



18th IAEE EUROPEAN CONFERENCE

REGULATORY CHALLENGES FOR THE EUROPEAN ELECTRICITY MARKETS IN A RENEWABLE-BASED ENERGY SYSTEM: THE EU NEW MARKET DESIGN

A LONG HISTORY...



Production commences at the San Quirico Refinery in Genoa.



1947



The ERG share is listed on the Stock Exchange.

1997



ERG enters the renewables sector with the acquisition of EnerTAD.

2006

ERG Power's combined cycle power plant (480MW) fuelled by natural gas enters operation.



TotalERG is established, a joint venture for the sale of oil products.

2010

ERG transfers the ISAB Energy plant and the fuel network of ERG Oil Sicily.



2014



ERG enters the wind market in the United Kingdom with a 47.5MW project. At the end of 2016, installed wind capacity is 1,720MW.

2016

ERG enters the solar power sector (30 photovoltaic plants acquired, 89MW in operation).



At the end of 2018, installed wind power totals 1,822MW. Definitive exit from Oil with the sale of TotalERG.

2018

ERG enters the solar sector in Germany: co-development agreement with AREAM (600MW).



Installed wind power at the end of 2020 totals 1,967MW.

2020

Wind: ERG acquires 172MW in Italy, and starts up about 230MW among France, Poland, U.K. and Sweden.

At the end of 2022 installed wind power totals 2,599MW.



PV capacity at year-end amounts to 370MW, after acquisitions of 34MW in Italy and 25MW in Spain⁽³⁾.

2022

1938

Edoardo Garrone founds ERG in Genoa.



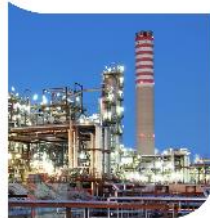
1975



Production commences at the ISAB Refinery in Priolo.

2000

ERG - through ISAB Energy - starts to produce and sell electricity from the gasification of the heavy residues from refinement.



2008



ERG sells 49% of the ISAB Refinery to LUKOIL.

2013

ERG becomes the leading wind operator in Italy with an installed capacity of 1,087MW and among the top ten in Europe (with a total of 1,340MW), and acquires a company for wind farm O&M activities.



ERG transfers the ISAB Refinery and completes its exit from refining.

2015

ERG enters the hydroelectric sector with plants in Umbria, the Marche and Lazio (527MW).



ERG acquires 6 wind farms in France (64MW) and constructs 3 wind farms in Poland for a total of 82MW. At the end of 2015, installed wind capacity is 1,506MW.

2017



ERG's growth in the wind sector continues: 48MW in operation in Germany; 16MW in operation in France. At the end of 2017, installed wind capacity in Europe is 1,814MW.

2019

ERG closes the acquisition of Andromeda (51MW) assets, increasing its PV total capacity up to 141MW.



Wind: ERG acquires 52MW in France and 34MW in Germany. At year end, installed wind capacity in Europe is 1,929MW.

2021

Wind: ERG enters the Sweden market, and starts operation in U.K.. At year-end installed wind capacity in Europe is 2,198MW.

On August 2, ERG signs an agreement with ENEL for the sale of ERG Hydro S.r.l.⁽¹⁾.



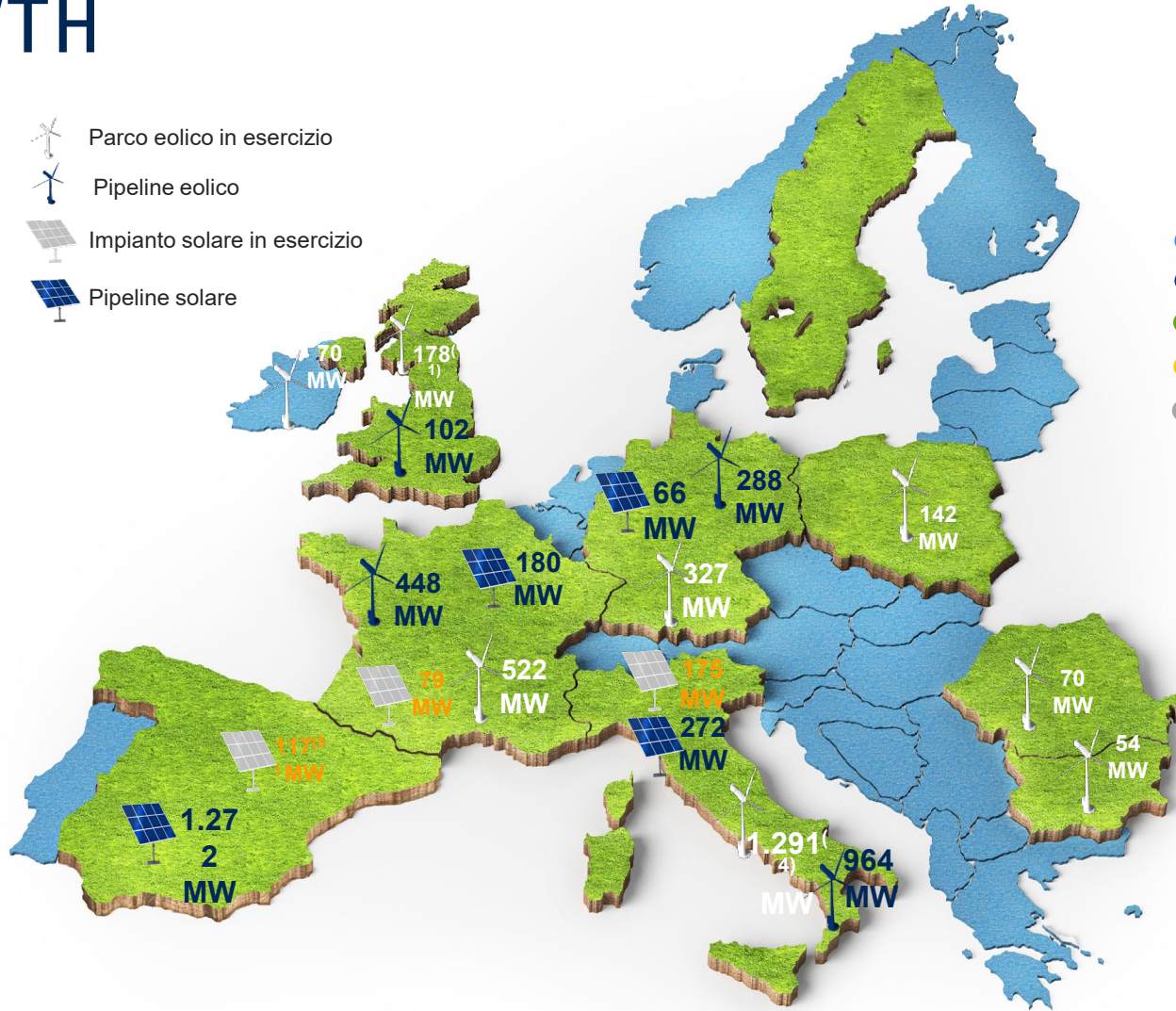
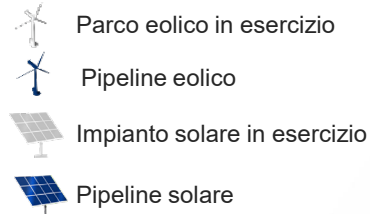
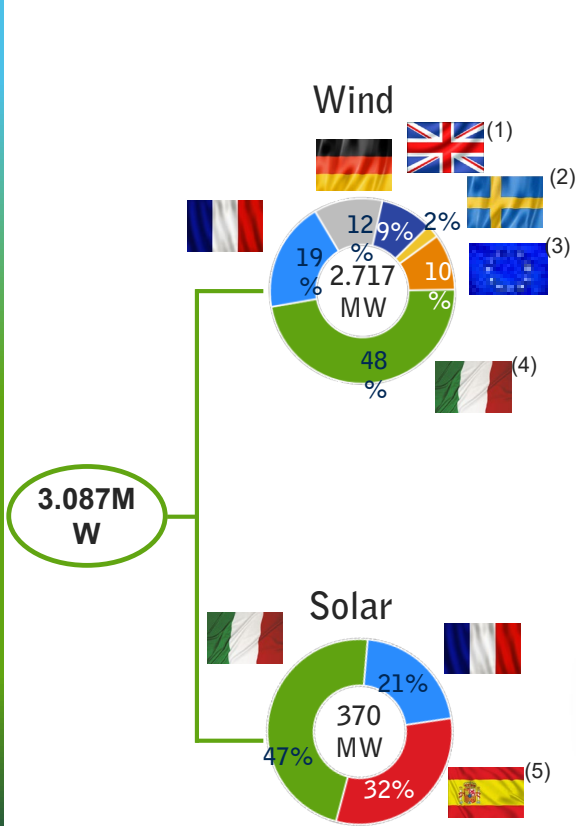
ERG enters the solar market in France (79MW) and Spain (92MW)⁽²⁾.

⁽¹⁾ The closing for the sale of the Hydro portfolio to Enel took place on January 3, 2022
⁽²⁾ The closing of the solar acquisition in Spain (92MW) took place on January 31, 2022
⁽³⁾ The closing of the solar acquisition in Spain (25MW) took place on June 30, 2023

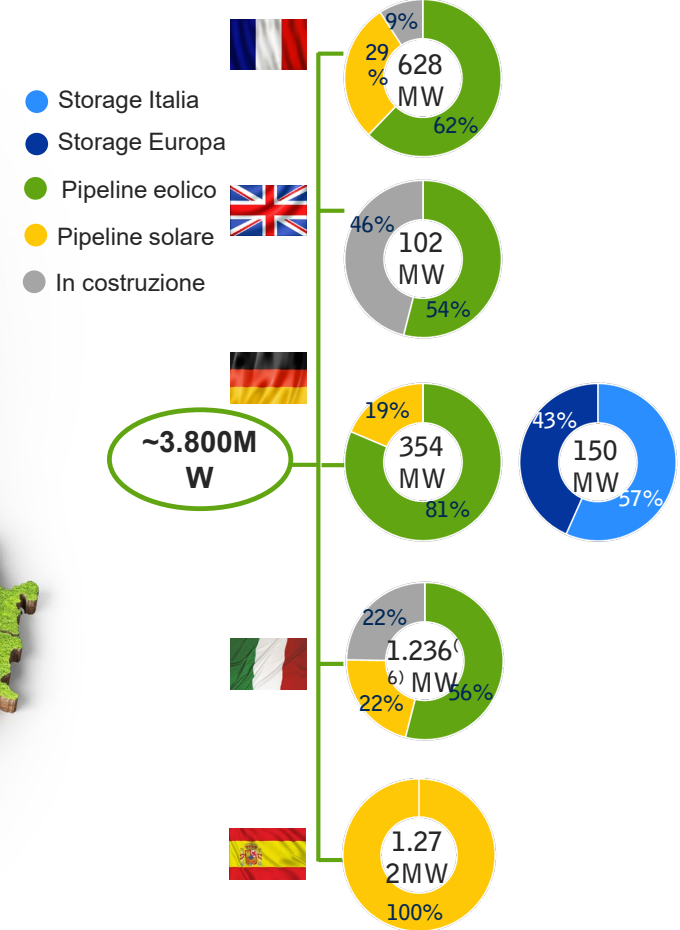
ERG AS OF TODAY: A SOLID PLATFORM OF ASSETS TO BOOST FUTURE GROWTH



Capacità installata totale



Pipeline eolico, solare e storage



(1) Include i parchi eolici Creagh Riabhach (92 MW, entrato in esercizio il 12 gennaio, 2023), e Sandy Knowe (86 MW entrato in esercizio in due fasi, rispettivamente il 13 ottobre e il 16 dicembre 2022)

(2) Si riferisce al parco eolico Furuby (62 MW), entrato in esercizio il 25 novembre 2022

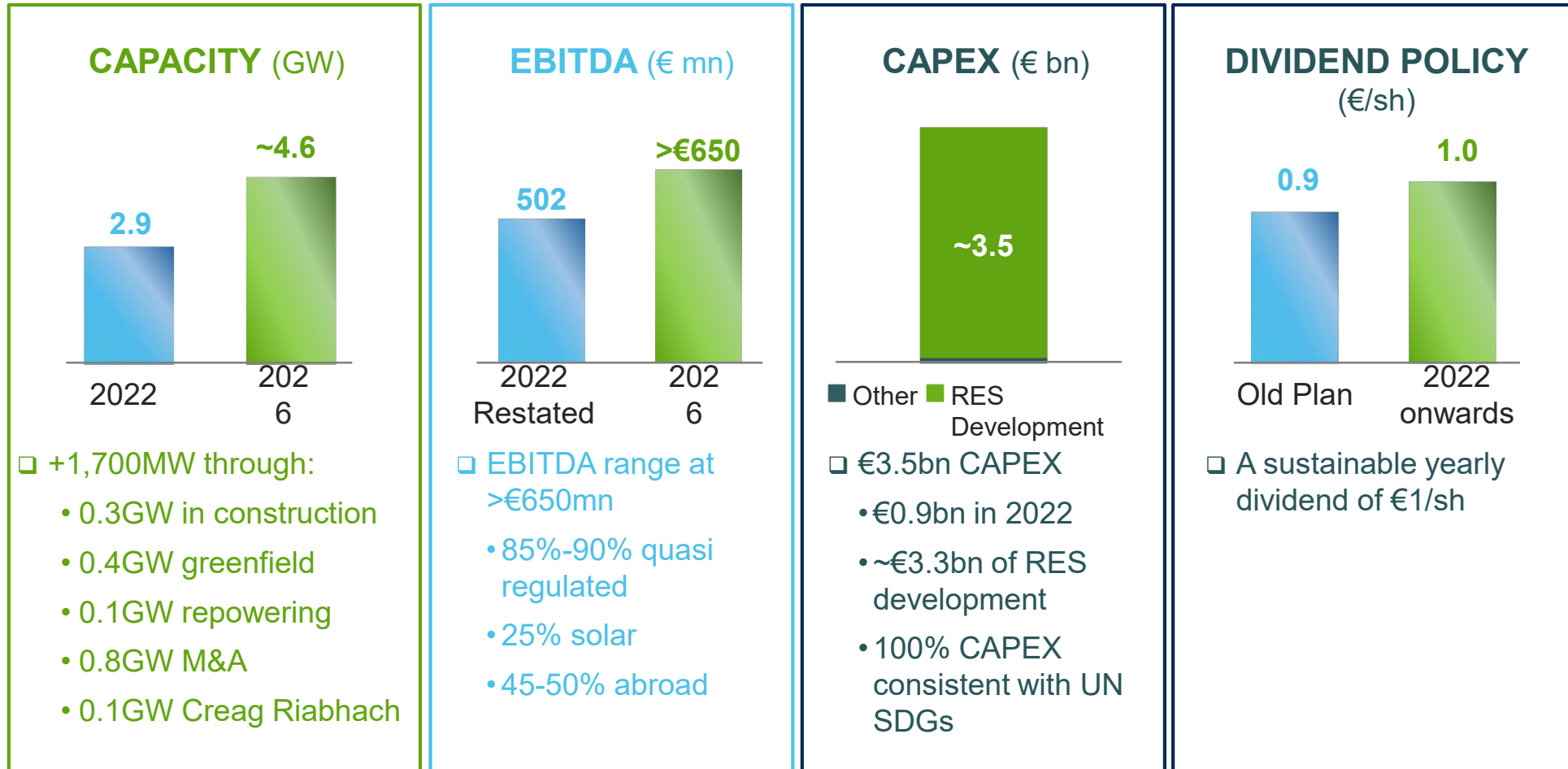
(3) Si riferisce a Polonia, Romania e Bulgaria

(4) Include 26MW di capacità aggiuntiva al parco eolico Monreale-Partinico, a seguito completamento delle attività di repowering in data 14 giugno 2023

(5) Include il parco fotovoltaico a Fregenal (25 MW), entrato in esercizio il 30 giugno 2023, data del perfezionamento dell'acquisizione

(6) Il Repowering è indicato su base lorda

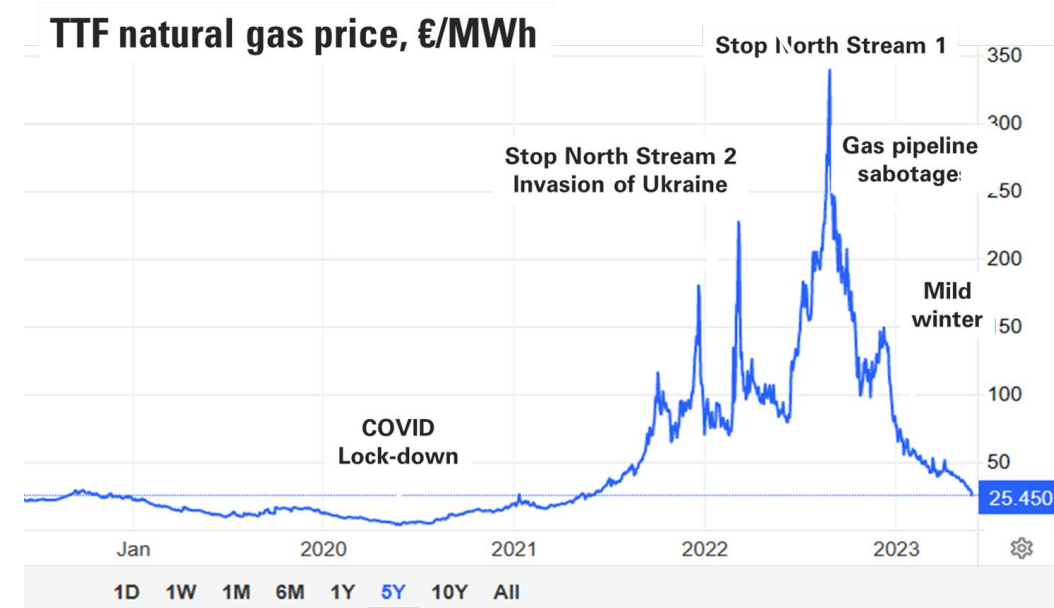
ERG: BUSINESS PLAN 2022-2026 KEY TARGETS



CURRENT FEATURES ON MARKET CONTEXT COMPARED TO PREVIOUS 2022-26 BP



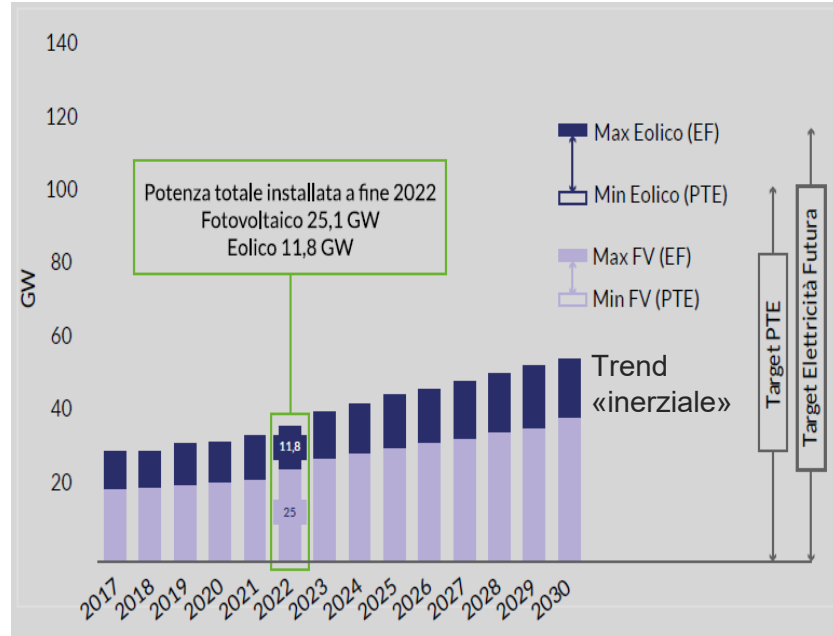
- **High volatility and increased levels** in (gas and) electricity prices
- **Decarbonization & energy security:** renewables at the heart of energy transition
- **Decarbonization vs energy security:** fossil fuel phase out / the future of nuclear are unclear
- **A tourbillon of emergency interventions at a national and EU level** against high prices but also RES generators (!)



- Need for an **Electricity Market design “mild reform”** within the current EU Parliament’s term of office

ENERGY&STRATEGY (POLIMI): LAST CALL FOR RENEWABLES

- Despite the potential, the RES growth in Italy (and not only) **lags behind the 2030 targets**



	Eolico	Fotovoltaico	
2023	Tasso necessario Scenario EF	~2,9 GW/anno	~7,8 GW/anno
	Tasso necessario Scenario PTE	~2,1 GW/anno	~6,5 GW/anno
2022	Tasso reale	~0,5 GW/anno	~2,5 GW/anno

EMD REFORM – MAIN FEEDBACKS



● Overall: **positive** ●

- The move **to long-term contracts** – on a voluntary basis - to **support long-term investments** and shield **energy bills from fluctuations of short-term market prices**, in particular from fossil fuel rump-ups
 - › it is a smooth beginning of the **exit from the energy only markets**
 - › ... towards a **RES-driven era** (high upfront costs)
- **CfDs through auctions as the core-instrument** and **PPAs** as hedging solutions
- **Repowering and life extension investments** sit within the notion of “**new investments** for the generation of electricity”
- It should mark **the end of the Council Emergency Regulation on inframarginal Price Cap** and **fragmented interventions of Governments**
- **CRMs are no longer a “last resort” tool** / promotion **non-fossil participation** in new and existing mechanisms

EMD REFORM – POSSIBLE ISSUES / 1



The devil is in detail

- **The endless debate RES – nuclear slows down the negotiations**

- reliability (France's experience)
- time to market out of this decade
- public opposition
- costs (experiences in Europe)
- environment (nuke waste)
- nuclear is for baseload



**Current
legislation
dissolves by
early 2024!**

- **CfDs**

- more liquidity → make tariffs and permitting “fit for the purpose”
- locational signals... but consider the RES source!
- repowering: need of a fair level playing field with new projects with no reduction in tariffs, valuing the soil-saving

EMD REFORM – POSSIBLE ISSUES / 2



- **What for existing RES units?**
 - standard PPAs / CfDs
- **Flexibility and related**
 - peak shaving as an emergency-related product
 - flexibility up to Member States' evaluation (complexity, market stability)
 - how to merge flexibility products with ancillary services market and CRMs
 - **storage** must reach an adequate revenue stacking for driving investments to the required level
- **CRMs**
 - **climate-compatible design** allowing **storage**, demand response and **renewable generators'** participation

WRAP UP



- Need to a **step-change** in the decarbonization pace, we are not doing enough
- EMD must play its role, from «energy-only» to a **decoupled market** to express the right price signals
- Besides, we must **stop any extraordinary interventions of Governments and Union** in power markets, which further slow-down investments in RES
- **CfDs are confirmed as the most suitable instrument to drive the RES deployment** but they must be given new liquidity: tariffs linked to the real cost of technologies, quicker and easier permitting procedures
- Repowering must play at the same level with green-field projects → no tariff reduction
- Flexibility ad CRMs need a **more climate-compatible design** and the right integration together and with other markets, to give to storage the correct revenue stacking
- **Time matters:** the current legislation will expire by early 2024 → no rush changes that we will regret.



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