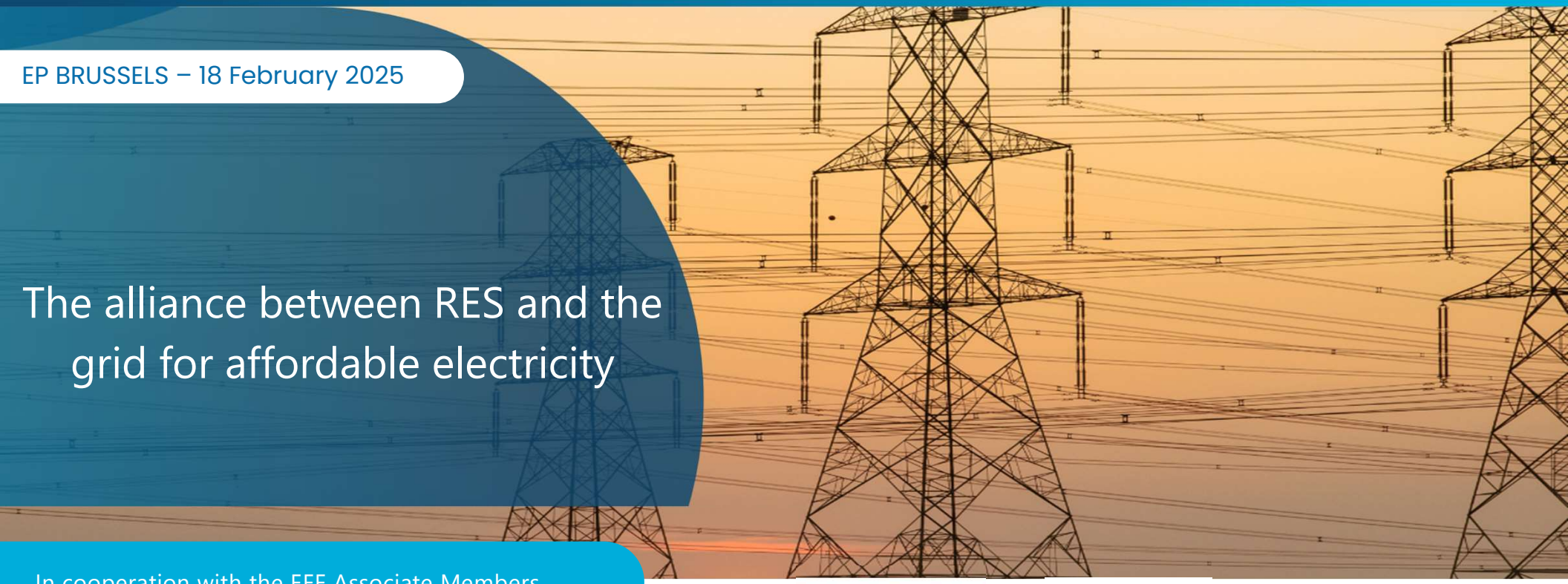
European Energy Forum

DINNER-DEBATE

EP BRUSSELS – 18 February 2025

The alliance between RES and the grid for affordable electricity



In cooperation with the EEF Associate Members

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axpo

Terna

Chatham House Rule

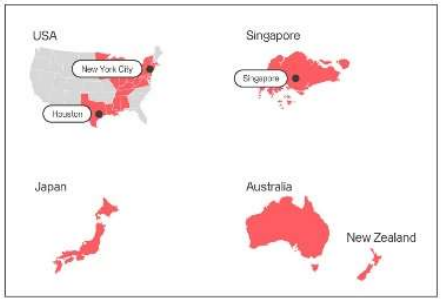
Why Renewables ?

Axpo’s three pillars:

Energy supply

Renewables energies

Customer and trading



Drive energy transition with renewables

Solar energy

- 1,300+ MWp already built
- Know-how in various solar technologies such as ÷ agri-PV, car park canopies, and floating PV.

Wind energy

- More than 90 wind farms throughout Europe.
- 1,600+ MW already built.
- 1,450 GWh production in EU in 2024.

Hydrogen

- First hydrogen-powered passenger vessel on Lake Lucerne.
- Production facilities planned in Reichenau and Wildegg-Brugg.

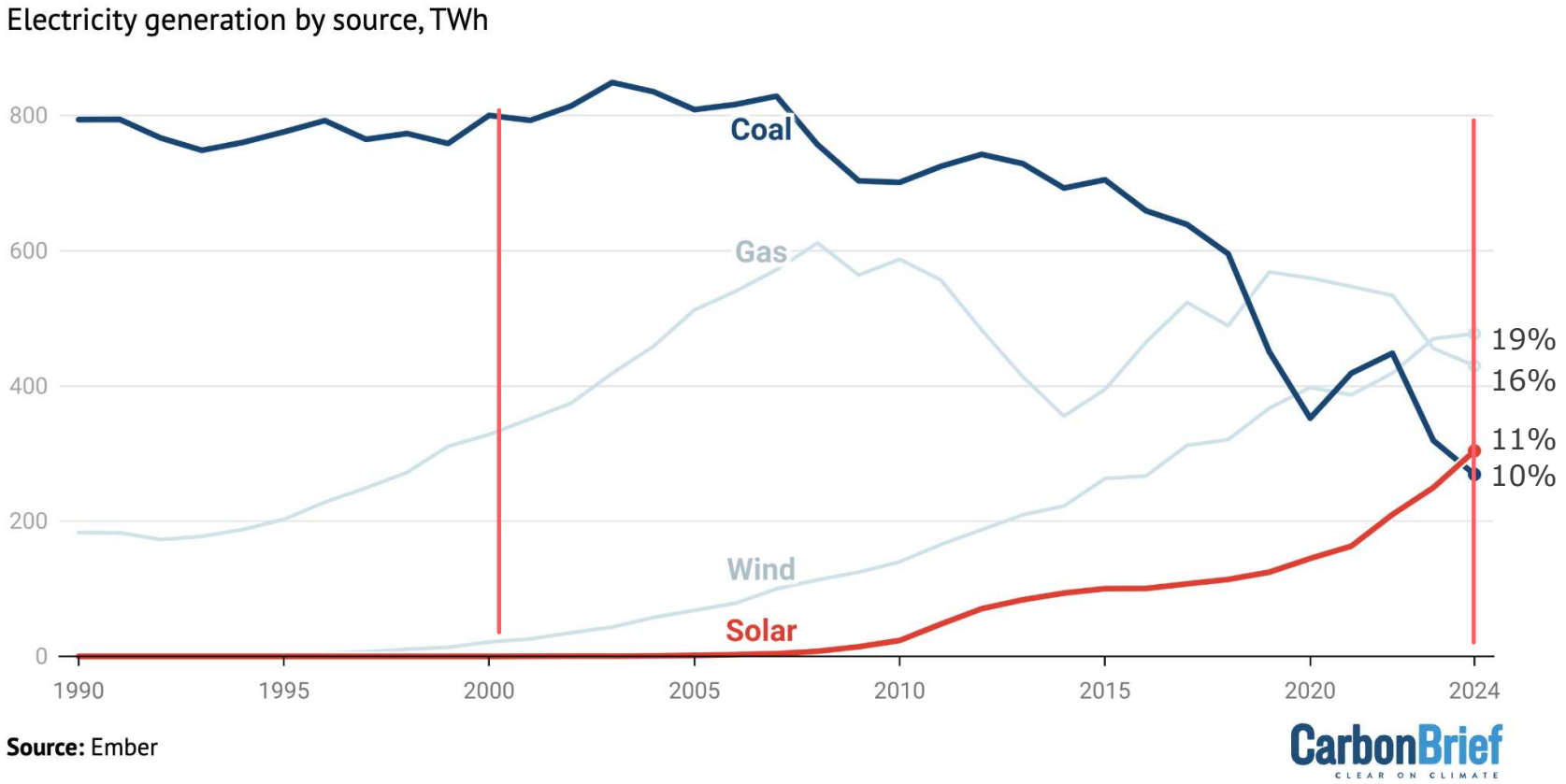
Battery plants

- Biggest plant in Sweden with 20MW/20MWh.
- Further plants planned.

© Axpo, EEF: RES + grids = affordable electricity

Axpo - Internal

Great achievement: wind & solar reached 19% resp. 11% of the EU's generation in 2024



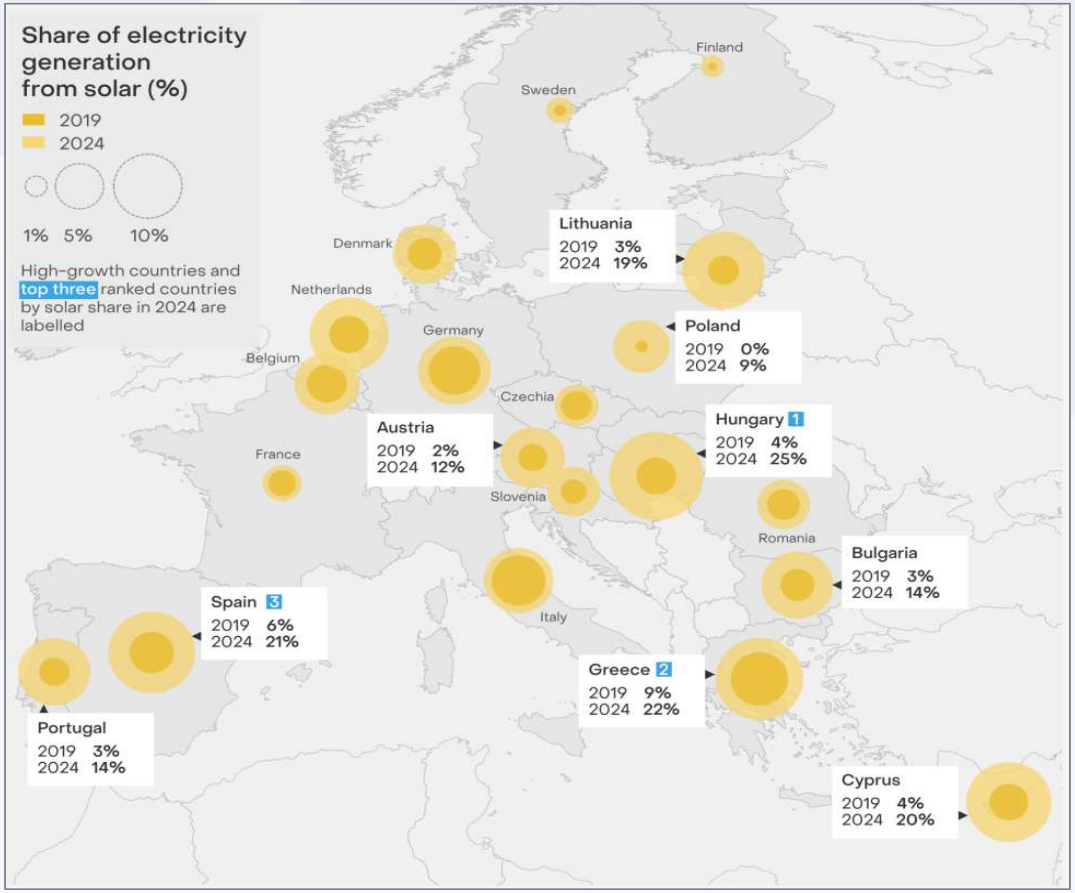
The EU's wind energy generation 2023

19%
of the EU's electricity demand

466 TWh
EU wind energy generation

Highest wind energy shares

- 56%
- 27%
- 36%
- 26%
- 31%
- 26%
- 27%



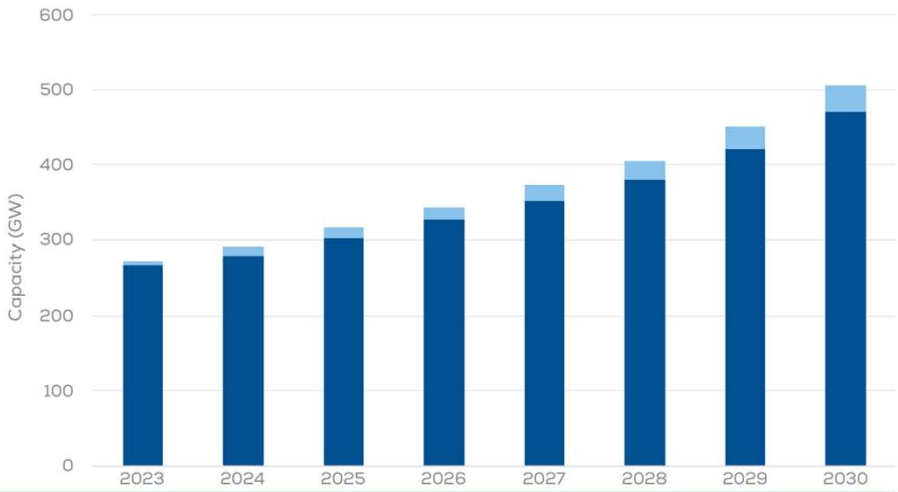
Source: WindEurope, Ember 2025

We are in the middle of the **transition!**

Clean Industrial Deal: What do we need?

1. Protect Electricity Market Design incl. PPAs.
2. Implementation of Fit-for-55 package incl. faster permitting.
3. Expansion & modernization of electricity grids.

FIGURE 23. New and repowered wind energy installations in Europe - WindEurope's Outlook

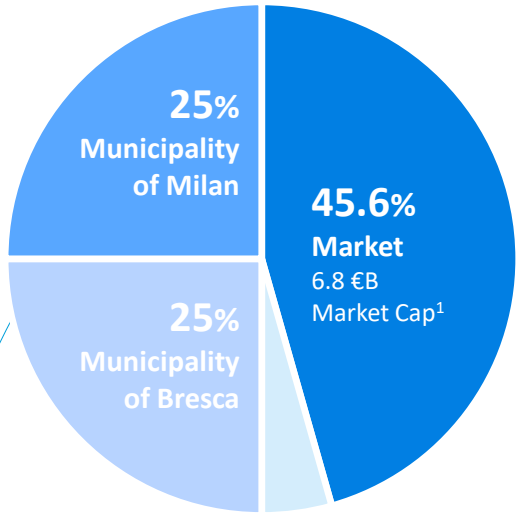


	2023	2024	2025	2026	2027	2028	2029	2030
Repowered wind farms	6	11	14	17	21	26	31	36
New wind farms	267	280	302	327	352	380	421	470

Source: WindEurope

A2A, Company profile

Our shareholding strucutre



4.4%
Other Municipalities

Key highlights | 2023 results

14.8 €B
Revenues

2.0 €B
EBITDA

0.7 €B
Net income

72%
EU taxonomy eligible CAPEX

310
Group's CO_2 emission factor (kg/MWh)

~14,000
Employees

Notes: Market Cap as of 18 February 2025

A2A, an integrated group, leader in the Energy & Utilities sector in Italy

Business Unit	Activities	Our leadership in Italy[1]	
 **Energy**	**Production | Supply** Operating throughout the energy value chain, from generation to sale of electricity, gas and services	 **2nd operator** by installed RES capacity[2]	 **2nd operator** by electricity sold
 **Waste**	**Collection | Treatment** From urban hygiene and integrated waste management to material and energy recovery with circular solutions	 **1st operator** by waste treated in WtE[3]	 **2nd operator** by tons of waste collected
 **Smart Infrastructures**	**Grids | District Heating | Services** We distribute electricity, gas, water and heat with our networks. We offer smart solutions for cities and develop infrastructure for electric mobility	 **1st operator** by heat sold	 **2nd operator** by electricity distributed

Source: Arera, AIRU, companies' websites | Notes: (1) Latest benchmarks available; (2) includes solar, wind, hydro; (3) Waste-to-Energy

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Rooted in Lombardy, we are now a national player

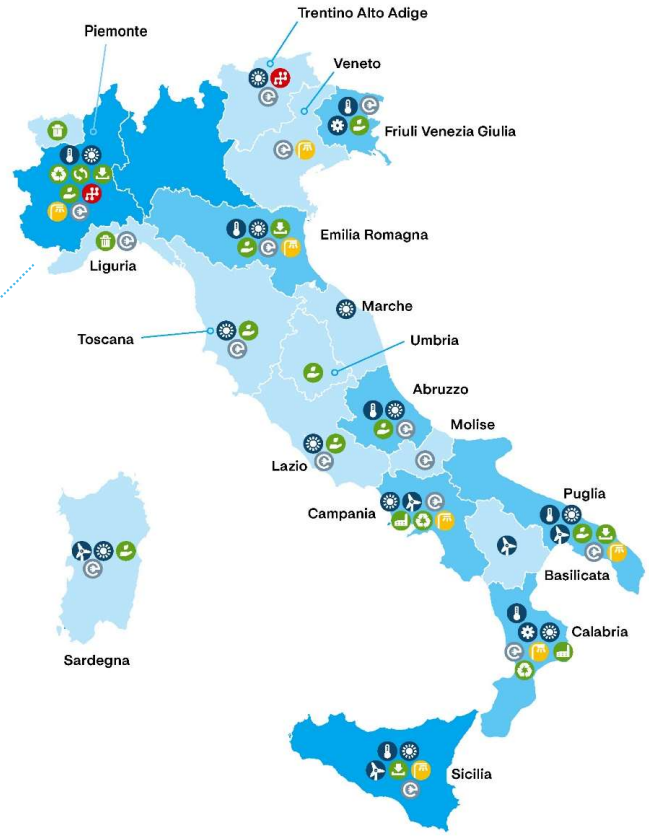
A2A Group plants and provided services

Energy plants	Waste plants
Thermoelectric	Waste-to-energy
Hydroelectric	Waste treatment
Photovoltaic	Material recovery
Wind	Landfill
	Biogas production

Services	
Waste collection	District heating
EE distribution	Integrated water service
Gas distribution	Public lighting
Gas transportation	E-Mobility charging points

Lombardia

Milano · Brescia - Sede Legale · Sondrio · Bergamo
Pavia · Varese · Como · Mantova
Lodi · Cremona · Monza · Lecco



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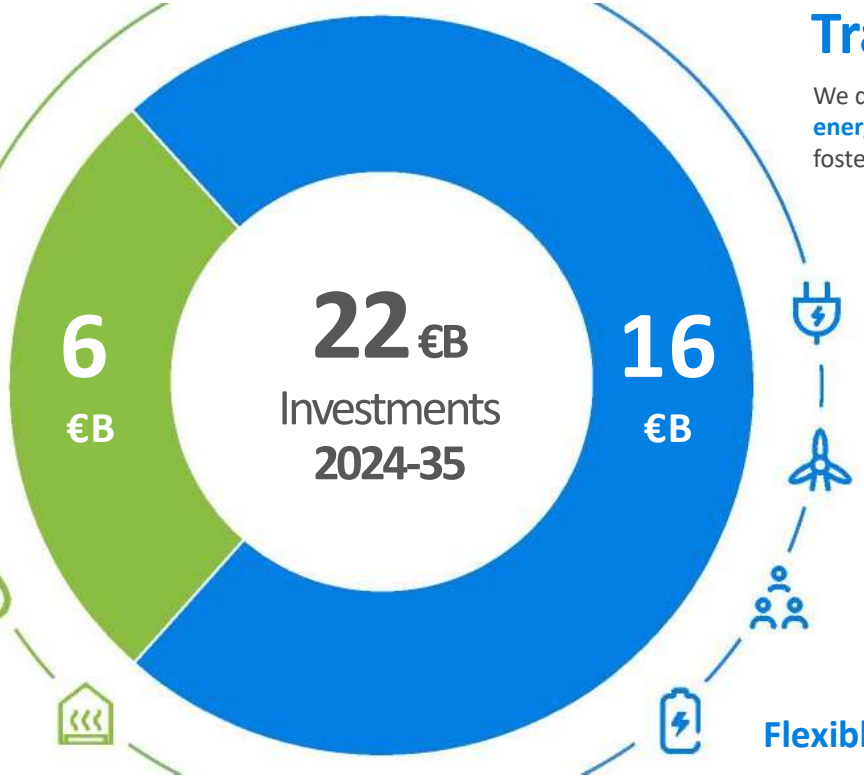
With our Strategic Plan, we aim to accelerate the Ecological Transition

Circular Economy

We generate **new resources** in the form of materials and energy, and we **reduce wastage** in order to preserve the planet and protect the environment

- Energy recovery
- Material recovery
- Water cycle
- District Heating



Energy Transition

We develop the production and use of **green energy**, speeding up **decarbonisation** and fostering the electrification of consumption

- Electric networks
- Renewable energy
- Customers
- Flexible Energy

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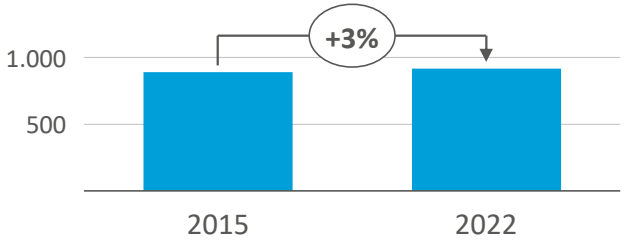
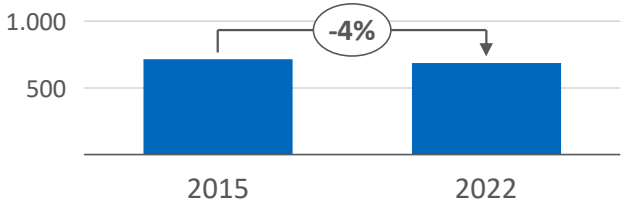
As the electrification of consumption advances…

+3% Electricity POD in the Milan area[1]
2022 vs 2015

Electricity POD in the Milan area[1] ('000)



Gas POD in Milan[2] ('000)



Source: Unareti, A2A | Notes: (1) Sum of PODs in Milan and Rozzano; (2) Referring only to the municipality of Milan

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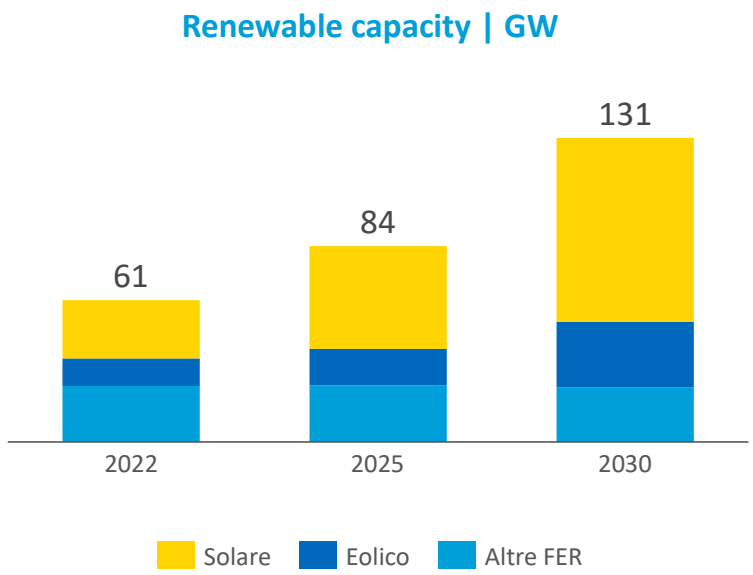
…and more and more renewables are being integrated into the system…

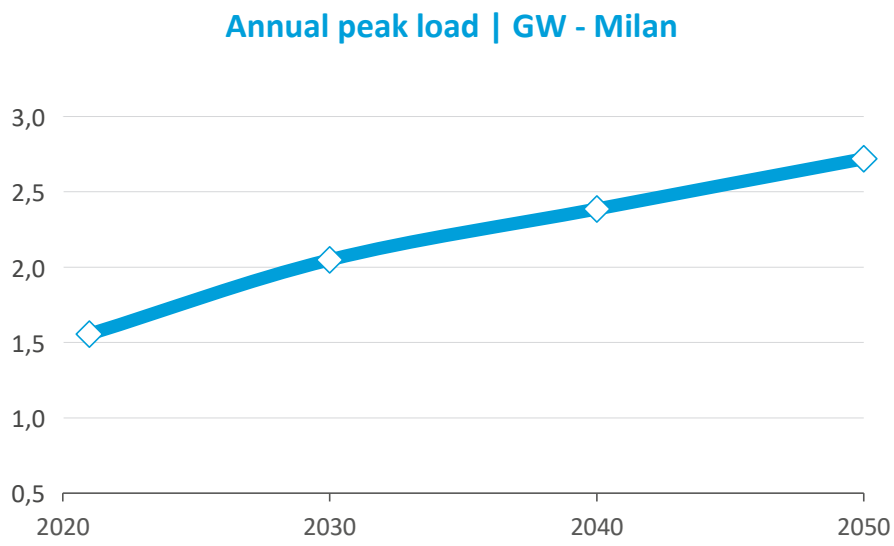
~2x Renewable installed capacity 2030 vs 2022



Source: PNIEC targets 2024

…DSOs will face many challenges, starting from the increase of peak load…

+30% Annual peak load on the distribution grid in Milan | 2021 vs 2030



Source: Unareti, A2A

...to increasing service-related issues and interruptions

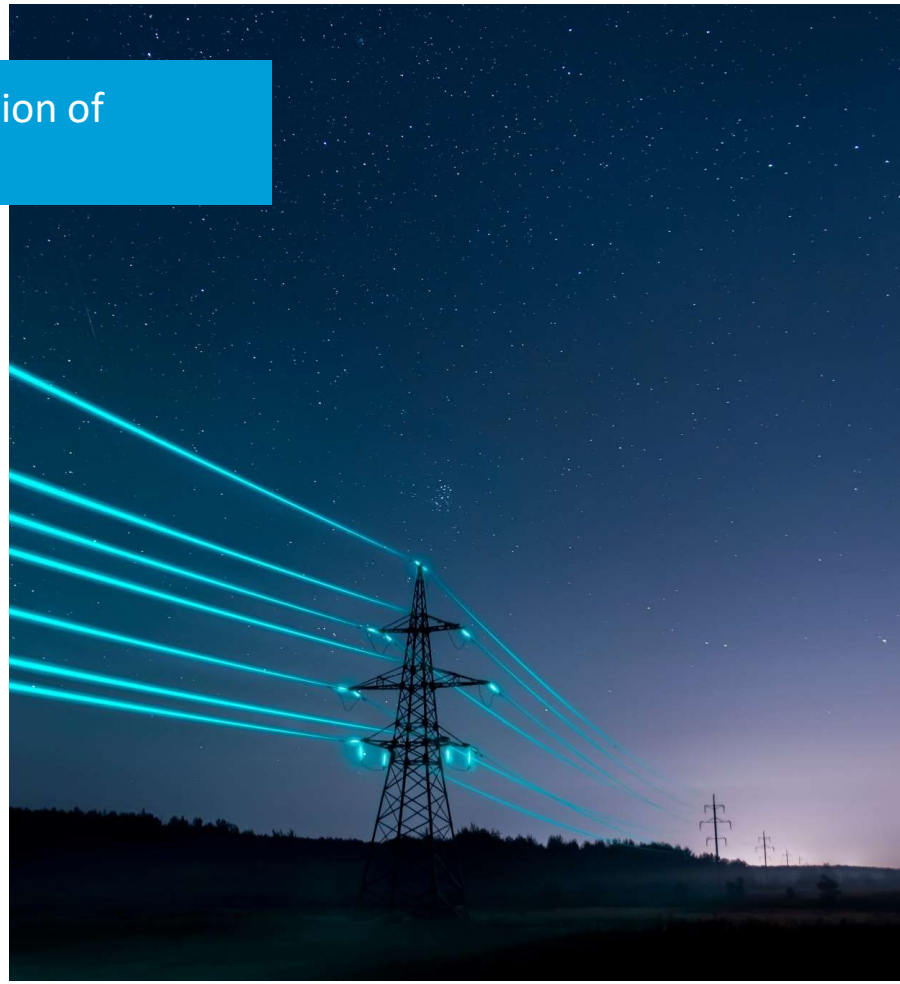
Increasing interruptions due to Climate change, electrification of consumptions and obsolescence of the grid

Acute weather events
such as heat waves and heavy rains

Higher energy demand
resulting from the energy transition

Obsolescence of network components

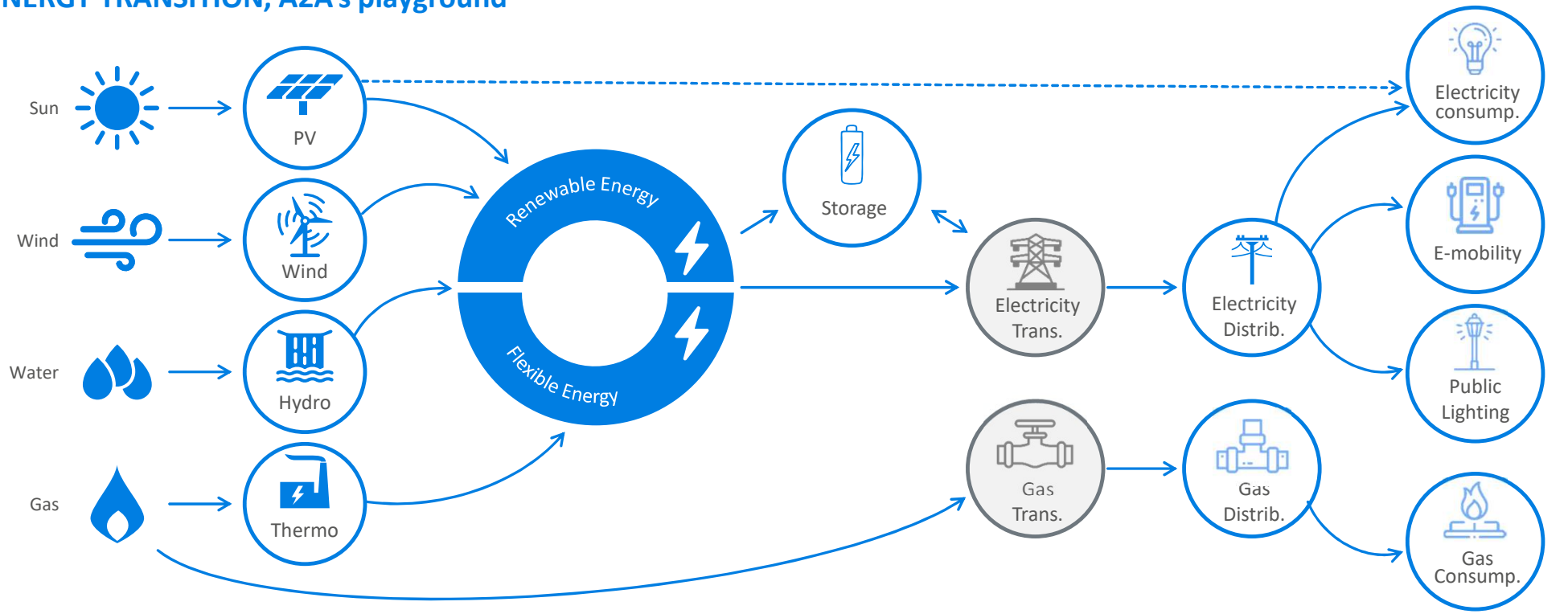
The **highest number of faults** in the Milan distribution network in 2022 occurred in conjunction with **heat waves** which led to significant temperature variations



Source: Unareti, A2A

A2A with its holistic vision is a key player for the Energy Transition

ENERGY TRANSITION, A2A's playground



Notes: Non-exhaustive representation

Achieving the energy transition will require the effort of all stakeholders

Reinforcing the grid to achieve the Energy Transition will require huge investments

>580€B

Investment needs to bridge the gap in grid infrastructures as estimated by the **EU Commission's Grid Action Plan**, of which **€375-425 billion in the distribution segment alone**.

Reducing the burden on grid operators is crucial for a sustainable transition

Recovering the amount of investment foreseen in the Grid Action Plan in the "normal" way, only through the current regulated return on investments, would lead to a **very significant increase in network tariffs** for consumers

Next EU budget as a powerful tool for grid investments

A **larger financing envelope is required at the EU level to support investments in grid infrastructure**. Existing EU financing programs available for grid investments need to be improved, especially for DSOs

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Introducing Terna

Terna in numbers

6000
Employees

75.140
km of lines

16,5bn
Investments between 2024-2028 in the transmission grid

30
Interconnections with neighbouring countries

1
PCI being implemented Elmed Submarine interconnection Italy - Tunisia

Terna & Innovation

in touch with 500+ Startups

10+ collaborative initiatives with academia and research centers

70+ innovation projects

The alliance between RES and the grid for affordable electricity

RES development

- Simplifying permitting procedures is crucial to accelerate the integration of RES
- Efficient and coordinated planning is needed to address the numerous requests for connections
- Terna supports the rationalisation and optimisation of electrical infrastructure planning through its dedicated new portal: TE.R.R.A.

Infrastructures: Investment and financing

- The rapid deployment of RES requires timely grid expansion and modernisation
- It is crucial that EU Institutions safeguard the principles of reciprocity and technological neutrality for all infrastructure cost-sharing purposes, while keeping a balance between the different priorities from all EU regions and Sea Basins

Efficiency on investments

- The future regulatory framework should aim at further integrating tariff schemes and output-based mechanisms to incentivize TSOs towards investments and actions with the greatest benefit for the system and for consumers

Implementation of EMDR and long-term markets

- There is a need to complement the regulatory framework for short-term markets with additional instruments and tools that incentivize the use of long-term contracts
- EMDR principles should be fully respected in promoting flexibility and capacity mechanisms concurrently, because these mechanisms address different goals, respectively the flexibility and adequacy of the energy system
- The complementarity of the European Resource Adequacy Assessment conducted at EU-level (ERAA) and national assessments (NRAAs) should be fully recognised to access the simplified procedures to be proposed by the European Commission as per the EMDR mandate