

**University of Stuttgart**

**IER** Institute of Energy Economics  
and Rational Energy Use



# Sustainable Datacenters and the Role of a European Register

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Prof. Dr.  
Peter  
Radgen

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Under the technical  
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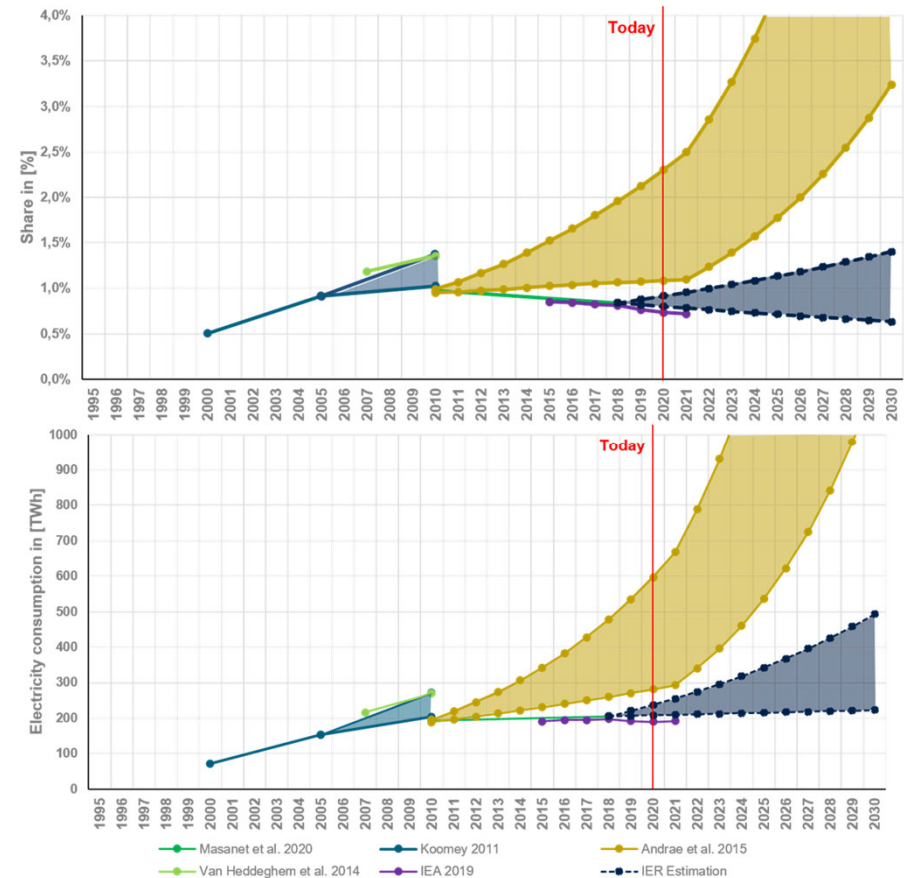


Bundesministerium  
für Wirtschaft  
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## Background and Motivation

- **Large growth in the area of digital infrastructures** with significant increase in electricity consumption.
- Data centers have already overtaken some industrial sectors in terms of energy consumption.
- Energy Efficiency and use of renewable Energy with high priority in Europe
- However **very little knowledge – data are mostly based on assumptions and best guesses**
- Lack of transparency with regard to electricity consumption, growth and efficiency, therefore a uniform approach is required for recording and evaluating the efficiency and sustainability of data centers.

Development of global power consumption in data centers



To be noted: All numbers are given in German format

# Development of a Data Center Register

Creating a Win-win situation for all actors



## Data center operators

- Visibility of own digital services and climate protection measures
- Competition for the most efficient data centers
- Uniform evaluation standards for comparing data centers
- Creation of a market for waste heat from data centers

## Data center customers

- Overview of available data center services
- Selection of energy-efficient, climate-friendly data centers

## Regulators

- Targeted measures to promote IT infrastructures and IT locations
- Basis for development of data center market and services
- Development of connected load and energy consumption for power plant and power grid planning
- Recording greenhouse gas emissions for monitoring climate protection obligations



**University of Stuttgart**  
Germany



**Thank you!**



**Prof. Dr. Peter Radgen**

e-mail peter.radgen@ier.uni-stuttgart.de

phone +49 (0) 711 685- 87877

University of Stuttgart  
Institute of Energy Economics and Rational Energy Use (IER)

Heißbrühlstr. 49a  
70565 Stuttgart  
Germany

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