Navigating a new energy paradigm

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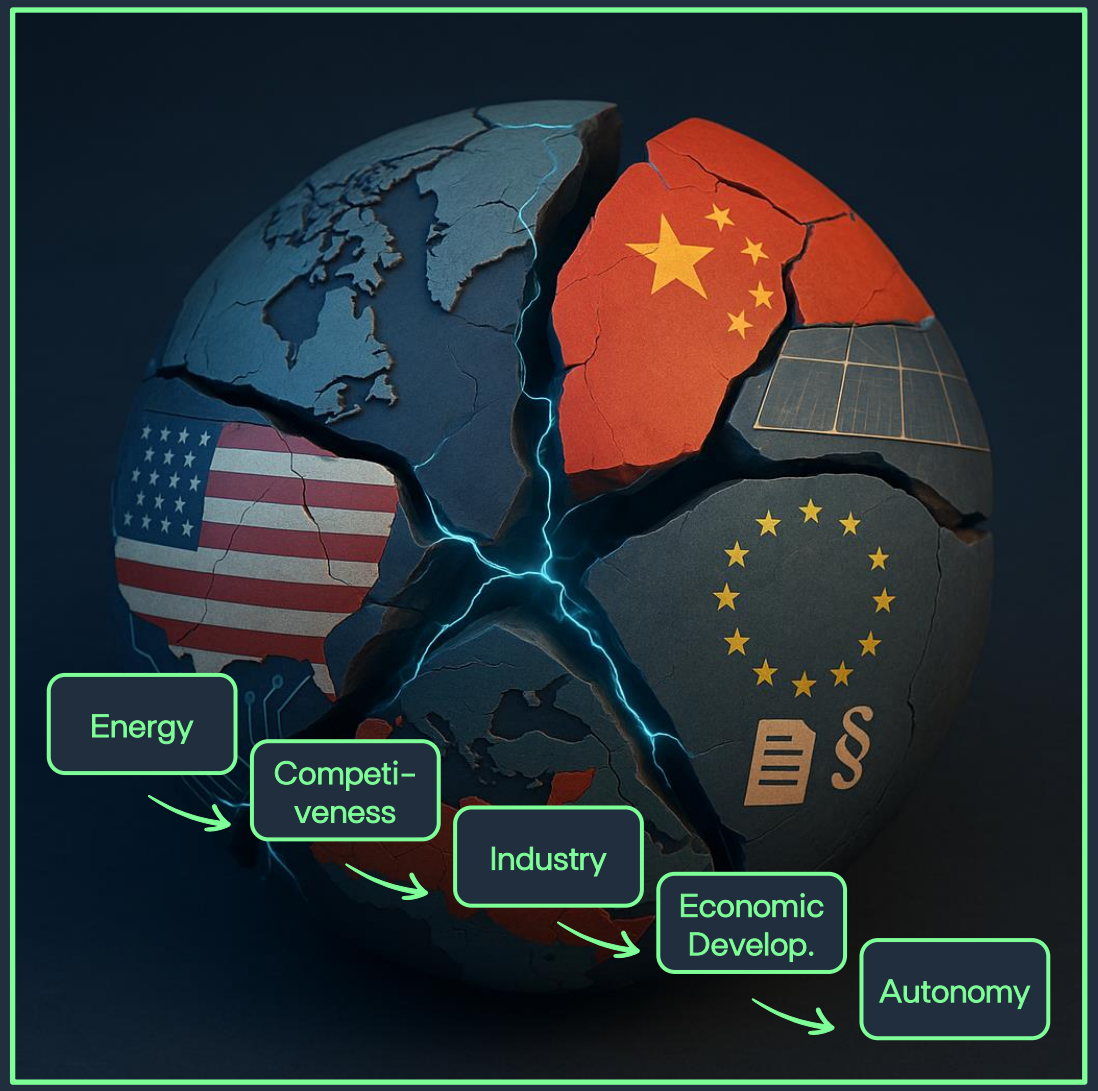
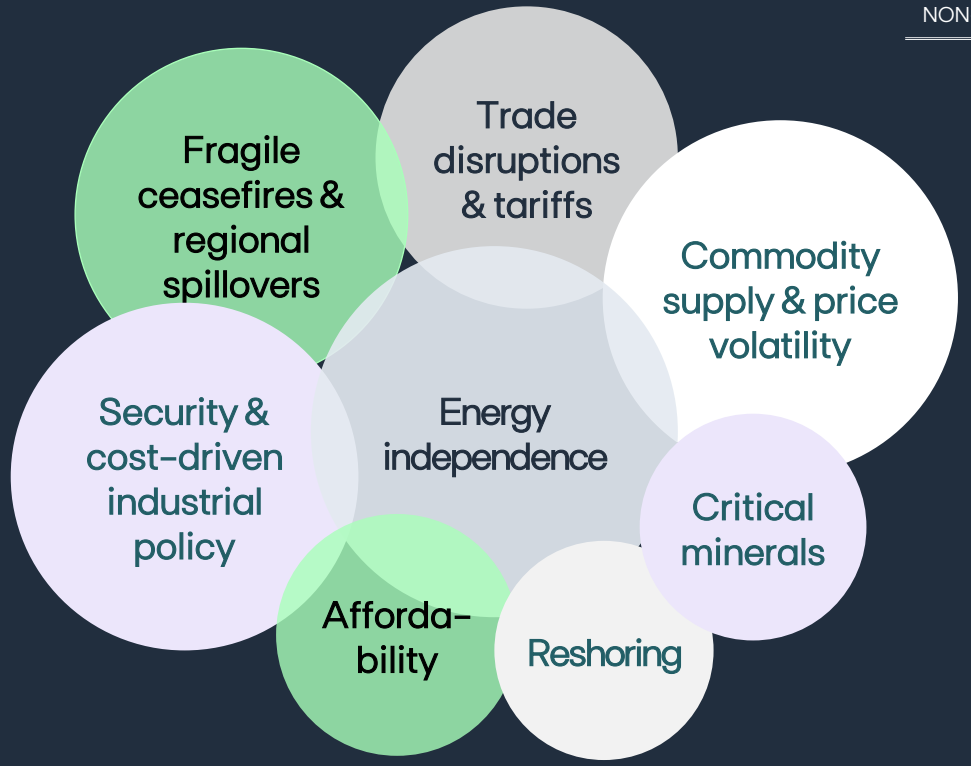
Global Strategic Intelligence

EDP, March 2026

The world has changed | We are now under a new world order, in which geopolitics reshape energy, competitiveness and strategic autonomy

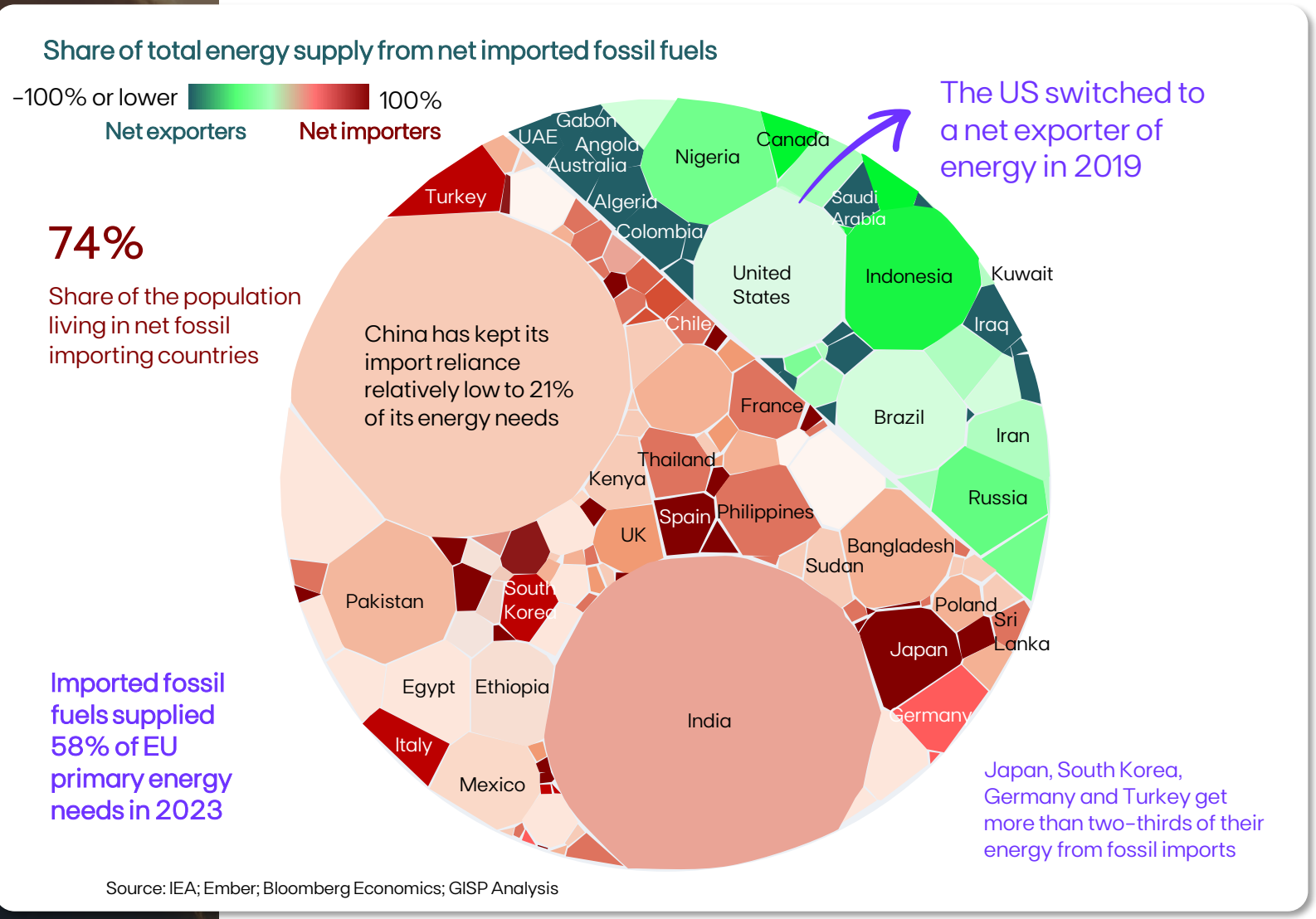


NON-EXHAUSTIVE



Energy is now a core economic and security lever

Most of the world depends on imported energy, and therefore is exposed to price shocks



Source: IEA; Ember; Bloomberg Economics; GISP Analysis

Electrification with RES is the largest driver of energy independence

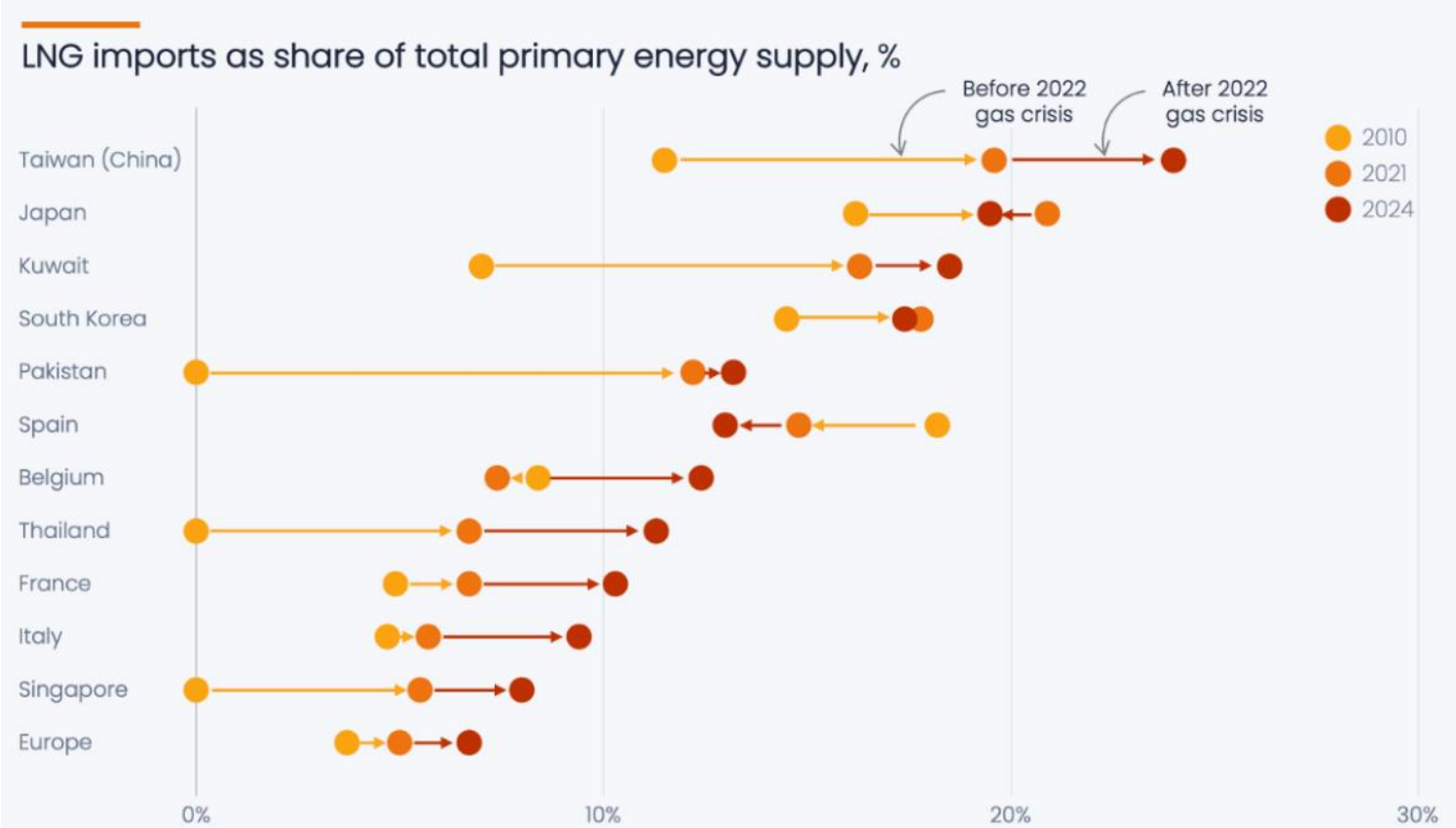
Replacing imported fossil fuels can cut net fossil fuel imports by 70%, saving up $1.3 T/yr. globally

Energy dependence is structural – and rising

Asian importers are most vulnerable, but European exposure is rising

LNG imports as share of total primary energy supply

%



Source: Ember

At the same time we are in a decisive moment to address climate change

2024

Warmest year
The new record comes after 15 consecutive months (June 2023 through August 2024) of monthly temperature records

Record high
CO_2 emissions from energy-related activities

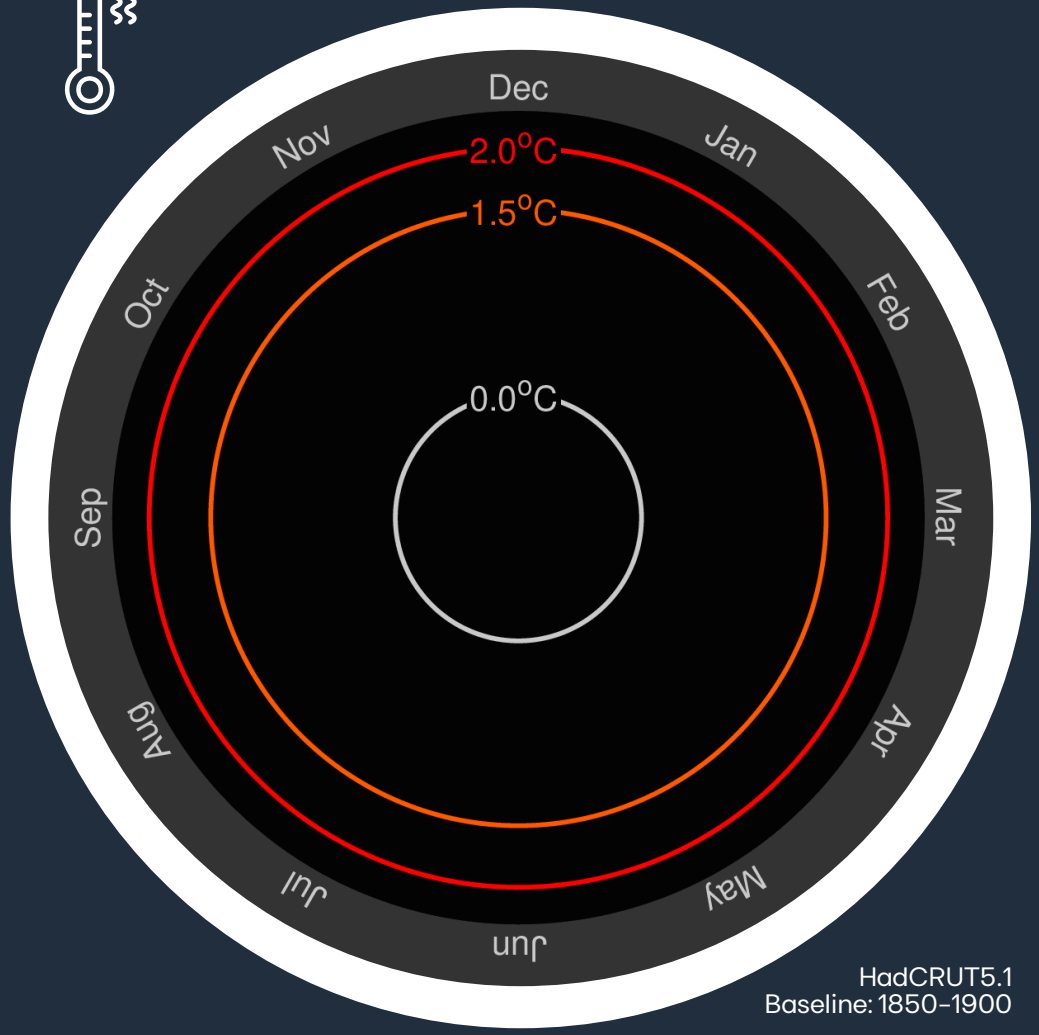
+3 Bn
people living in regions that are considered highly vulnerable to climate change

$229 Bn
direct cost from 2024 top 10 worst climate disasters such floods, storms and hurricanes

Source: NASA, DNV, IPCC, IEA, EDP analysis

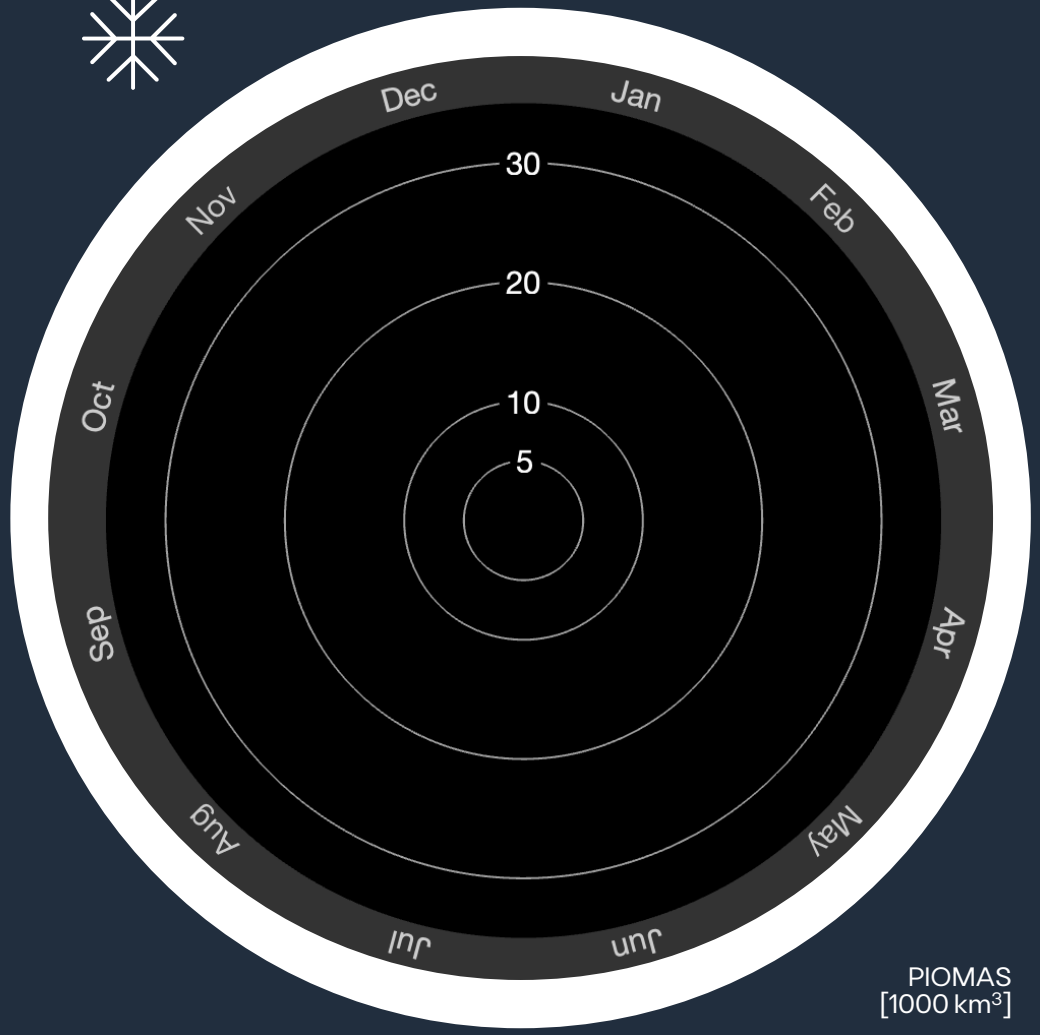
What brought us here cannot take us forward

→ Global temperature change
(1850 – 2025)



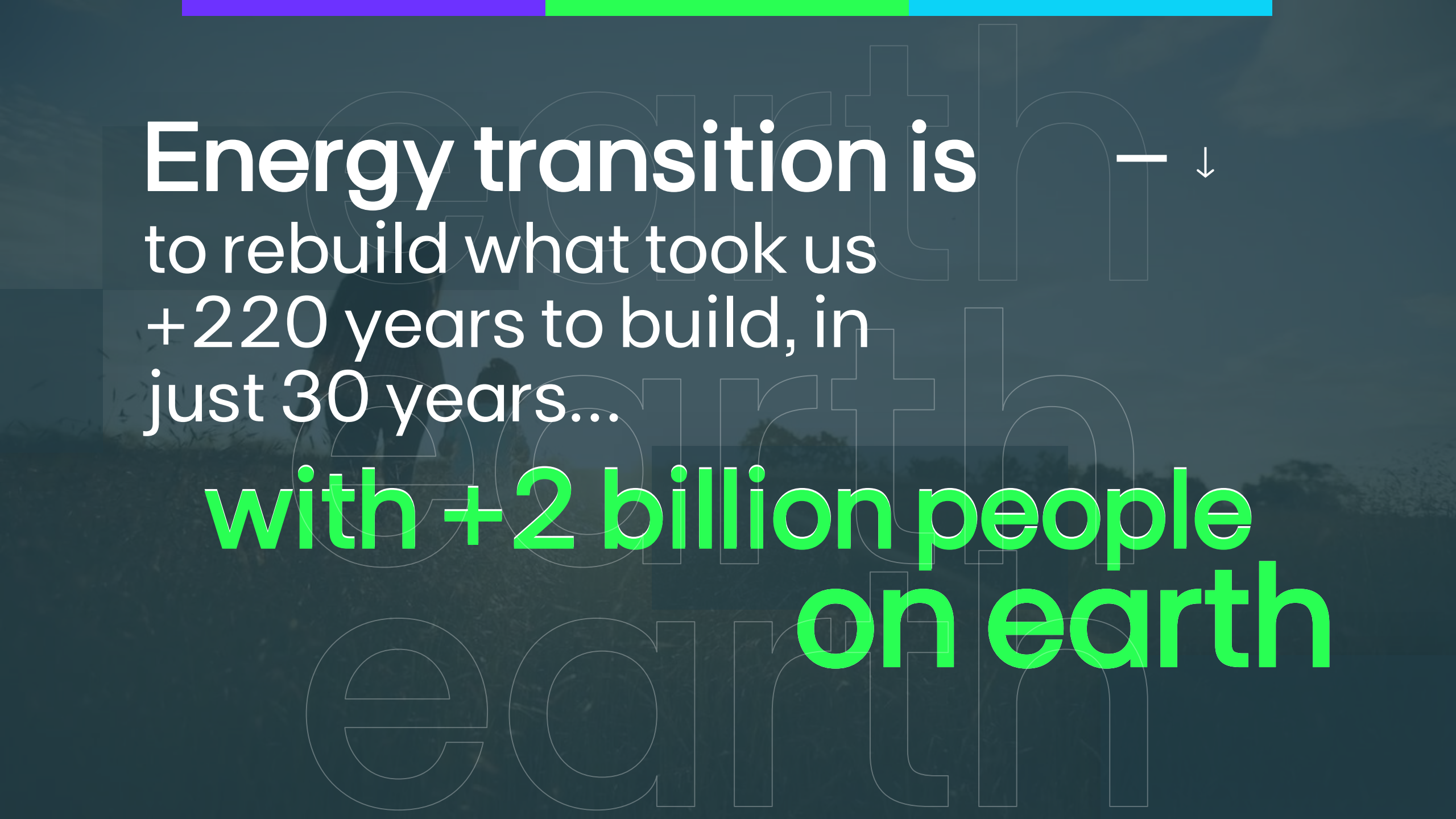
HadCRUT5.1
Baseline: 1850-1900

→ Arctic sea ice volume
(1979 – 2024)



PIOMAS
[1000 km^3]

@ed_hawkins


Energy transition is
to rebuild what took us
+220 years to build, in
just 30 years...
with +2 billion people
on earth

Speed and scale

Renewables expansion requires **significant scale, both in land requirements and asset's size**

700 GW = 1–2 million

Solar PV additions in 2025 require 1–2 million football fields

Average rotor diameter of newly-installed turbines

>270 meters

...which is similar to...

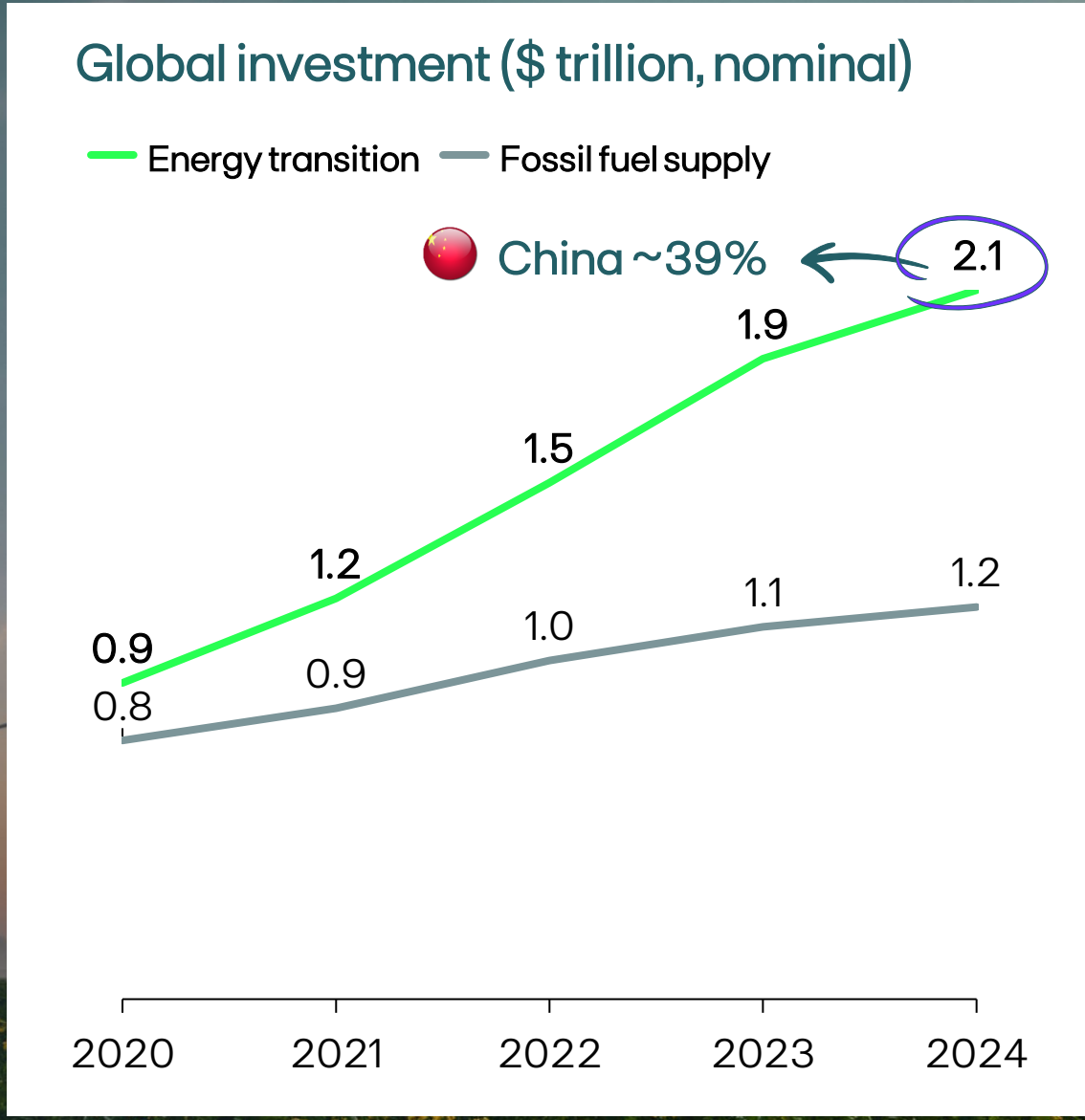
Twice the height of Giza Pyramid *(139m)*

90-story skyscraper *(270m)*

Wingspan of 4 Boeing 747 *(64m)*

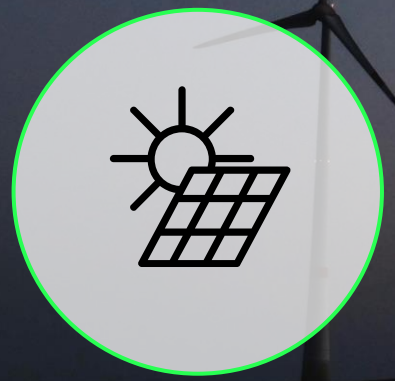
A lot is being done

Investment in the energy transition has been rising, systematically outpacing fossil fuels investment...



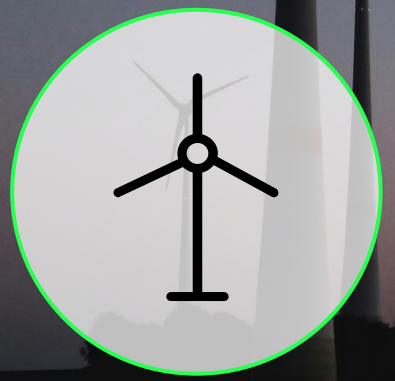
Source: BloombergNEF

At the same time, RES LCOEs have been dropping significantly since 2010...



-90%

2023 vs. 2010



-71%

2023 vs. 2010

-63%

2023 vs. 2010

-80%

2023 vs. 2015

Source: BloombergNEF

RES are the cheapest, fastest and most scalable energy sources

Cost competitiveness[1]

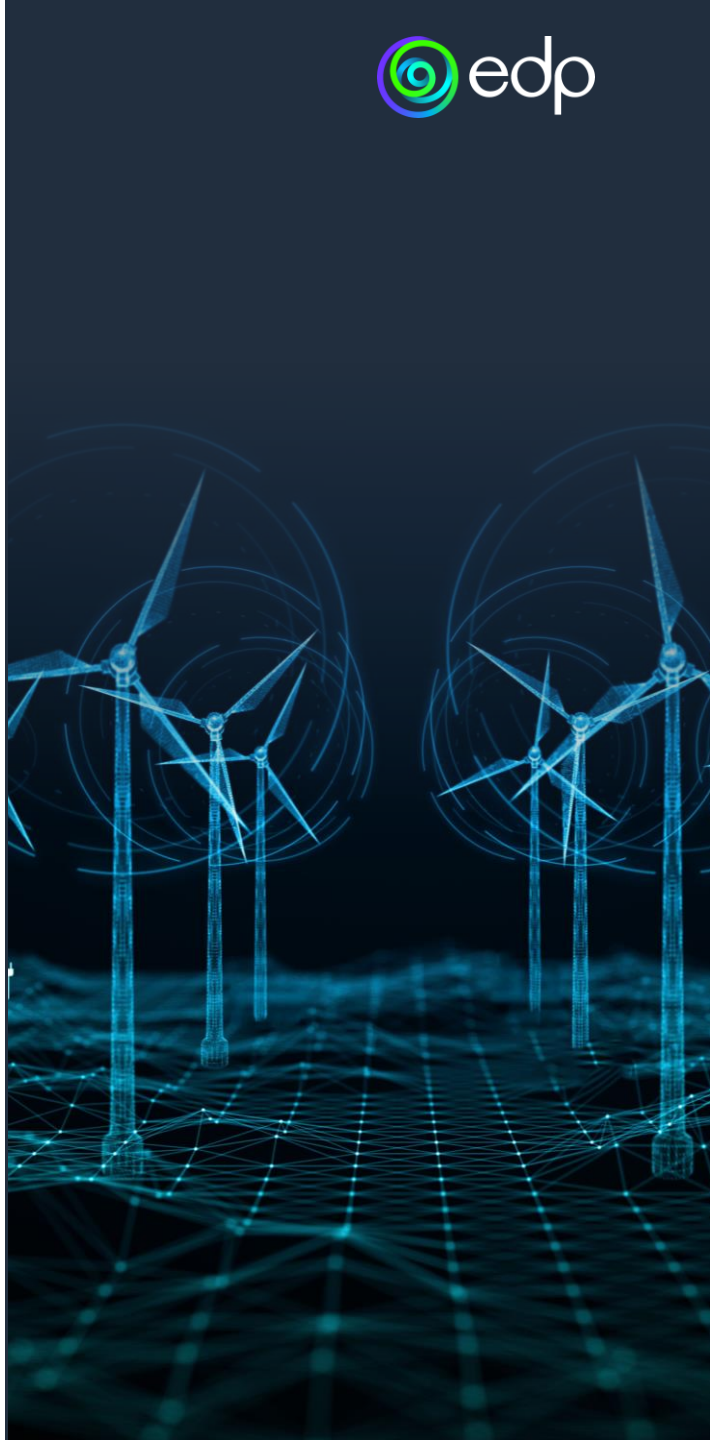
Lower cost → Higher cost

- -80% in the last 10 years
- -65% in the last 10 years
- -65% BESS in the last 6 years
- +10% in the last 10 years

Time-to-market[2]

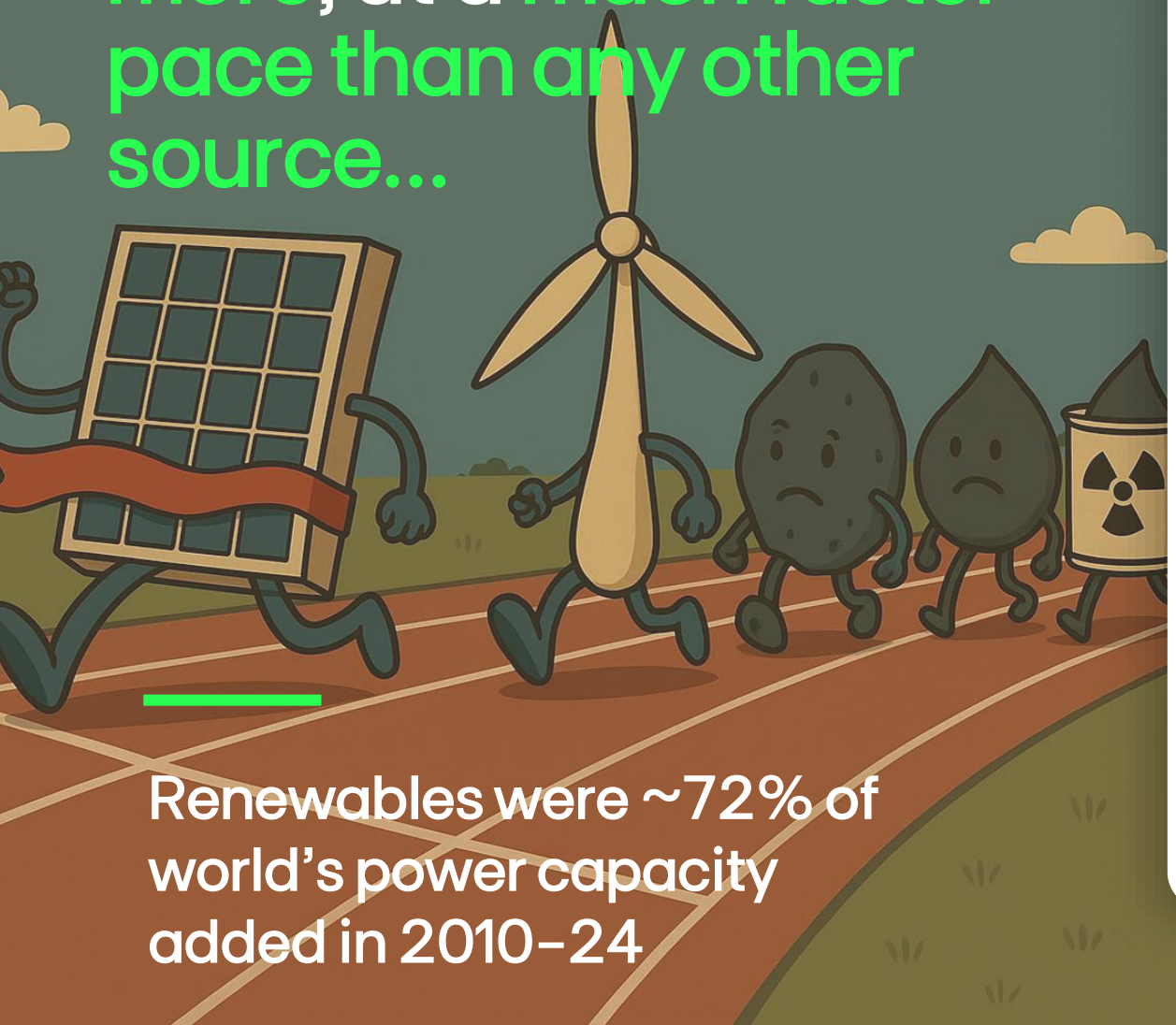
2025 2030 2035 2040

- ~1-3 years
- ~1-3 years
- ~1-3 years
- ~5-10 years
- +15 years



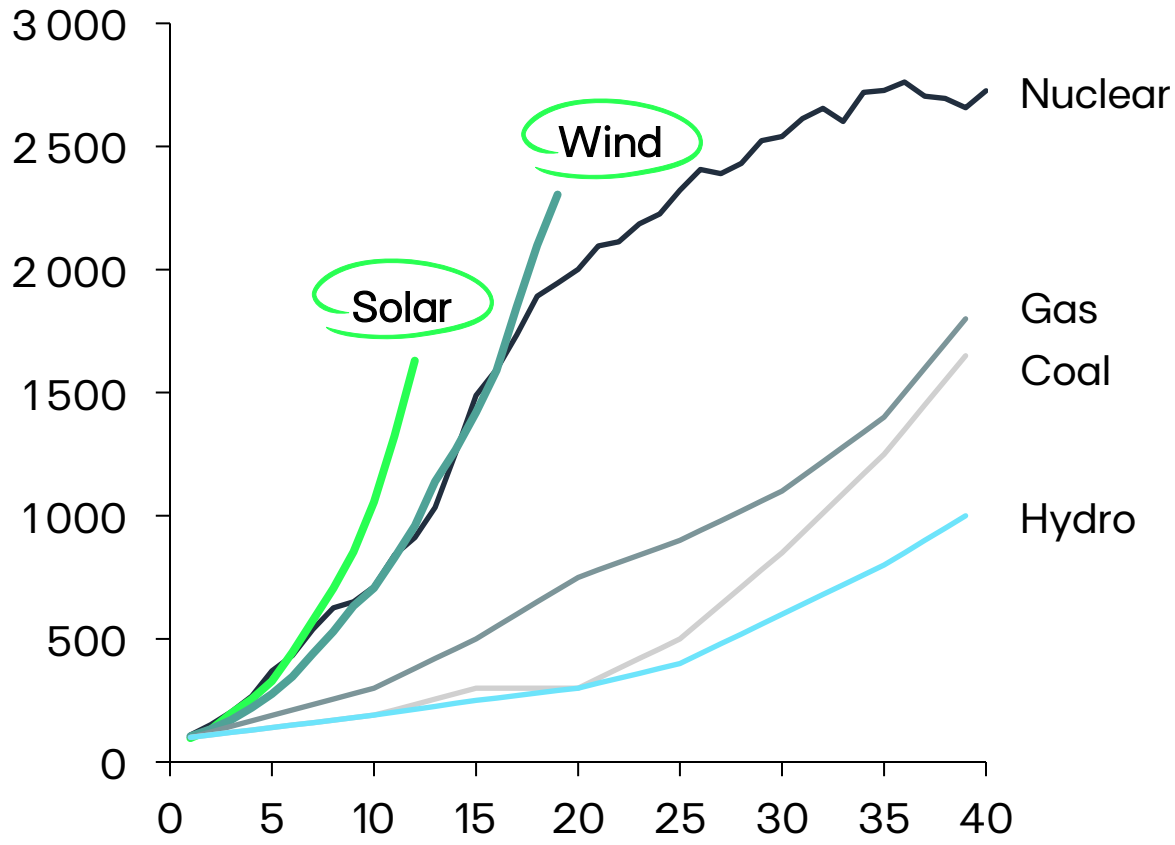
1. LCOE – ($/MWh) Including tax credits in US | 2. Time-to-market estimations for new projects, with FID in 2025 | 3. Fixed axis PV
Note: BESS - Battery Energy Storage Systems. Source: BNEF (PPA prices 2024, EUR – incl. Spain, France and Germany), LevelTen (PPA prices 3Q 2025, US), BNEF (for EU LCOE), Lazard (for US LCOE), S&P Global, Wood Mackenzie

Renewables keep on growing every year more, at a much faster pace than any other source...



Renewables were ~72% of world's power capacity added in 2010–24

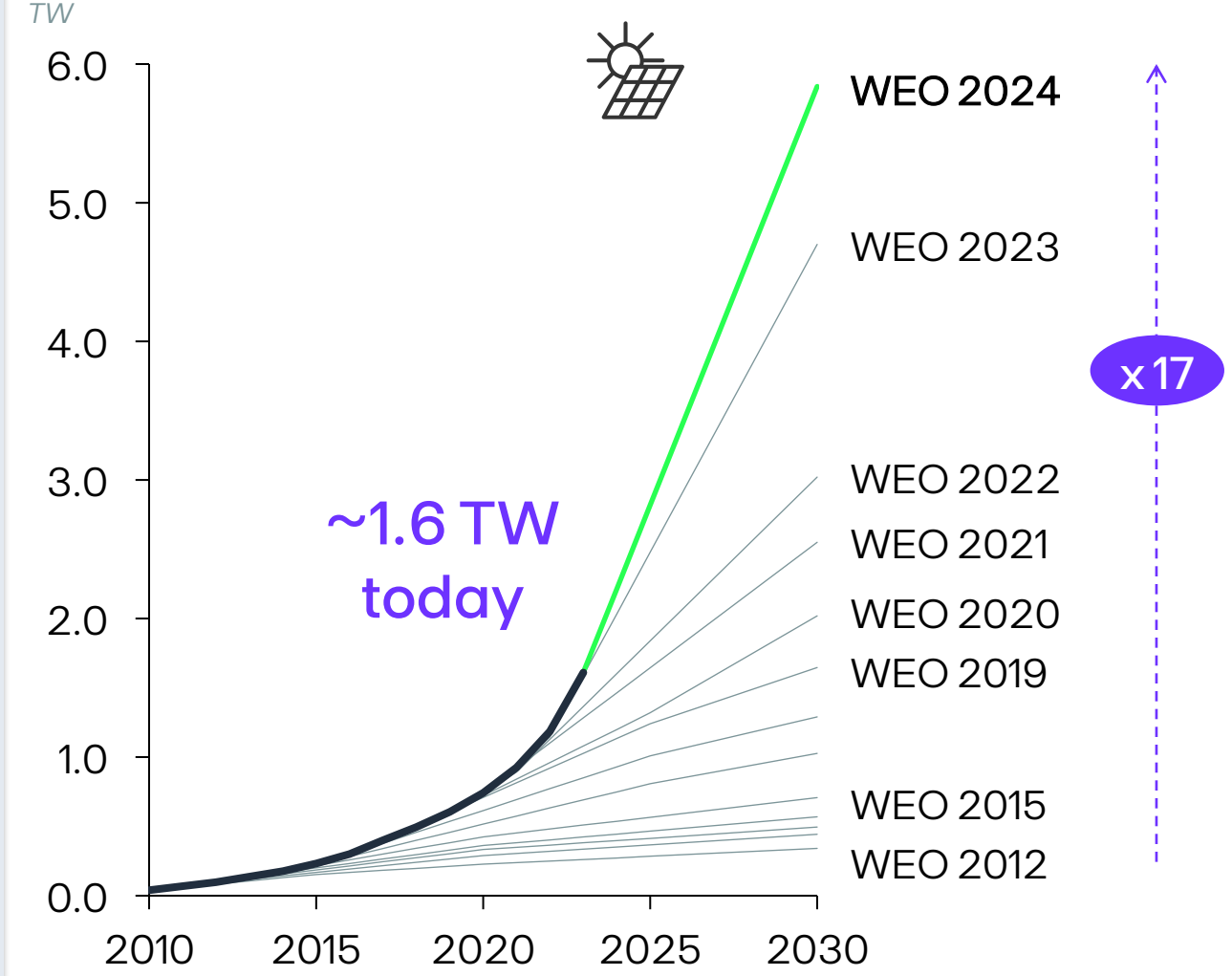
Annual generation after exceeding 100 TWh in a year (TWh)



Source: Enerdata; IEA; Note: hydro, coal and Gas values approximated; GISP Analysis

… constantly outpacing projections, demonstrating high resilience

2030 capacity predicted in 2019 already reached



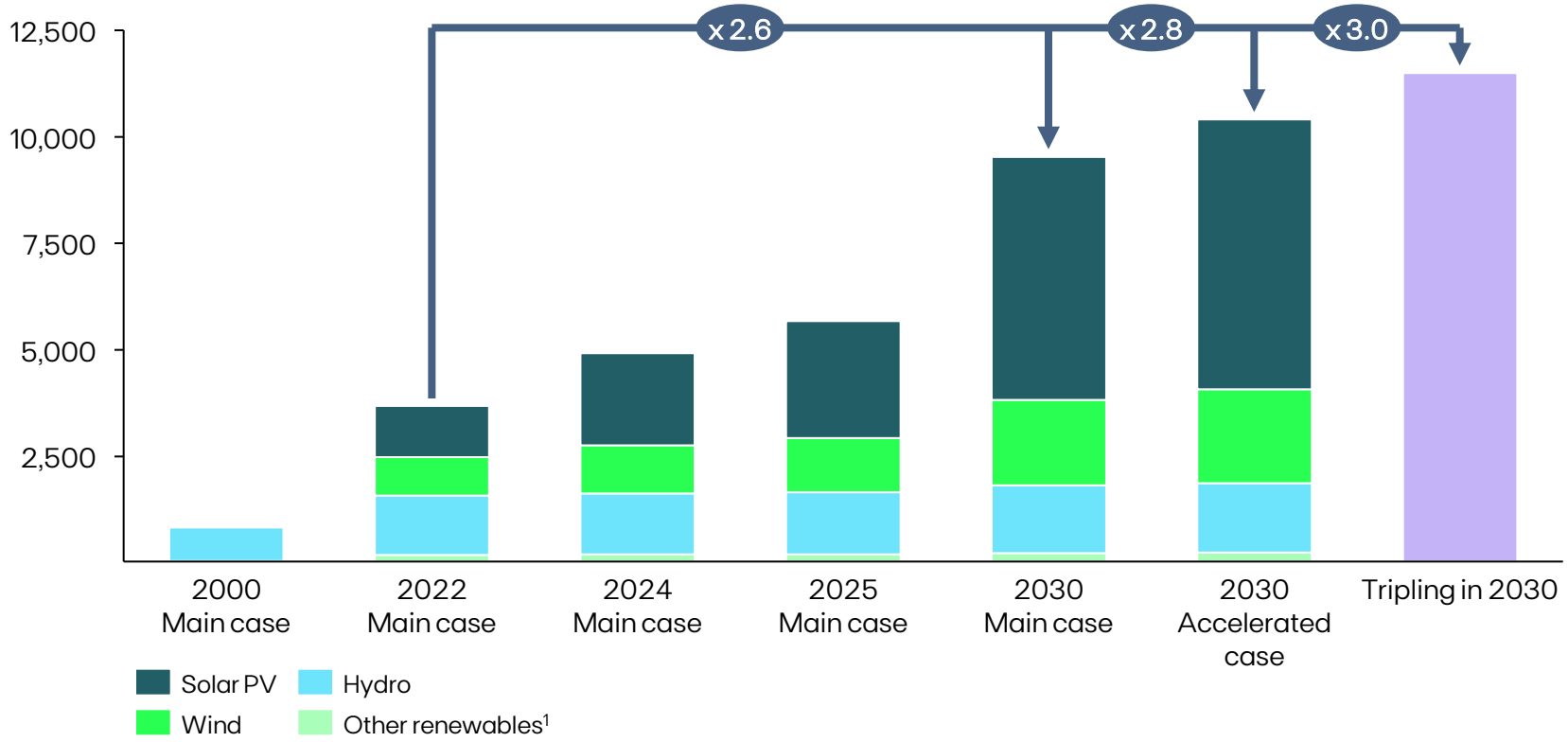
Source: IEA; GISP Analysis

Progress in supply has been outstanding

Every day, we add more solar capacity than in all of 2006

Renewables capacity

GW, 2000–30



23rd consecutive record year in RES additions

32% of global power generation in '24

Source: IEA – Renewables 2025 | Note: 1: Other renewables includes concentrating solar power, geothermal, bioenergy, ocean

Despite geopolitics and uncertainty, 2025 was the best year ever in the energy transition

- **$2.3 trillion record invested** in the energy transition (+8% vs. ’24); Supply-side investment above fossil fuels for several years now
- **Record solar** (~650 GWdc), **wind** (~160 GW), and **battery storage** (~90GW) additions, reaching cumulative capacity of ~4.5TW[1]
- **Record investment in power grids**, almost $500 billion
- **Power demand grew 3% and is rebounding** – driven by heating & cooling, DCs, EVs, industrial electrification – “Age of “Electricity”
- **RES accounted for ~98% of power demand growth** in ’25 – even in US (~61%) – and produced as much electricity as coal
- **Record sales of EVs** (~22M) and EV sales penetration (~25%)
- **Clean energy stocks outperformed** broader market in ’25

Source: BNEF; IEA; GISP analysis | 1. Solar in GWdc

However, we need more and faster – an effort across the board is needed

Up until 2035 (vs. 2024), we need...

~4x
Installed RES

–44%
Fossil fuel demand

~4x
Energy intensity improvement

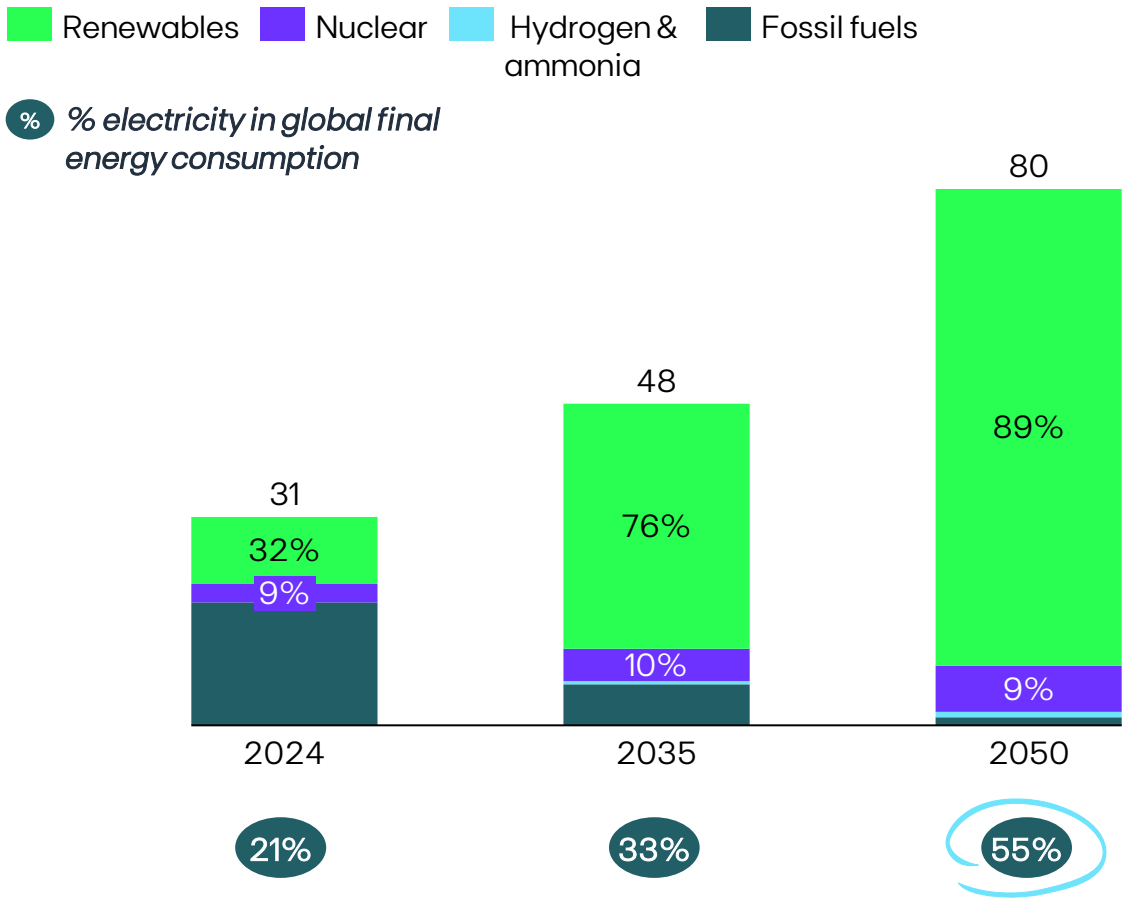
~2.5x
Clean energy investment

Source: IEA WEO 2025

For the longer future, RES needs to keep on growing to reach 89% of power gen. by 2050 (vs. 32% in '24)

Global electricity generation under net zero scenario

1,000 TWh, 2024–2050



Source: IEA WEO 25; GISP analysis

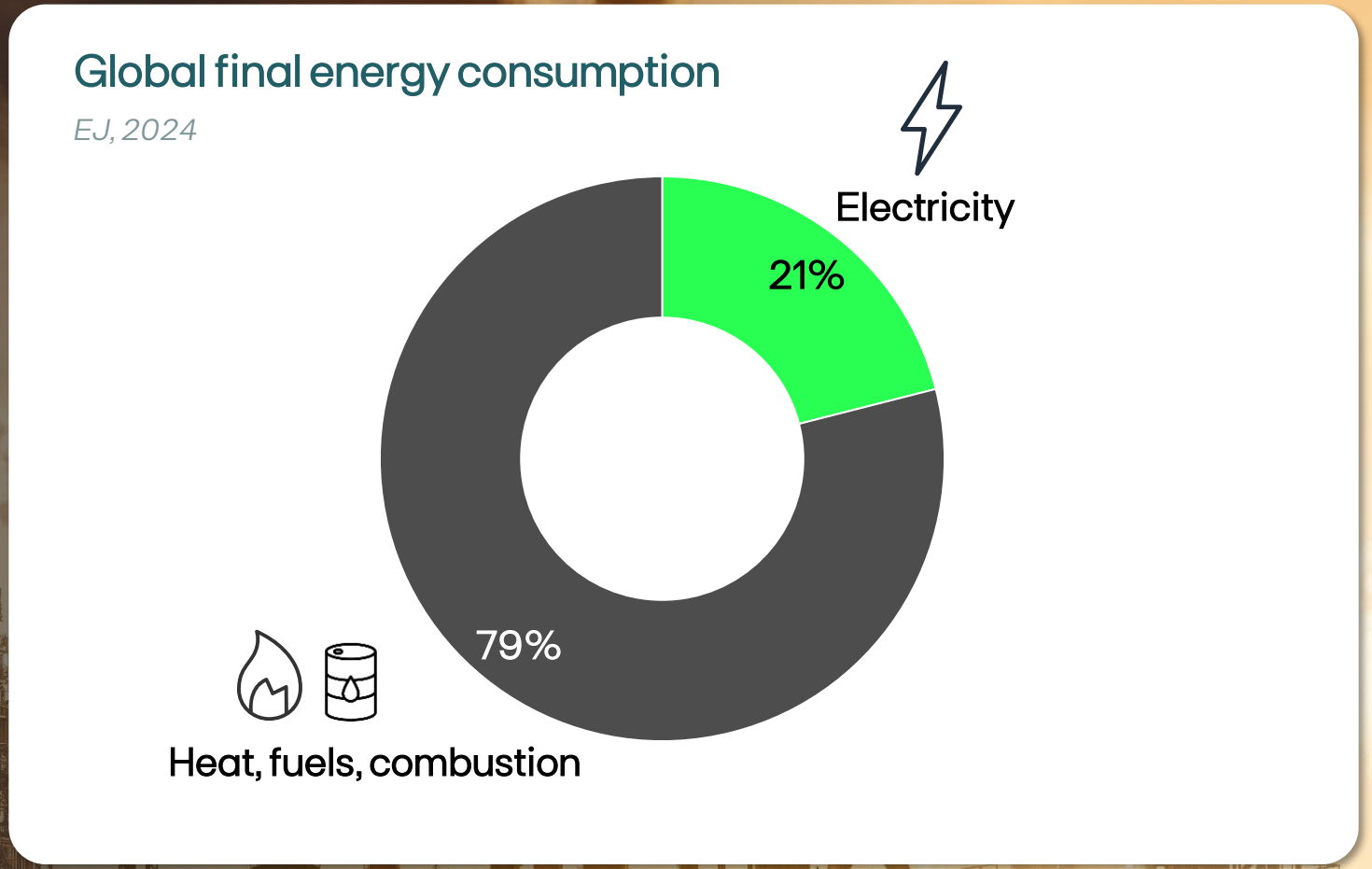
We have been cleaning the supply, but we also we need to change how we use it

The energy system is not only electricity…it has inefficiencies and end-use fossil fuels consumption

Today, **only about one-fifth of the energy we use is electric** ...

...the rest... **we still burn**

Far from the +50% electric required

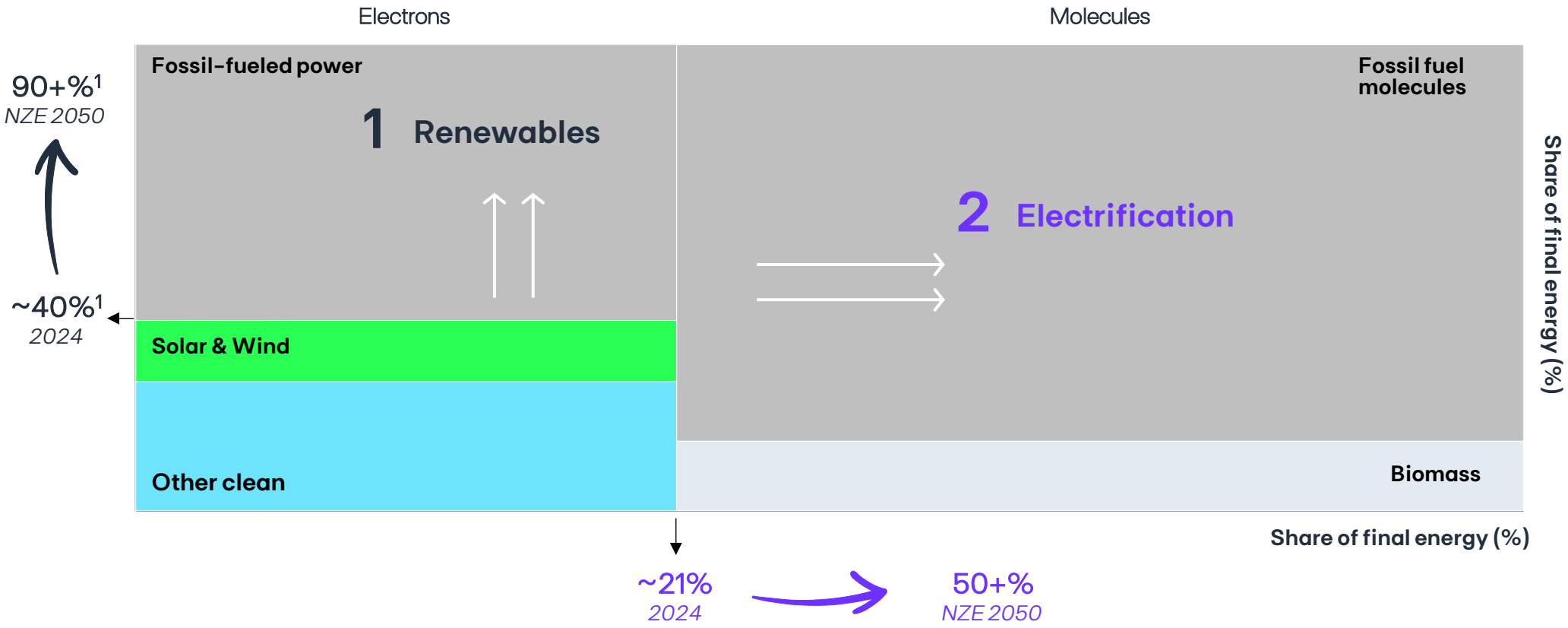


Source: BloombergNEF New Energy Outlook 2025

Energy transition needs both — clean generation and electrified use

Global final energy demand in 2024 vs. 2050

Share of final energy



Source: EMBER; Enerdata; IEA - WEO24 | Note: 1: Renewables + Nuclear


Electrification is at the core of the energy transition
Key to meet climate goals, drive efficiency, enhance energy security & competitiveness, support RES growth

Electrification can cut global CO_2 by half

End-uses account for ~55% of CO2 emissions

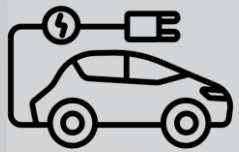
NON-EXHAUSTIVE

	Transport	Industry	Buildings
% contribution in total emissions	24%	25%	6%
Share of fossil fuels in final energy consumption	95%	56%	37%
Electric replacement solutions	 Electric vehicles	 Heat pumps  Industrial heat pumps	 Electric boilers and furnaces
Main fuels used	*Oil*	*Coal, gas, oil*	*Gas, oil, coal*

Sources: IEA (2023); BNEF; GISP Analysis

Electric beats combustion by 2-5x...

Electric vehicles are...

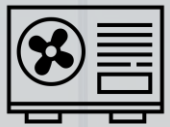


2-4x

More efficient than internal combustion engines

80-90% efficiency vs. 25-40%

Heat pumps are...



3-4x

More efficient than gas boilers

300-400% efficiency vs. 85%

Electric cooking is...

4-5x

More efficient than traditional cookstoves

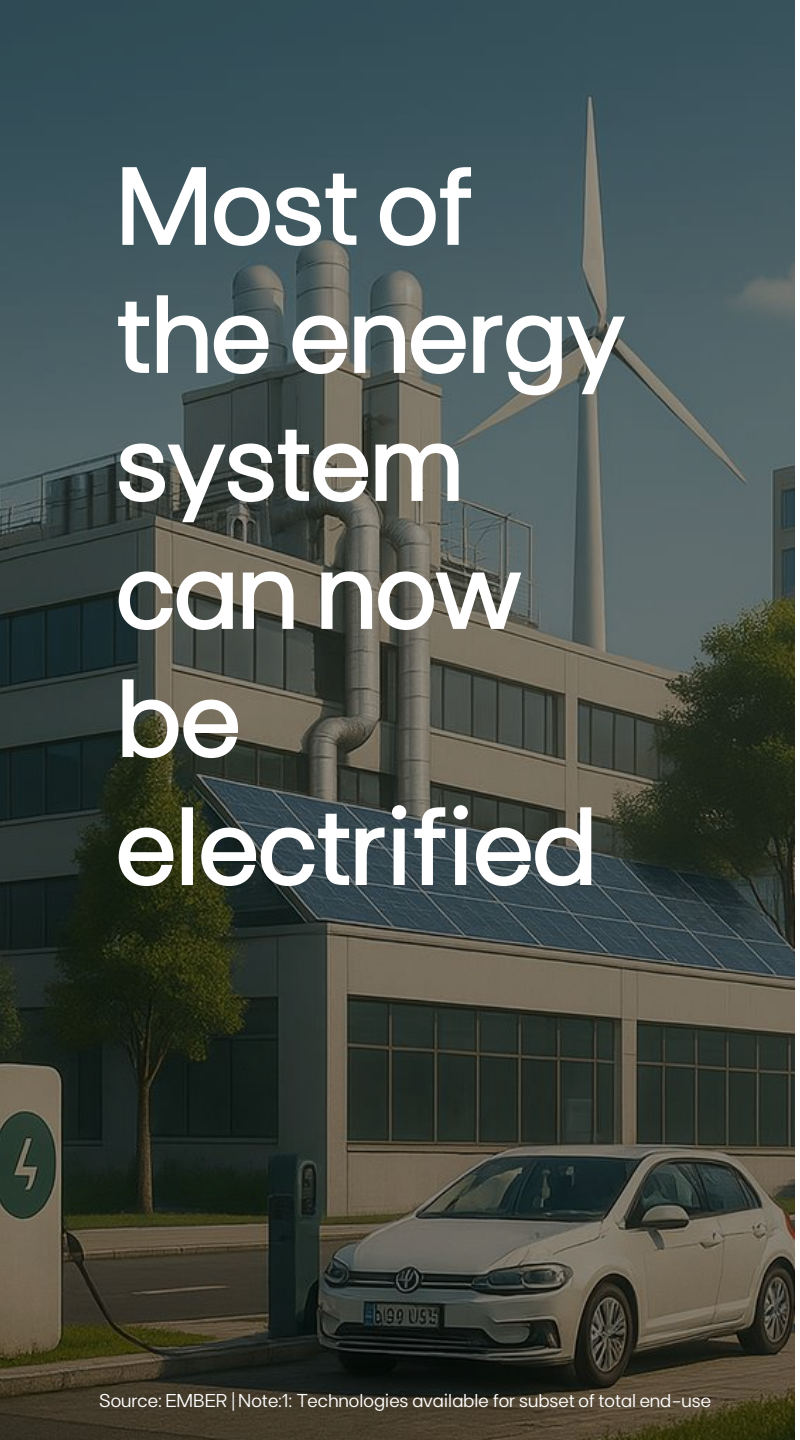
70-90% efficiency vs. 10-20%

...also reducing costs for consumers

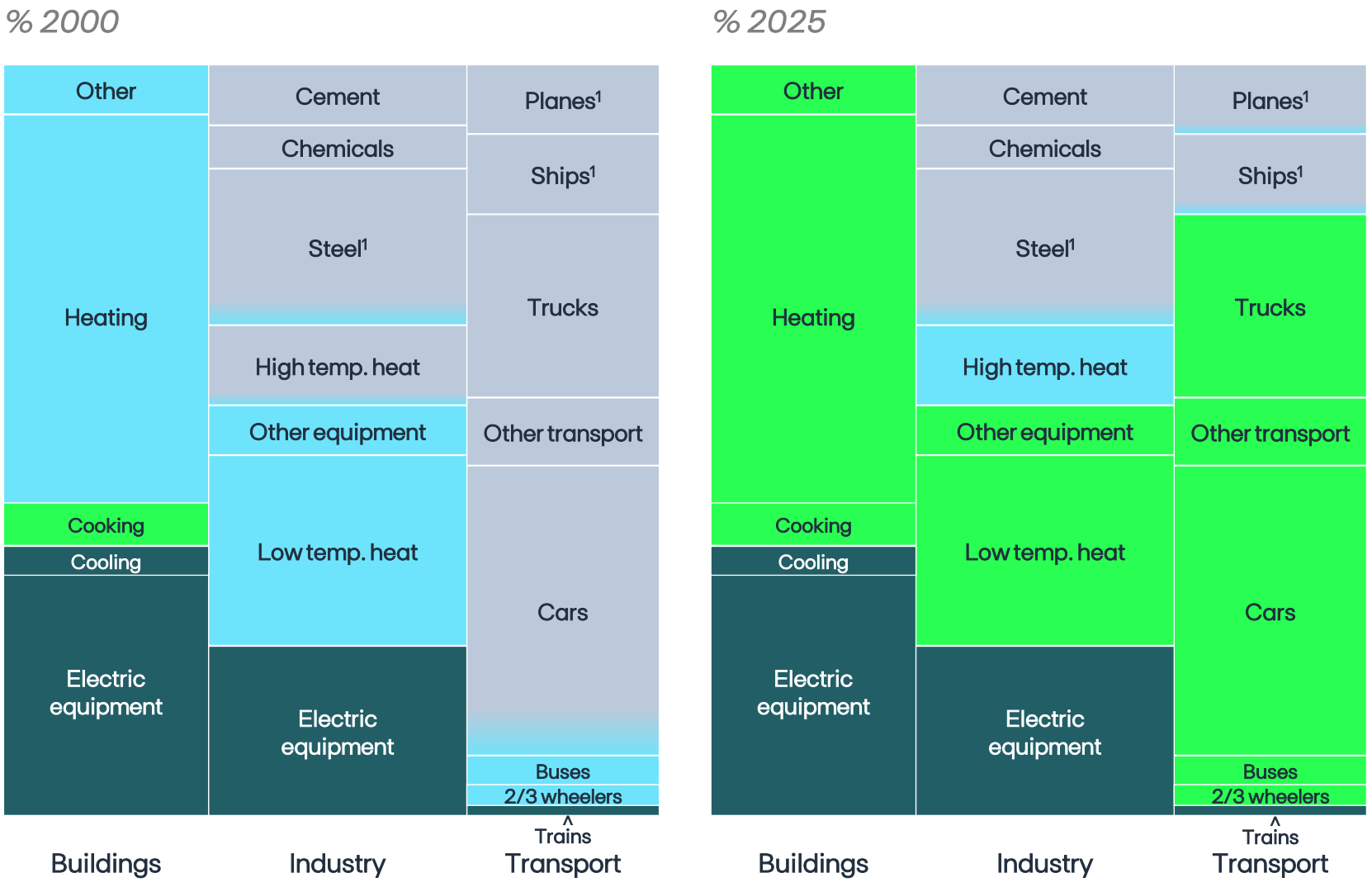
(~3-5% of income per year)

Source: EMBER

Most of the energy system can now be electrified



Share of final energy demand by subsector and electrification potential



Source: EMBER | Note:1: Technologies available for subset of total end-use


edp
The world is moving at speed into the “Electricity Era”
Power demand is at an inflection point,
driven by electrification and tech

Electricity demand to grow **4x faster than total energy** demand and fossil fuels[1]

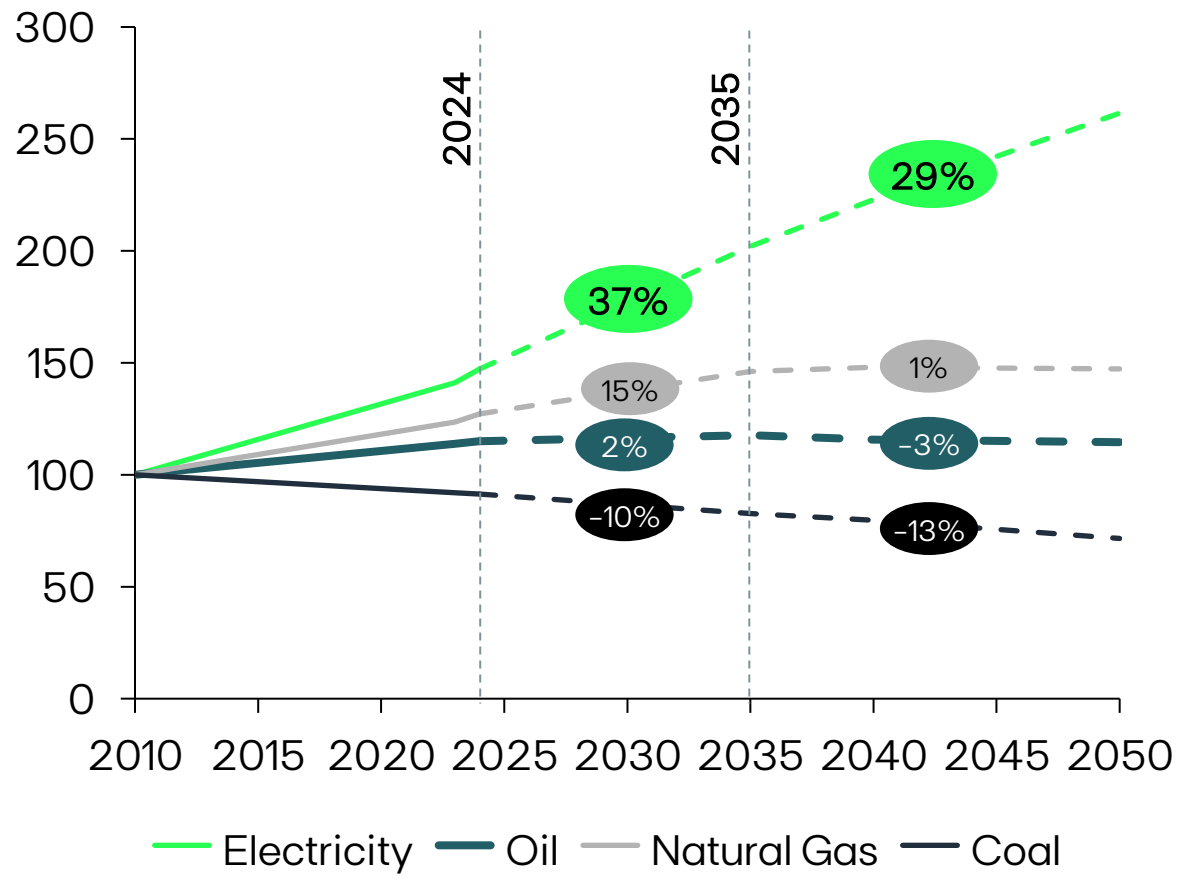
Electricity demand expected to grow ~40% by 2035 and ~80% by 2050

Growth mostly driven by EVs, heat pumps, ACs, industry & data centers

Electricity demand growth

Final energy consumption (base-case scenario)[2]

Index (2010=100)



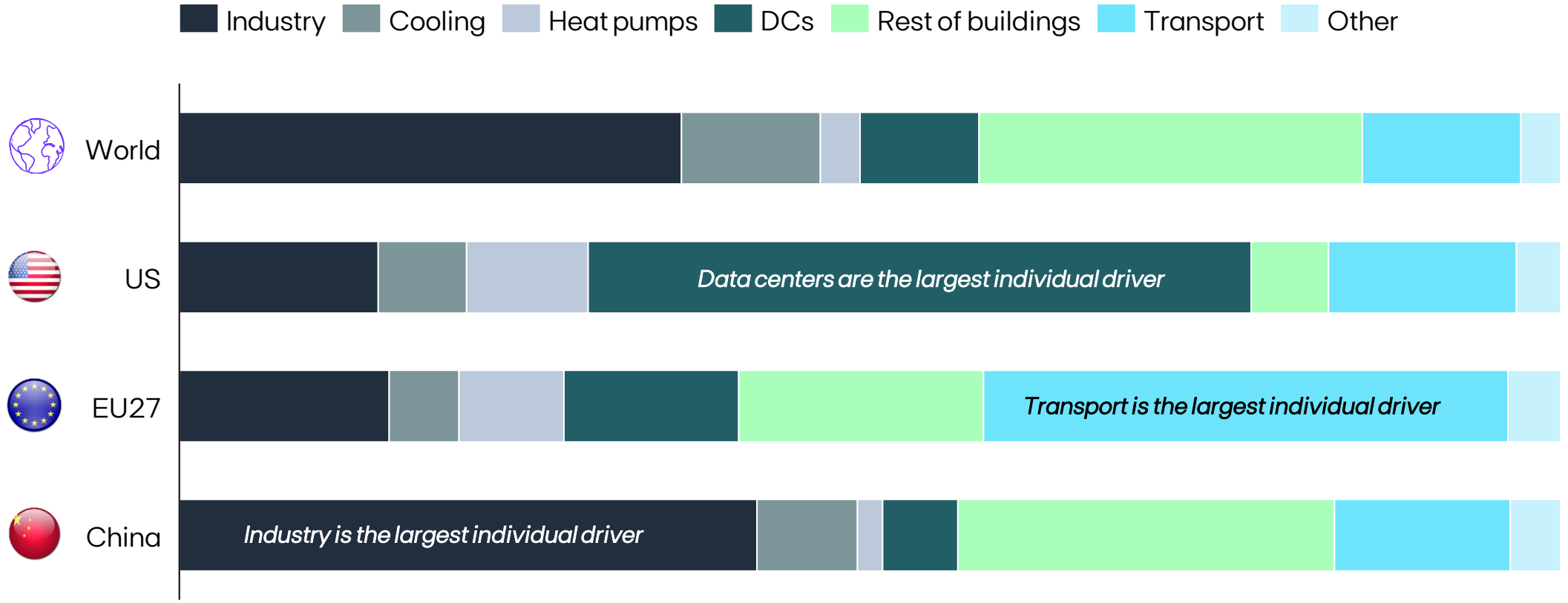
Source: IEA WEO 2025

1. In 2024-2035 period; 2. STEPS scenario

Power demand drivers differ across regions – In US, DCs drive ~50% of growth; in EU27, ~40% transport; in China, ~45% industry

Electricity demand drivers in '26–30

%



Source: IEA Electricity 2026; GISP Analysis

Digital and AI starving for electrons

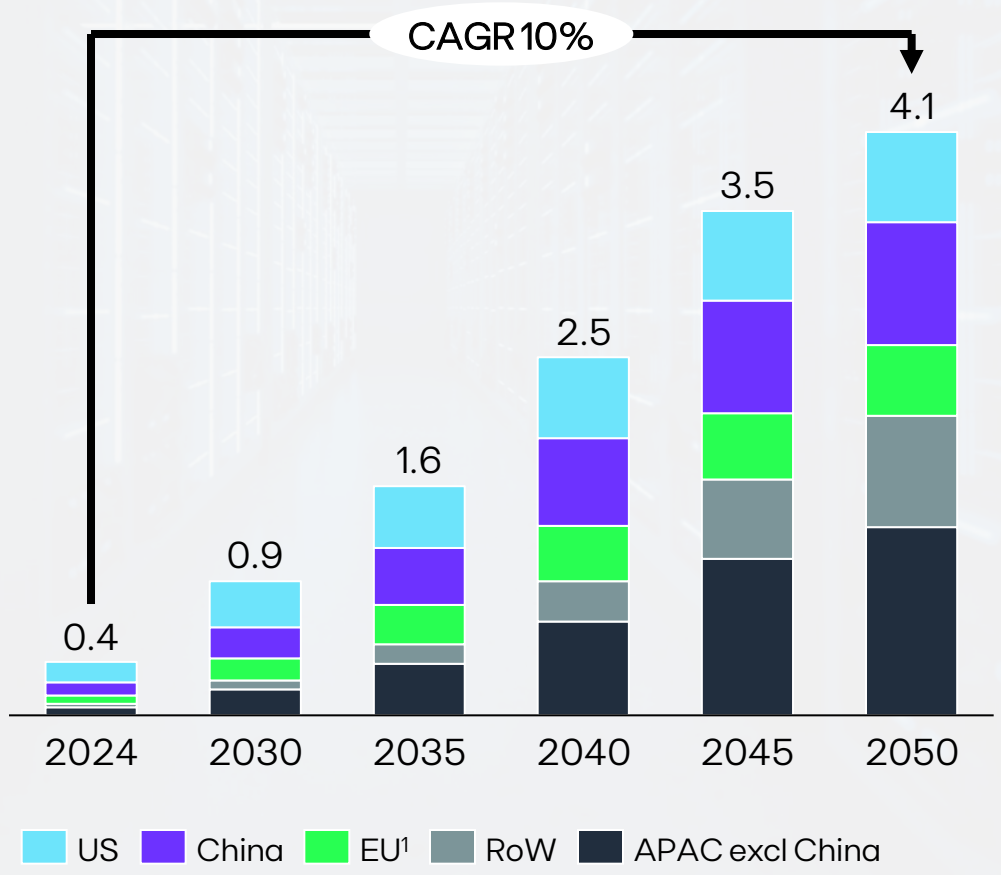
Until '30, DC electricity demand to rise ~17%/y...

...representing up to 15% **of total global electricity demand growth**

A single largest DC under construction today will consume as much electricity as 2 million households

Final electricity demand for data centers by region

Thousand TWh



Despite uncertainty and disparity in DC demand forecasts, it is clear they represent a substantial opportunity in the coming decade

Renewables are the cleanest, fastest and cheapest way to meet increasing DC demand

Source: BloombergNEF; IEA | Note: 1: EU27 + Norway + United Kingdom + Switzerland

Grids are the **backbone of the energy transition**

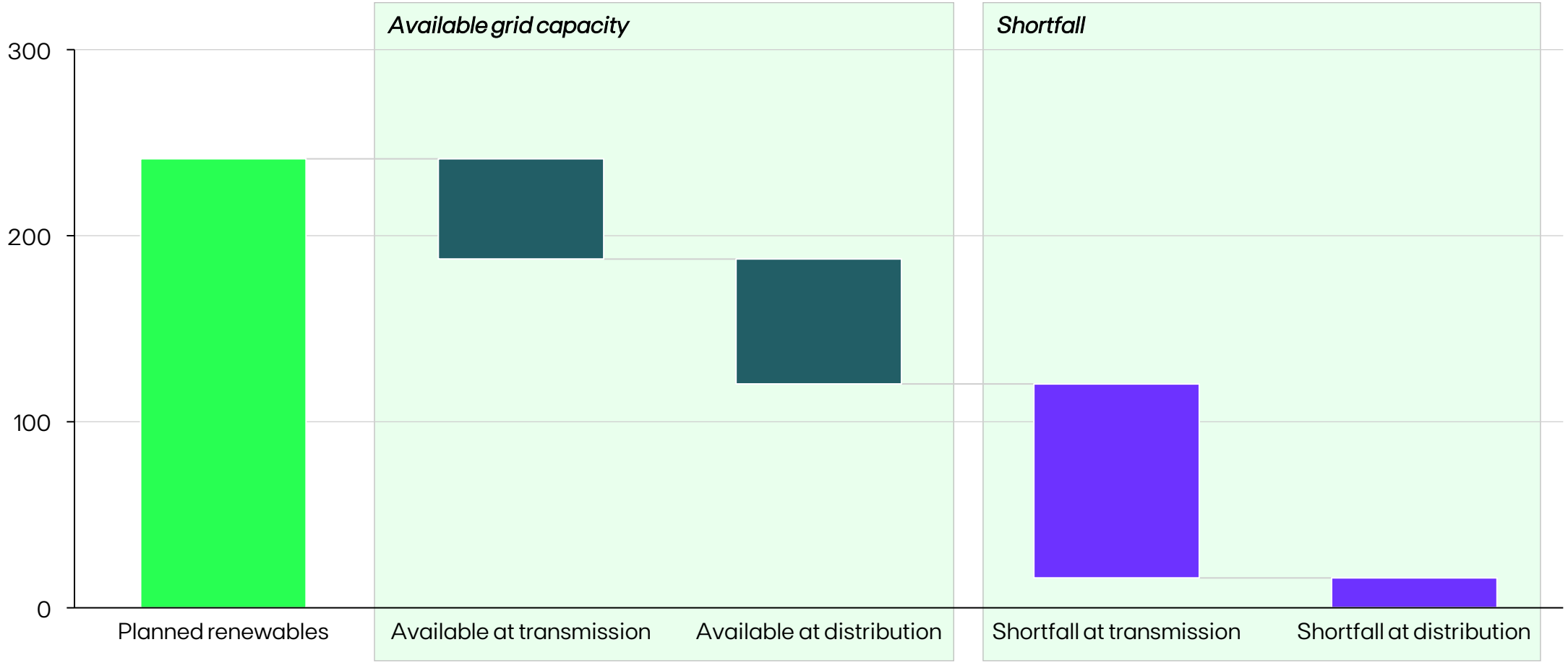
and need more investment to support RES and electrification

Did you know?

116M km	New or replaced lines by 2050 (~3k trips around Earth)
~40%	of Europe's distribution grids have >40 years
+3 TW	RES projects in queue (4x solar & wind added in '24)
2x	Needed increase in investment to be on track to net zero (real 2023 values)

At least 120 GW of planned renewables are at risk due to shortfall in EU grid capacity

Expected renewable additions by 2030 compared to available grid capacity in 20 reporting countries[1] (GW)



Source: EMBER (Crossed wires Grid capacity could block EU energy security | Ember)

1 Reporting countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Germany, Spain, Finland, France, Italy, Lithuania, Latvia, Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia

The future energy system will require much more flexibility...

Batteries and hydro are key

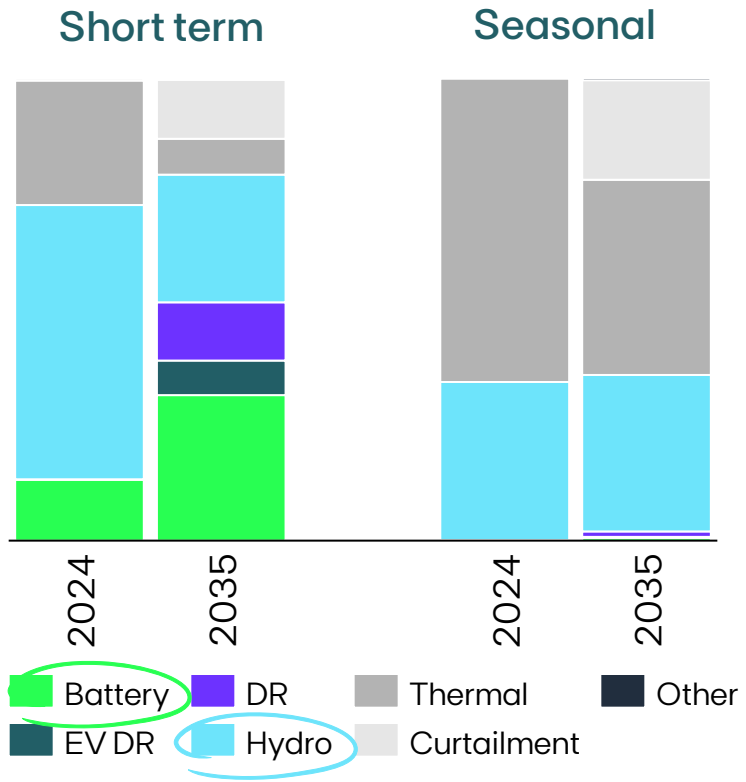
2x
More short-term flexibility needed by 2035 in the US vs. today

~4x
More short-term flexibility needed by 2035 in China vs. today

2-3x
More short-term flexibility needed by 2035 in Europe vs. today

Power system flexibility needs & global flexibility supply

2024-2035



10x
More battery storage capacity by 2035

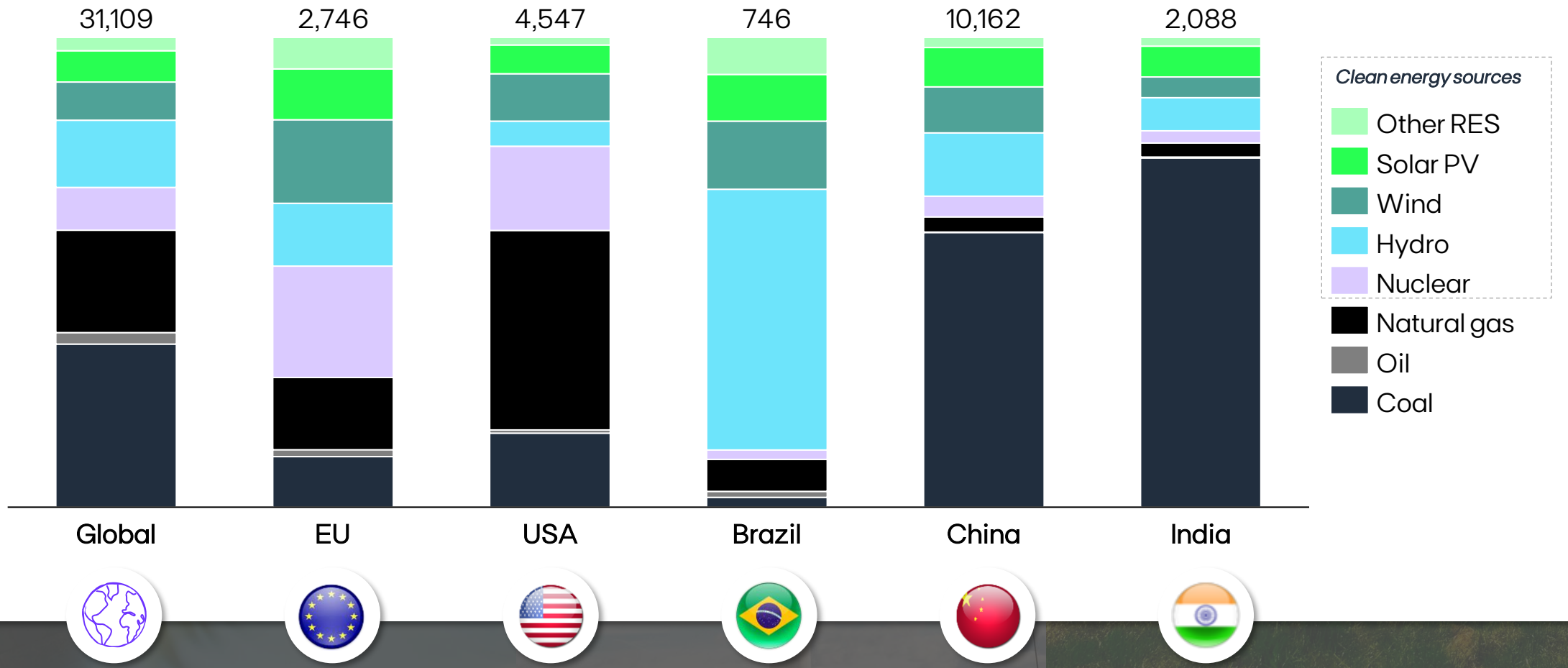
Source: IEA WEO 25; GISP analysis


Different regions have very different realities and stages of maturity in the energy transition

Different electricity generation mixes & stages of maturity in energy transition

Electricity generation by main market

TWh, 2024

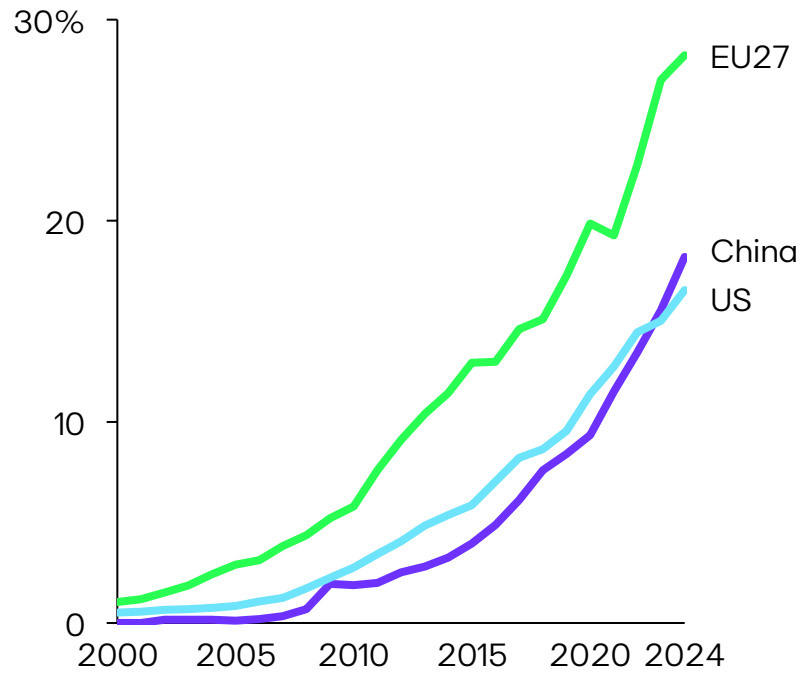


Fuente: IEA WEO 2025; GISP Analysis

While China is making progress in both clean generation and electrification, Europe and US having been lagging on electrification

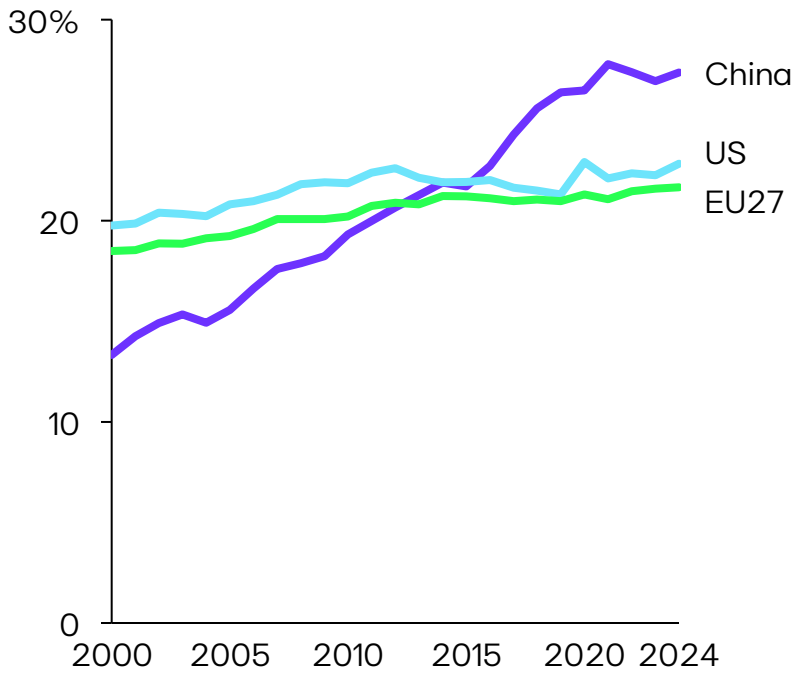
Renewables

Solar & wind share of global generation, 2000-25



Electrification

Electricity's share of final energy, 2000-2025



Source: Enerdata

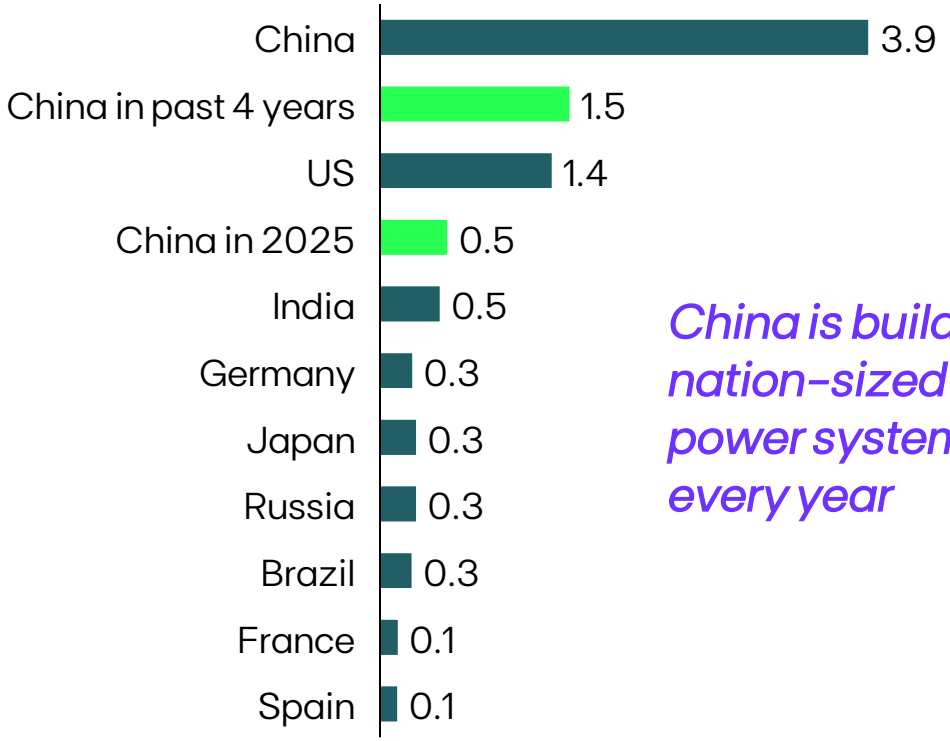
China on the path to become an 'Electrostate'

China installed +500GW of RES[1] only in 2025 (~60% of the world), and strengthened its leadership in the energy transition

China adds more capacity every year than most countries have in total; In one year, China adds more generation than US entire nuclear fleet, and in the last four years installed more capacity than total US power system

Power system installed capacity

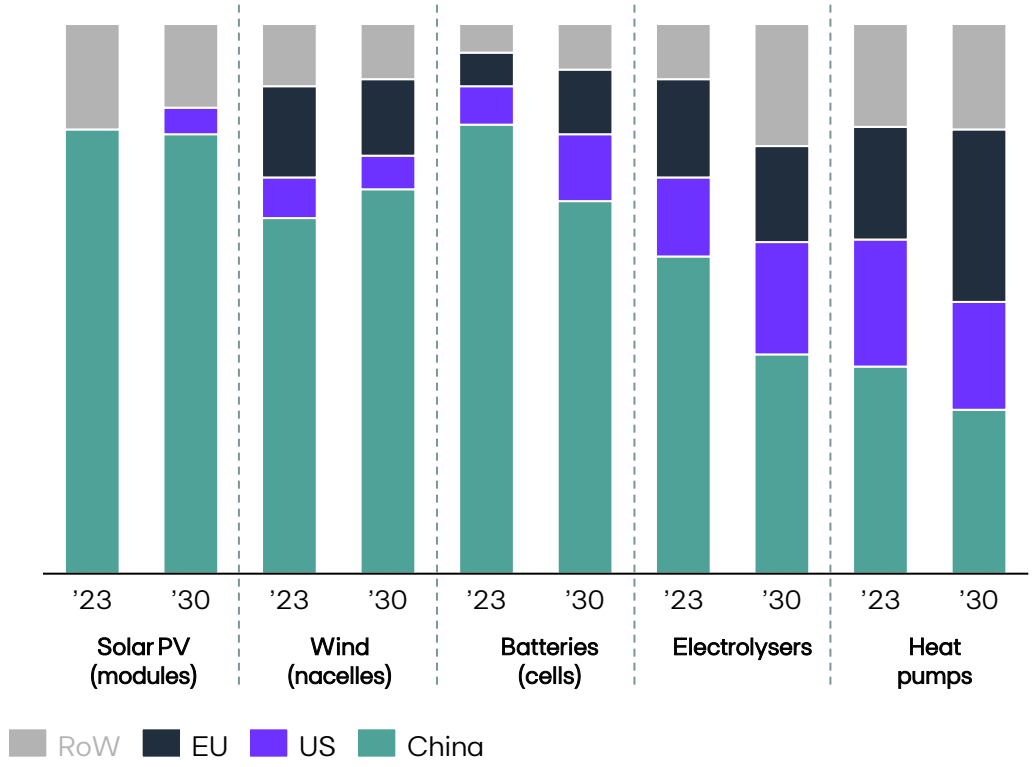
TW



China is building nation-sized power systems every year

Geo concentration of manuf. capacity

%



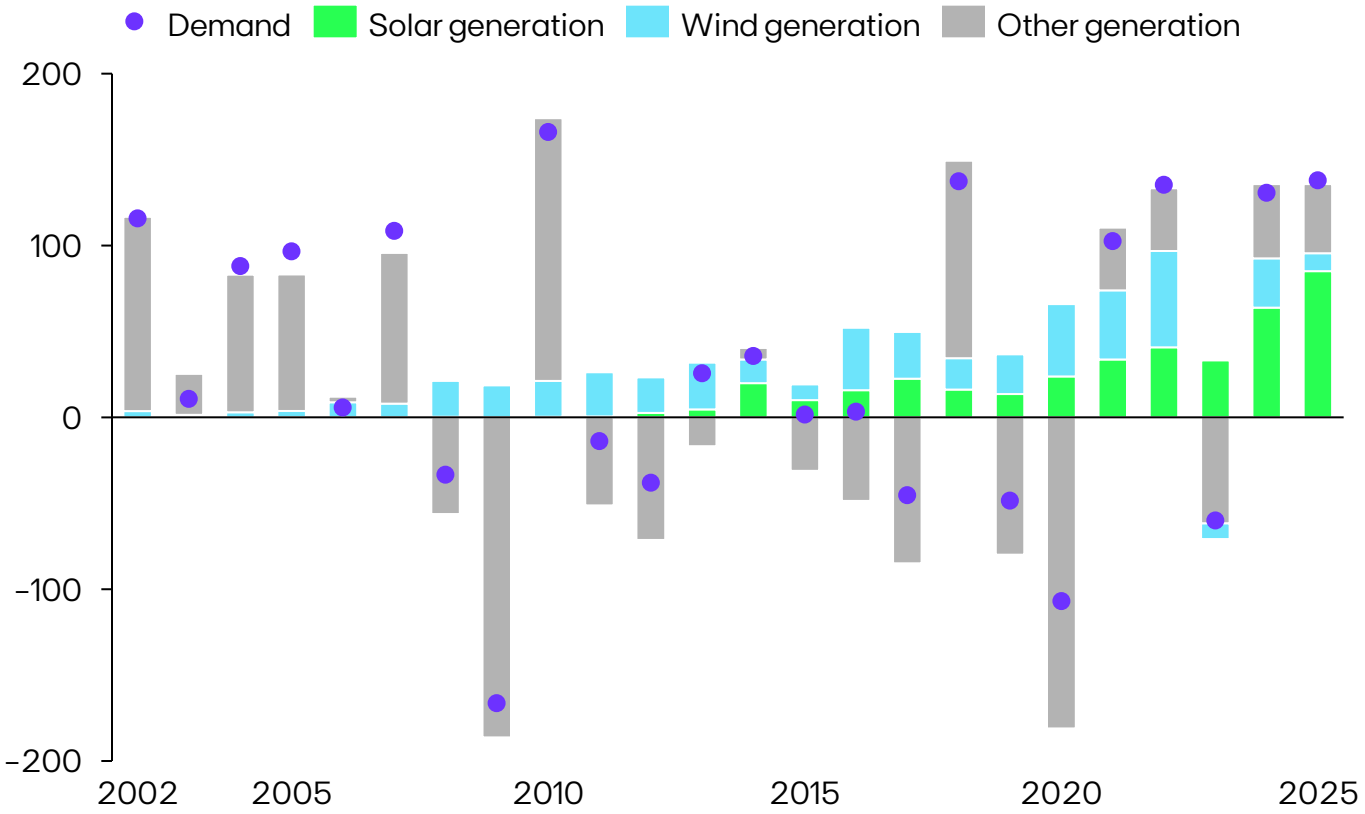
Source: BNEF; IEA; GISP analysis
1. Includes solar, wind, and battery storage

In US, despite all the noise and political friction, RES continue to thrive – wind and solar were ~70% of new electricity generation in 2025

RES capacity was 92% of new capacity; Battery capacity nearly doubled; Electricity demand increased 2.1%

YoY change in US electricity generation

TWh



Solar growth met all the daytime growth in electricity demand – and some in the evenings

Electricity demand grew ~2.1% – US is currently in the **middle of its strongest four-year demand growth period this century**

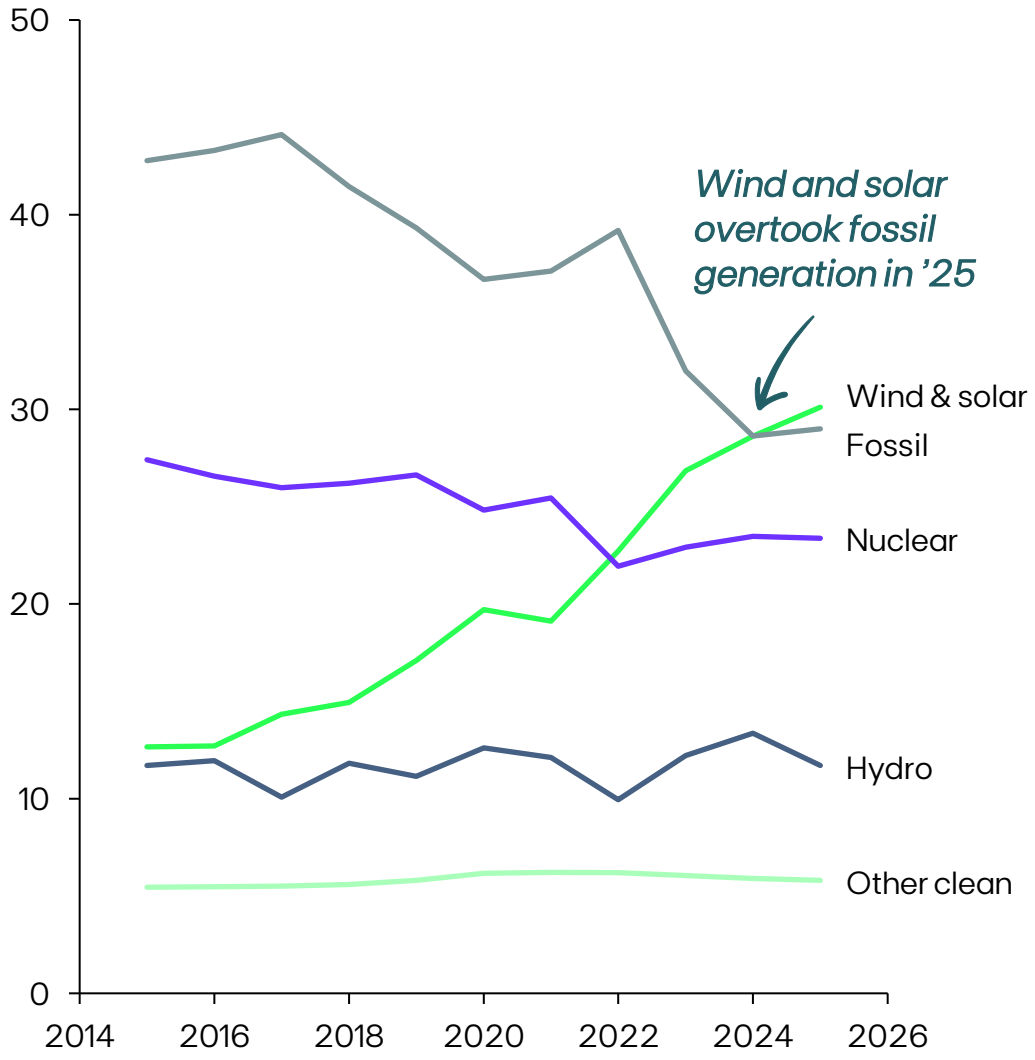
In 2025, **US utility-scale battery capacity increased by ~50%**, reflecting continued investment in system flexibility

Source: EMBER; BNEF; IEA; GISP analysis

In Europe, amid increasing concerns for energy security and independence, wind and solar generated more EU electricity than fossil fuels in ’25

Share of EU’s electricity generation

%



Source: EMBER; IEA; GISP analysis

Wind and solar generated 800 TWh in ’25 (+6% YoY)

Solar generation +20% YoY in ’25 vs. +8% YoY in gas

This occurred despite weather-driven declines in hydro (-12% YoY) and wind generation (-3%)

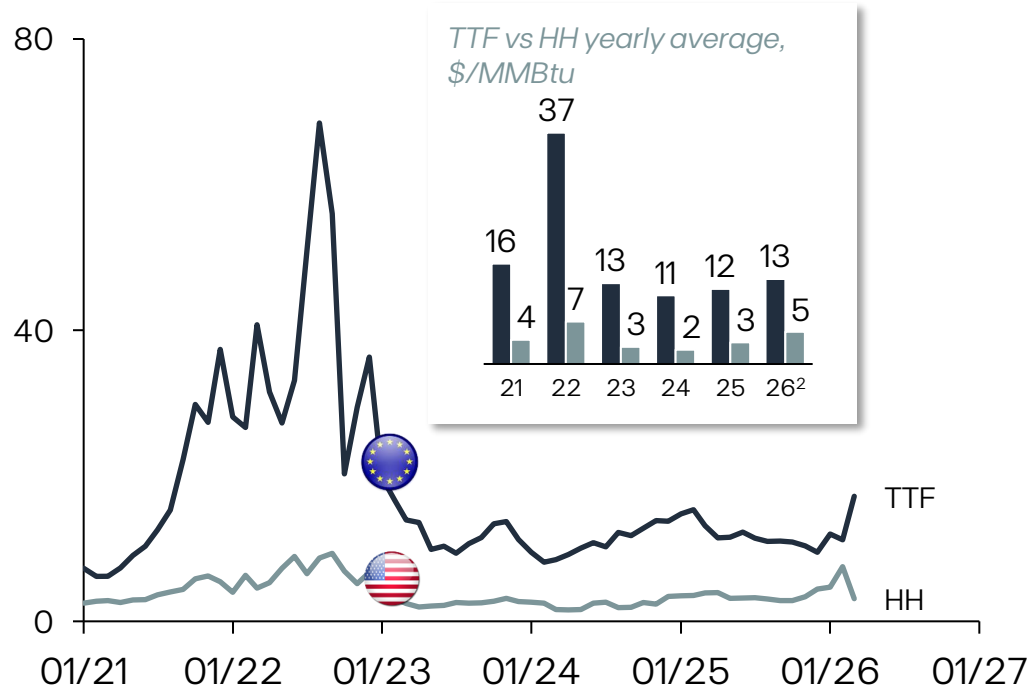
Power demand up 0.9% in ’25 driven by heat pumps, DCs & EVs; 0.3pp weather-driven

For Europe, RES are critical to reduce energy dependence to control electricity prices and above all increase industrial competitiveness

Europe facing a deindustrialization trend driven mostly by high electricity prices linked to a high energy dependency & gas prices

European industry has lost 6% of its total gross value added (GVA) since 2004

TTF & Henry Hub (Europe & US benchmark) spot prices[1]
$/MMBtu



57%

EU energy imports dependency rate in 202 – 85% on natural gas. Energy imports dependency and slow uptake of RES threatening EU's strategic self-sufficiency

~4x

Higher average natural gas price in TTF (benchmark EU) vs Henry Hub (US) in 2025, **5.5x higher in March26 (until 19th)**

2-3x

Higher electricity prices vs US

Europe needs to **embrace renewables, energy transition and electrification as growth engines** in order to increase strategic self-sufficiency and boost competitiveness

Source: Mckinsey, HenryHub, ICIS Heren; S&P; EDP analysis

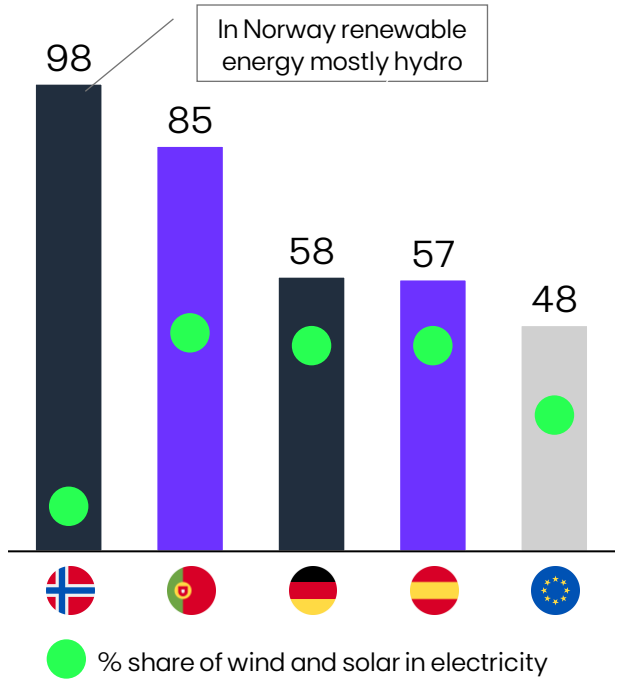
1. Not including CO2 costs
2. Until March 19th

Iberia has unique conditions to supply clean affordable energy, attract high demand industries and actively boost Europe's competitiveness

NON-EXHAUSTIVE

- Abundant natural resources, leading to more competitive LCOEs
- High RES penetration & ambitions targets
- Lower wholesale electricity prices
- Favorable conditions for 24/7 green energy
- Leading PPA market
- Pipeline and demand

%, share of renewables in electricity generation in 2024



This environment supports **industry decarbonization and attracts demand-driven players** (like data centers), **seeking cost-effective and clean energy solutions**

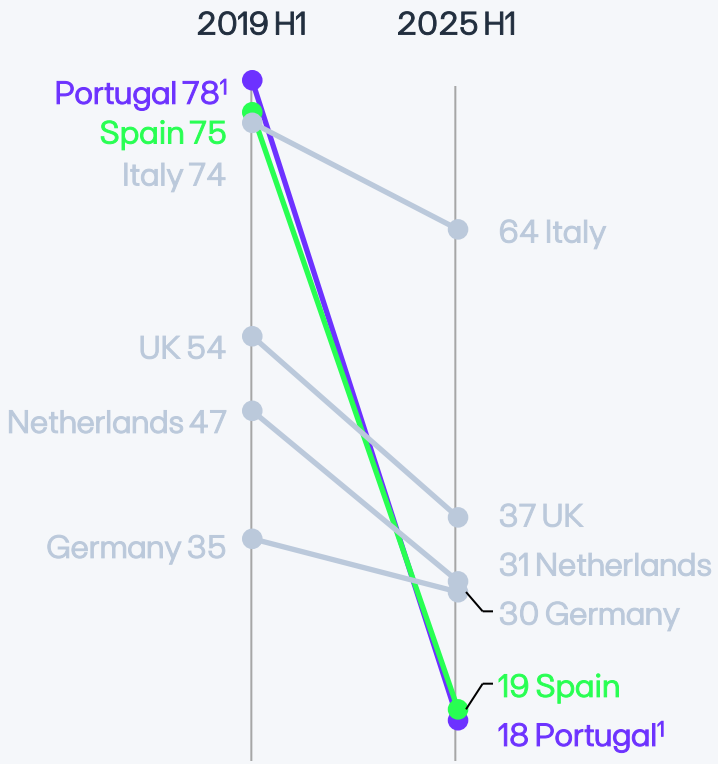
Source: Ember, Enerdata, Mckinsey, EDP analysis

Iberia RES path towards minimal fossil influence has led to the most competitive wholesale and industrial retail power prices in EU+UK

From 75-78% fossil influenced hours in 2019 to 18-19% in 2025, Iberia registers much lower wholesale and retail power prices

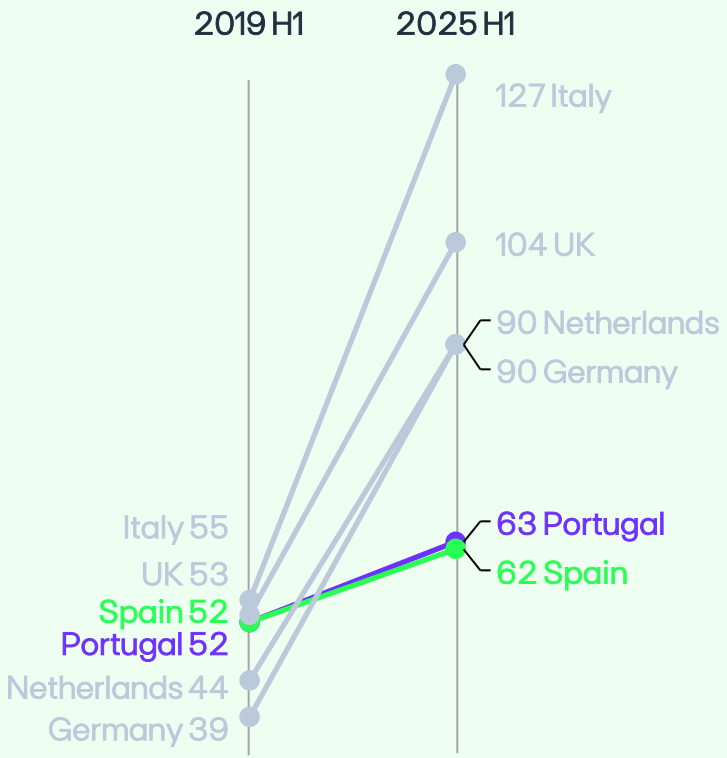
Fossil influence on electricity price

% hours



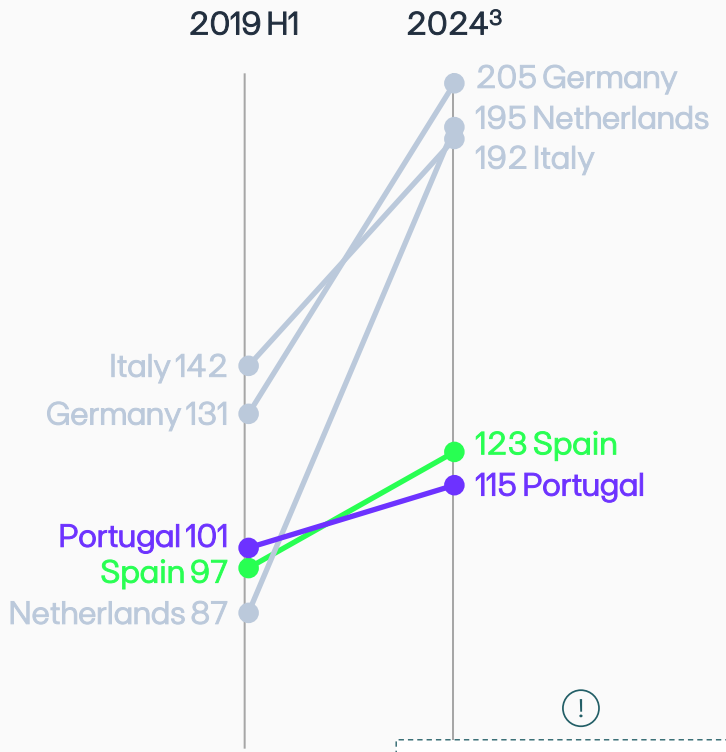
Average wholesale electricity price

(€/MWh)



Industrial average retail electricity price[2]

(€/MWh) – ID band, annual consumption 2GWh-20GWh

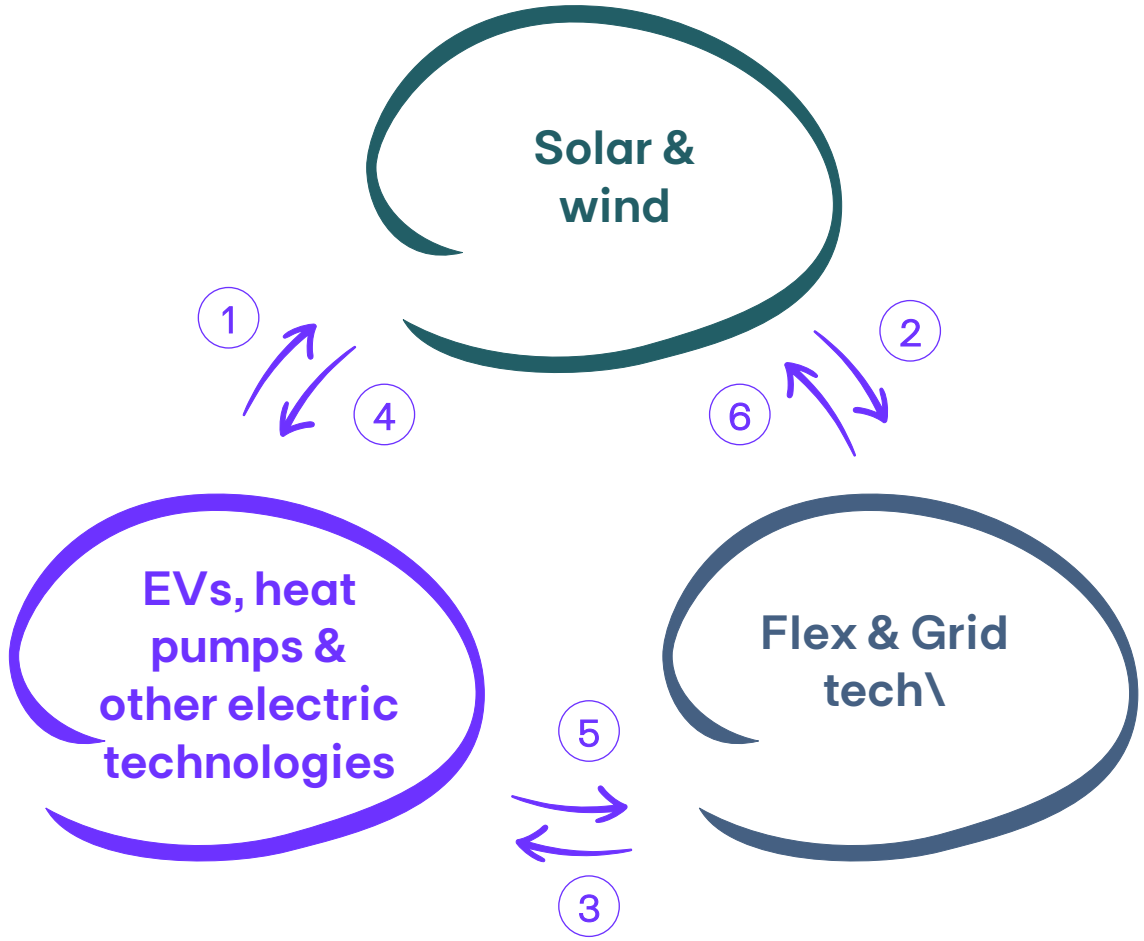


Even in higher consumption bands (IE, IF) Iberian prices are 30-40% lower

Source: EMBER Analysis; ENTSOE, LCCC, Montel, BFF; Eurostat; Fossil influences measured by % hours when electricity price is above the cost of gas power;

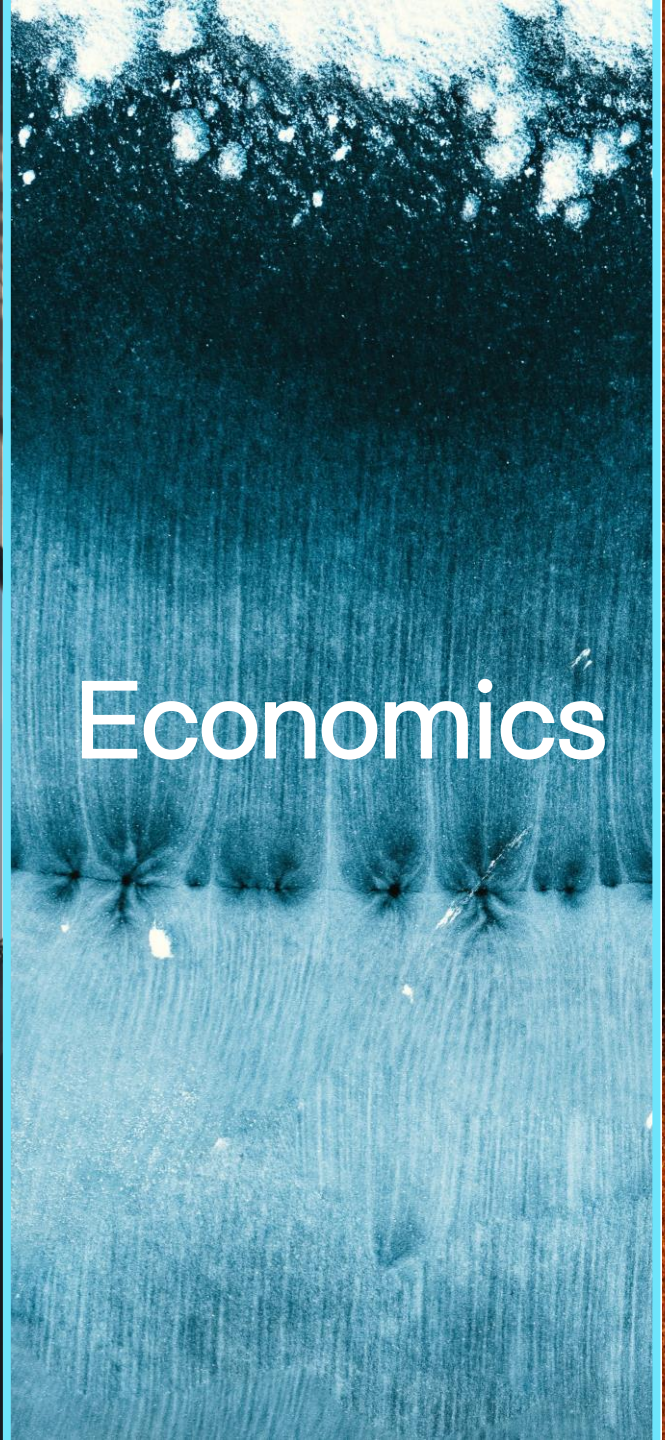
1: The analysis is based on a gas plant efficiency of 48% and a CO_2 emission factor of 0.3909 tonnes CO_2 per MWh;. 2: Eurostat – ID Band, representing consumption between 2,000 MWh and 19,999 MWh, excluding VAT & other recoverable taxes and levies. Data for the UK is not available. 3: Due to the absence of 2025 H1 data, an average of 2024 H1 and 2024 H2 was used

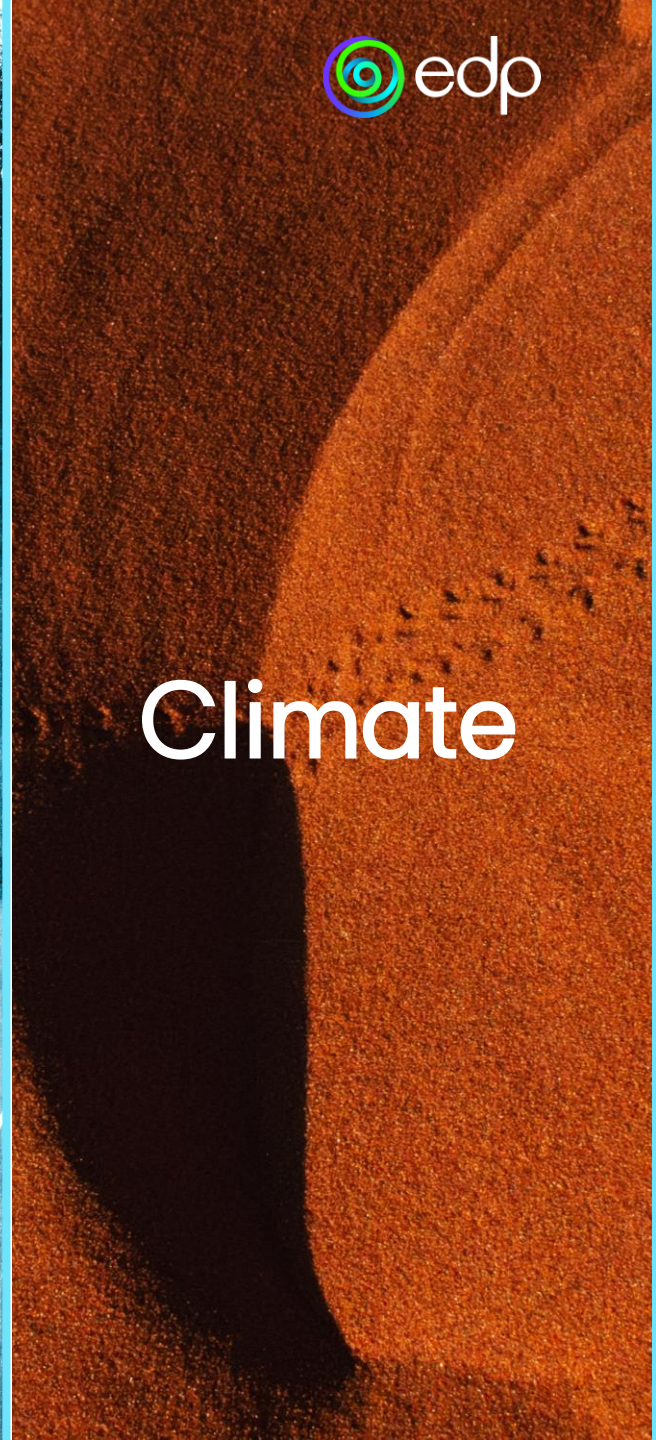
1. Electrified demand **scales RES, driving costs lower**
2. Variable RES require smoothing **— a chance for flex tech**
3. Cheap electricity **incentives more demand**
4. **Cheaper, local RES** make electrifying more attractive
5. More demand to **pool & optimize**
6. **Flex & grid technologies** enable higher penetration



Clean, domestic and resilient electricity systems are key to affordability, competitiveness and energy security

The energy transition is now non-negotiable






edp
What kind of company wins in this world?

EDP is at the center of this secular investment opportunity

Electricity at the core of strong investment momentum in the sector...

- Entering an era of sustained growth of power demand
- Renewables are the cheapest, fastest and most scalable technology
- More flexibility needs with increasing value pools
- Step change in Networks investment
- Market and regulatory tailwinds

... and EDP is prepared to capture the opportunity

- **Leader in Renewables** with strong track record and pipeline, namely in US
- **Resilient integrated position in Iberia**, with strong FlexGen and Clients portfolio
- **Strong Electricity Networks business**, with material step up of investments, especially in Portugal

We choose Earth

edp

- 1985 — 1ST wind farm in Portugal
- 1996 — Start of Brazil Operation
- 2004 — Spanish market entry
- 2007 — USA market entry (Horizon)
- 2013 — #1 Dow Jones Sustainability Index
- 2021 — Acquisition of Sunseap

EDP is a global energy company operating through regional hubs in Europe, Americas and Asia

Europe (~52%)

12,613 | 4,789
291 | 7,639
928

South America (~11%)

3,681 | 4,028
101 | 2,952
60

North America (~33%)

10,809 | 969
627

APAC (~4%)

1,152 | 305
34

Note: Data as of December 2025

Capacity intslalled (%)
Solar Capacity (MW EBITDA + Eq.)
Wind Capacity (MW EBITDA + Eq.)
Hydro Capacity (MW EBITDA + Eq.)
Storage Capacity (MW EBITDA + Eq.)
Capacity under construction (MW)
Networks length ('000 km)
Clients ('000 #)
Employees (#)
Main Offices

2025

32.7 GW
Installed Capacity

~90%
Renewables generation

64.2 TWh
Energy produced

391,000
Km Networks

~9 million
Clients

~12,000
Employees

We are leaders in the energy sector, operating throughout the different stages of the value chain

Renewables, Clients & Energy Management

69%

- Wind onshore
- Solar utility-scale
- Solar DG[1]
- Wind offshore
- Hydro
- Storage
- H2
- Client solutions

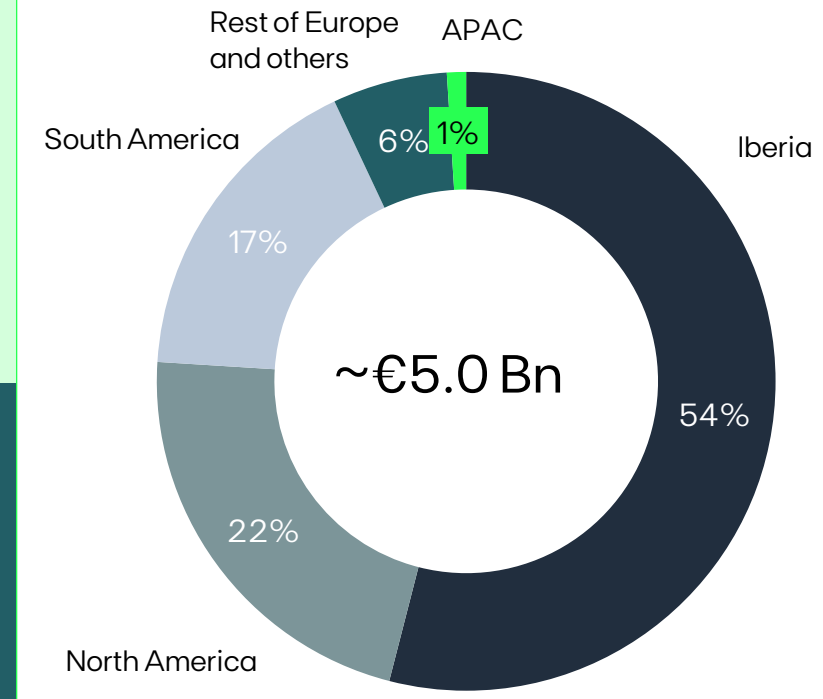
Electricity Networks

31%

- Distribution
- Transmission

(%) Weight on EBITDA 2025

EBITDA 2025 by geography



Key indicators 2025

€3.9 Bn	BBB	€5.0 Bn	€1.3 Bn	€15.4 Bn
Gross Investment	Rating[2]	EBITDA[3]	Net Profit[3]	Net Debt

[1]Distributed Generation (DG).
[2]S&P
[3]Recurring

Our 2026-28 commitments focused on value creation

Focused growth	• **~€12 Bn investment plan with enhanced returns** – focus on **US renewables and Iberian Electricity Networks** • **~€5 Bn Asset Rotation** delivering value crystallization and recycling capital to fund growth
Business optimization	• **~€1 Bn Disposals** to refocus in attractive core markets and businesses • **Improving efficiency** metrics through **operational excellence** *(~26% OPEX/Gross Profit)*
Distinctive and resilient portfolio	• **~80% EBITDA in A-rated markets** and **highly contracted profile** *(~80% regulated + LT contracted/ hedged)* • **Committed to BBB** rating with **improved ratios** *(22% FFO/ND)*, providing **increased optionality**
Value creation	• **Increasing EBITDA to ~€5.2 Bn by 2028** *(+6% vs 2025)* while decreasing Net Debt by €1 Bn • **Increasing Net Income to ~€1.3 Bn by 2028** *(+8% vs. 2025)* supporting new DPS floor of €0.21 in 2028 *(+5%)*

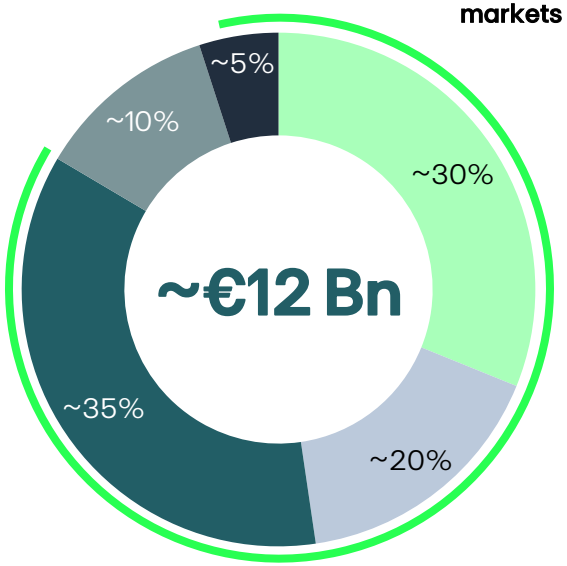
Focused €12 Bn investment plan with US renewables and Iberian Electricity Networks at the core

Gross investments

2026-28, € Bn

Iberia
Brazil
RoE
Other
US

~90% in A-rated markets



~70% in Renewables, Clients and Energy Management

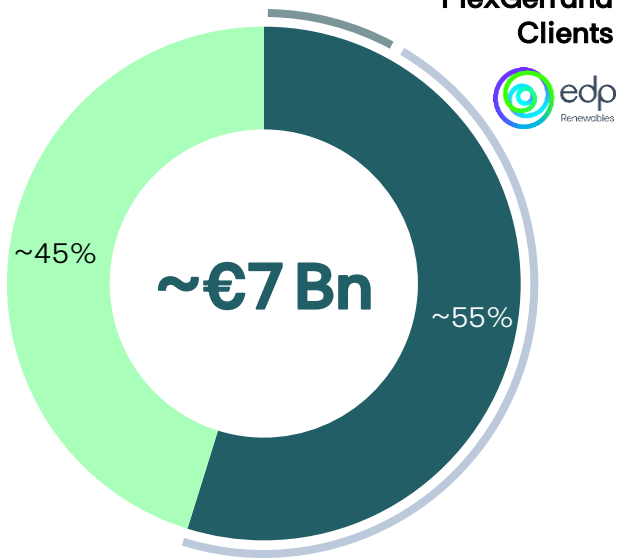
~30% in Electricity Networks

Net investments[1]

2026-28, € Bn

Renewables, Clients & Energy Management
Electricity Networks

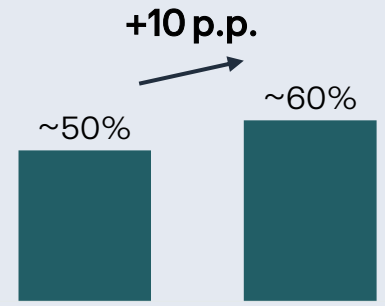
FlexGen and Clients



~€5 Bn of Asset Rotation mostly in Renewables

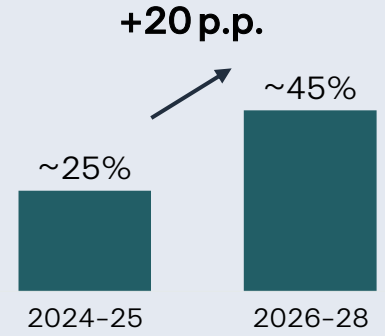
US renewables

% of EDPR Gross investment



Electricity Networks

% of Net investment



Pipeline optionality to accelerate throughout the plan and beyond

1. Net investments equals gross investments subtracted of Asset Rotation proceeds

1 WINDFLOAT ATLANTIC

WindFloat Atlantic – a global reference in renewable energy production

Location

- **20 km of the coast of Viana do Castelo, in ~100 m water depth**, in a area of sand and sediments, suitable for mooring

Technology

- **3 wind turbines** of 8.4 MW each
- **3 floating platforms** and mooring system
- **Dynamic cables** for the collecting system

Interconnection

- Constructed by PT's TSO (REN) allowing a **direct connection at 60kV to an existing onshore substation** operated by DSO (E-Redes)

Financing

- **EIB**: 60 M€
- **EU** FUNDING – NER300: 18 M€
- **PT** Fundo Ambiental: 6 M€
- **Windplus** shareholders funds

European Investment Bank

Remuneration

- **Combined scheme**: PT FiT + FA supplement + EU NER300 Program

- 25 years of asset lifetime
- Equipment fabrication started in Q1 2018
- Offshore installation in Summer 2019 / Winter 2020
- O&M base in the North of Portugal, using technical teams and local logistics

2 ALQUEVA FLOATING SOLAR

Why in Alqueva?

25.000 ha

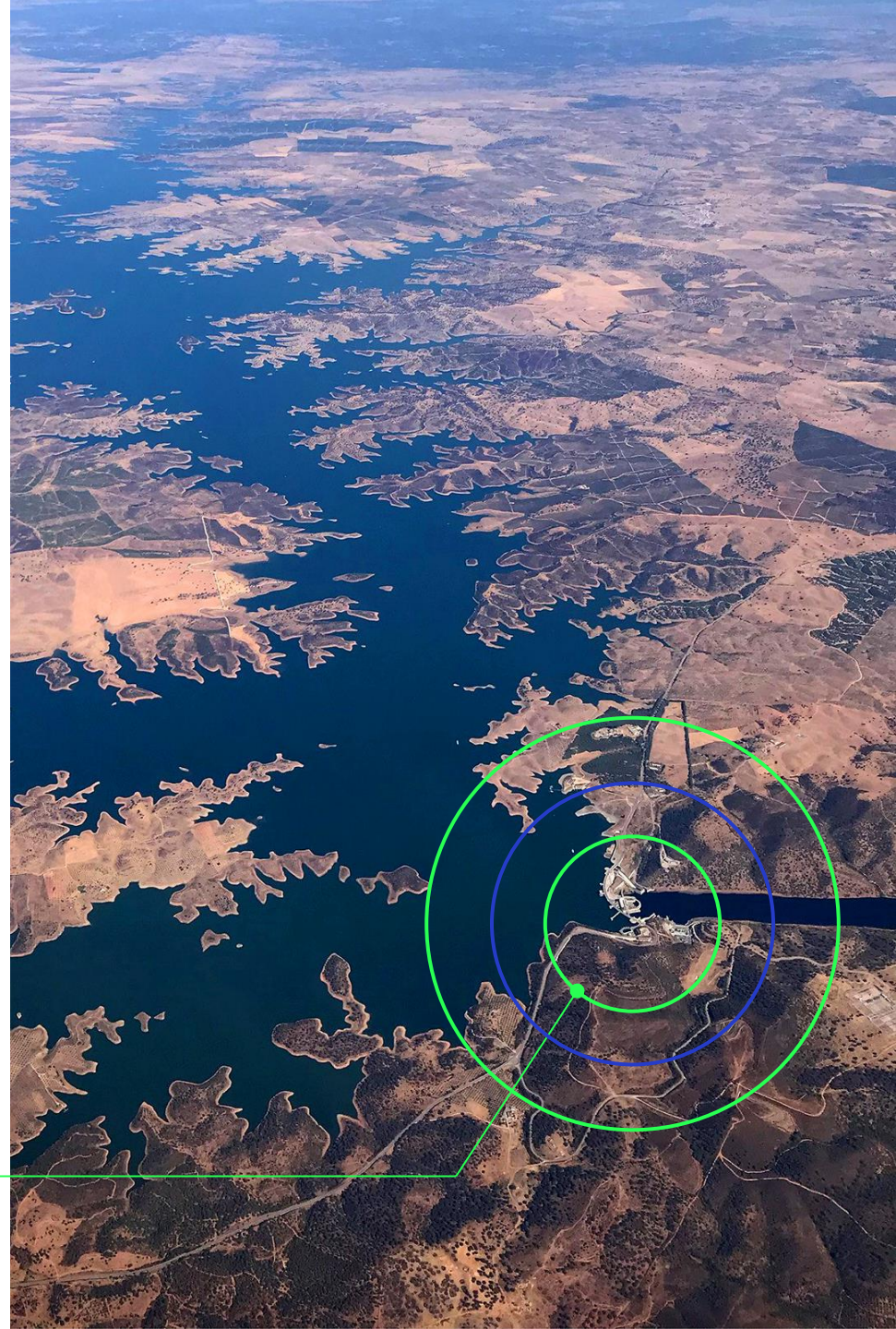
Biggest artificial lake in Europe

---

500 MW Pump Hydro Plant

Available **Transmission Lines**

Potential for **growth**



3 AUTOPV

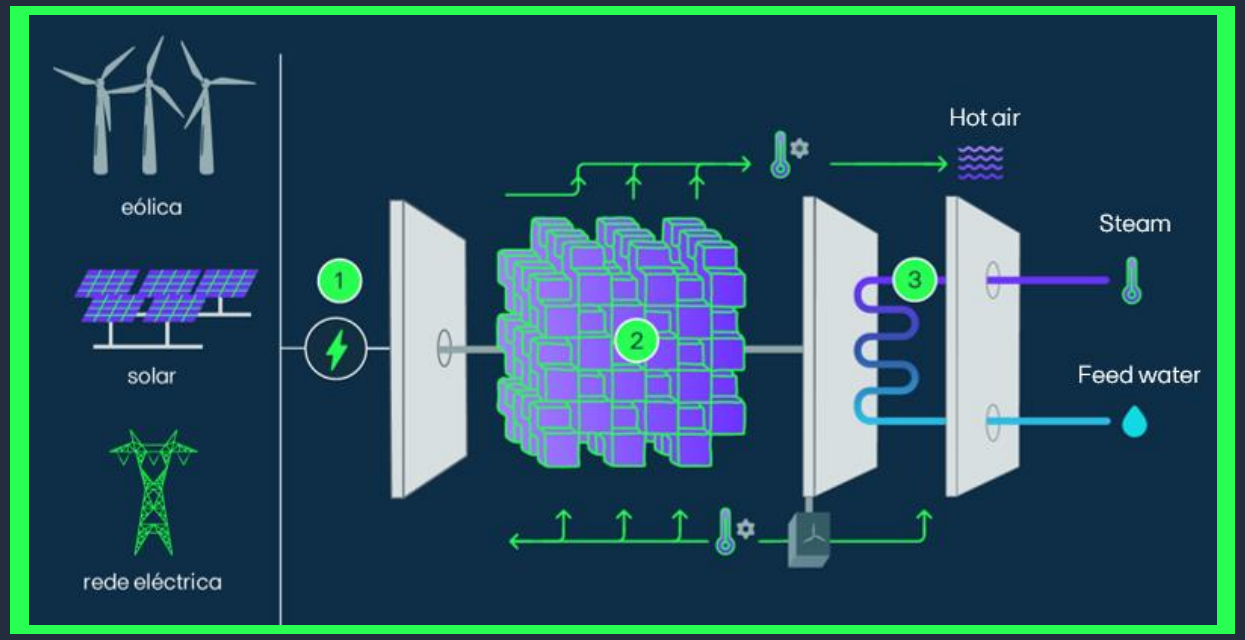
4 HEAT ELECTRIFICATION

Decarbonizing industrial heat

Heat battery based on refractory bricks that can store heat up to several days

WHAT IS THE TECHNOLOGY?

- → Refractory bricks and can store heat up to several days, providing a constant baseload
- → Clean, safe, and cost-competitive industrial heat without structural modifications to the process
- → Continuous high-temperature heat (up to 1000 °C)



*“The transition to clean energy is happening worldwide and **it’s unstoppable**.*
It’s not a question of ‘if’, it’s just a matter of ‘how soon…

…and the sooner the better for all of us”

Fatih Berol – IEA Executive Director

Questions?


edp