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EU Electricity Market Design: How to design a clean, secure electricity market fit for net-zero

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Sofia 23 February

Our Key Messages for Today

- When it comes to market design we need **an evolution, not a revolution**
- In reforming Europe's electricity market we should follow a two step approach:
  1. Preserve the current **European wholesale markets based on merit order and marginal pricing**
  2. Develop a **long-term market** to reduce the influence gas on prices and promote the necessary level of investment

- Elsewhere, we should:
  - Seek to fully **incentivise flexibility**, especially on the demand side with the real empowerment of the final consumer.
  - The capture of inframarginal rents – exceptionally put in place – **should not be extended** beyond their current end date.
  - Improve **capacity mechanisms** to fully cope with security of supply issues

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Presentation Outline

- In the next 10-15 minutes, I am going to look at the following;

1. **Background:** What we have learned from the Energy Crisis
2. **Process:** Timeline on the market reform and what the EU hopes to achieve
3. **Reforming the market:**
   i. What we should **keep**
   ii. What we can **improve**
   iii. What we need to **avoid**

Conclusion

1. Background

What we have learned from the crisis

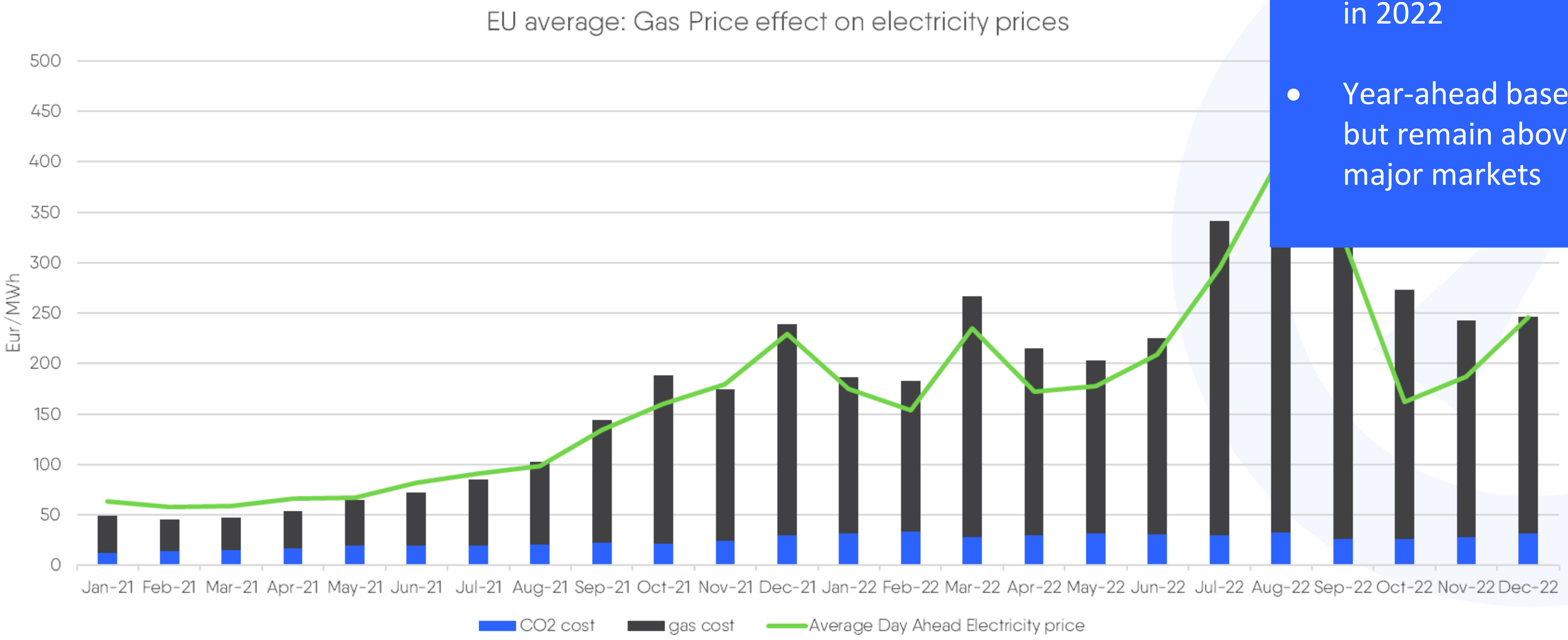
Let's not forget

- The electricity market design is not the cause of the current crisis. The "root cause" is clearly a supply shock - triggering high high gas price - having contagion impacts on electricity prices (See diagram in next slide)
- Thus, essential that we keep the discussion on emergency measures and structural reform separate
- The internal energy market has actually helped mitigate the impact of the crisis

However...

- **The crises has revealed the need to better pass on the benefits of renewables and other low carbon technologies with low generation costs to consumers**
- **Renewable and low-carbon energy sources can offer energy at low and stable prices. However, their advantages are hidden by the influence of short-term price signals on forward prices (Exacerbated by the current high price peaks)**
- **To achieve this, we principally need a greater role in the market for long term hedging instruments and contracts. This should be a key focus of the Commission's reforms**

High electricity prices mostly fuelled by gas



Progress, but the crisis isn't over

- EU Gas imports from Russia fell from 40% in 2021 to 7% in 2022
- Overall EU gas consumption fell by 20% in 2022
- Year-ahead baseload prices are down, but remain above EUR 150 / MWh in major markets

Condition exacerbated by:

- Dry summer → reduced hydro reservoirs levels
- Several nuclear reactors shut down for maintenance

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2. Process

We are currently reforming the EU Electricity Market Design

Tentative Timeline

23 January 2023
Opening of the consultation

13 February 2023
End of the consultation

14 March 2023
Commission legislative proposal

23-24 March 2024
EUCO

Summer/Autumn 2023
Tentative adoption by Ordinary Legislative Process

3. A Market Design Fit For Net Zero

What we should maintain

European wholesale markets based on merit order and marginal pricing

- Wholesale markets based on merit order and marginal pricing ensure short-term optimisation and operation of the energy system
- They ensure:

1. An **efficient dispatch of generation and flexibility** (gas units are only used when necessary)
2. **Efficient imports and exports** from countries with cheaper electricity
    1. In 2021, cross-border trade delivered 34 billion euros of benefits (ACER)
    2. Helped to smoothen price volatility
3. **Strengthened security of supply** – Without the internal market in the EU, security of supply could not have been guaranteed in many Member States. Despite the deliberate efforts from Russia to disrupt the EU energy supply, the European model has proven robust
4. **Incentivisation** - It also reveals the value of electricity and its scarcity through competition, allowing thousands of generators, prosumers, flexibility providers to react and provides transparent economic signals to demand

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What works well but can be further improved

A revised market should offer customers choice

- Rather than seeking to decouple gas and electricity, a structural reform should provide customers with a better choice of products. All customers deserve access to long-term hedging offers

Strategies to shield customers against excessive volatility

1. **Give customers better access to long-term pricing and supply offers so they can decide on their exposure to spot prices:**
   a. remove existing barriers to long-term contracts
   b. promote standardisation and transparency of PPAs
   c. reduce credit risk on PPAs

2. **Lowering volatility is also about reliable retailers. Rogue suppliers have privatised profits and socialised losses**
   a. same rules for all retailers, no exemptions
   b. consider requirements to enter retail market

3. **Be cautious with obligatory hedging**
   - avoid locking in high prices
   - hedging requirements risk shortening forward markets

Reducing credit risk of PPAs

- **State-Backed Guarantees:** Public funds can offer guarantees to protect generators and lenders.
- **Pooling demand**: A multi-buyer consortium could sign PPAs on behalf of numerous smaller consumers, jointly responsible for the contract.

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Diverse long-term instruments to support build-out

- +700 GW new RES are needed by 2030 along with renewal of flexible and firm capacity and additional storage and DSR.
- A market with uncertainty and rising inflation will not deliver this alone. A well-balanced variety of long-term instruments will be needed

4 Long-Term Instruments	
Long-term hedging/contracting • Enhance the liquidity by removing barriers • Support the development of XB forward products	**Contracts for Difference (CfD)** • Keep CfDs as a complement to market-based investments • Consider implications of CfDs on forward markets and public budgets
Capacity mechanisms • Apply where needed • Allow for different technologies	**Power purchase agreements (PPA)** • Standardise PPAs to make them tradable • Reduce credit risk through aggregation and pooling

CfDs are useful but require caution

- CfDs should be used on a voluntary basis – there should be no mandatory obligation
- There is no 'one-size-fits-all' CfD – an adequate design matters
- Massive use of CfDs raise a question of how to pass on costs to the customers and their impact on forward markets liquidity

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More manageable transparency and financial rules must be manageable

- Huge collateral requirements caused by volatile prices are putting liquidity strains on companies and limiting their ability to invest.
- In some cases companies have had to mobilise billions EUR in few days to answer margin calls.
- Strict collateral rules are a key cause of low liquidity in forward markets

3 ways to improve collateral rules

1. Widen types of non-cash collateral accepted
2. Make collateral accessible to wider energy clearing industry
3. Ensure regulatory predictability

Complexity – a growing risk

- The rules and reporting requirements for utilities are growing more complex by the day.
- Increased regulatory pressure may deter investors and risks crowding out smaller players from the market.

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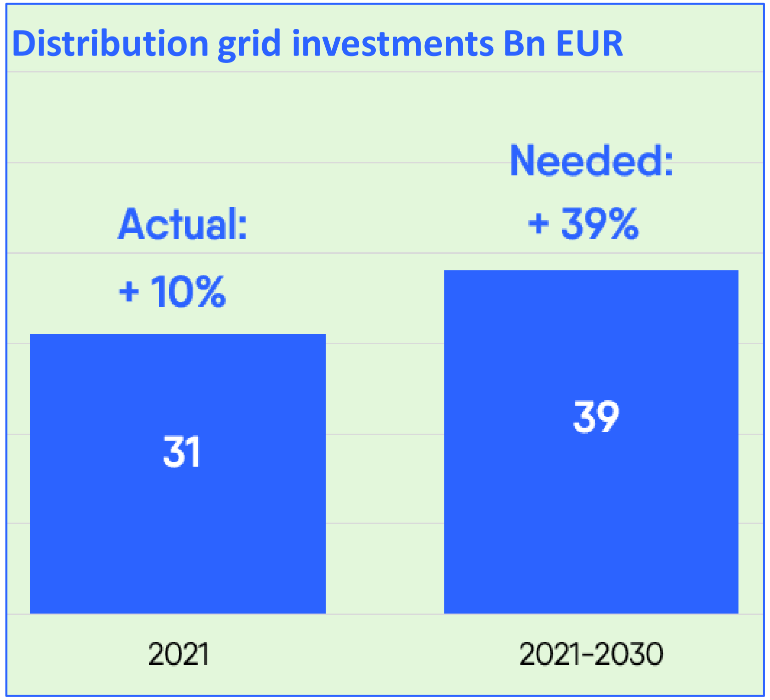
More investment in grids

- The net-zero transition entails massive electrification and decentralisation
- Distribution grids will be the backbone of a decentralised electricity system
- The structural under-investment needs to be addressed by EU, Member States and regulators

5 ways to accelerate grid investment:

1. Give overriding public interest status to distribution grids
2. Modernise tariffs where needed
3. Integrate distribution in EU infrastructure planning
4. Include distribution grids in EU funding programmes
5. Mandate national regulators to remove all barriers



Source: Eurelectric Power Barometer 2022

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What we need to avoid

Extending the cap on inframarginal rents

1 FRAGMENTS THE EUROPEAN ELECTRICITY MARKET

2 AFFECTS PRODUCERS' INCENTIVE TO INCREASE PRODUCTION

Eurelectric is opposed to an extension of any form of revenue limitation of inframarginal generators

47%

3 RAISES SIGNIFICANT IMPLEMENTATION CHALLENGES

4 BREACHES INVESTORS' CONFIDENCE AND DISINCENTIVISE INVESTMENTS

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Disruptive changes will not work

- The investment needs in generation amount to EUR 80 Bn per year. Disruptive changes to the market will trigger uncertainty among investors
- Both the Spanish and French proposals risk fragmenting the internal market increasing costs and prices by eliminating the market and competition
- In a strongly centralised model where a state entity acts as the sole buyer of a large part of generation, the forward market and competition in trading will be undermined
- The Spanish proposal disregards the role of PPAs and removes the demand signal from marginal pricing

State vs market in Spain

- In the past five years renewables grew 21 GW thanks to bilateral contracting and the development of PPAs.
- In the same period 6 GW capacity were awarded via auctions, of which only 1.5 GW is expected to be built.
- In the last auction in November only 1% of the 3.3 GW auctioned by the government were awarded.

Source: Eurelectric, Aelec

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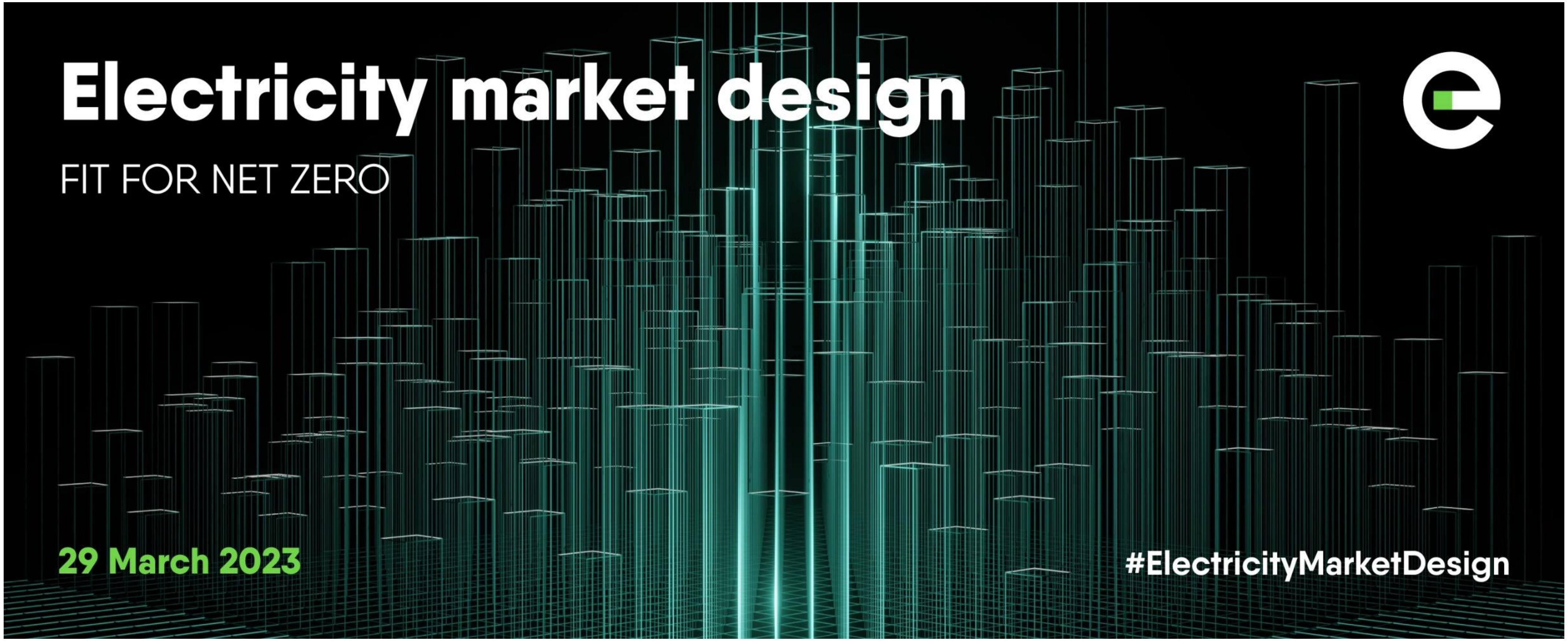
#ElectricDecade #GameChangers

Save the Date – Launch event on 29th March



- **350** industry & policy leaders from the transport and power sectors
- Launch of EY-Eurelectric study on 6 critical essentials accelerating e-mobility
- Interactive showroom of e-mobility innovations
- B2B meetings & networking
- c-level public debates
- private roundtables
- high-level fireside chats

1 Critical raw materials

2 Clean power generation

3 Grid management

4 Charging infrastructure

5 Consumer acceptance

6 Workforce shortages

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Europe’s most prestigious energy event!

20 - 21 June 2023, Brussels

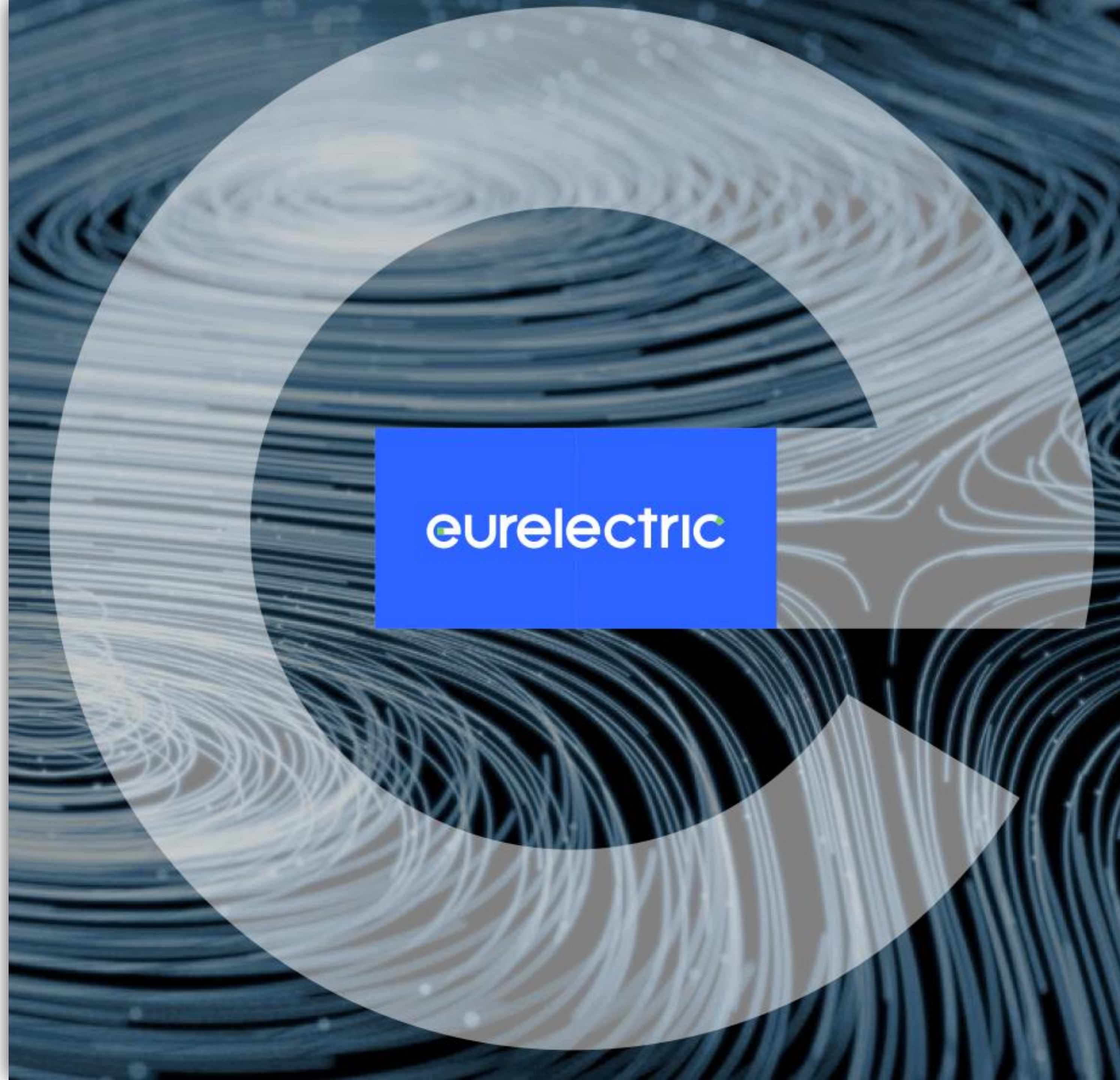
Eurelectric Power Summit

Balance of Power

70+	50+	1,500+	12+
Visionary Speakers	Sponsors	Participants	Sessions

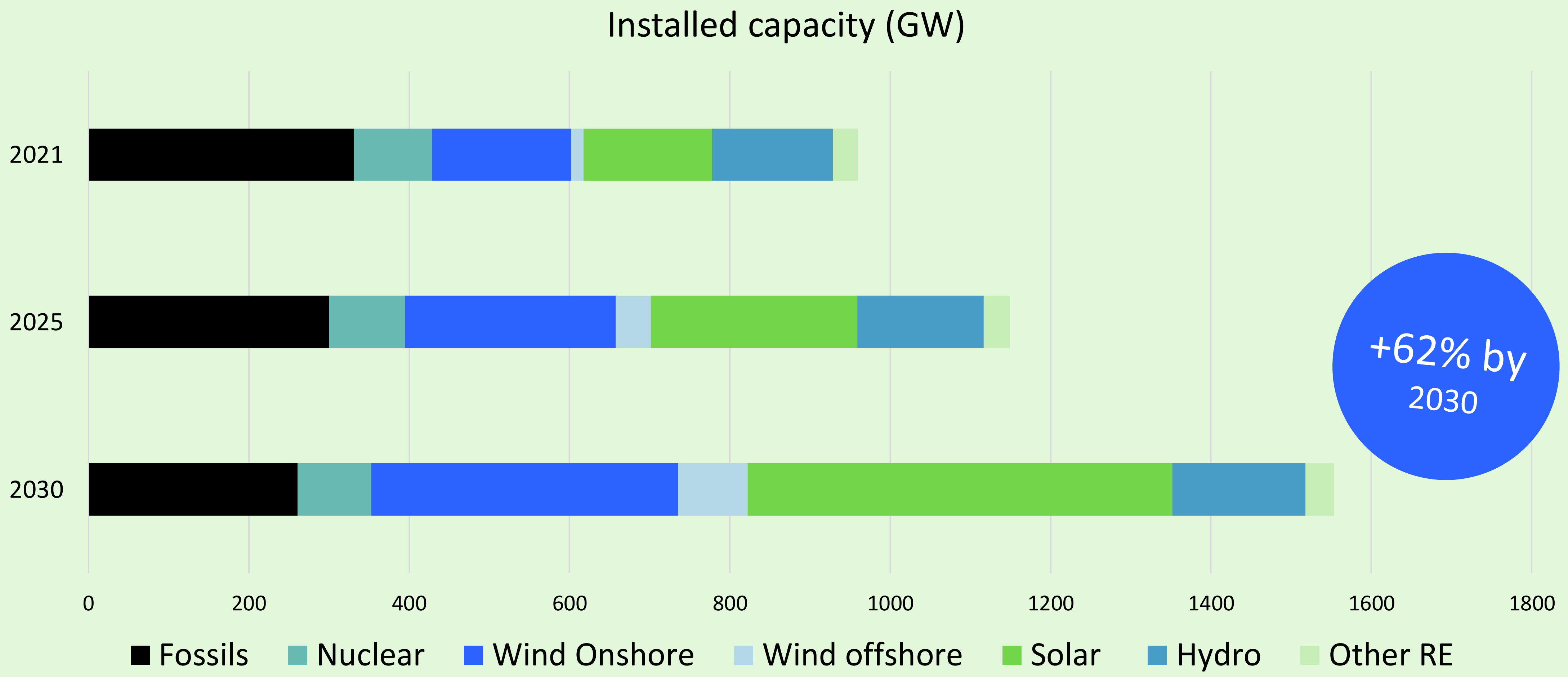
Who we are

- **Eurelectric** represents **+3500** electricity companies in over **32** European countries and **+30** business members across the globe
- Our work covers all major **policy** and **technical** issues affecting electricity generation and markets to distribution networks and customer issues
- Drawing on **more than 1000 industry experts** to ensure that our policy positions and opinions reflect the most recent developments in the sector
- The Secretariat is based in Brussels and coordinates all activities of Eurelectric



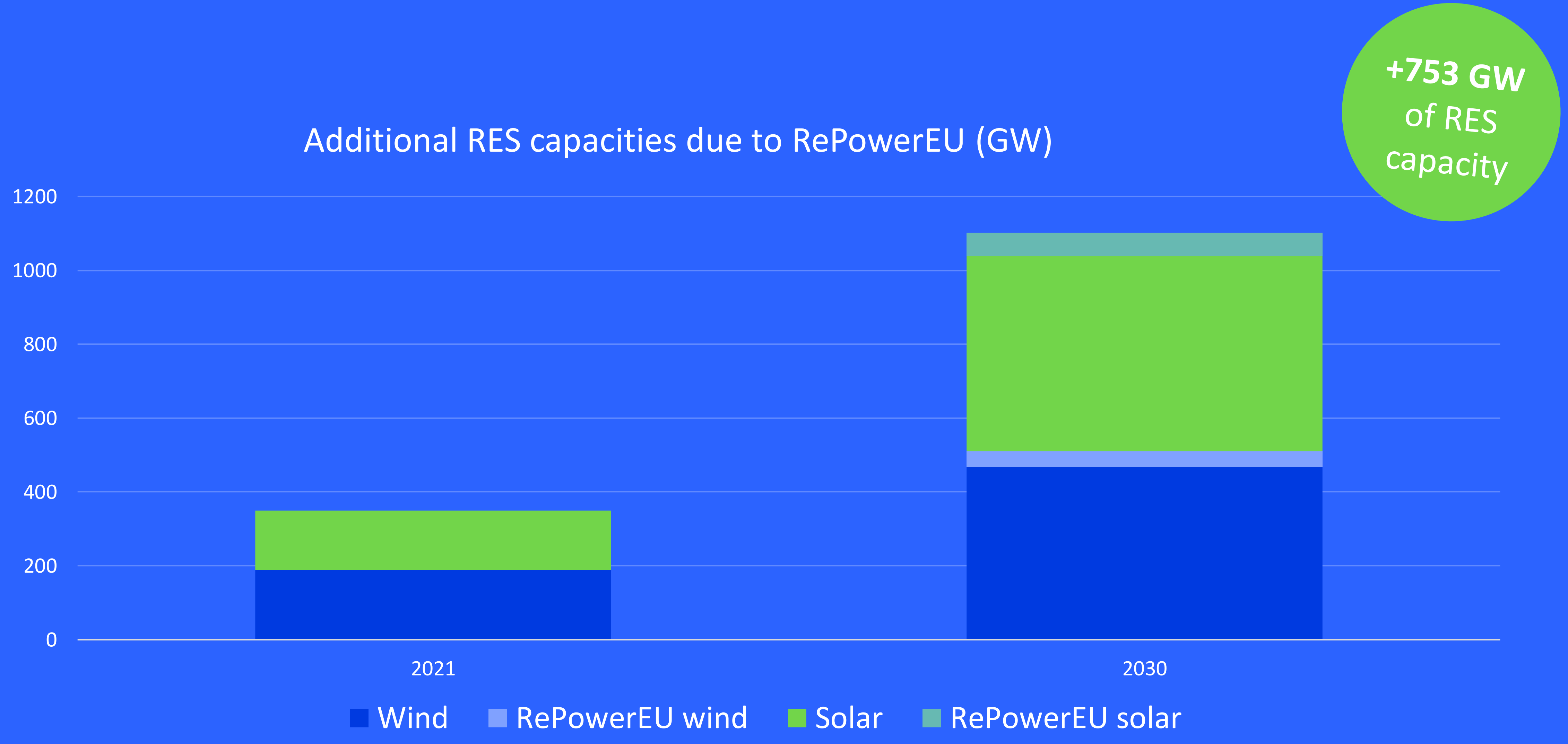
Grid integration challenge

More than 70% of new capacity will be connected at the distribution level

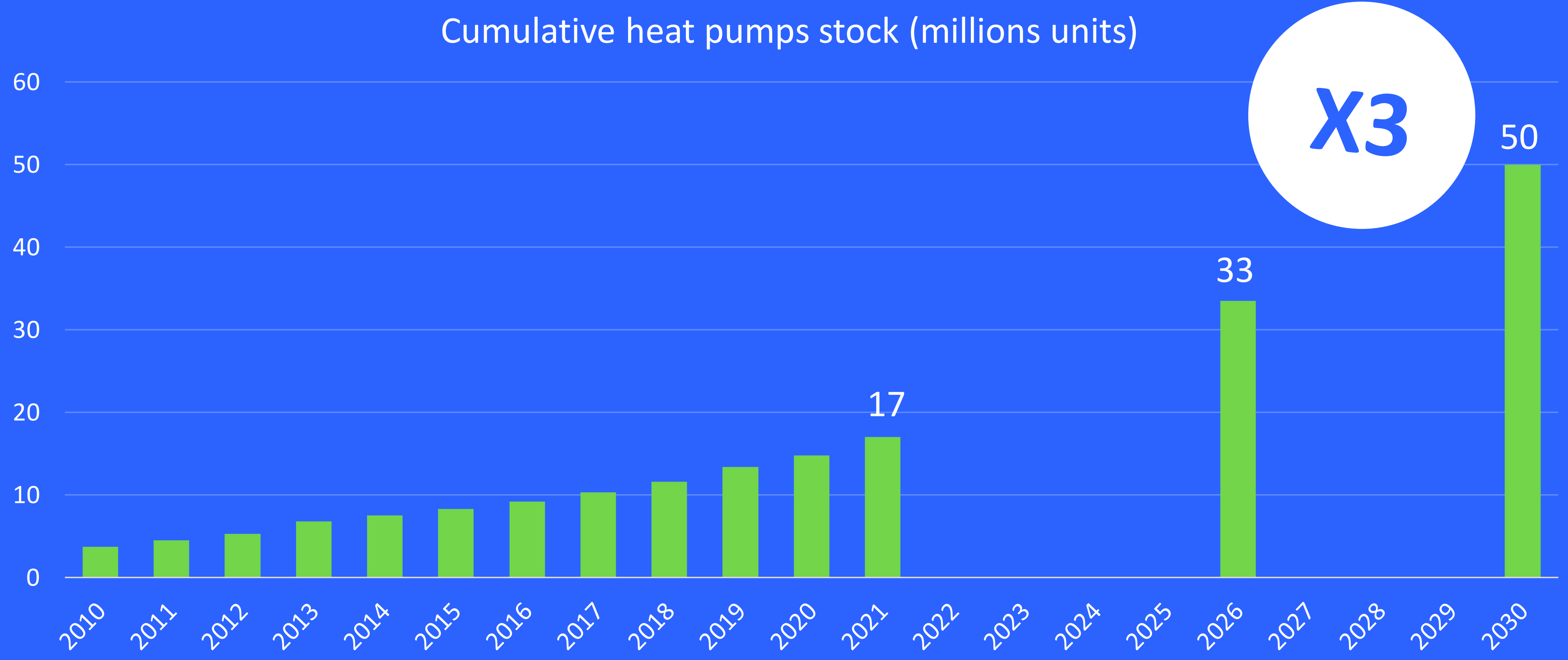


If we accelerate renewables, we need to accelerate the grid"

Leonhard Birnbaum, Acting President of Eurelectric

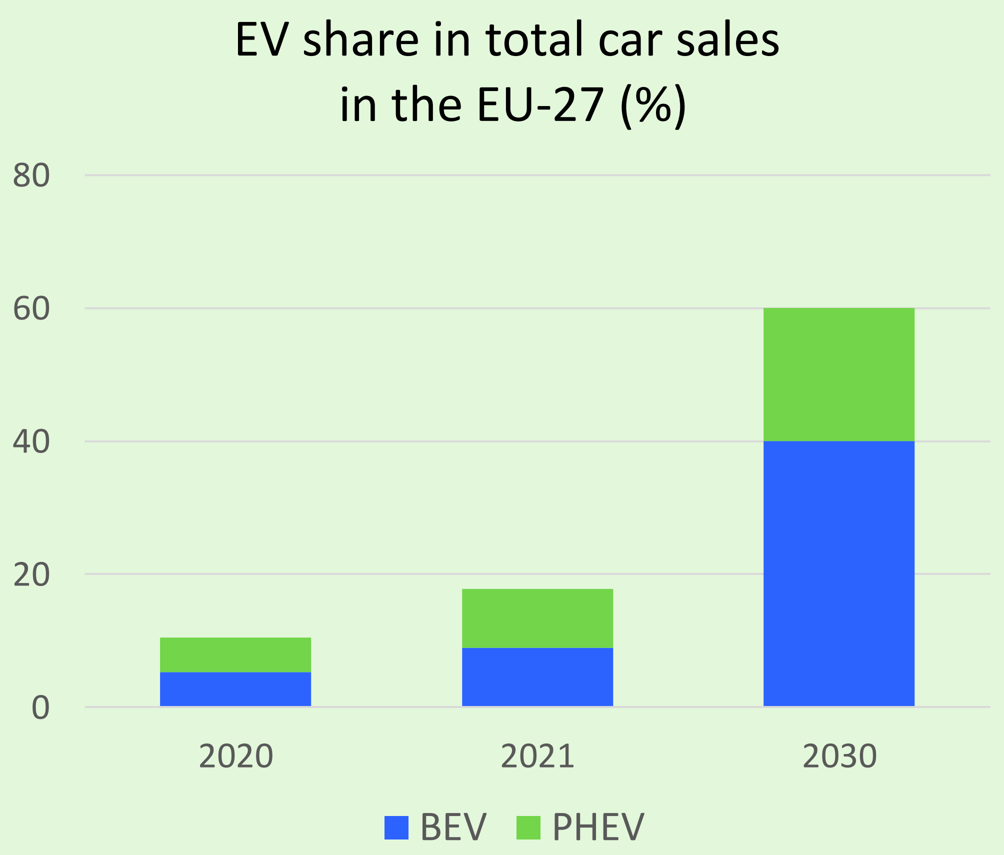


Total heat pumps is expected to triple by 2030 and will need to be integrated in the grid

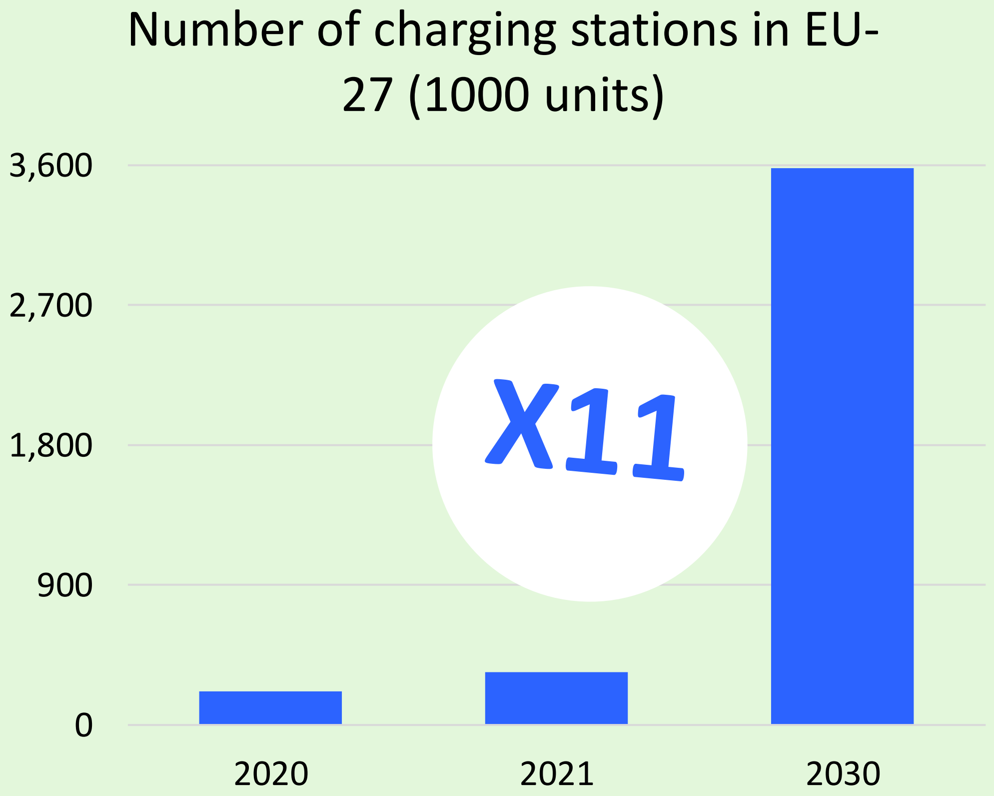


The e-mobility revolution underway…

2 in 11 car sales are electric



..And the charging infrastructure will need to be rolled out accordingly



23% more investment in distribution grid is needed this decade