Grid Technologies A Bedrock of the Energy-Transition

Customer Event Steam Turbine and Generators 2023



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Our new world

A complex and interconnected Energy Landscape



2023-09

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Creating a digital and sustainable transmission grid
The challenges

Rising global demand for electricity



Demand growth
Maintain reliable power supply

Increasing focus on environment across energy transmission



Decarbonization
Make energy greener

Monolithic and centralized energy systems



Decentralization
Embrace system complexity

Improving asset performance & grid management



Digitalization
Adopt digital solutions

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We enable a reliable, sustainable and digital grid through a leading portfolio

Our grid technology portfolio



Digital Grid 01

- Grid Consulting
- IoT and Edge
- Grid Automation



Grid Solutions 02

- High-Voltage Direct Current (HVDC) – onshore & offshore
- Flexible AC Transmission System (FACTS)
- Substations – onshore & offshore
- Medium-Voltage Direct Current (MVDC)



Products 03

- Power and Distribution Transformers
- Bushings, Instrument Transformers & Coils
- Renewables & Traction
- Switchgears
- Product bundles and systems



Storage 04

- Turnkey battery energy storage solutions (grid connected and off-grid)



Service 05

- Product services
- Modernization and upgrades
- Long-term service concepts and grid integration

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Siemens Energy's BESS

Our approach

- **Battery System**
- **MV/HV Equipment**
- **EPC, Grid Integration & Controls**
- **Services & add. business models**

Providing **turnkey solutions** incl.

- **system design** & **grid integration**
- **I&C** & perf. monitoring **software**
- **service** concepts

Our portfolio

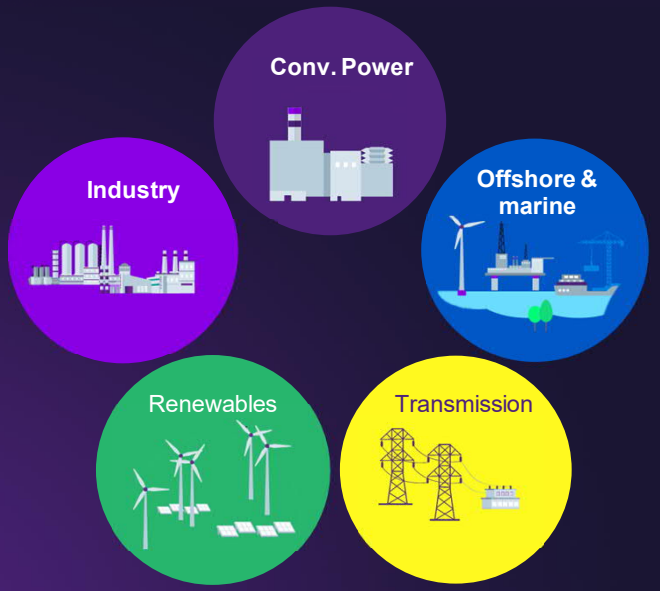
Grid connected and off-grid applications



or

Integrated, **modular** and **scalable** BESS for **high-energy** or **high-power** applications and for requirements in **high safety environments**

Our customer segments



Flexible design

- Using different established suppliers and inhouse solutions for batteries and inverters
- Easy to scale (1MWh – 500+MWh)
- Up to 4h discharge duration systems

Digital solution optimizing dispatch based on production and / or market data

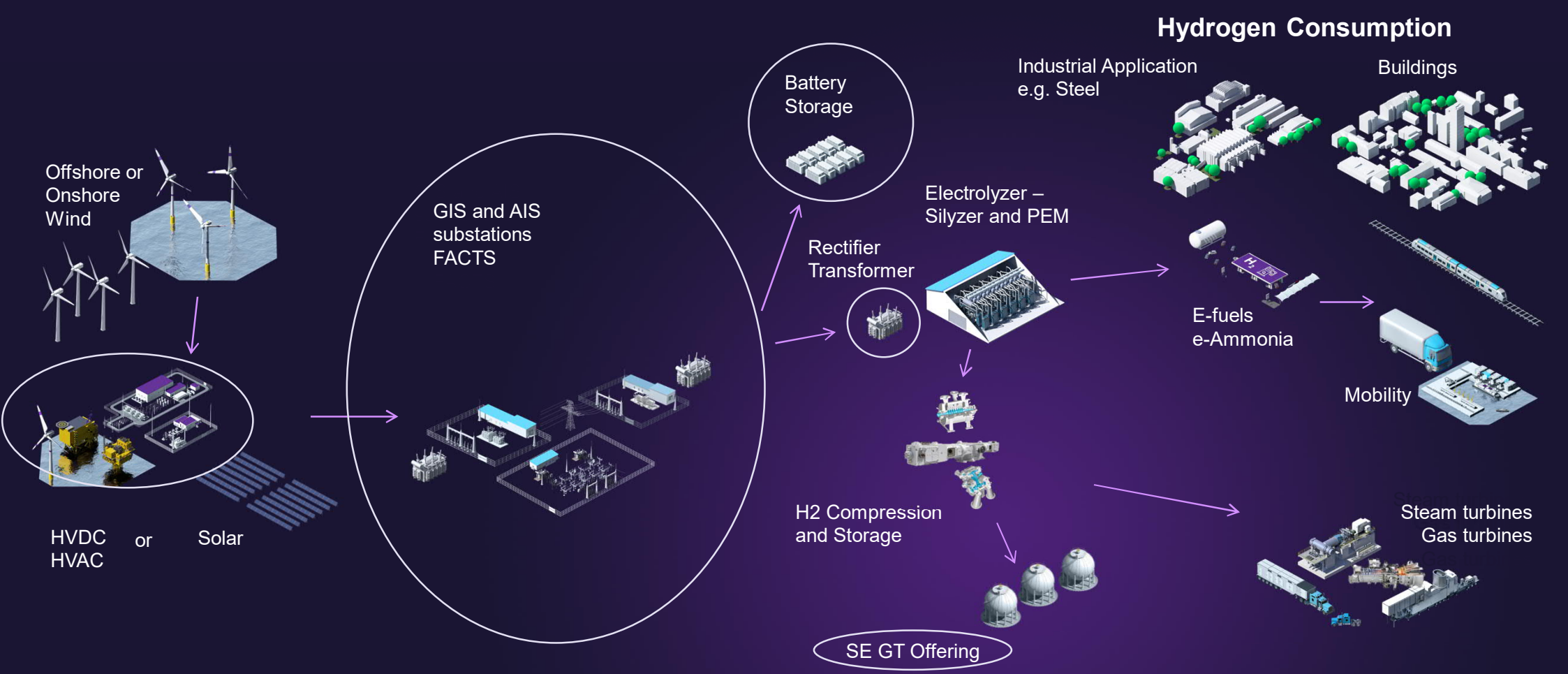
High level of prefabrication limiting time on site

Long-term service optimizing component performance and ad-hoc aftersales support

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Hydrogen Energy Conversion Chain



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Key Take Away – Grid Technologies



Enabling green energy transition through environmentally friendly technologies



Paving the way towards net-zero industry

We decarbonize operations of our partners by adopting most efficient product designs and innovative, tailor-made solutions, such as battery energy storage systems.



Sustainable value creation

From consulting to full operation and maintenance competencies, GT offers technical expertise and experiences across the entire value chain.

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Contact

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A Bedrock of Energy Transition



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