



XIII SIMPOSIO EMPRESARIAL INTERNACIONAL - BARCELONA, 3 FEBRERO 2025

# EUROPA: CAMINO HACIA LA SOSTENIBILIDAD ENERGÉTICA



3 de febrero de 2025

Bruno Gouverneur  
ENTSO-E Head of Market and Operations



# Symposium on the European Energy Transition

3 February 2025



Bruno Gouverneur, ENTSO-E Head of Market and Operations

# Introduction to ENTSO-E

500.000 km of transmission lines

520 million citizens

- ENTSO-E, established in **2009**, represents **40 TSOs** from **36 countries**
- ENTSO-E is the Association for the **cooperation of TSOs**, entities with **public service** and **EU mandates** on:



Security of **power system**



Optimal functioning and development of **electricity markets**



Climate-neutrality by 2050



# The Grid Action Plan



## Grid Action Plan, 28 Nov. 2023

Developed by the EU Commission, in close collaboration with ENTSO-E and other stakeholders

### An Action Plan Already in Motion



Planning and Delivering Europe's Future Electricity System



Facilitating Financing the Ramp-Up of Investments



Ensuring Adequate Manufacturing Capacity



Promoting Technology Uptake for Smart Grids and Network Efficiency

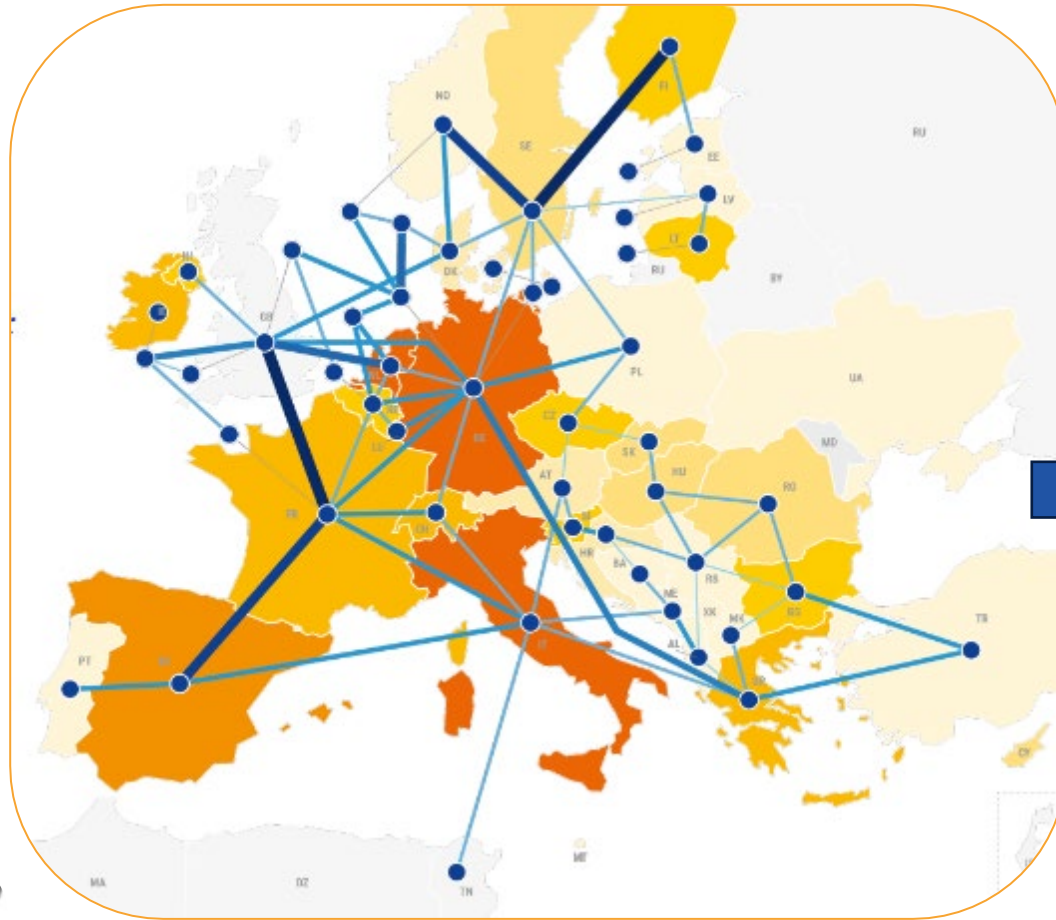


Addressing Supply Chain and Procurement Challenges

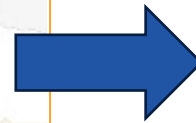


Enhancing Regulatory Drivers

# TYNDP in Maps: Needs and Projects



2040 System needs



TYNDP2024 project portfolio

# TYNDP 2024: Securing Competitiveness



**Ten-Year Network Development Plan 2024**  
Comprehensive plan for the future European electricity system based on multi-energy scenarios

**+108 GW**  
Cross-border capacity by 2040  
(double compared to today)

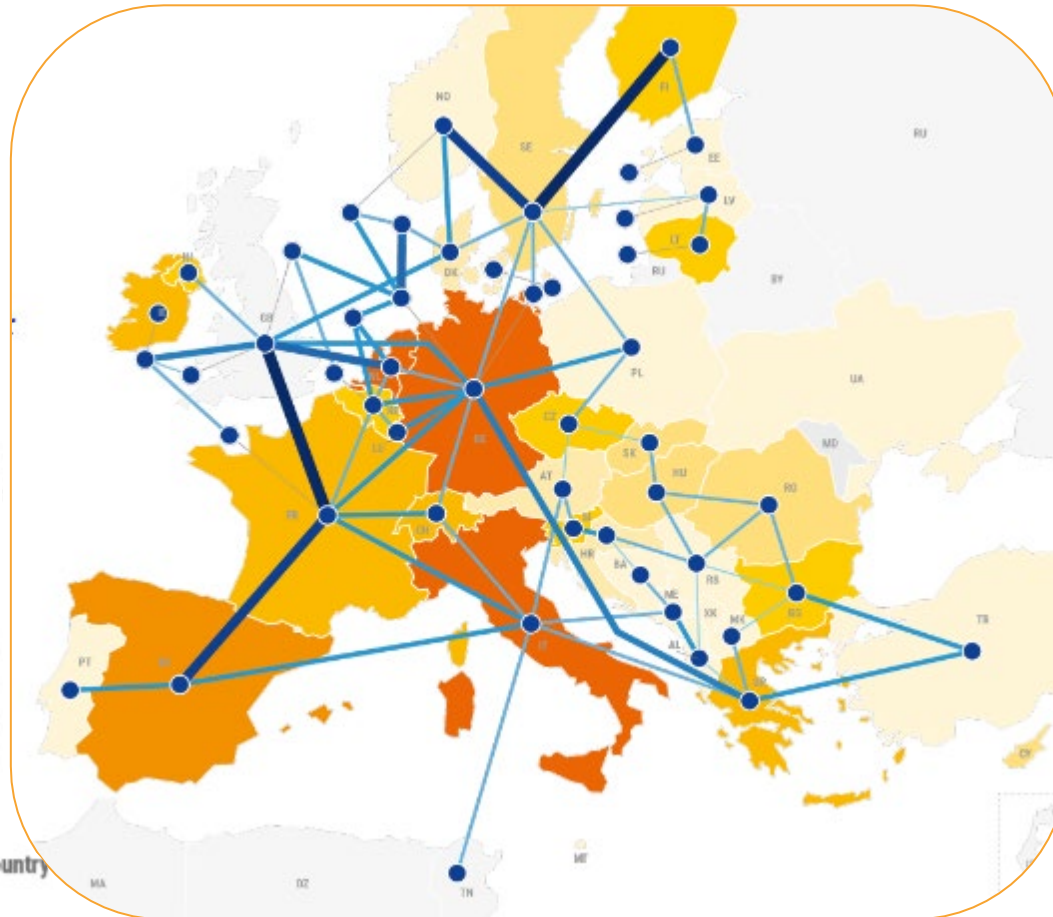
**7 Bn/yr**  
cross-border investment cost by 2040

**13 Bn/yr** savings in system costs by 2040

**4.1 Mil.** Jobs created by 2040

**€606Bn** Mobilised in production by 2040

**€247Bn** Increase in European GDP by 2040



**2040**

# TYNDP 2024: Ensuring Energy Security



**Ten-Year Network Development Plan 2024**  
Comprehensive plan for the future European electricity system based on multi-energy scenarios

**€13 Bn/yr**

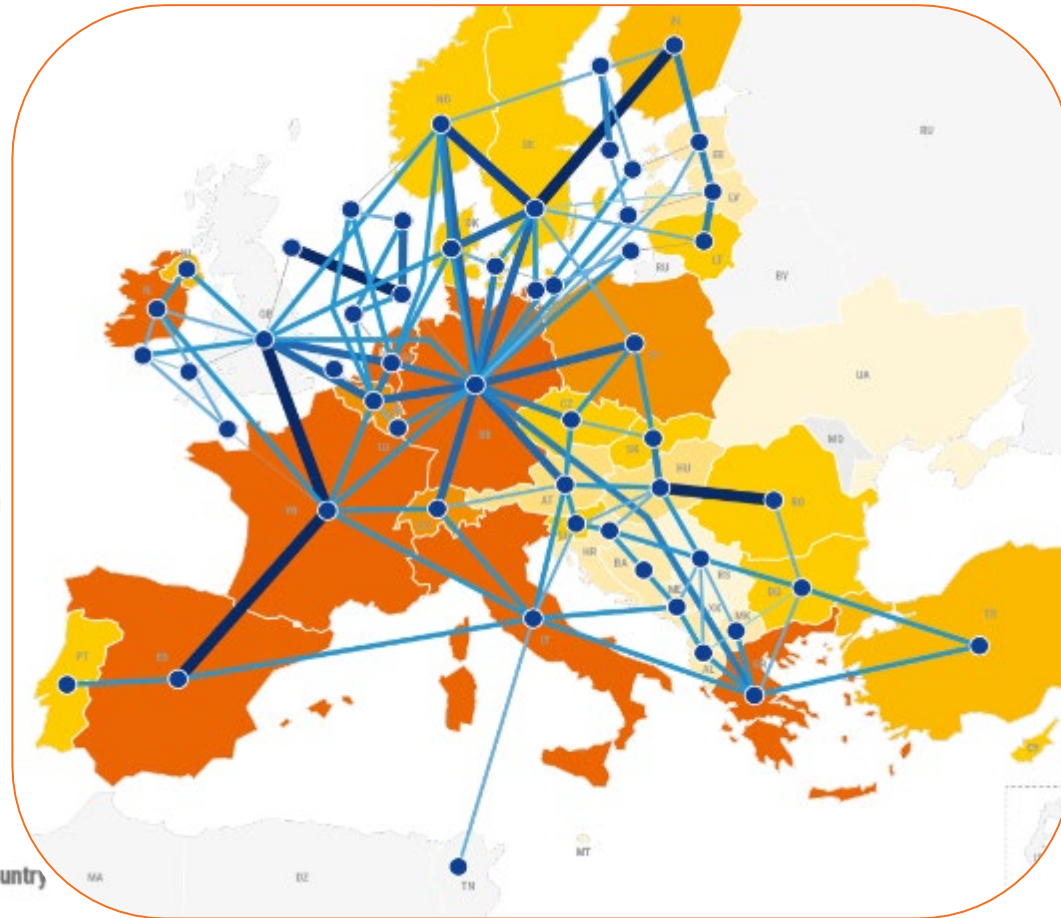
Yearly investment in cross-border grid infrastructure by 2050



**175 TWh/yr** Yearly decrease in RES curtailment by 2040

**€23 Bn/yr** Saved annually in system costs towards 2050

**€863 Bn** Full picture: all known cross-border transmission investments up to 2050, including offshore hybrid and radial



**2050**

# TYNDP 2024: Accelerating Decarbonisation



**Ten-Year Network Development Plan 2024**  
Comprehensive plan for the future European electricity system based on multi-energy scenarios

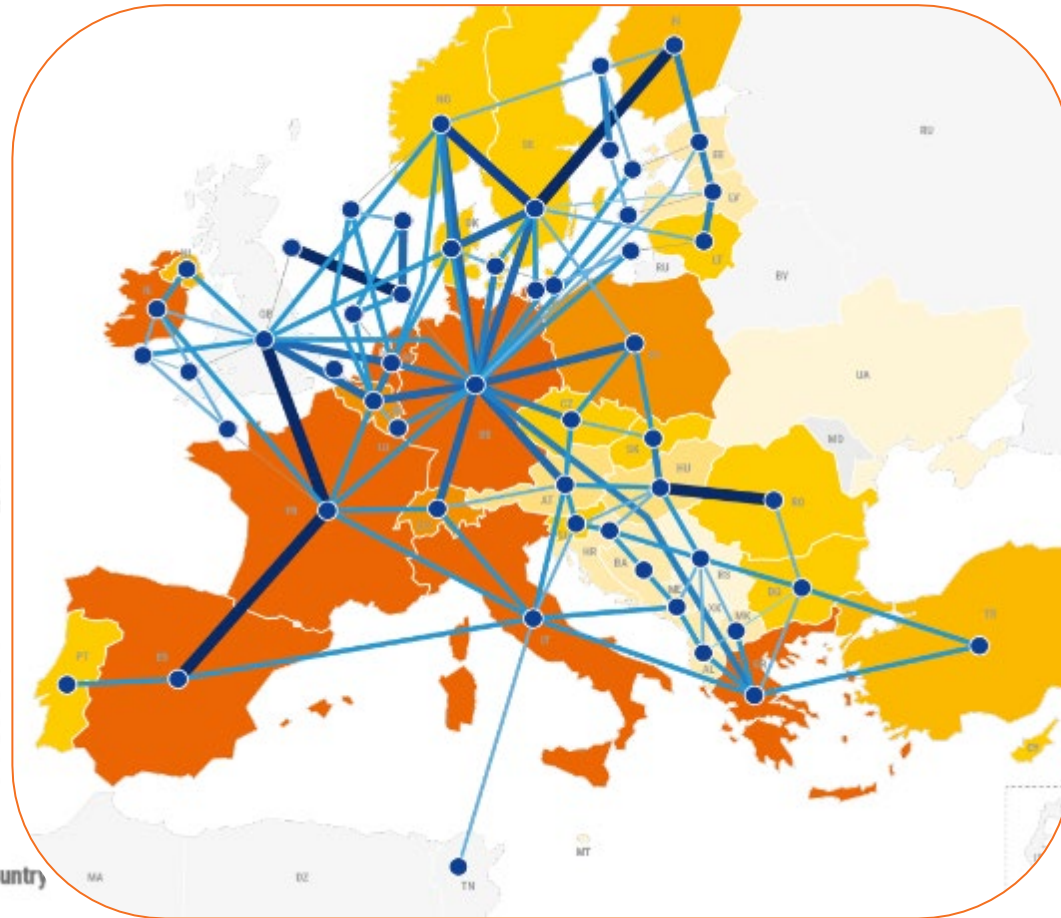
**224 GW**  
Additional cross-border capacity needed by 2050

**540 GW**  
Storage capacity in 2050



**30 Mil. Ton** Yearly CO2 Reduction by 2040

**91 TWh** Reduced need for thermal power plants by 2040 through sharing of flexibility across borders



**2050**



**Thank you !**

ENTSO-E website: <https://www.entsoe.eu>