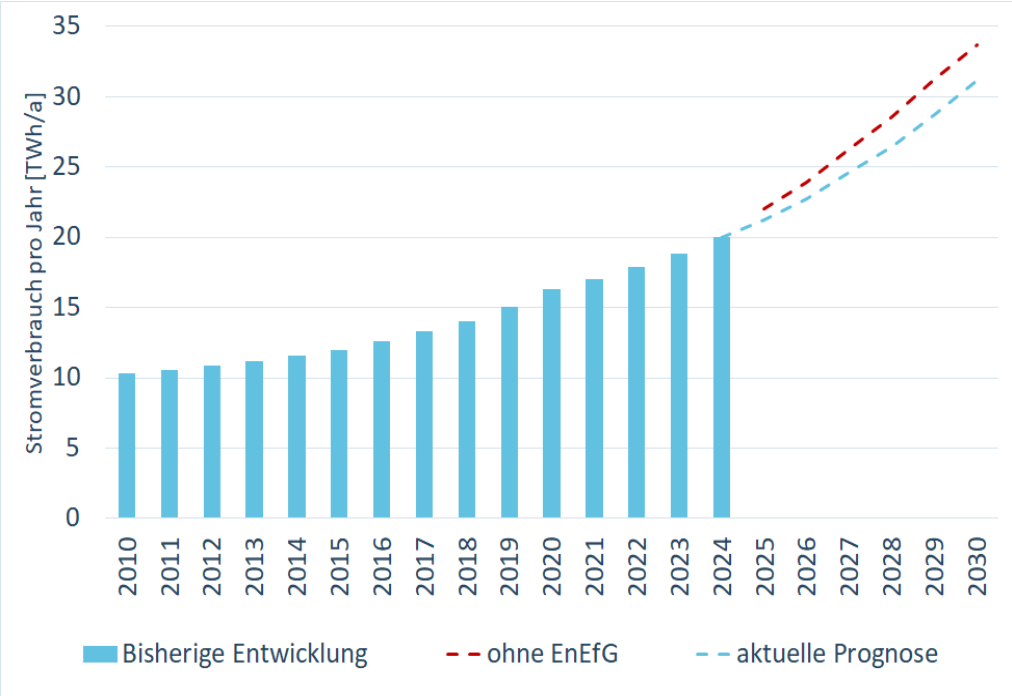
# MEPS provide significant potential for savings

2030:

- 2.5 TWh of electricity
- Avrg. PUE of 1.25 (instead of 1.35)
- 1 TWh of heat (district heating)

2045:

- Up to 10 TWh of heat




Source: Hintemann et al. (2025)

# Policies are adapting globally

| Jurisdiction | PUE | WUE | Heat reuse | Reporting |
|---|---|---|---|---|
| Canada | 🔴 | 🔴 | 🔴 | 🔴 |
| France | 🔴 | 🔴 | 🟢 | 🟢 |
| Germany | 1.3 | 🔴 | 10-20% ERF | 🟢 |
| Italy | 🔴 | 🔴 | 🟢 | 🟢 |
| Japan | 1.3 | 🔴 | 🔴 | 🟢 |
| United Kingdom | 1.3 | 0.4 L/kWh | 🟠 | 🔴 |
| United States | 🔴 | 🔴 | 🔴 | 🔴 |
| European Union | 🔴 | 🔴 | 🟢 | 🟢 |
| Ireland | 1.3 | 🔴 | 🟢 | 🟢 |
| Spain | 🔴 | 🔴 | 🟢 | 🟢 |
| Singapore | 1.25 | 2.0 L/kWh | 🔴 | 🟢 |
| China | 1.2 | 0.8 L/kWh | 🔴 | 🟢 |

Key: 🟢 national requirement or government target 🟠 voluntary measure only 🔴 no national measure specific to data centres identified

Notes: PUE = power usage effectiveness; WUE = water usage effectiveness; ERF = energy reuse factor. Singapore's 1.25 PUE standard applies to new data centres only.

Source: IEA analysis based on official legislation and policy documents; see the policy collection in the annex.

# Amendment 2026 [cabinet decision - not in force]

## Starting operation before July 2026

**PUE requirements:**
**PUE 1,6 from** July 2027
**PUE 1,4 from** July 2030

**No waste heat usage mandatory**

## Starting of operation from July 2026

**PUE requirement:**
**PUE 1,2**

**Mandatory waste heat usage of at least (ERF):**
**10% from** July 2026,
**15% from** July 2027
**20% from** July 2028

Transition period: 4 years

Introduction of CBA

Federal Ministry
for Economic Affairs
and Energy

# EnEfG: Additional requirements



**RE usage**:

**zu 50% starting** 2024 / **100% from** 2027 [2030]



~~**Information obligation about individual energy consumption per customer**~~



**Transfer of specific energy related KPIs to national data base**



**Implementation of EMS/UMS until July 2025; certification necessary from 2026 for DCs > 1 MW or public body**

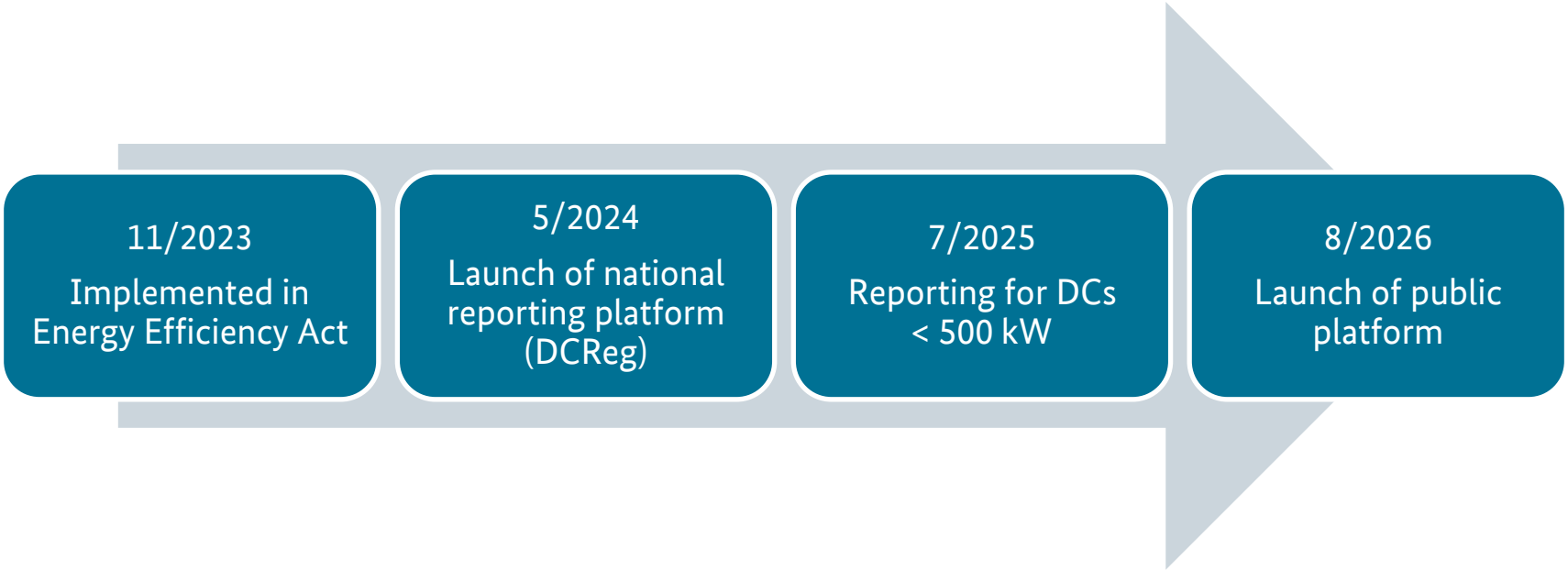
Icons: flaticon.com

# The „*Rechenzentrumsregister*“ *(DCReg)*

Genesis and current developments

Christopher Niederelz, BAFA

# Genesis of the national reporting platform (DCReg)



# The public DCReg: Overview




Source: www.rechenzentrumsregister.bund.de/

# The DCReg: Public data vs. aggregated statistics

**Public Annual Reports**

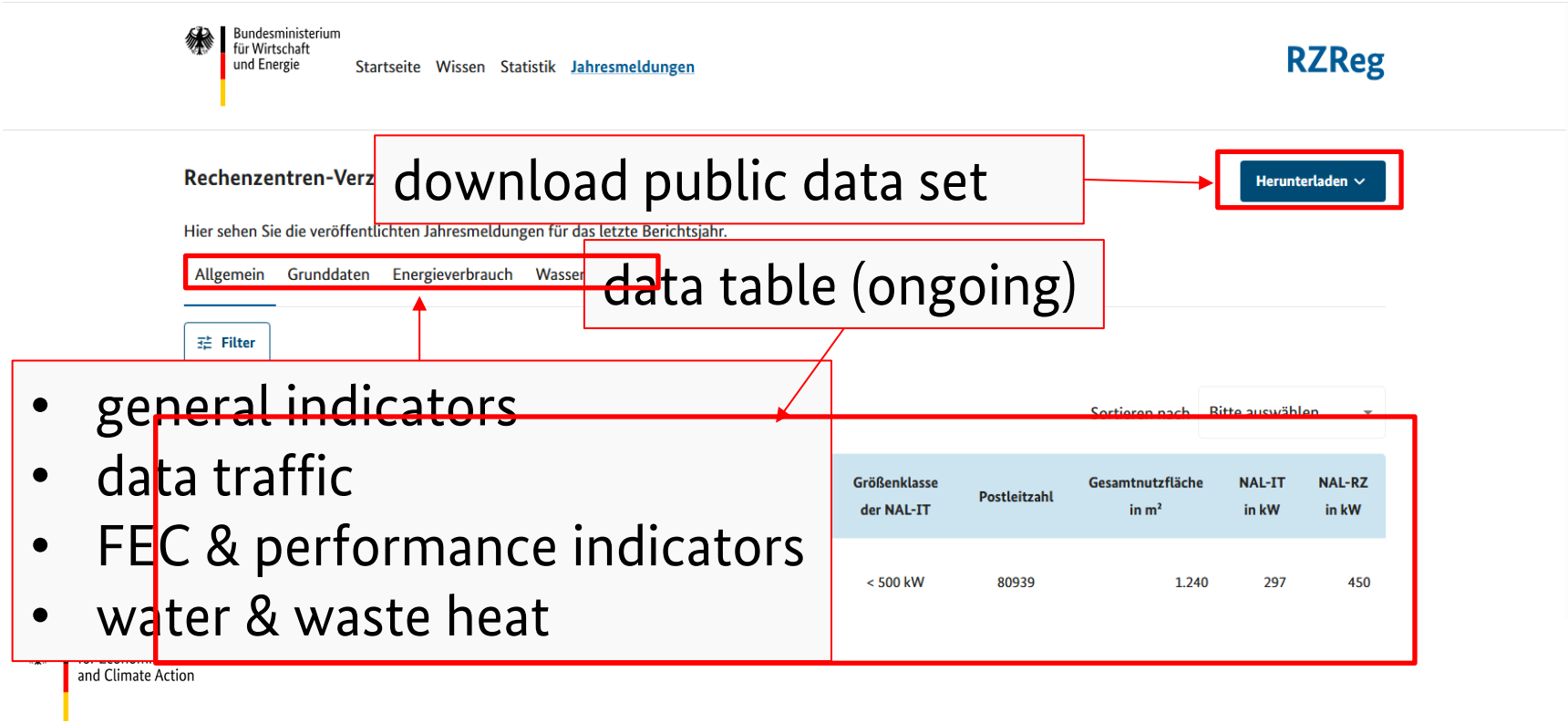
- based upon § 14 EnEfG
- disaggregated and by name
- only partial data set
- different and supplemental data points vs. DR (EU) 2024/1364

**Aggregated Statistics**

- based upon DR (EU) 2024/1364
- aggregated and anonymized data
- complete data set*

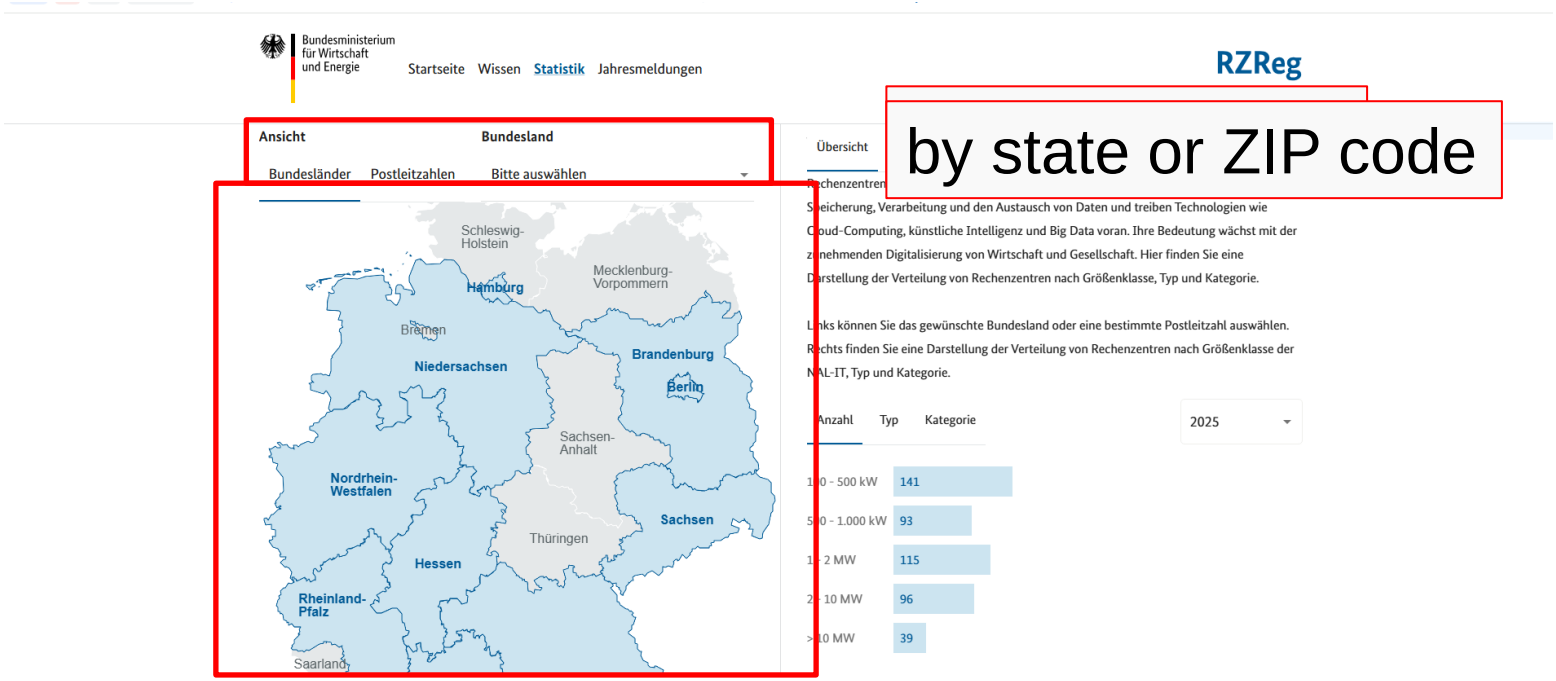
* depending on data quality

# The DCReg: Public Annual Reports




- general indicators
- data traffic
- FEC & performance indicators
- water & waste heat

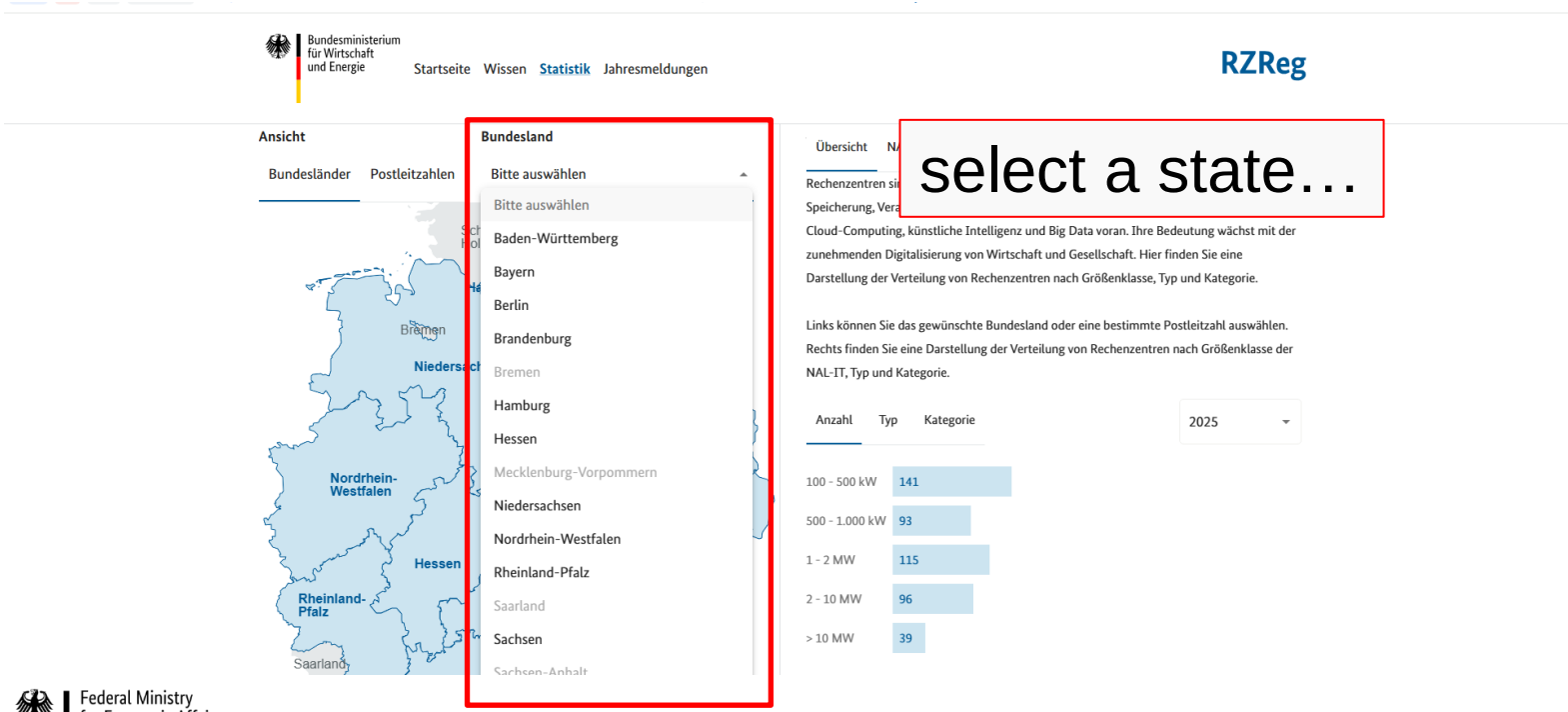
# The DCReg: Aggregated statistics




Federal Ministry for Economic Affairs and Energy

https://rechenzentrumsregister.bund.de/de/statistic/

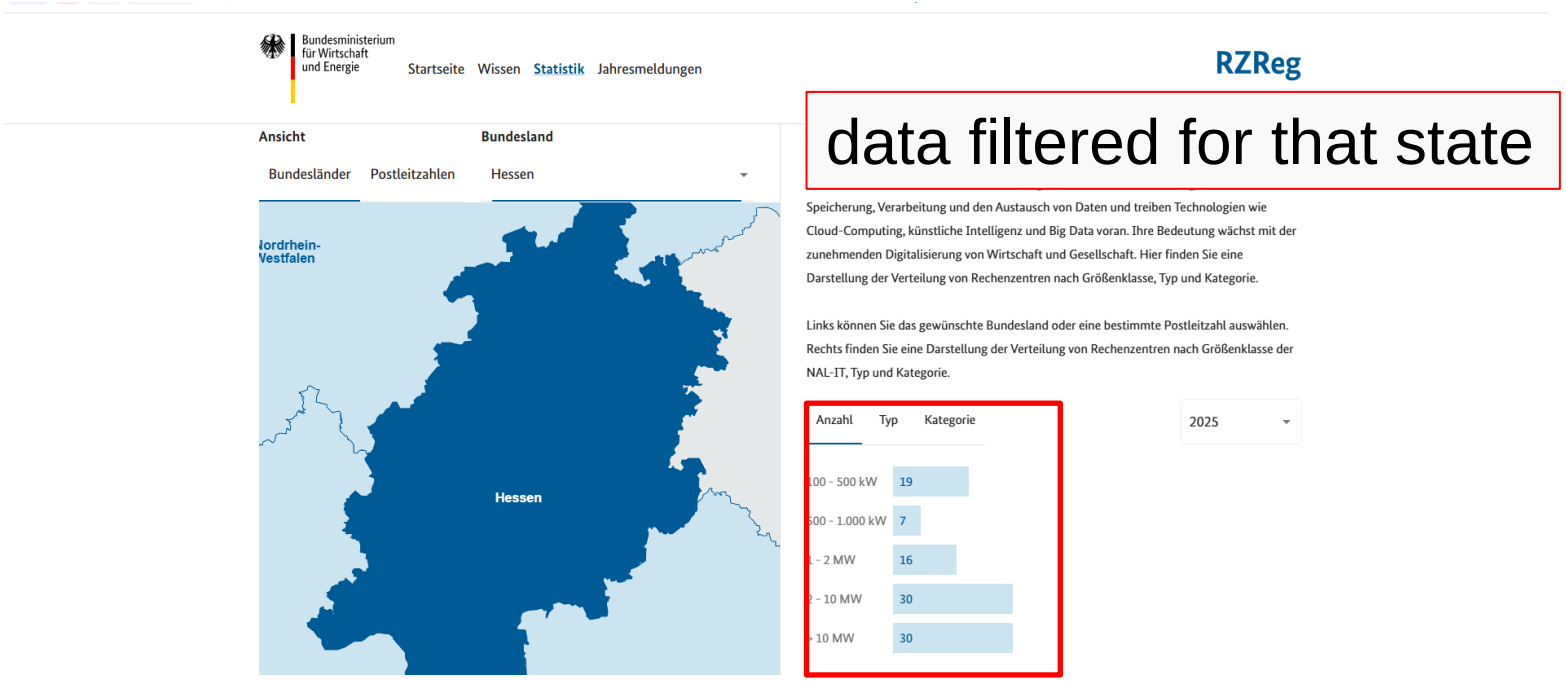
# The DCReg: Aggregated statistics




https://rechenzentrumsregister.bund.de/de/statistic/

Federal Ministry for Economic Affairs and Energy

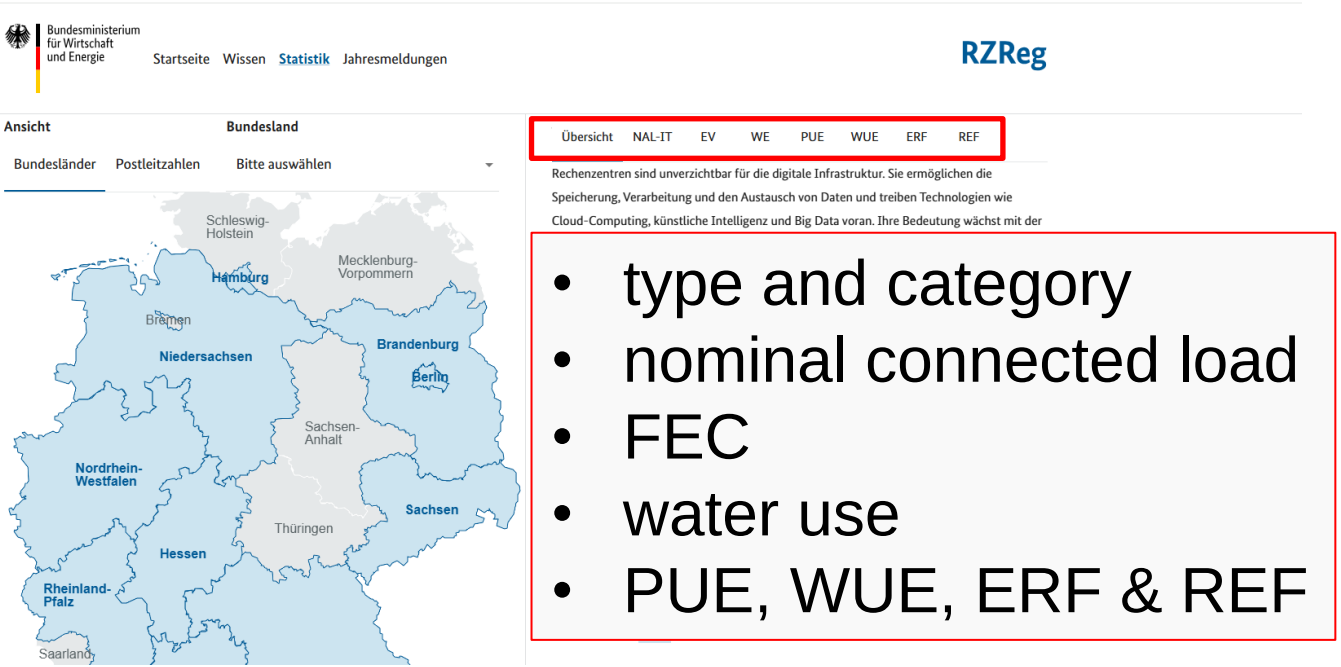
# The DCReg: Aggregated statistics




https://rechenzentrumsregister.bund.de/de/statistic/

Federal Ministry for Economic Affairs and Energy

# The DCReg: Aggregated statistics

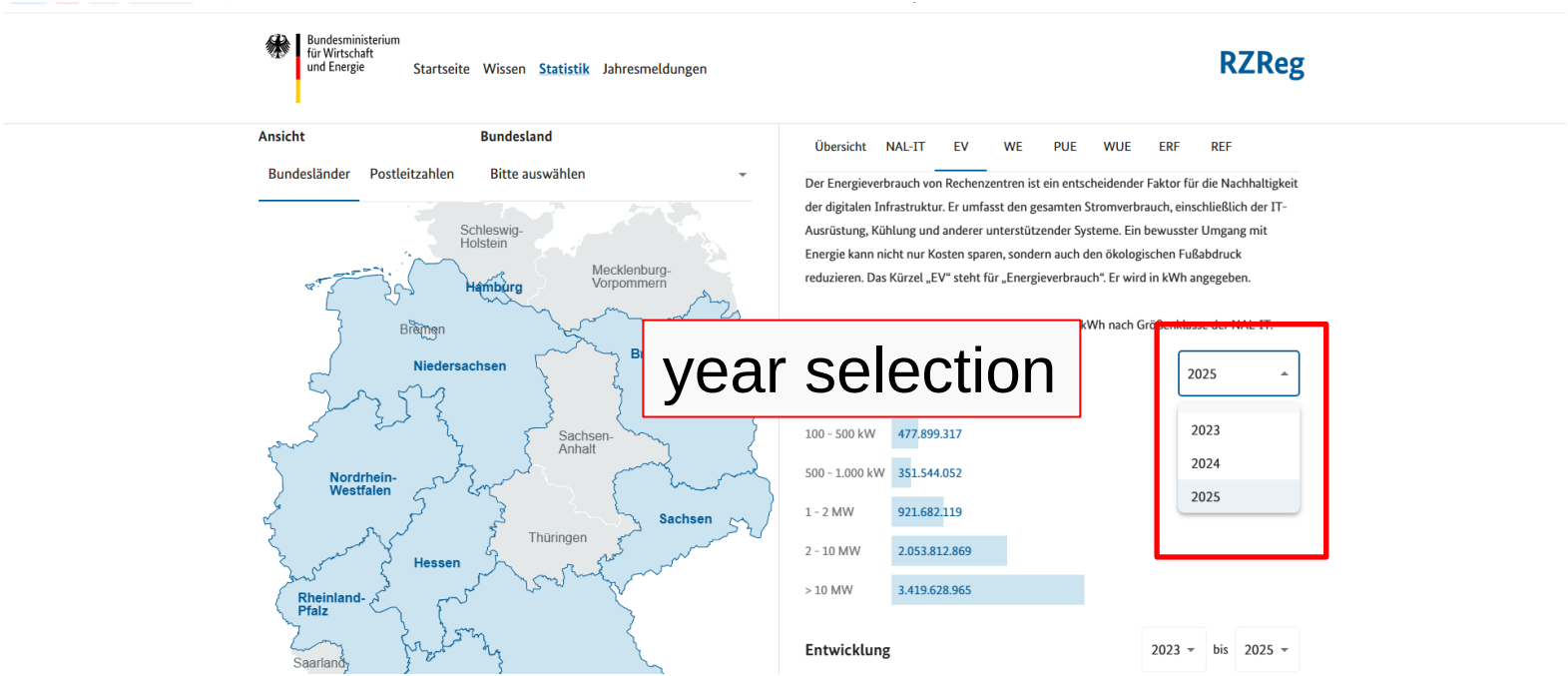



- type and category
- nominal connected load
- FEC
- water use
- PUE, WUE, ERF & REF

https://rechenzentrumsregister.bund.de/de/statistic/

Federal Ministry for Economic Affairs and Energy

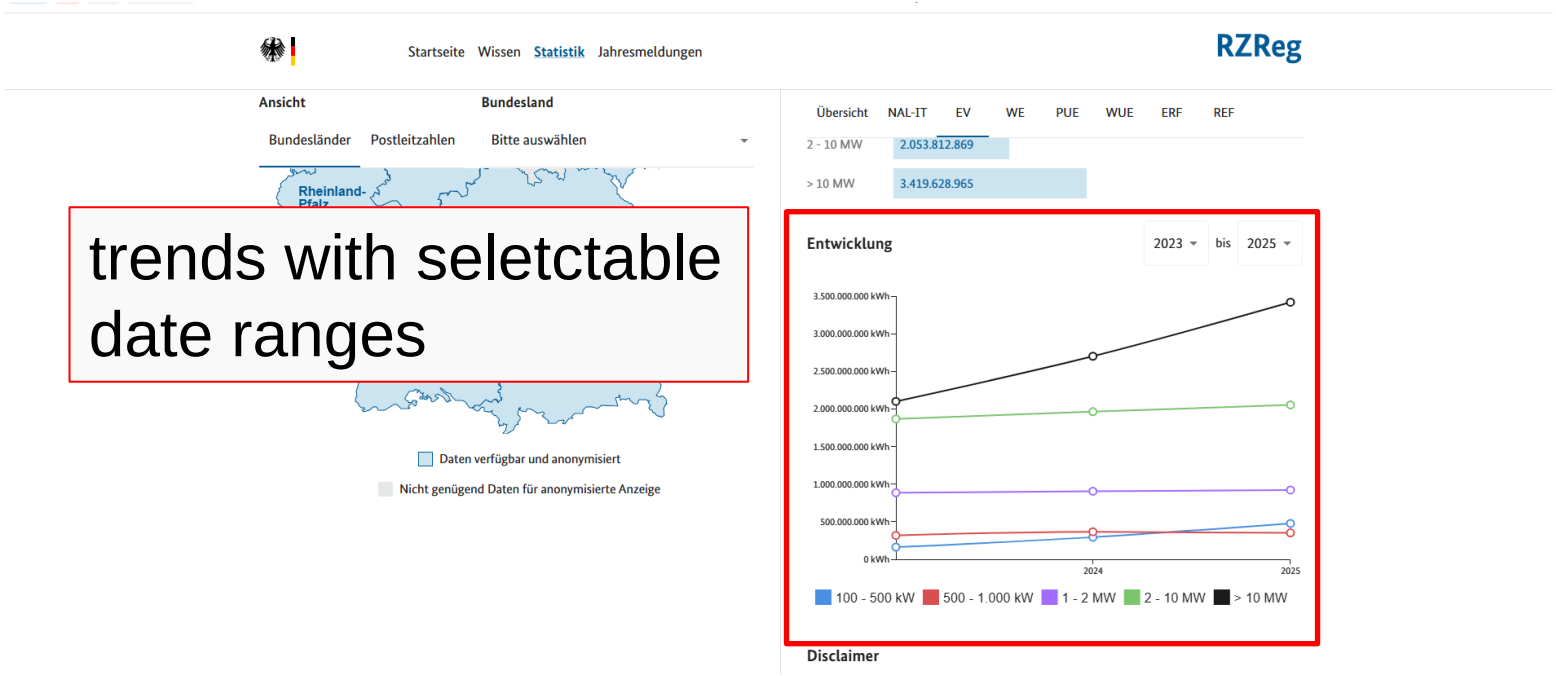
# The DCReg: Aggregated statistics




Federal Ministry for Economic Affairs and Energy

https://rechenzentrumsregister.bund.de/de/statistic/

# The DCReg: Aggregated statistics



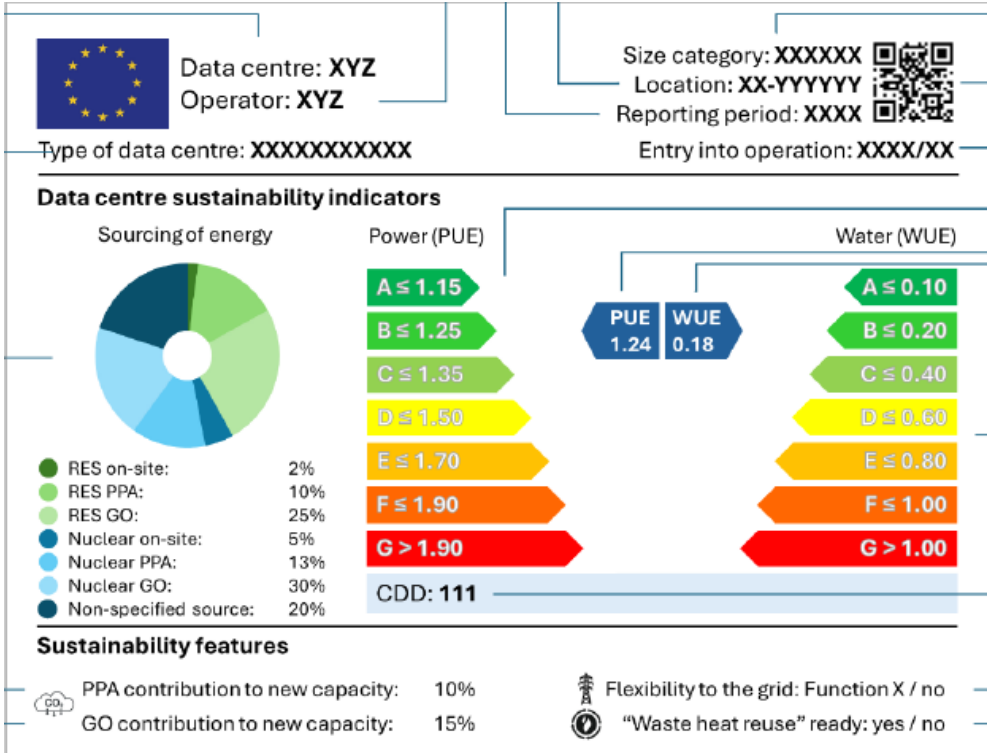

trends with seletctable date ranges

https://rechenzentrumsregister.bund.de/de/statistic/

Federal Ministry for Economic Affairs and Energy

# The New Common Rating Scheme for DCs

German KPIs on power- and water use efficiency


Data centre: XYZ
Operator: XYZ
Size category: XXXXXX
Location: XX-YYYYYY
Reporting period: XXXX
Type of data centre: XXXXXXXXXXX
Entry into operation: XXXX/XX
Data centre sustainability indicators
Sourcing of energy
RES on-site: 2%
RES PPA: 10%
RES GO: 25%
Nuclear on-site: 5%
Nuclear PPA: 13%
Nuclear GO: 30%
Non-specified source: 20%
Power (PUE)
A ≤ 1.15
B ≤ 1.25
C ≤ 1.35
D ≤ 1.50
E ≤ 1.70
F ≤ 1.90
G > 1.90
PUE 1.24
WUE 0.18
Water (WUE)
A ≤ 0.10
B ≤ 0.20
C ≤ 0.40
D ≤ 0.60
E ≤ 0.80
F ≤ 1.00
G > 1.00
CDD: 111
Sustainability features
PPA contribution to new capacity: 10%
GO contribution to new capacity: 15%
Flexibility to the grid: Function X / no
"Waste heat reuse" ready: yes / no

# Status Quo - Power Use Efficiency

| Efficiency Class | Count | Average PUE | Percentage |
|---|---|---|---|
| A | 54 | 1,10 | 11,20% |
| B | 67 | 1,21 | 13,90% |
| C | 82 | 1,30 | 17,01% |
| D | 113 | 1,43 | 23,44% |
| E | 78 | 1,59 | 16,18% |
| F | 39 | 1,80 | 8,09% |
| G | 49 | 3,40 | 10,17% |
| Sum | 482 | 1,60 | 100,00% |

- trend towards the middle
- median PUE 1,4

*Source: own data*

German DCs by PUE efficiency class

Federal Ministry
for Economic Affairs
and Energy

# Status Quo - Water Use Efficiency

| Efficiency Class | Count | Average WUE | Percentage |
|---|---|---|---|
| A | 328 | 0,01 | 68,05% |
| B | 34 | 0,15 | 7,05% |
| C | 32 | 0,29 | 6,64% |
| D | 14 | 0,50 | 2,90% |
| E | 10 | 0,69 | 2,07% |
| F | 12 | 0,89 | 2,49% |
| G | 52 | 4,36 | 10,79% |
| Sum | 482 | 0,56 | 100,00% |

*Source: own data*

German DCs by WUE efficiency class

# Final Questions

Please go to menti.com

Code: 5832 0635



Federal Ministry
for Economic Affairs
and Energy