

The background of the image features a dark, textured rock formation in the foreground, illuminated with a blue and green glow. In the background, three concentric, glowing circles in shades of cyan and white are centered against a dark blue sky. The text "POWER BAROMETER" is overlaid on the left side of the image in a large, white, sans-serif font. The word "POWER" is on the top line, and "BAROMETER" is on the bottom line. A small green needle-like graphic is integrated into the letter "O" in "POWER".

# POWER BAROMETER

2024

ZEROING IN

# EU slowly kicking its fossil fuel addiction

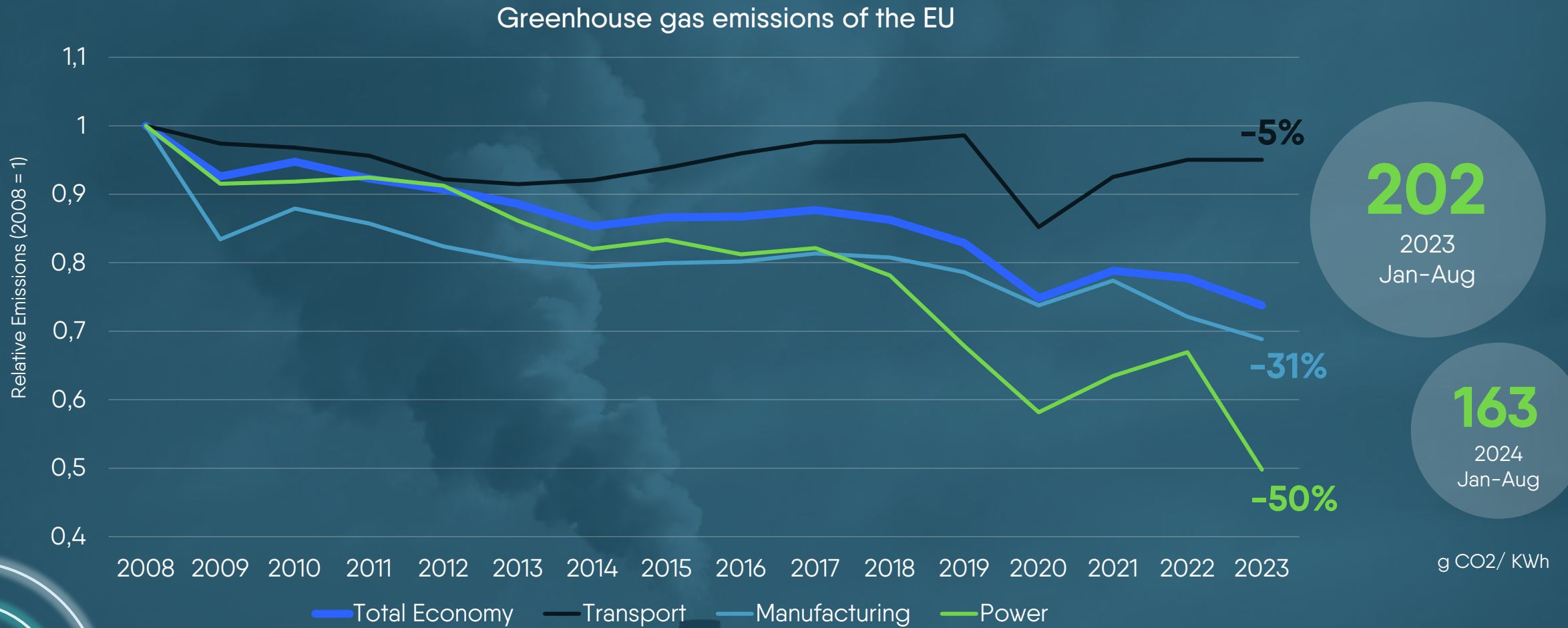


EU energy import bill

€ 451 bn equivalent to

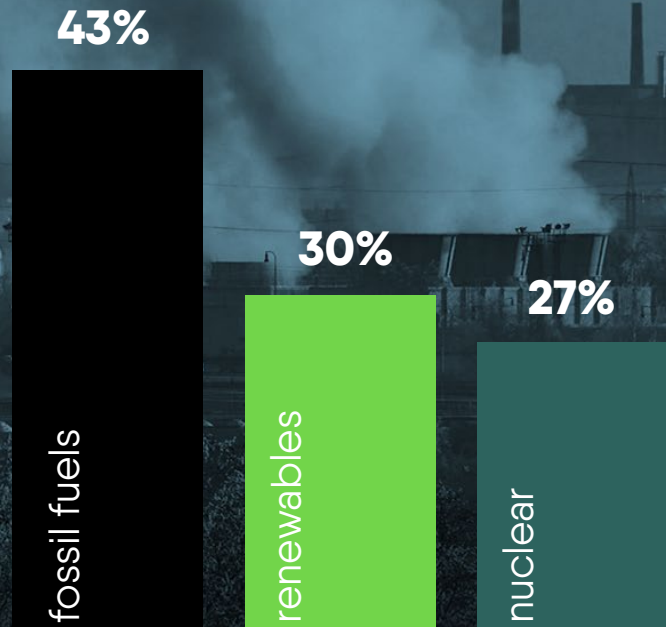
**2.6 % of GDP** in 2023

# Power leading the charge in emission reduction





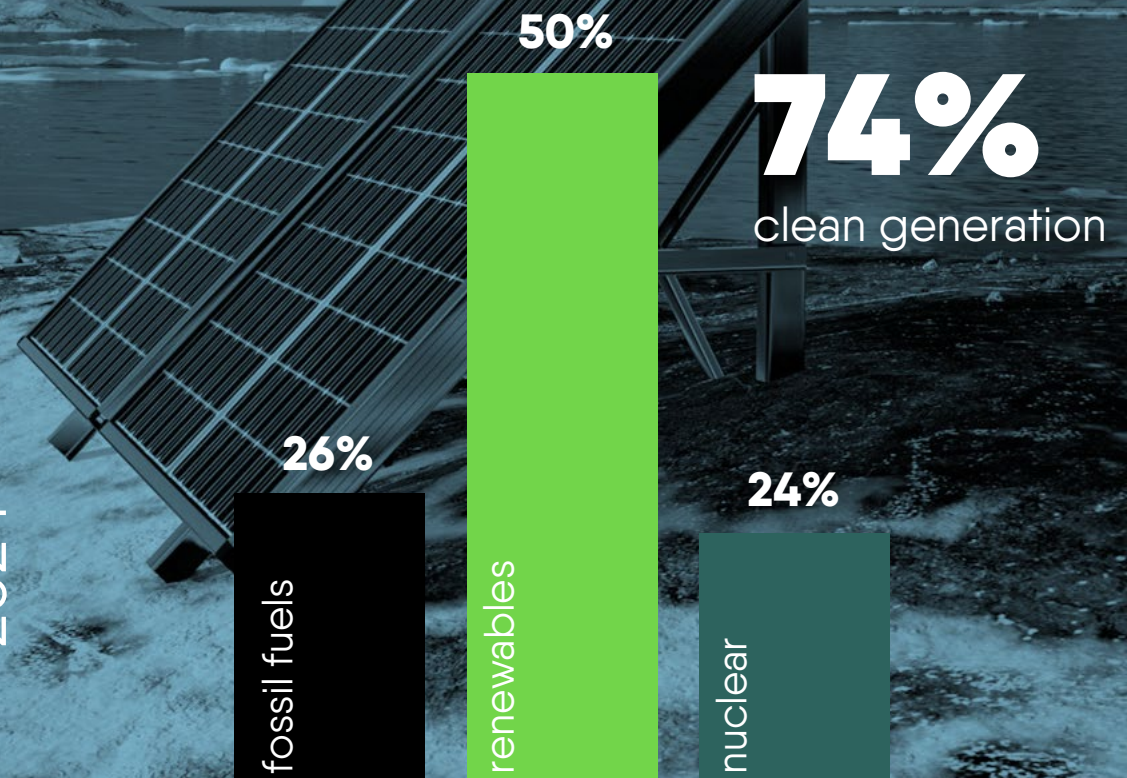
2015



# 2024 H1

highest share of clean electricity ever

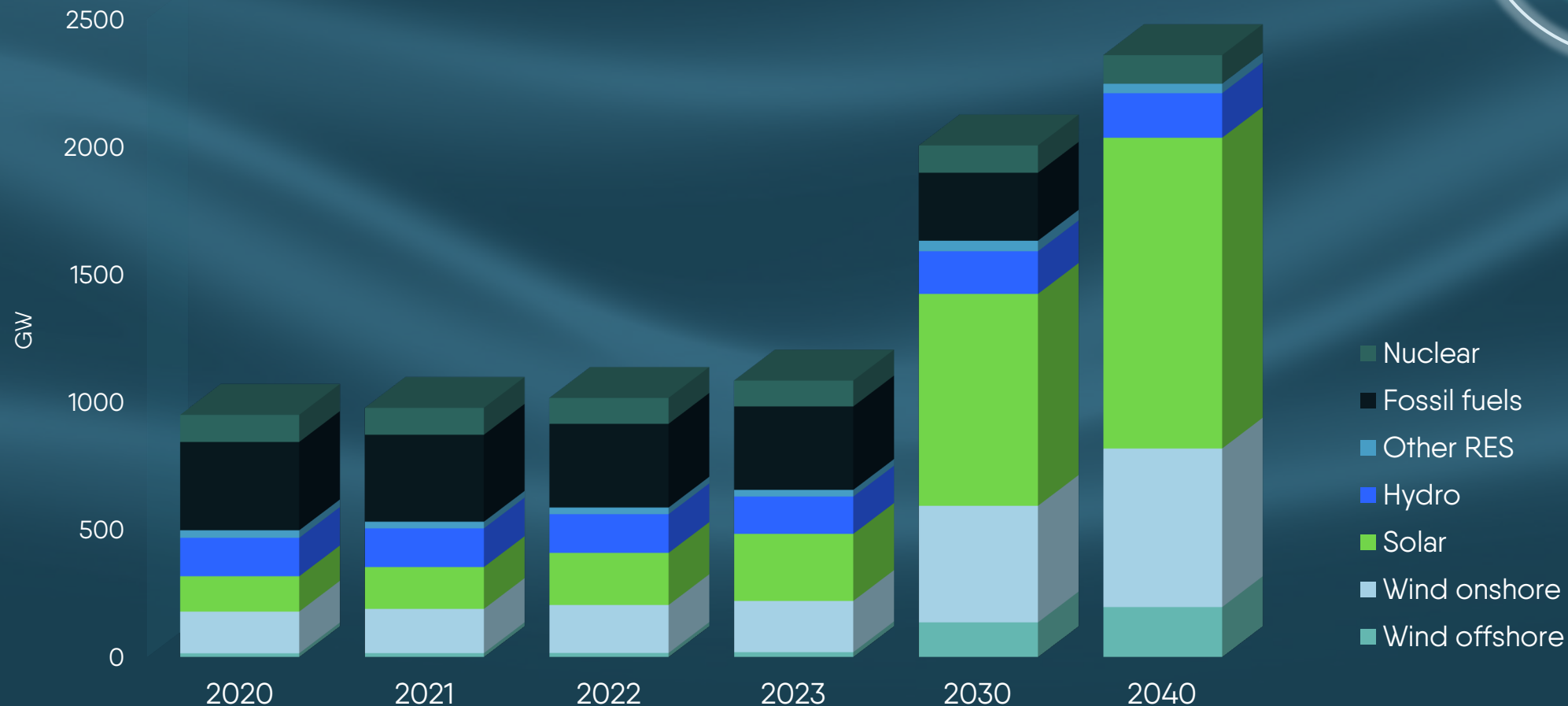
2024



# Clean technologies: we need them all!



Installed generation capacities EU27

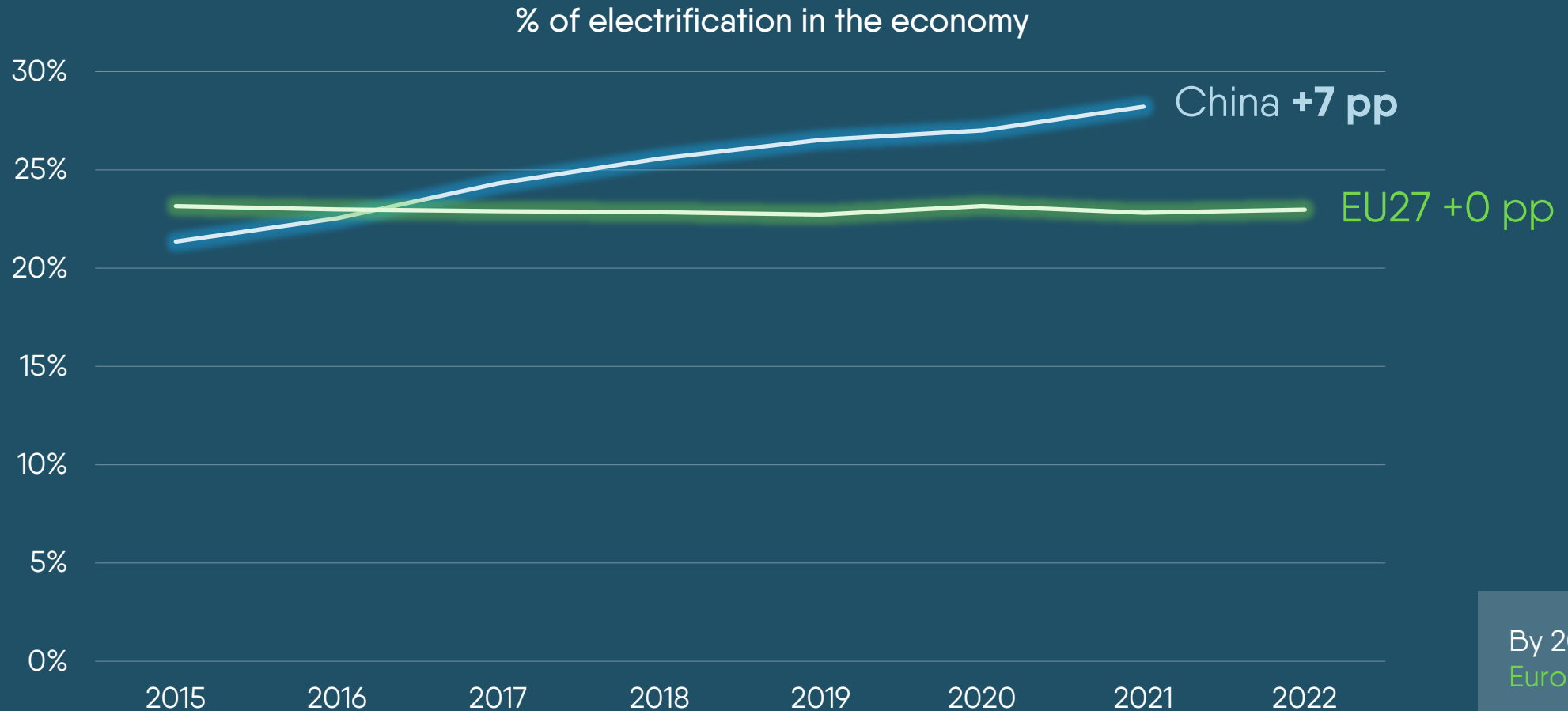




# Zeroing in: Electrification



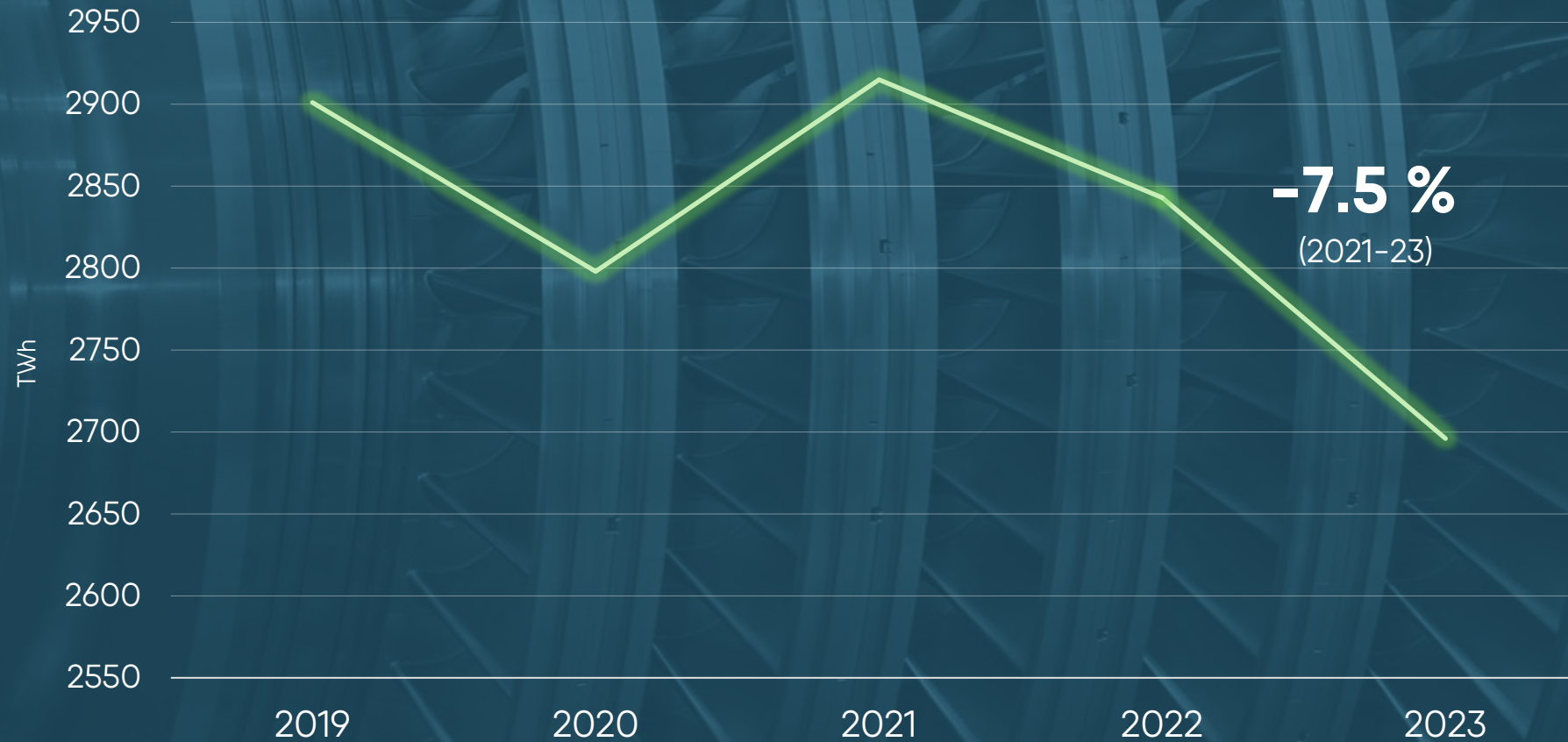
# Electrification stagnating in Europe, thriving in China



By 2030  
Europe needs  
**31-35%**  
electrification

# Power demand dropping, mainly due to industry slowdown

EU's electricity demand trend

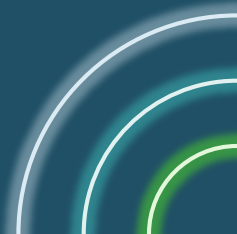
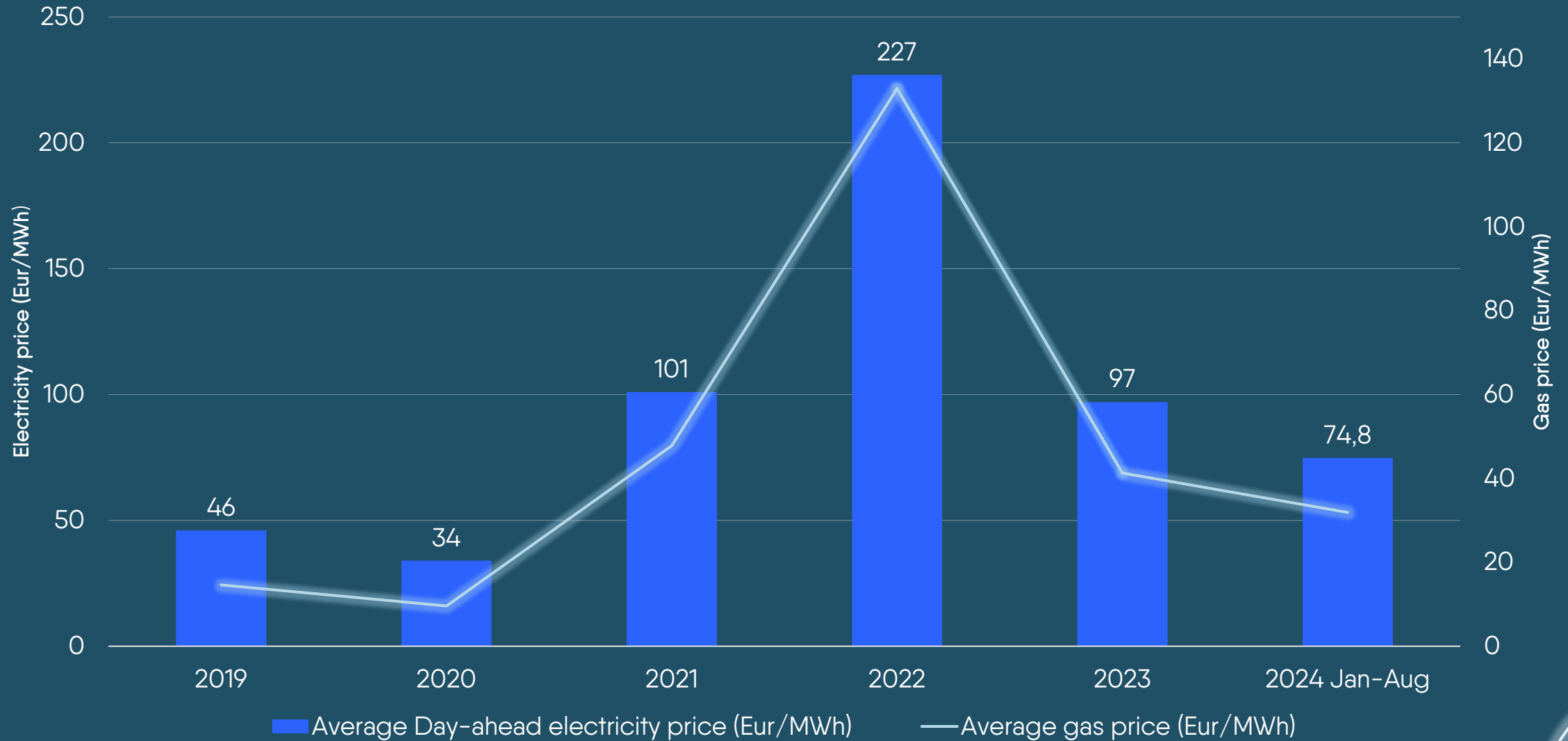


 **>50 %**

demand reduction in 2023 due to decline of industry

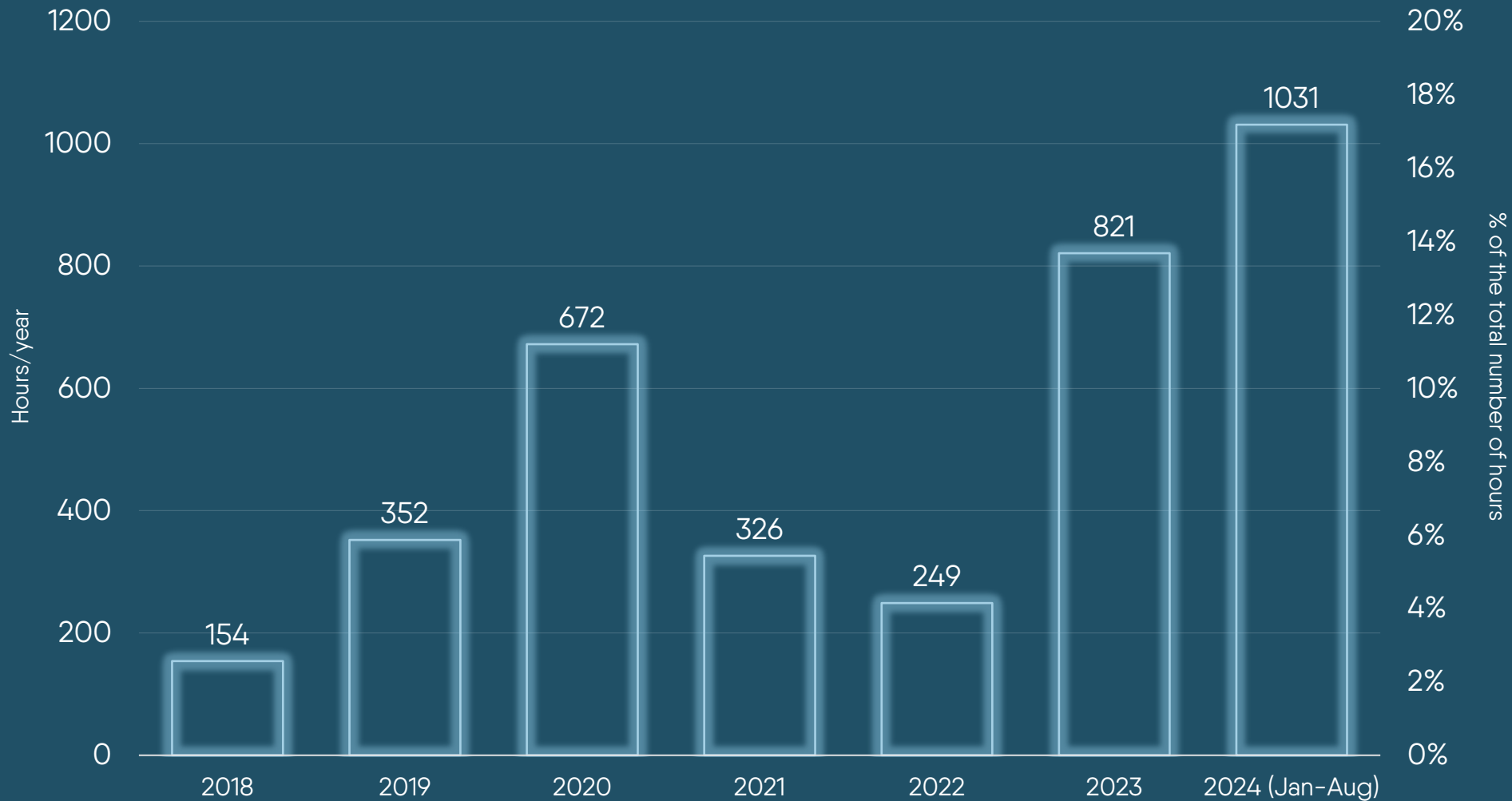


# Power prices stabilised, but above pre-crisis levels

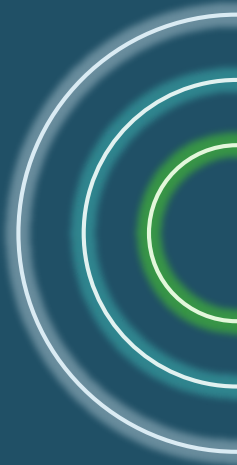


# Negative prices on the rise: potential for flexibility

Hours with negative prices in min one market (Day ahead)



Capture price for solar PV was even down to **41%** in Spain in April 2024.



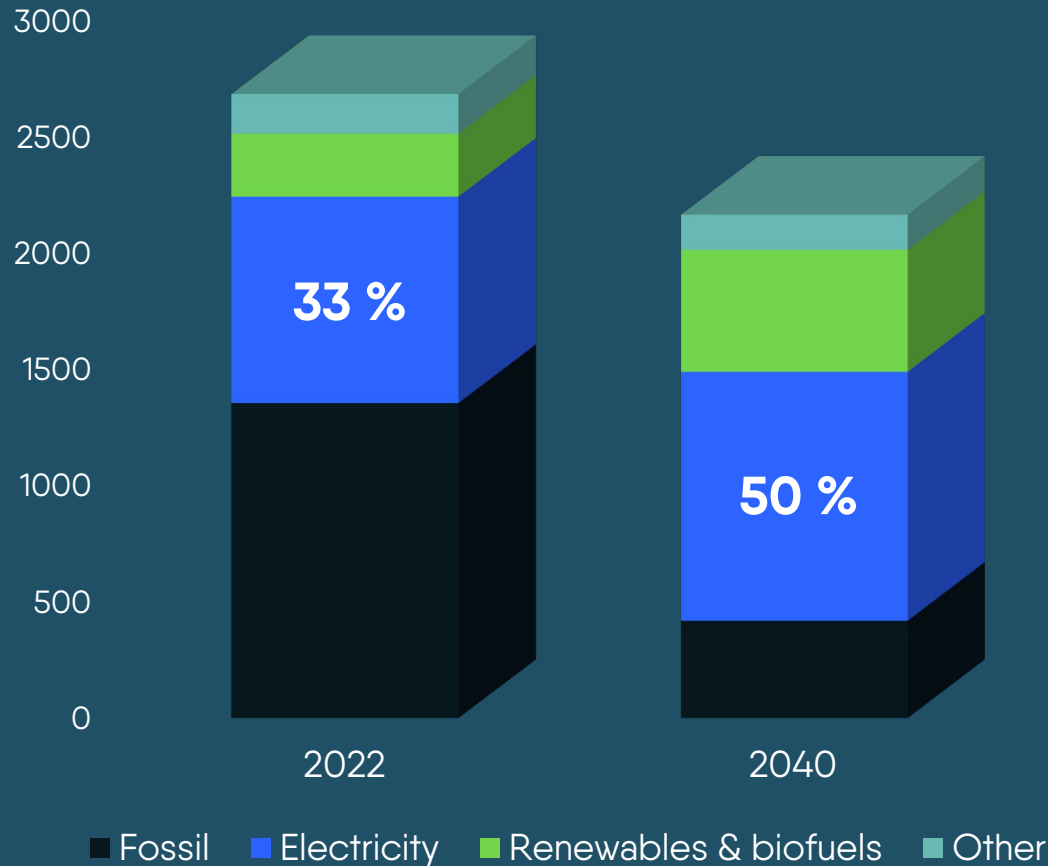
# Zeroing in: Electrification by sector





# Industry electrification: high potential, stubborn reality

Industry final energy consumption (TWh)



## Industry electrification

stagnating at **33%**  
vs a potential **60-90%**

## Process heating electrification

stuck at **4%**

## Iron & Steel

## Chemical

## Non-ferrous metals

### SSAB and Danieli

Electric arc furnaces, secondary metallurgy, caster and strip mill. Quality hot-rolled coils will be produced through electric steelmaking and direct casting-rolling.

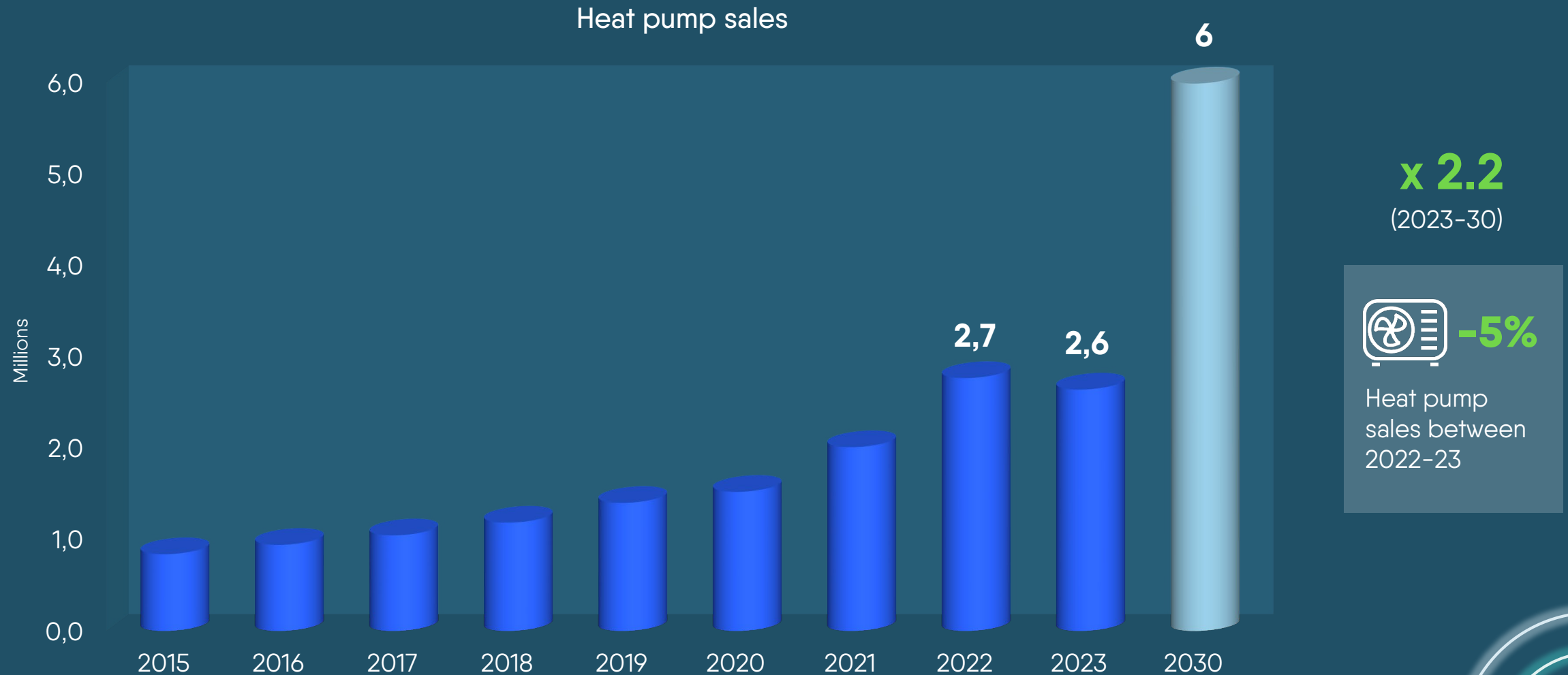
### BASF, Sabic and Linde

World's first electric cracker project in Germany. With electrification, the efficiency of steam crackers is expected to reach 95%, vs 40% efficiency for fuel-based steam crackers.

### Alro's Wrought Aluminum

Induction and resistance heating offer efficient alternatives to fuel-based heating. Alro has just invested in electric furnace for its production of primary aluminum.

# Buildings electrification: suffering a downturn

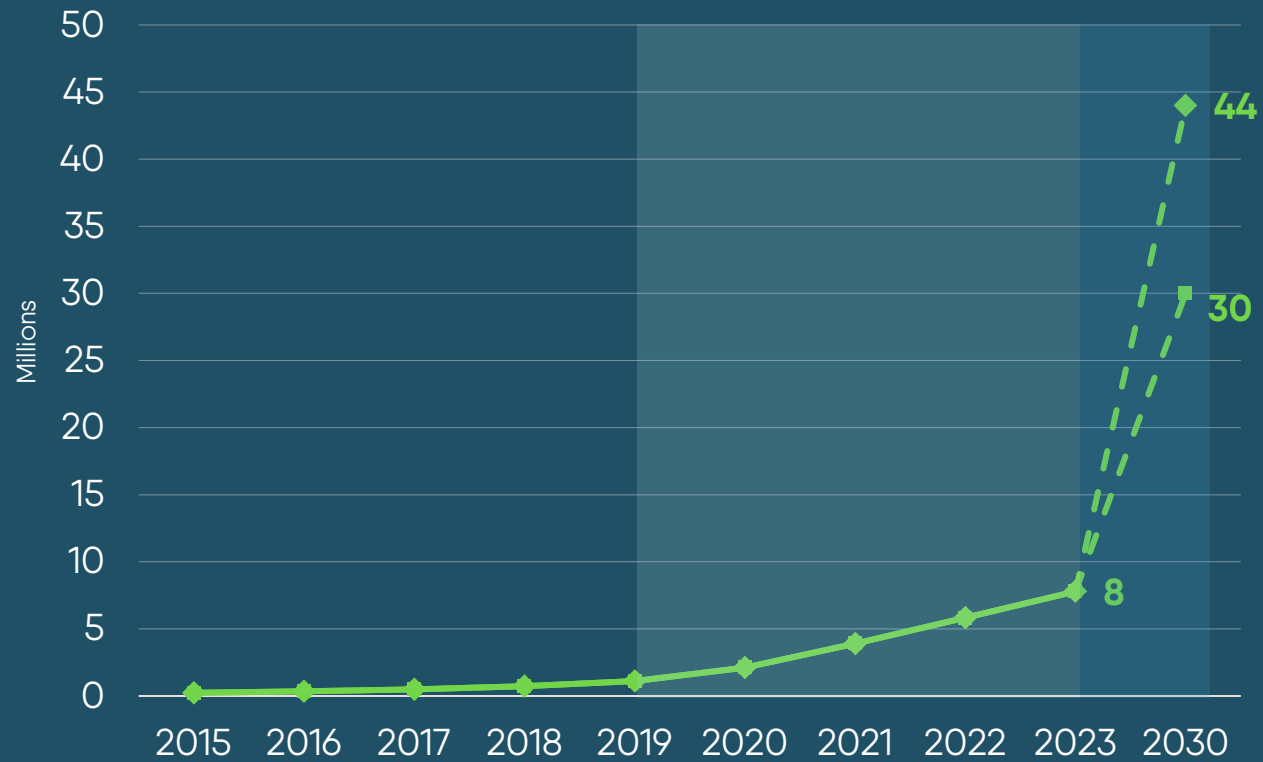




# Transport electrification:

still in need of a kick to reach at least 30M EVs

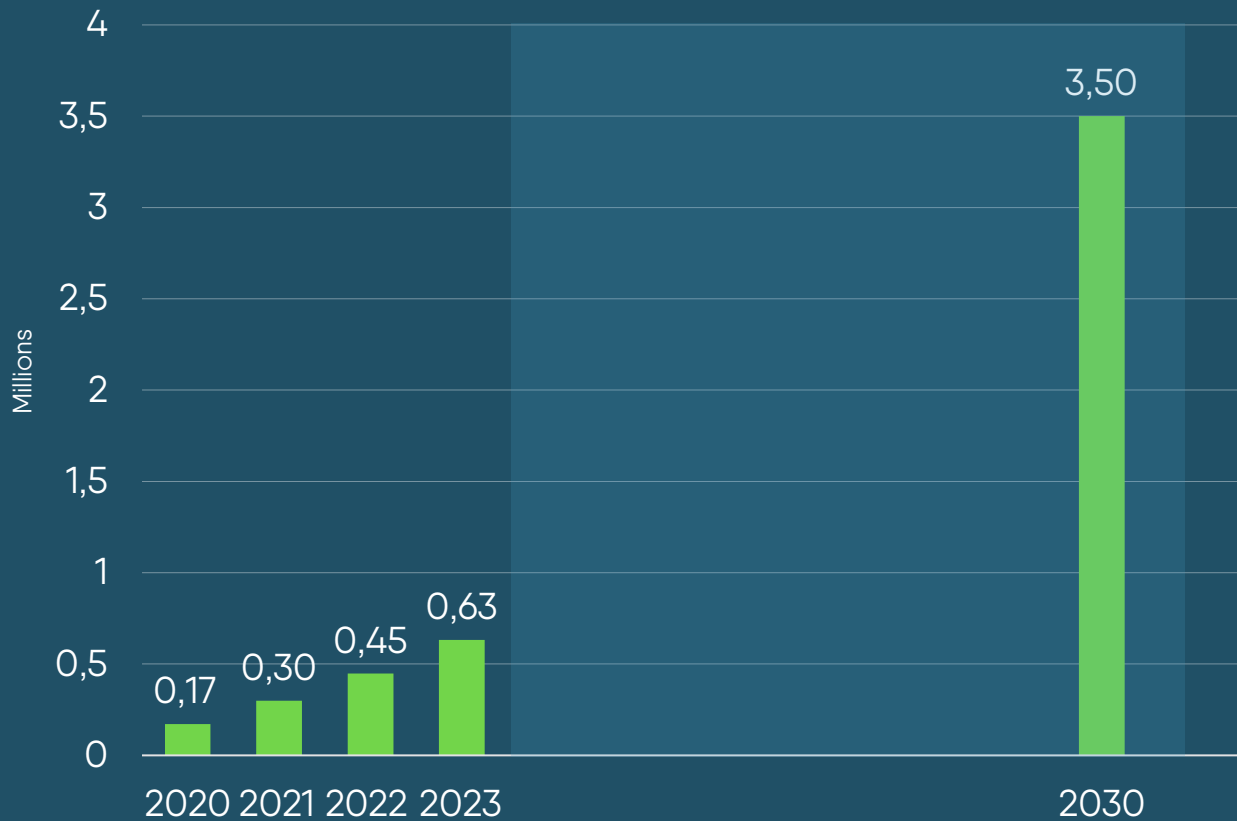
Evolution of number of EVs



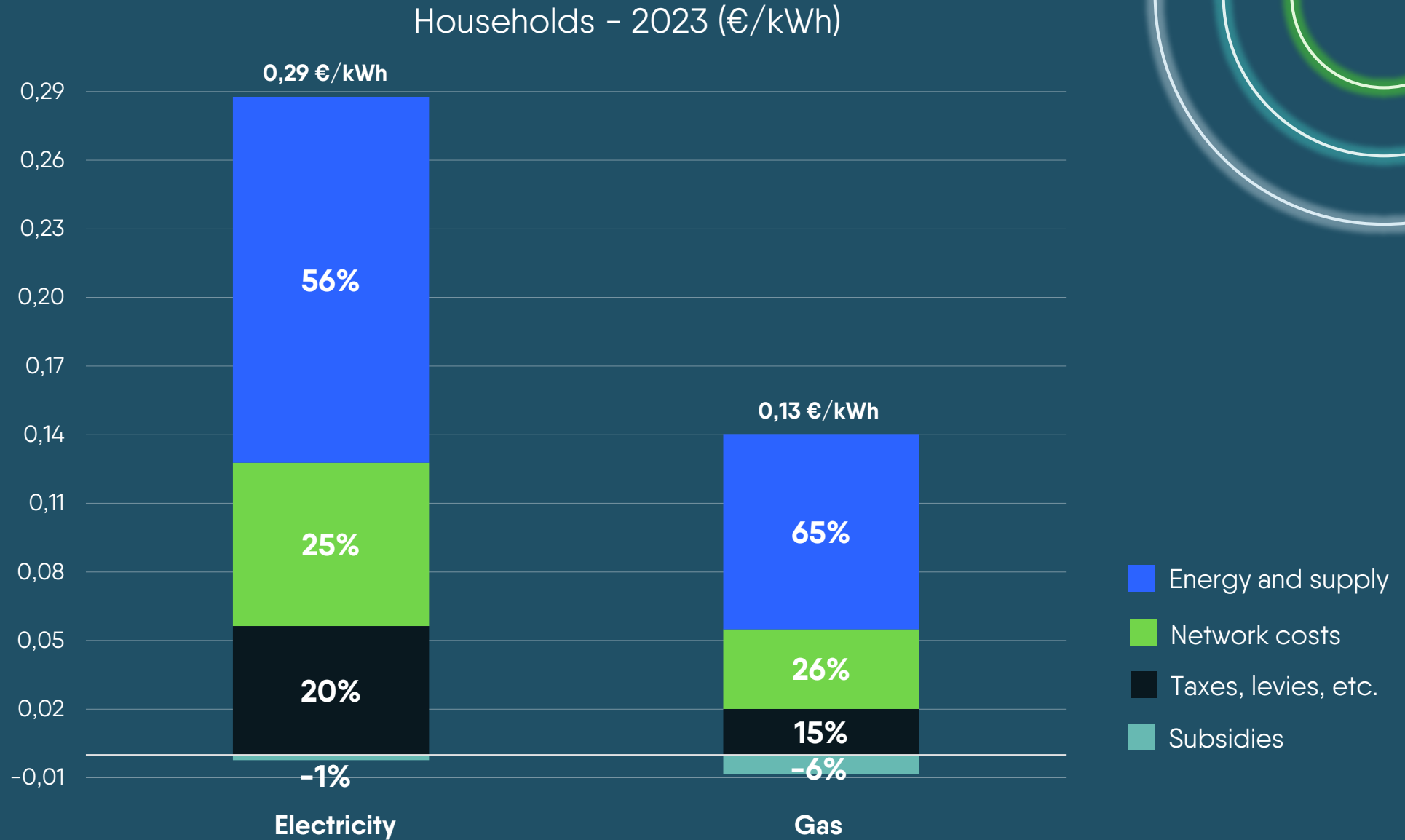
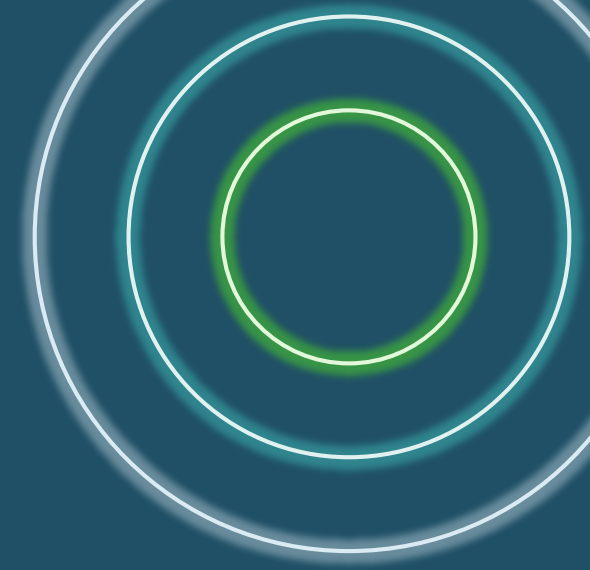
# Transport electrification:

still in need of a kick to reach 3.5 million charging stations

Number of EV public chargers

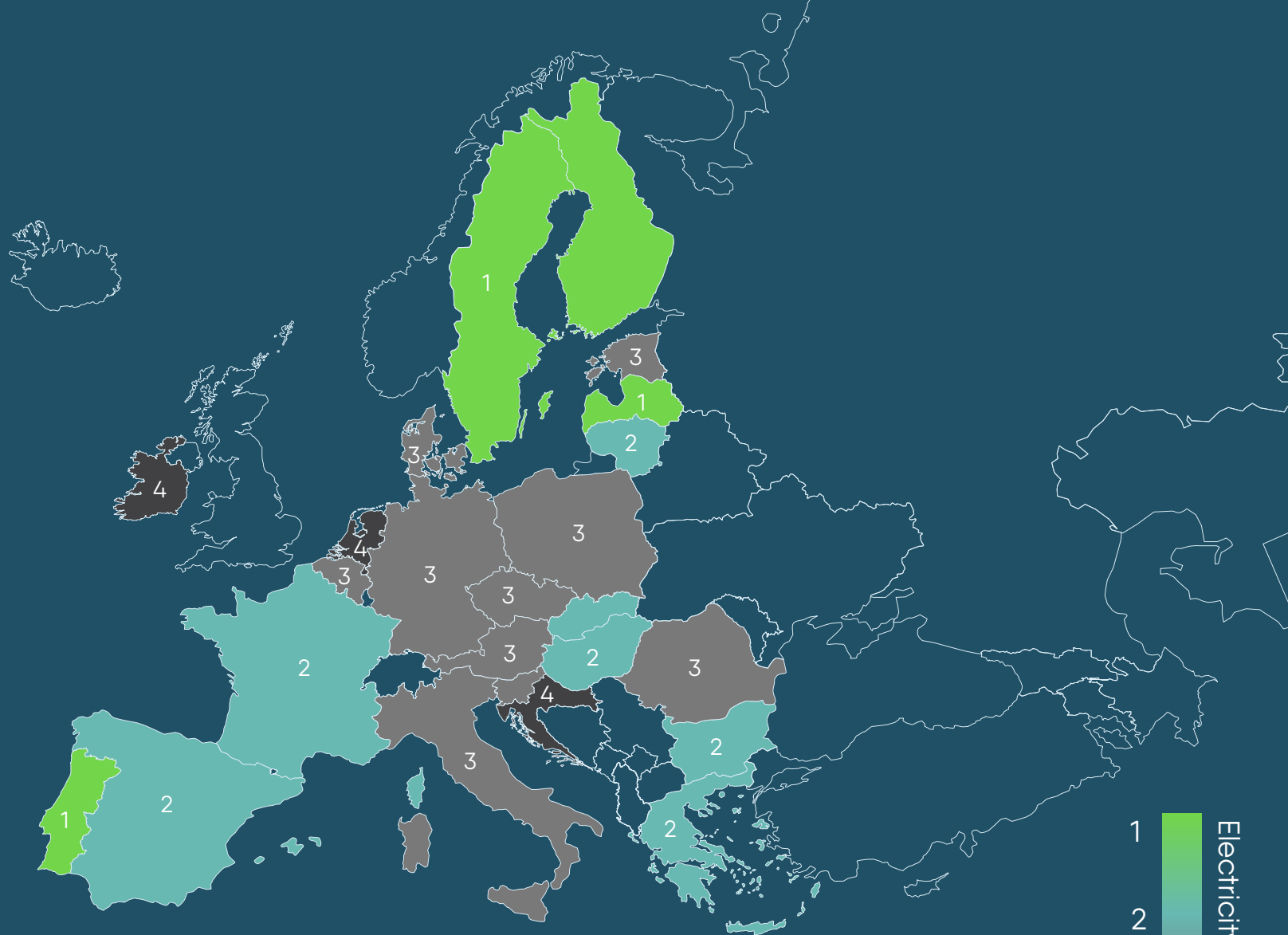


# Perverse taxation policy keeps on favouring gas

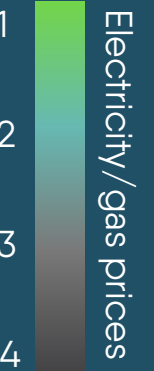




# Electricity prices higher than gas



Industry - 2023



# Zeroing in: Grids



# Exponential surge in connection requests

Growth in grid connection requests for solar PV (2021-22)

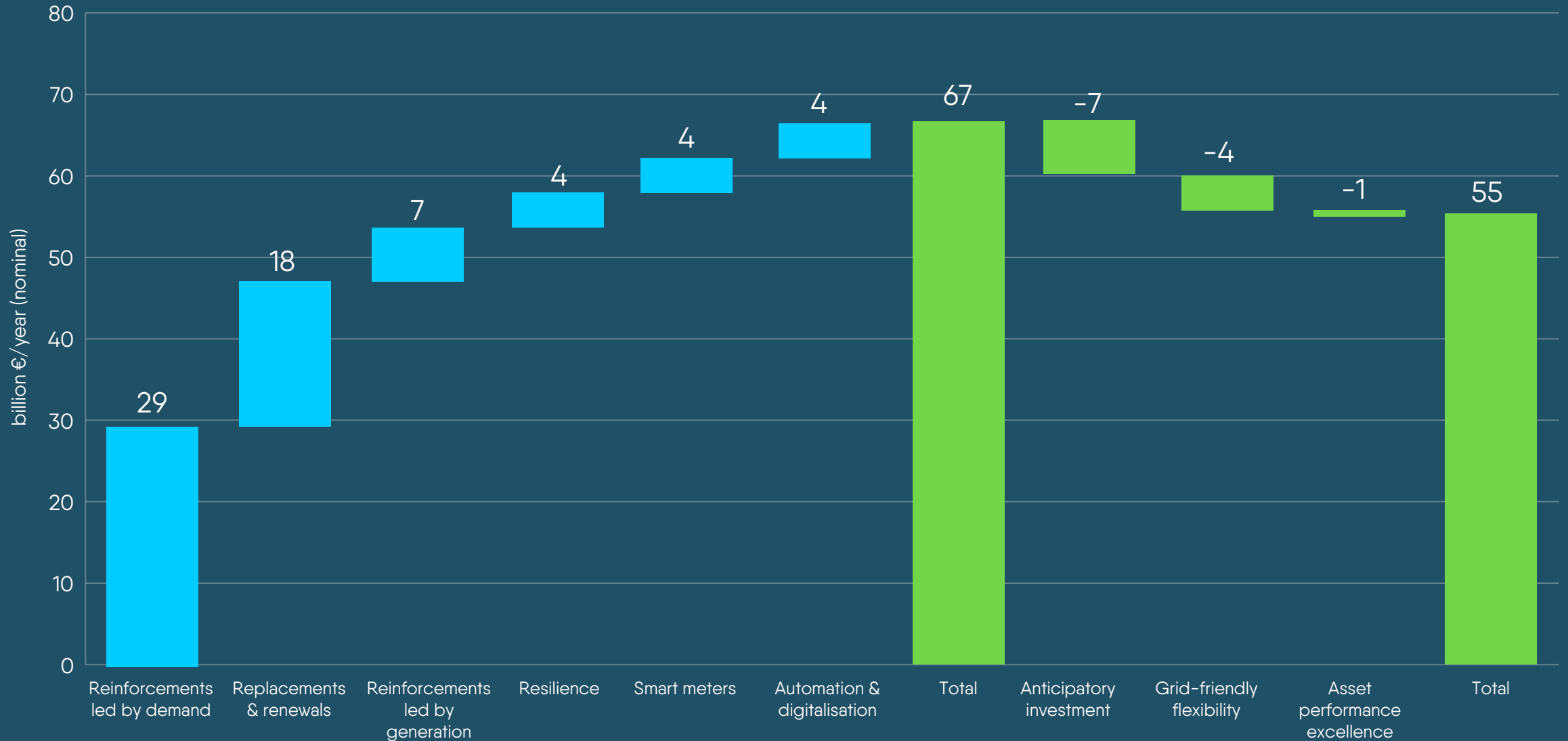


**x2-3**

connection requests  
to all European DSOs



# €67 bn needed yearly, with potential to cut by 18%



# Zeroing in: next steps





## **i** mplementation

- deliver on green deal
- implement market reform



## **i** nvestment

- business case for RES & backup



## **i** nfrastructure

- anticipatory investment
- long-term planning



## **i** ndustry

- accelerated electrification



# Sources

**Slide 1:** [Eurostat energy update March 2024](#)

**Slide 2:** Eurostat for total & manufacturing, EEA for transport, Eurostat and EEA for power sector emissions until 2022, 2023 power sector from [Eurelectric's Elda](#)

Note: Emissions do not account life cycle emissions

**Slide 3:** [Eurelectric's Elda](#) for 2024, Eurostat for 2015

**Slide 4:** Eurelectric, Wind Europe, Solar Power Europe, ENTSO-E Transparency Platform, Enerdata

**Slide 5:** Eurostat, IEA

**Slide 6:** [Eurelectric's Elda](#), Eurostat, IEA

**Slide 7:** [Eurelectric's Elda](#), investing.com for gas prices

**Slide 8:** [Eurelectric's Elda](#)

Note: if a particular hour registers negative prices in several bidding zones in the EU, this is counted as just one occurrence.

**Slide 9:** Eurostat for electrification, Agora industry & EC's 2040 targets impact assessment for electrification potential

**Slide 10:** SSAB, Fleiter et al., Tercelli, World Steel, Linde Engineering, Jasi, SecoWarwick.

**Slide 11:** Historic data from EHPA statistics, 2030 projection is an estimation based on the EC projection of 58 million HP stock by 2030.

Note: Sales data shown is that of EU 14 countries that made up 90 % of the European heat pump market in 2023

**Slide 12:** European alternate fuels observatory for historic figures, EC's mobility strategy 2020 and IEA net zero for EV lower and upper projections respectively,

**Slide 13:** AFIR for projected public chargers

**Slide 14:** Eurostat

**Slide 15:** Eurostat

**Slide 16:** Grid connection requests from EU DSO entity's Fit for 55 paper

**Slide 17:** Eurelectric's grid4speed study