

Šibenik CIGRE

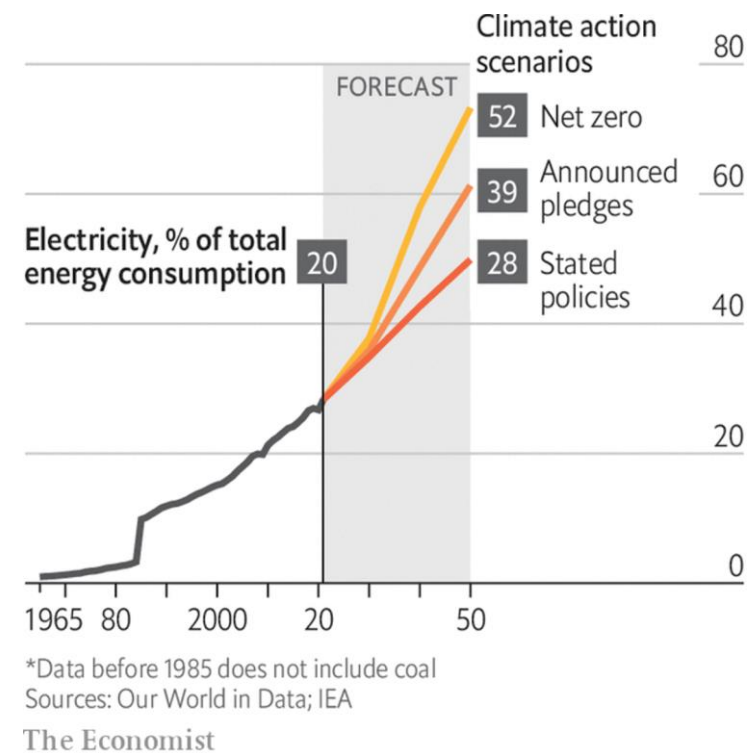
Aleš Prešern, South East Europe VP

October 2023

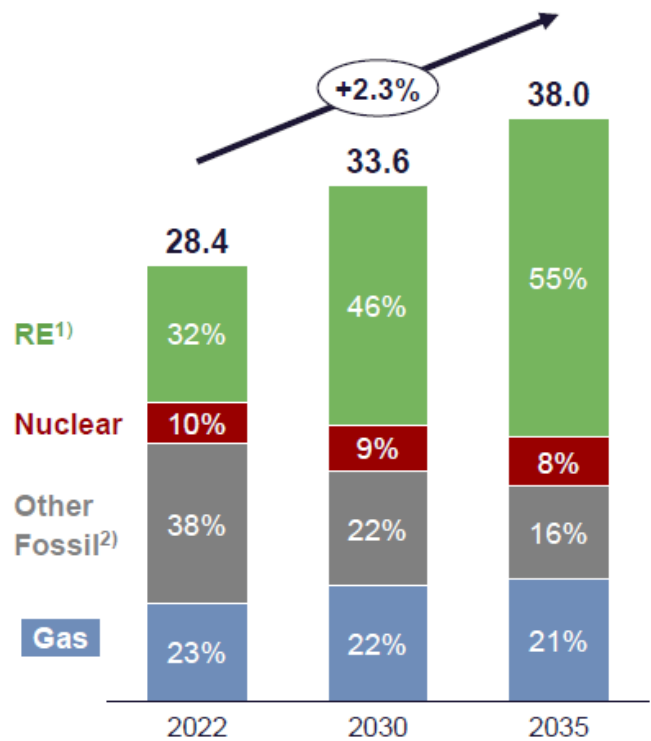




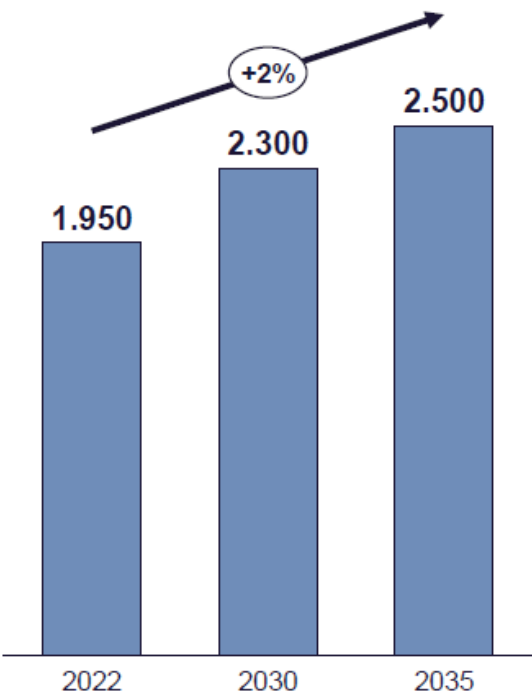
Growing Energy Demand Worldwide



Total Power Generation (in 1000TWh)

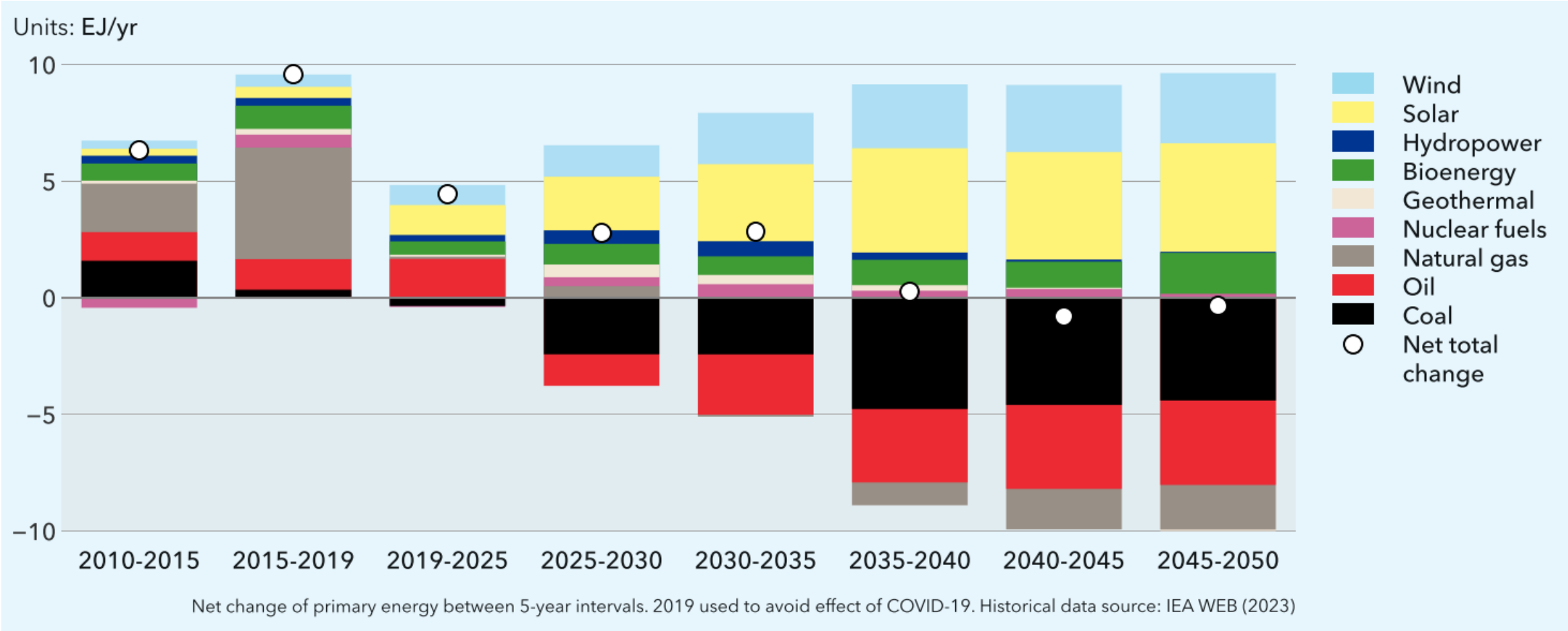


Installed Gas Capacity (in GW)



1) RE = Renewables: Solar PV, Solar CSP, Wind Onshore, Wind Offshore, Geothermal, Biomass/Waste, Hydro, Ocean
Source: IHS 2022 Scenarios (incl. impact of UA crisis)

Net change in primary energy supply by source

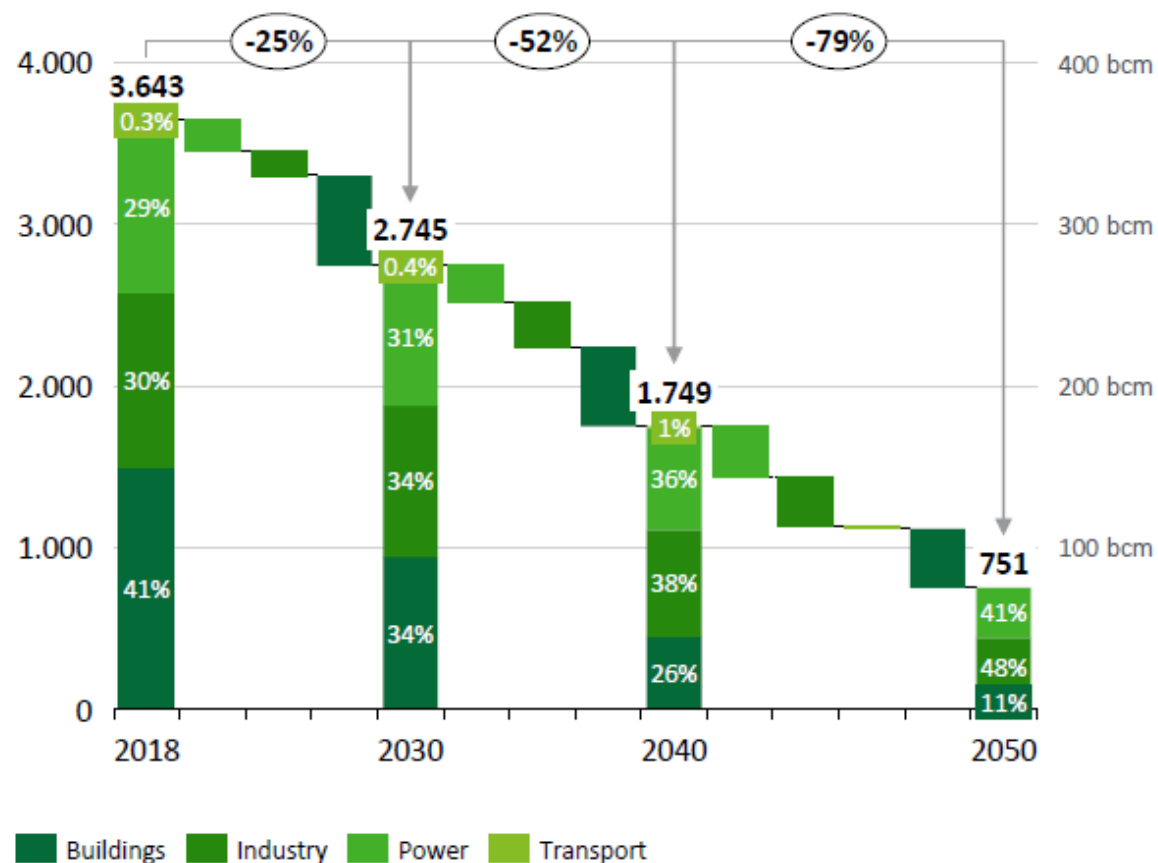


Source: DNV, Energy Transition Outlook 2023

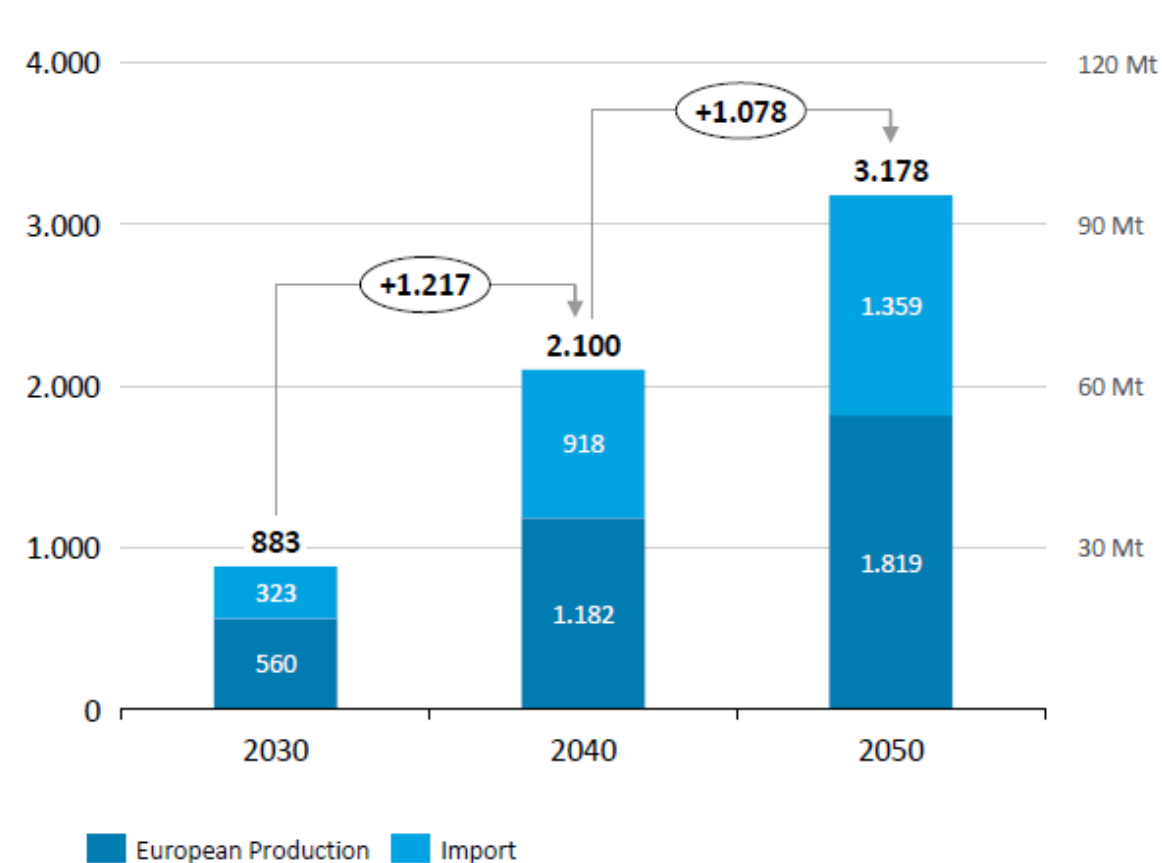
Gas Sector | Transition to Hydrogen

Electrification of heat generation and shift to hydrogen – mainly in industrial processes and power plants

Projection EU Natural Gas Consumption [TWh]¹



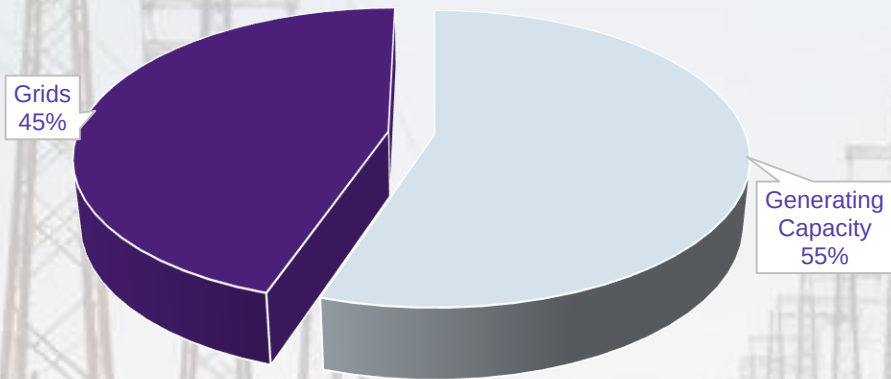
European Hydrogen and Derivatives Production and Imports [TWh]²



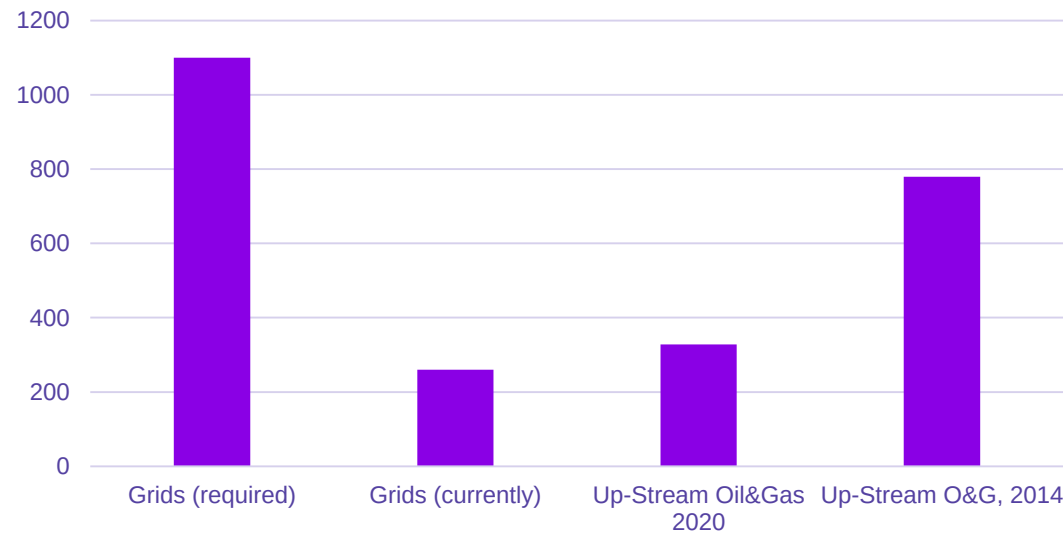
1) Deloitte and Öko-Institute study "Natural Gas Demand Outlook to 2050", forecast using DARE model (announced pledges scenario) | 2) Deloitte study "Global Green Hydrogen Outlook 2023" (2050 Net Zero scenario)

Net-Zero Until 2050: Global Investments into Energy Systems

Investments required until 2050:
2,4 trn USD per year (estimate)



Yearly Investments: Comparison
(in billion USD)



Source: IEA; The Economist

Siemens Energy is a
**global leader in the
energy business**

~ 1/6

of global electricity generation
is based on our technology.

92,000

employees work as a team
to energize society.¹

We are present in

> 90 countries.

We invest around

€1bn annually in
research and development.

¹ Number of employees as of September 30, 2022
May 2023



We are driving innovation with our partners

R&D net spending
~ **€1.1bn**¹

Employees in R&D
5,300¹

Global Innovation Centers

to drive partnerships & co-creation:

-  Orlando, United States of America
-  Berlin, Germany
-  Abu Dhabi, United Arab Emirates
-  Shenzhen, China

Key R&D partners

10 of the top 25 world-ranked universities²

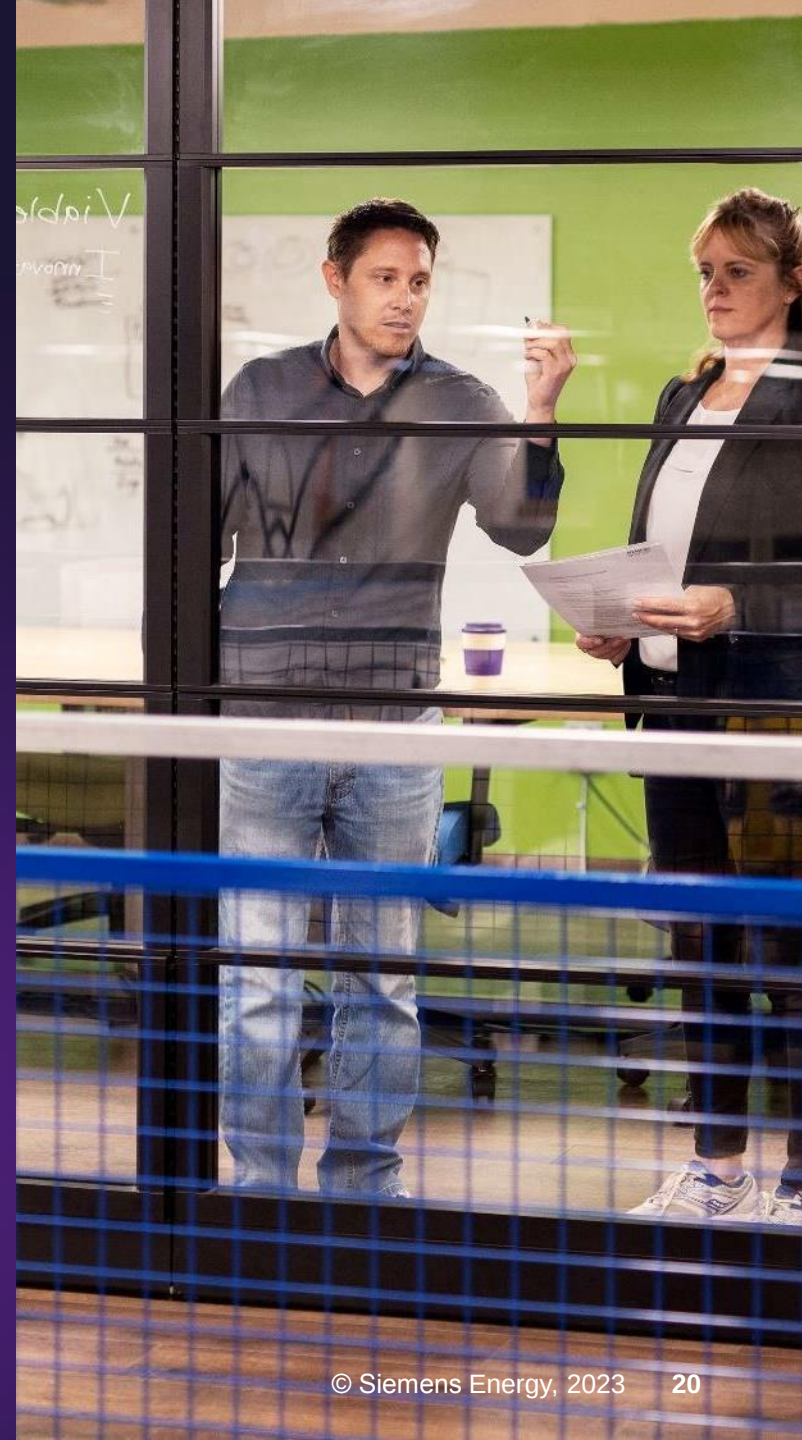
22 Start-ups through **Siemens Energy Ventures** (external/internal)

 [Siemens Energy Ventures](#)

1 FY 2022 | 2 QS World University Rankings by Subject 2022: Engineering & Technology

May 2023

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We focus on

5 fields of action to shape the energy world of tomorrow

Decarbonized Heat and
Industrial Processes



Energy Storage



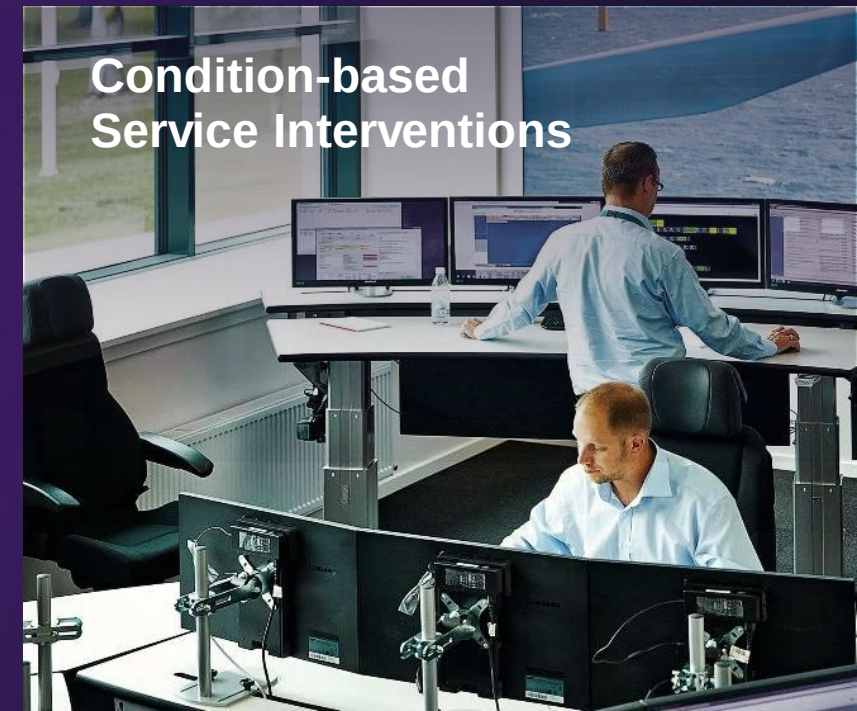
Power-to-X



Resilient Grids and Reliability



Condition-based
Service Interventions





We energize society

