Capgemini

Global Findings

WORLD ENERGY MARKETS OBSERVATORY 2023 | 25TH EDITION

Shaping Tomorrow's Energy Landscape:
Balancing Sovereignty, Affordability and Climate Responsibility

Despite significant progress, the world is not on the right climate trajectory…

To reach climate change mitigation objectives:

Electricity consumption will have to quadruple by 2050!

With over 75% of this supplied by wind and solar energies.

Nuclear capacity will also have to triple…

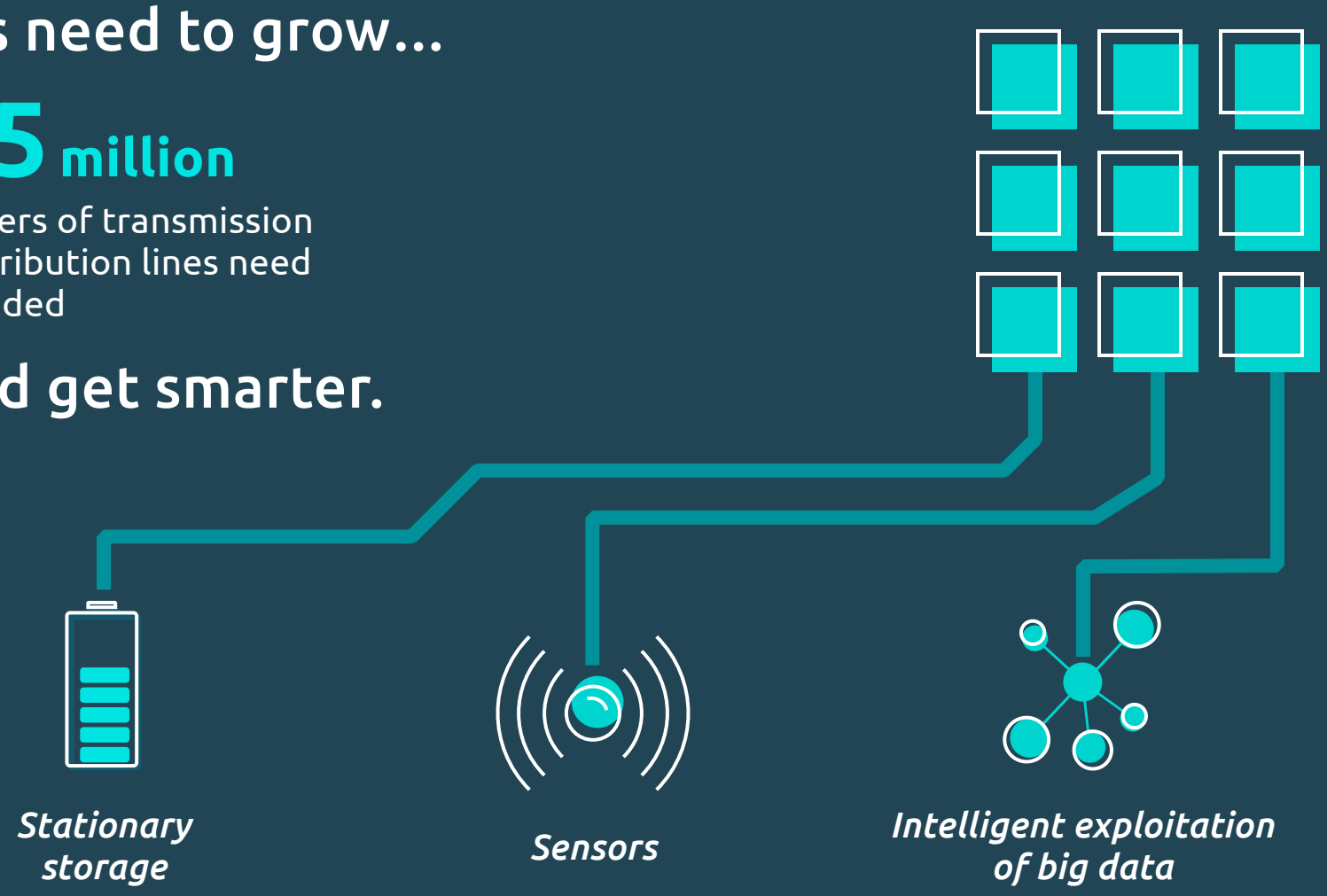
Which means adding 250 new nuclear power stations by 2050…

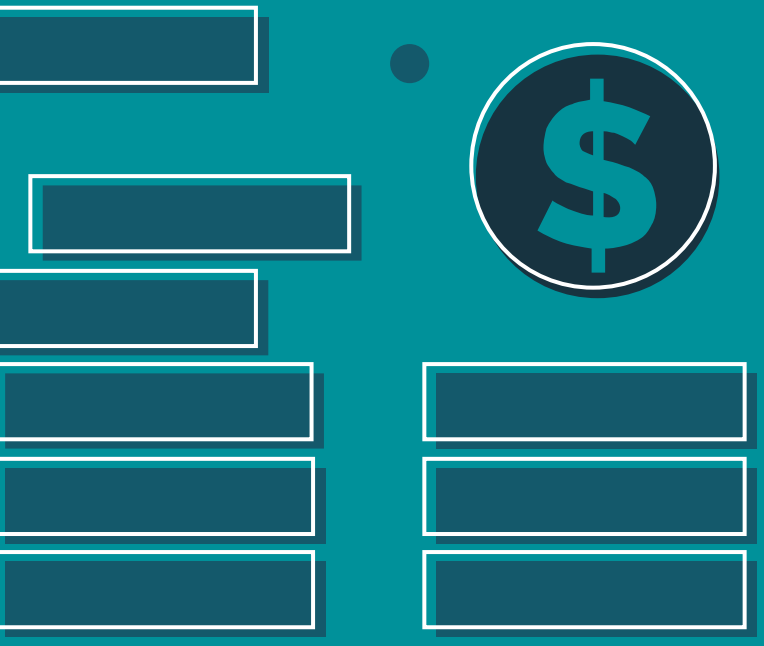
Grids need to grow…

125 million

Kilometers of transmission and distribution lines need to be added

…and get smarter.





Investment is not yet at the levels required:

$7T/year

needed for the next

30 years

Investment decisions must balance 3 key factors:

Sustainability

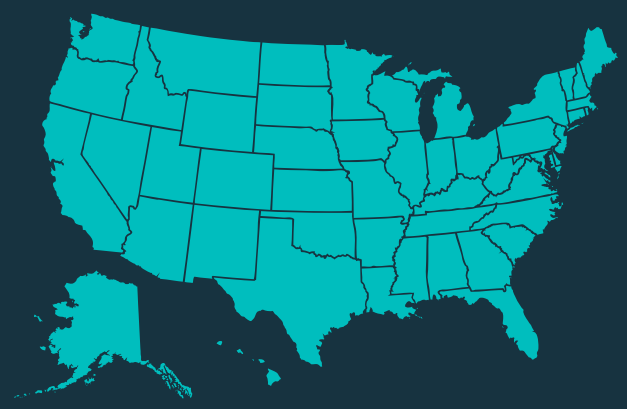
Sovereignty

Consumer affordability

Market reform is needed, including:

Improving security of supply through legislation.

Reclaiming sovereignty over equipment, metals, rare earths, and industrial installations



Inflation Reduction Act (IRA) of 2022

REpowerEU

Countries have a strong need to regain sovereignty on their energy supply, and lessen dependence on China for equipment and critical resources.

Wind and solar LCOE on the rise.

+15-20% in 2022 compared to 2021

Mostly triggered by high interest rates for this CAPEX intensive industry

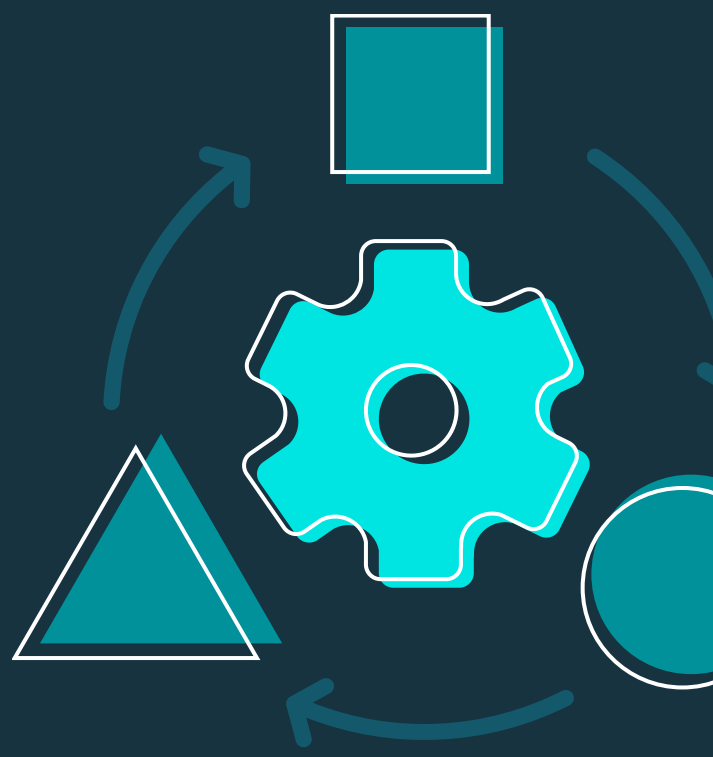
After years of impressive cost reductions, the levelized cost of electricity (LCOE) for wind and solar increased in 2022, a continuation of the 2021 trend.

Looking ahead

Equipment cost stabilization is expected in 2024, but some projects are at risk and offshore wind bankruptcies in Europe prove concerning.

Network investment is critical:

Adaptation measures are necessary for all energy production, transport and distribution assets, to increase resilience against floods, heatwaves, fires, earthquakes.



We leave customers behind at our peril:

Thankfully there are many new opportunities to explore

Positive lifestyle changes

Reskilling workforce

Adapting production capacities

Access all the 2023 WEMO highlights, expert perspectives, and key recommendations.

Download now

> Much like 2023, 2024 is full of uncertainties. Our analysis in this year's World Energy Markets Observatory underscores the idea that even as the world deals with an onslaught of disruption, we must maintain our focus on the fight against climate change to ensure the future of our industry and the health of the planet."
>
> **Colette Lewiner**
> Energy and Utilities senior advisor at Capgemini

> Because of recent significant global events, energy priorities have been redefined. In this year's World Energy Markets Observatory, we explore our urgent need to accelerate the energy transition while managing the sovereignty of energy production, equipment and resources, and ensuring energy affordability."
>
> **James Forrest**
> Group Industry Leader for Energy Transition & Utilities at Capgemini

About WEMO

The World Energy Markets Observatory (WEMO) is Capgemini's annual thought leadership and research report created in partnership Vaasa ETT, and Enerdata, that tracks the development and transformation of electricity and gas markets in Europe, North America, Australia, Southeast Asia, India, and China. Now in its 25th edition, WEMO includes in-depth coverage of: commodities markets; climate change and regulatory policies; energy transition and related technologies; infrastructure and adequacy of supply; supply and final customer; transformation; financials; and the Oil & Gas industry's shift from fossil fuels to low carbon (route to net zero).