Hitachi Energy

Welcoming the Electrical Era: Building resilient, sustainable energy infrastructure for AI-powered data centers

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Data Center Forum 2025, October 2nd

Datacenter Forum 2025

Hitachi Energy at a glance

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About Hitachi Energy

50,000+ employees

150 nationalities

60 countries

100+ years of heritage

1,800+ field engineers

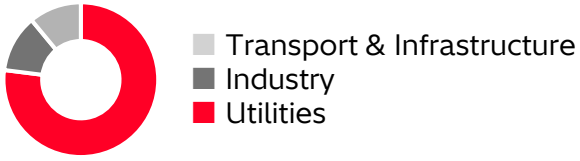
2,600+ R&D experts

~$16 billion USD business revenues

Business Units

- **Grid Integration**
- **Grid Automation**
- **High Voltage Products**
- **Transformers**
- **Service**

Customers



Offering

Geographies

Business mix by revenue FY2023

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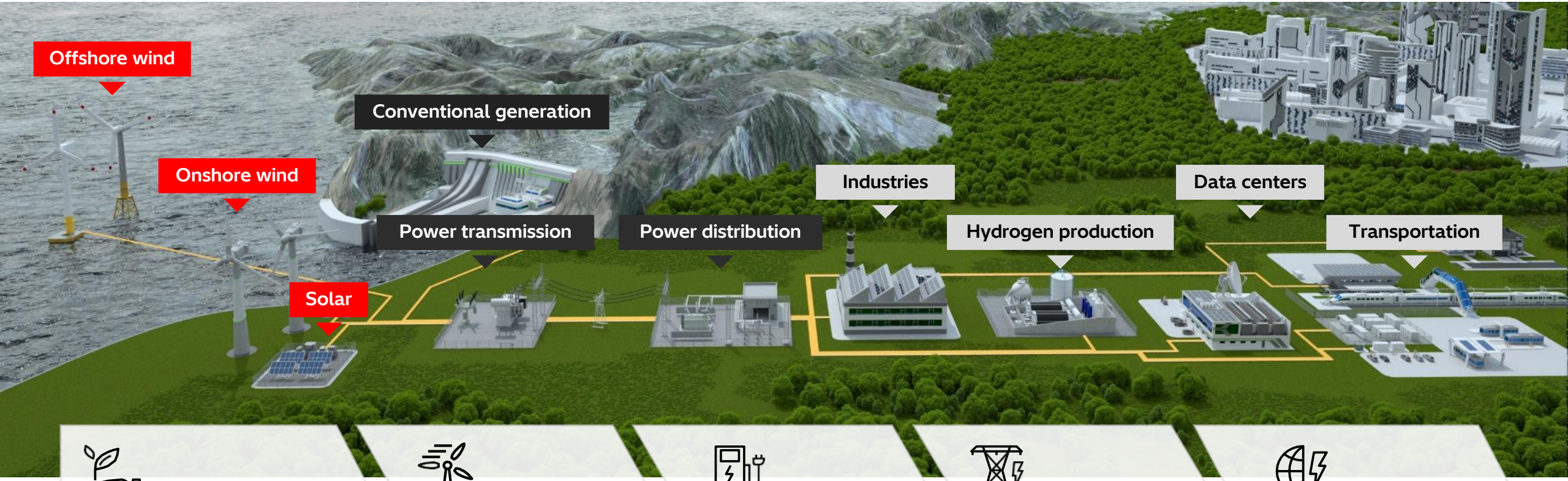
We serve customers across the energy value chain

Power generation | Power transmission and distribution | Energy intensive industries



Transform through low-carbon technologies and digital solutions

Accelerate the shift to renewable power generation

Decarbonize through electrification

Expand and strengthen the transmission and distribution grid

Enable sustainable energy fuels

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Hitachi Energy in Data Centers

We secure reliable power for your data center with an integrated eco-friendly design, so, a sustainable future is in your control.

01 Ensuring continuous operation and uptime through reliable solutions

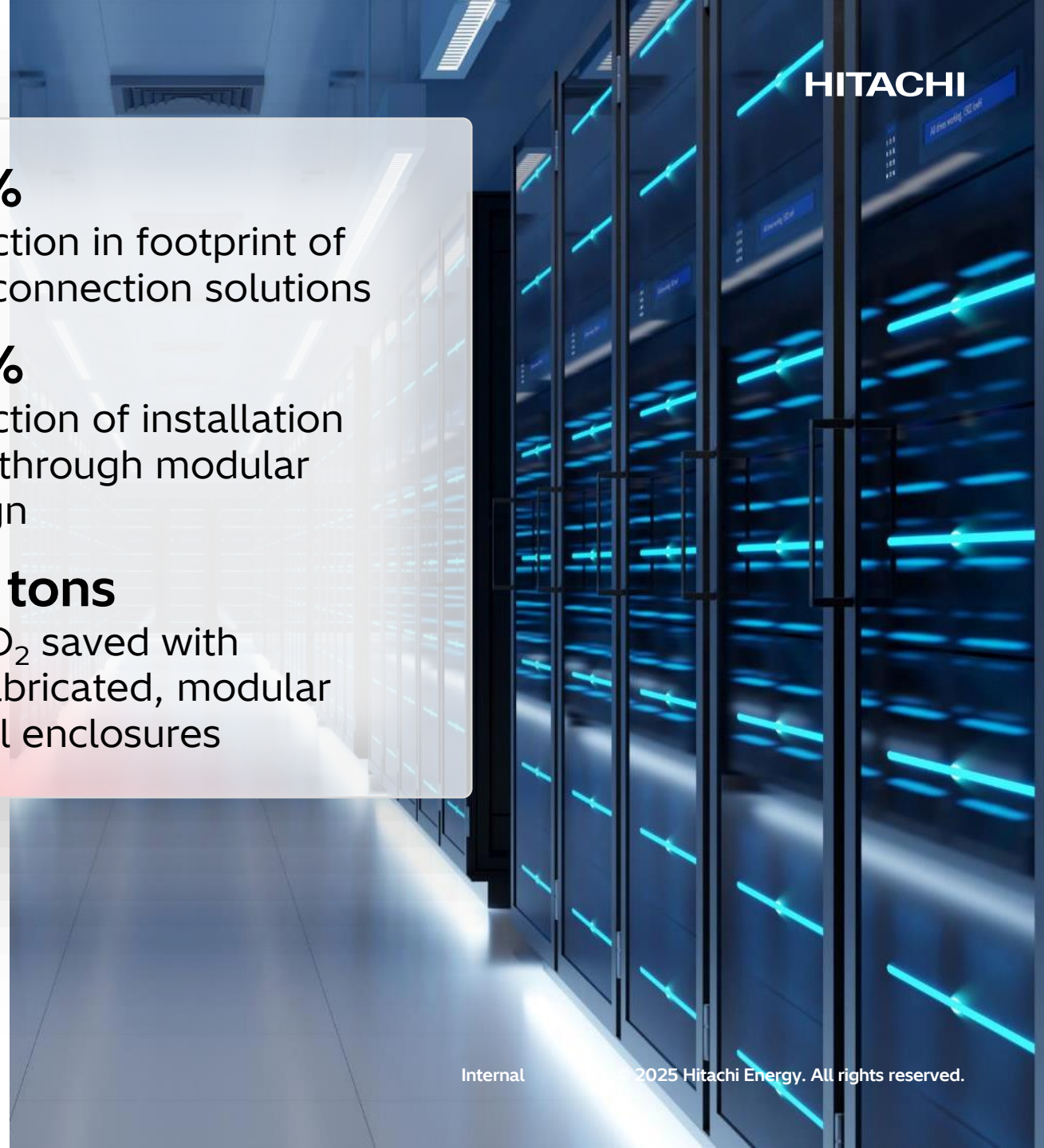
02 Standardized designs enabled for local deployments on a global scale

03 Low environmental impact through sustainable and efficient solutions

30%
reduction in footprint of grid connection solutions

40%
reduction of installation time through modular design

156 tons
of CO_2 saved with prefabricated, modular metal enclosures



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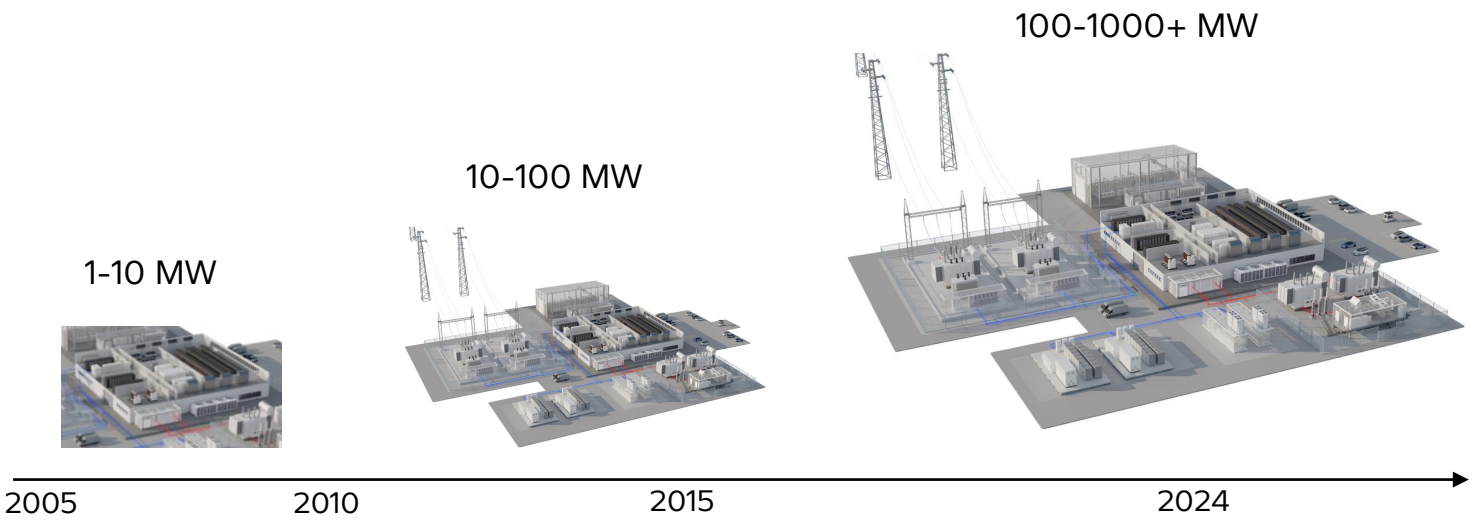
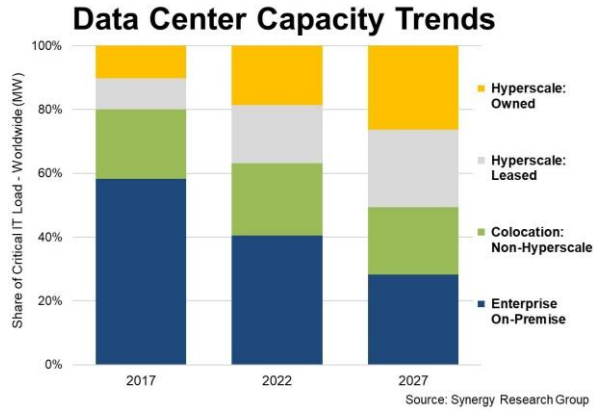
Data centers are becoming larger

What is a total power of a large data center?





Data centers **over the years are getting larger:**

- > 10 ago large data center was 1-10 MW
- 5-10 years ago 10-100 MW
- Today large data center is even 1GW or more

Hyperscale providers are building largest data centers

Global colocation prodividers are also building very large data centers, especially if they are single tenant data centers

HV and MV connections are becoming increasingly necessary

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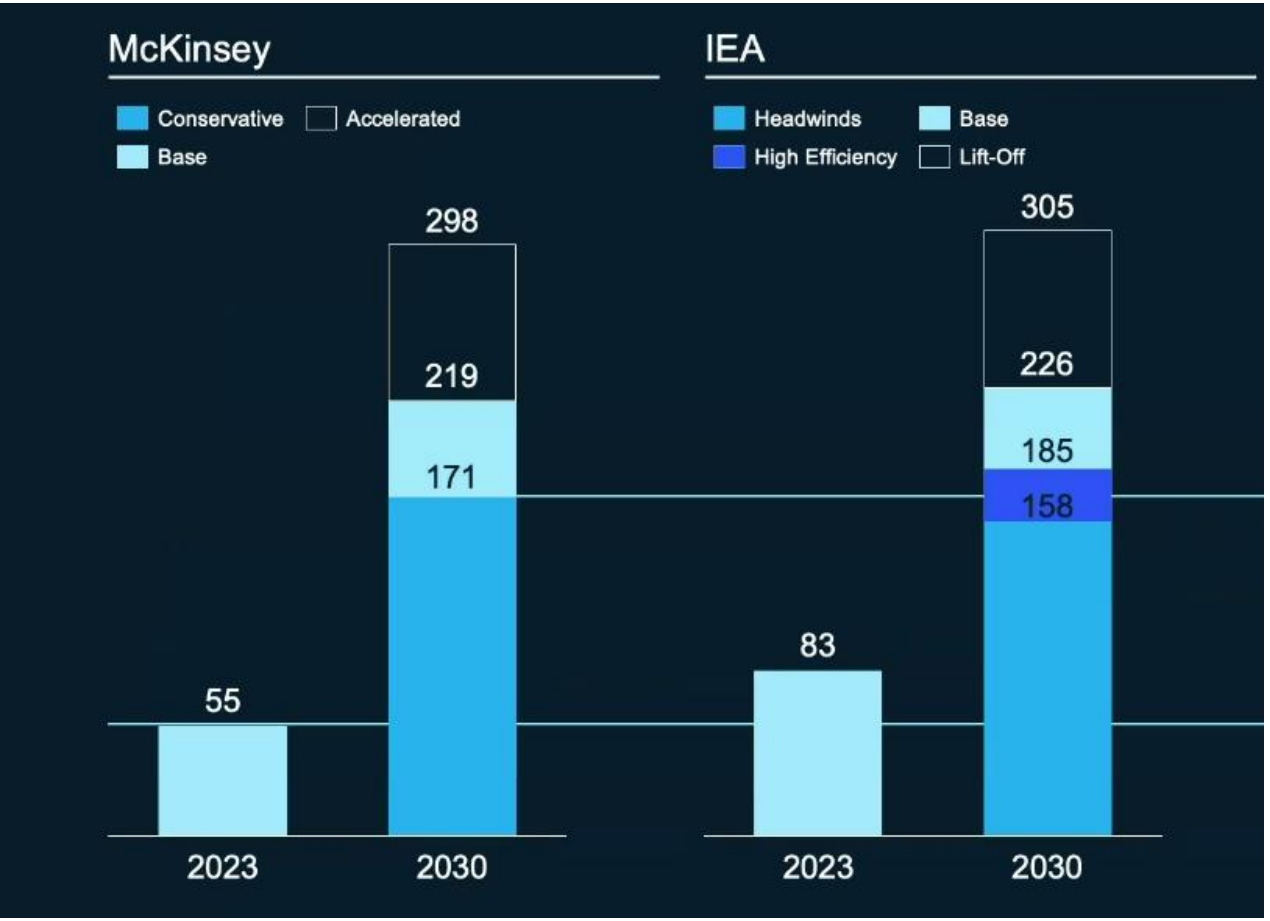
Comparison of forecast growth of computation Power demand [GW]



- Market challenges shape **“Accelerated” vs. “Lift Off”** scenarios
- Not all projects will materialize—**uncertainty is high**
- Power grid and **infrastructure constraints** (e.g., transformers, switchgear)
- **Rapid tech shifts**: GPUs, software, cooling, efficiency
- **AI adoption** and business growth remain **unpredictable**
- **Economic, regulatory, and regional factors** impact progress

Source: McKinsey Data Center Deamdn Model, S&P Global 451 Research Datacenter Knowledgebase, Goldman Sachs, JLL, IEA

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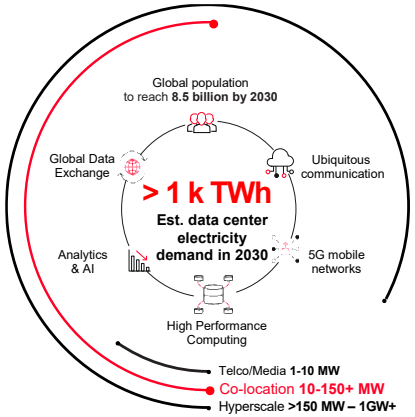
Today and Future Data Center Needs and Challenges

Surging electricity demand

- Global data center electricity demand could double by 2026 compared to 2022
- Continued strong growth expected through 2030
- Estimated CAGR: 10%+

Drivers of growth

- Artificial Intelligence
- Cryptocurrencies
- Digitalization across industries



Sustainability pressure

- Utility power access is increasingly constrained

Call for innovation

- A new approach to energy supply is essential
- Rethink infrastructure to support future demand and sustainability

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The energy transition needs technologies, services, and partnerships

Urgent power system ramp-up: The technology is available to start now

Technology implementation	**Partnerships**	Demonstrators and pilots
Business models		Research
Policies and regulatory framework		Talents and investments

Technologies – enabling the energy transition

Additional innovative solutions while ramping up the infrastructure


Sustainable products & solutions


Power electronics


Digital technology and services

Building the foundation for a system of systems

Inspire the next era of sustainable energy

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Data Center Solutions

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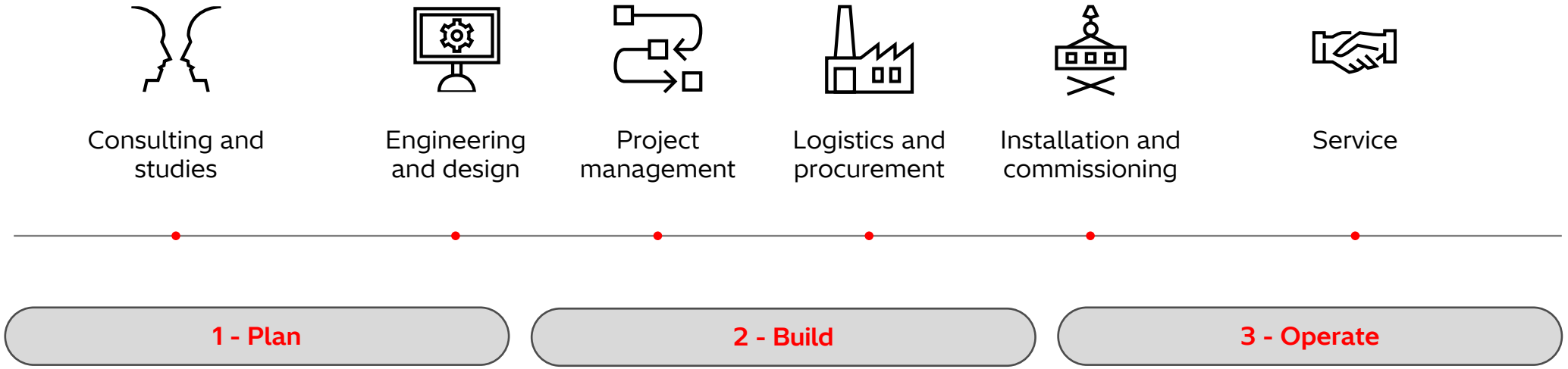
Your partner to connect to HV Grid: Plan – Build – Operate

Masters in project execution from the very early stage



Supporting you throughout the entire project lifecycle

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Hitachi Energy Data Center Solutions

Grid and **system studies** for ensuring compliance with grid codes and requirements

Life cycle analysis and sustainability evaluation of solutions and systems

Prefabricated and **modular** high-voltage switchgear

Optimized control of system power flow, including distributed energy resources and storage

Service agreements and **digitalization** for optimized operation and maintenance

Improved Power Quality with **Active Harmonic Filters**

Secondary power distribution with **distribution transformers**

Power transformers for high-voltage substations

Containerized GIS solutions with off-site integration

SF6-free GIS and Mineral-oil free Transformers with **EconiQ portfolio**

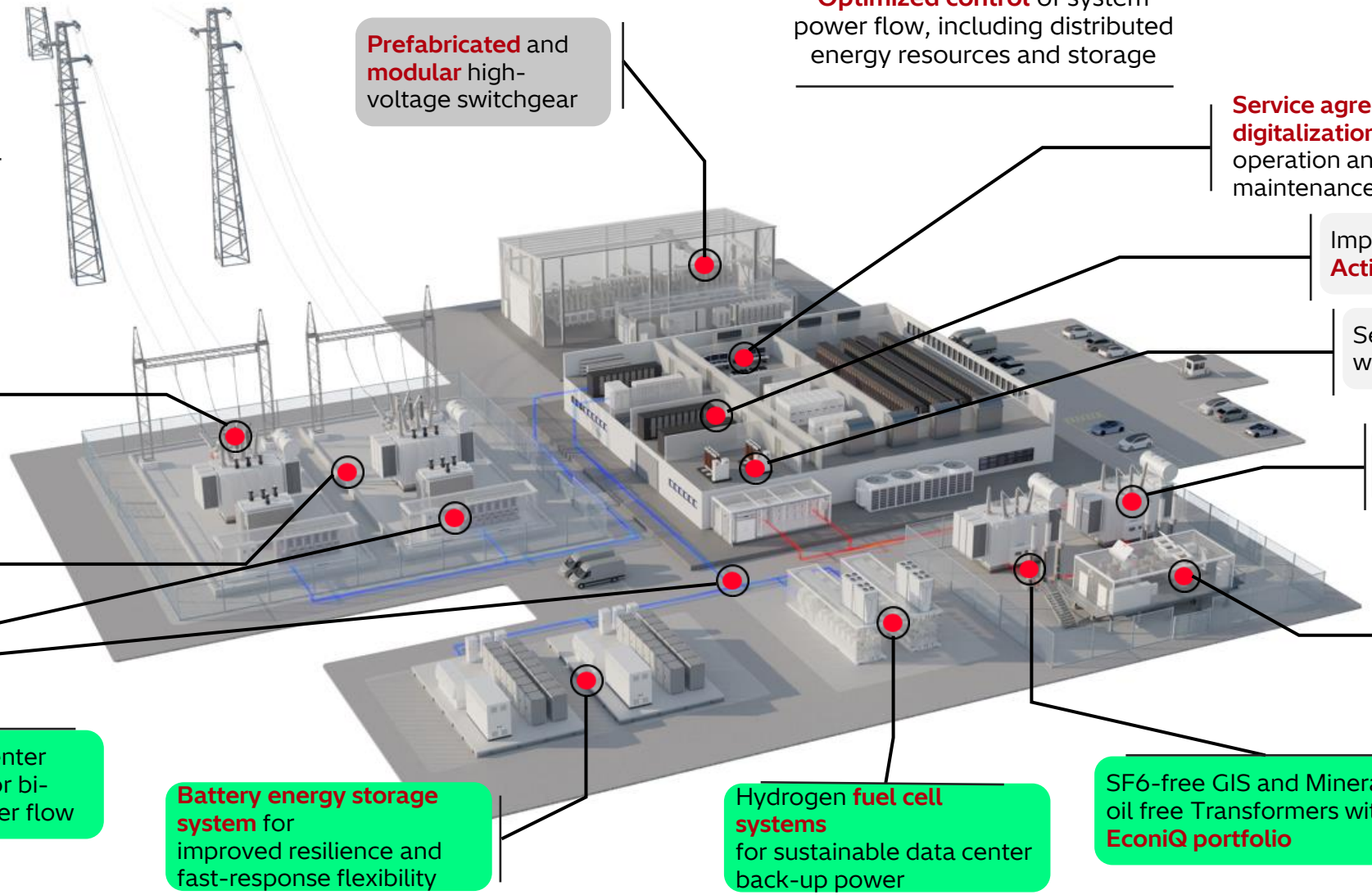
Hydrogen **fuel cell systems** for sustainable data center back-up power

Battery energy storage system for improved resilience and fast-response flexibility

Local data center **micro grids** for bi-directional power flow

Power Quality Solutions

Hybrid switchgear (PASS) with high functional integration



Footprint: Installed data center projects

Europe

Main Customers:

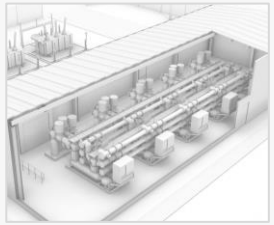
- ✓ Hyperscalers: under NDA
- ✓ Colocations companies: under NDA

Voltages:

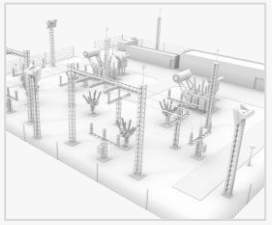
- ✓ 400 kV
- ✓ 220 kV
- ✓ 150 kV
- ✓ 132 kV
- ✓ 110 kV
- ✓ 66 kV
- ✓ MV

HV Technology:

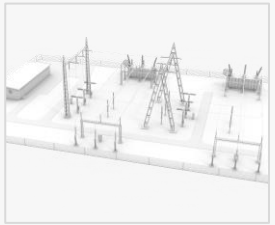
✓ **GIS**



✓ **Hybrid (PASS)**



✓ **AIS**



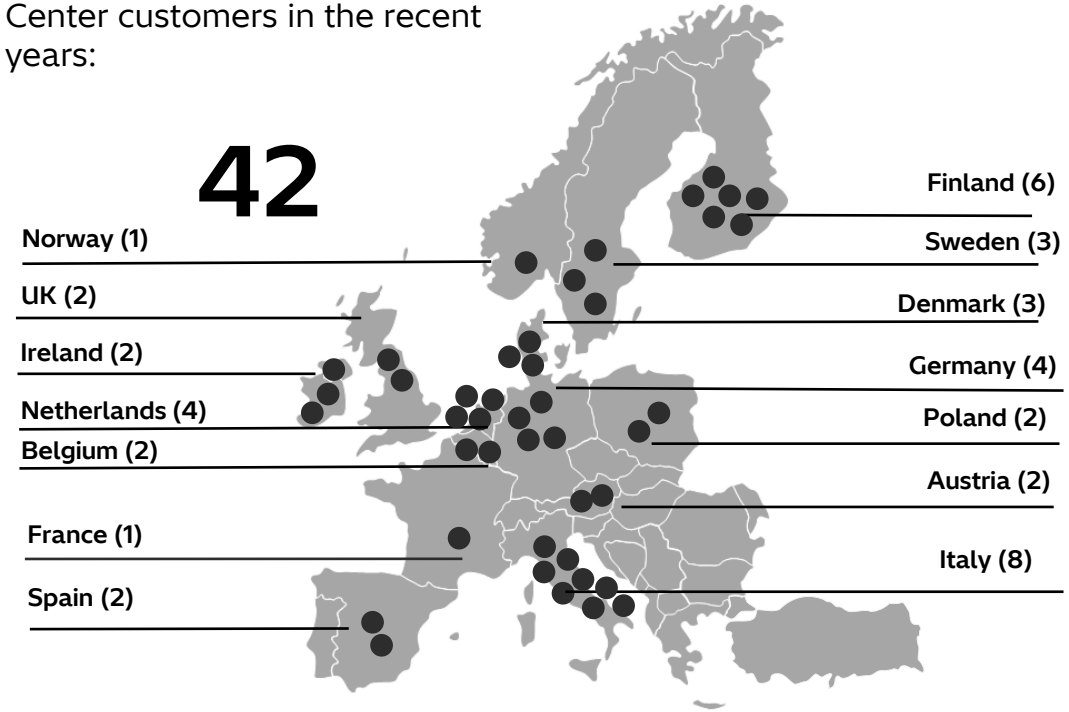
What we offer:

- ✓ Global / Regional player
- ✓ Manufacturer: secure supply chain
- ✓ Early engagement with customers: partner approach
- ✓ Grid experts: long experience with local Utilities (TSOs / DSOs)
- ✓ BIM and Modular/Prefab solutions to allow fast response & delivery
- ✓ Strong Country units + cross-country collaboration (EU HUB)

Projects :

HV projects **DELIVERED** to Data Center customers in the recent years:

42



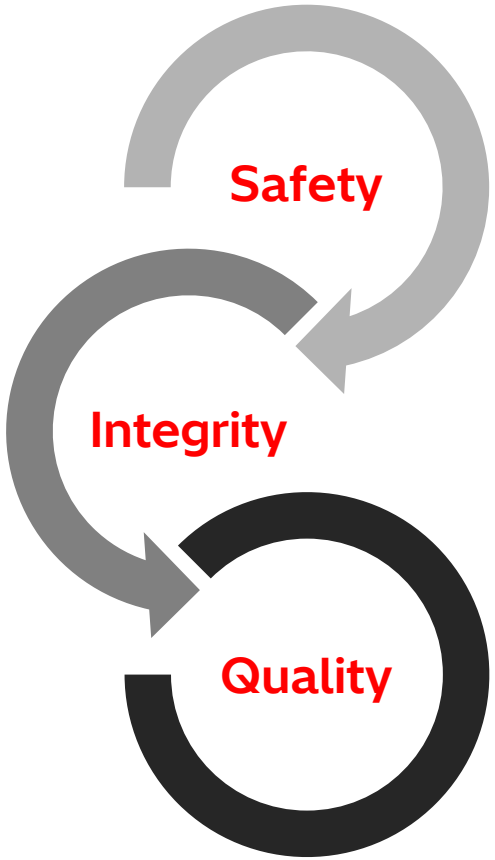
Safety first

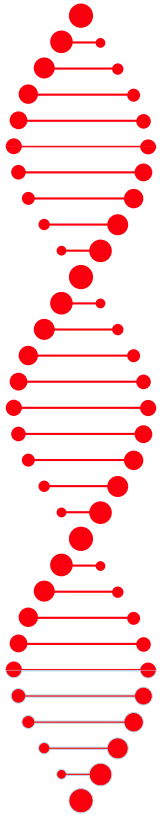
On quality

On time

Safety, Integrity, and Quality - our license to operate

Safety, Integrity, and Quality is part of our DNA





Sustainability Strategy

Planet

Accelerating the clean energy transition while boosting circularity and biodiversity:

- **Climate**
- **Circular economy**
- **Biodiversity and ecosystems**

People

Supporting a safe, inclusive, equitable, and just energy transition for today's generations and those to come:

- **Health and safety**
- **Diversity, equity, and inclusion (DEI)**
- **Human rights and social contributions**

Principles

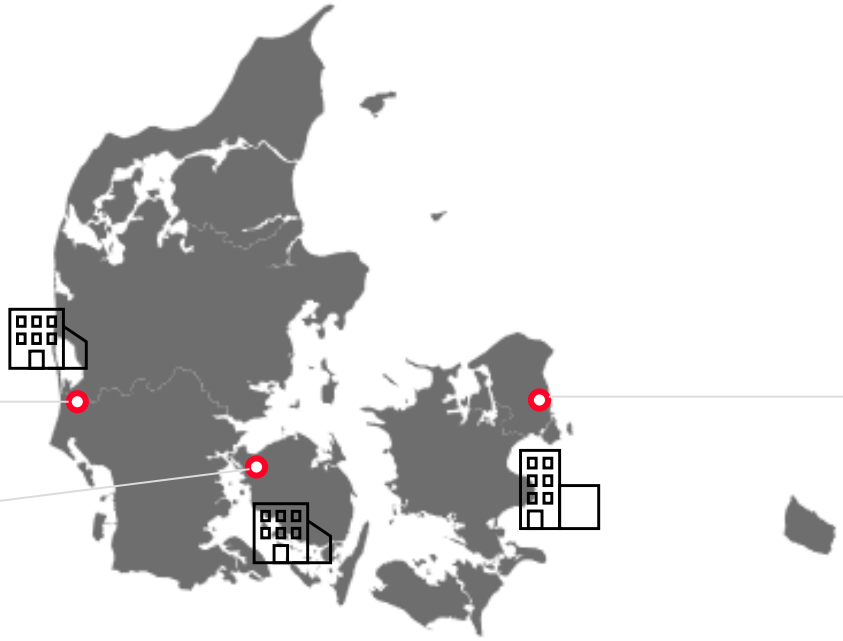
Taking responsibility for our company governance and employee behaviors, as well as our value chain:

- **Ethics and integrity**
- **Sustainable supply chain**
- **Behaviors and values**

Hitachi Energy in Denmark - Overview

Esbjerg
Commercial representation

Middelfart
Commercial representation
Service



Ballerup
Headquarters
Commercial representation

Ballerup Headquarters	5 business units	80+ employees	3 locations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