

A satellite view of Europe at night, showing the continent illuminated by city lights against the dark background of the night sky. The lights are concentrated in major urban centers and along coastlines, creating a glowing pattern across the landmass.

New trends in the European electric power business

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Diversified energy transition policy drivers

Together with climate change, other important policies are accelerating the transition

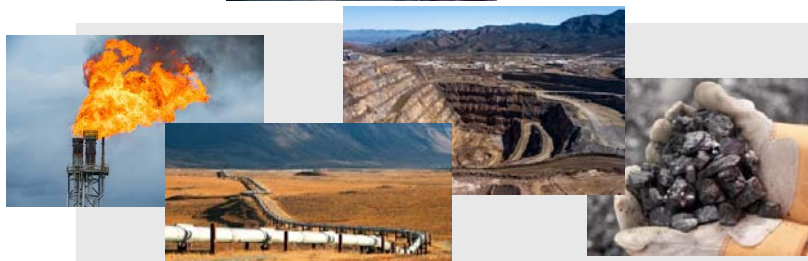


Sustainability

Climate, sustainable finance, fair transition, air quality

Examples of Policy Initiatives

- Fit for 55 Package (e.g. RED, ETS, CBAM, Energy Tax, CO2 Standards)
- Just Transition Fund
- EU Taxonomy
- Zero Pollution Action Plan (air, water and soil)



Geo-Politics

Energy Independence and Strategic Value Chains

- European Industrial Strategy
- Raw Materials Strategy
- European Battery Alliance
- Hydrogen Alliance
- Gas Package



Competitiveness

Growing through the twin Transition

- Recovery and Resilience Facility
- Horizon Europe
- Modernization Fund

Emission reductions will transform the energy sector

Decarbonized power and ever more efficient uses will deliver most of the GHG reductions



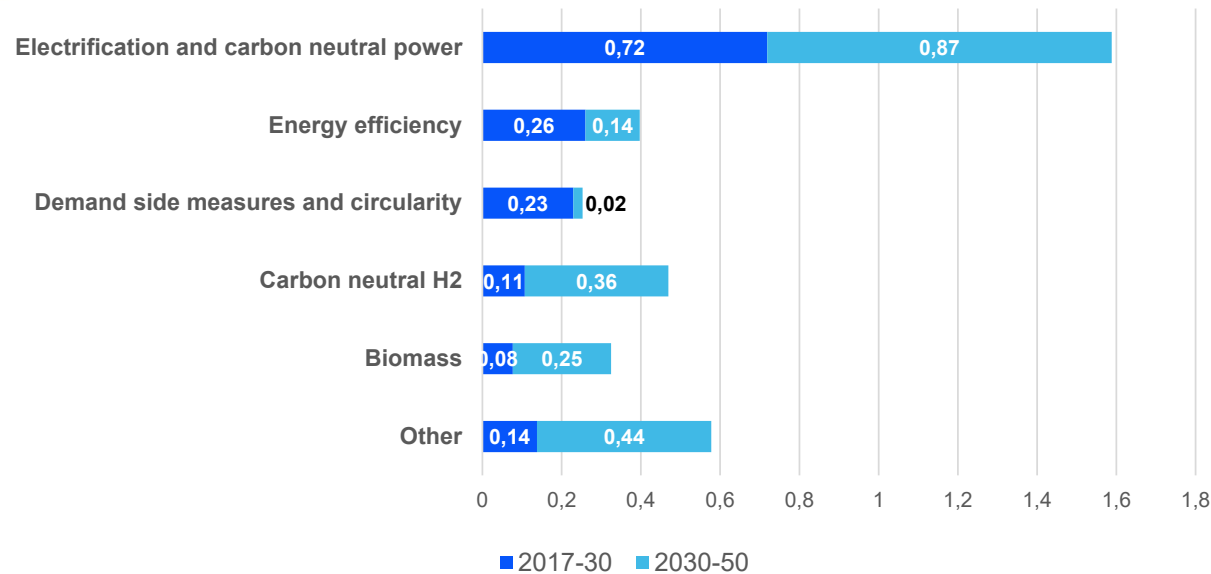
EU27 Abatement potential of GHG emissions to **2030 and 2050**



The energy sector by **2050**



Thousand MtCO₂e



91% renewable generation



Up to 100% of all cars will be electric / fuel-cell



The entire building stock will be renovated



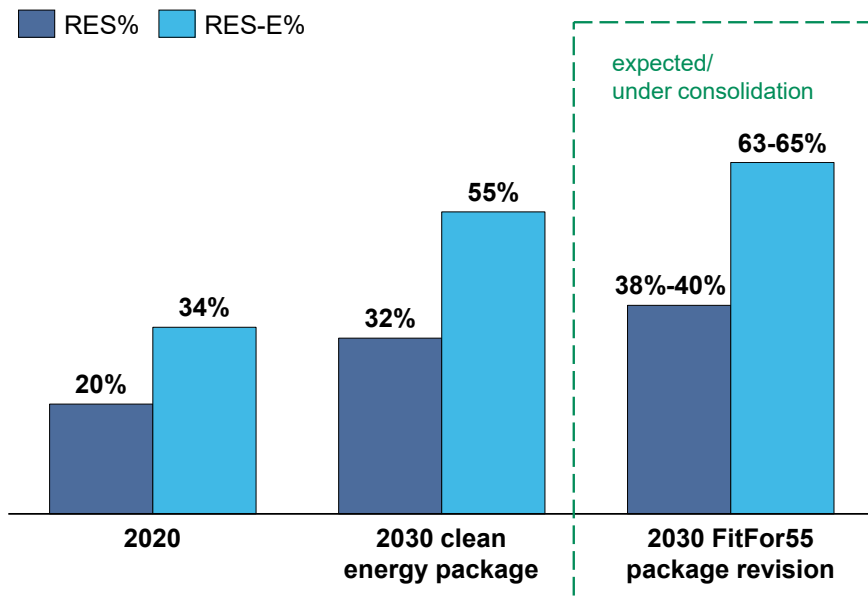
Reduced by 96% the overall Industrial emissions

2030 EU renewable energy targets

Increased ambition implies more than doubling wind & solar and extra-efforts in end-use sectors

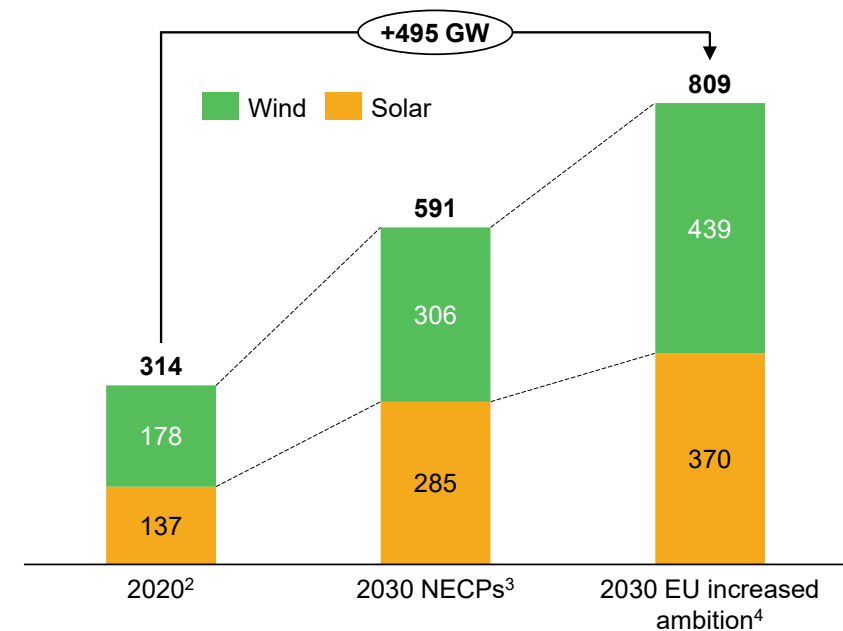


EU Renewable energy targets¹



Targets expressed as renewable share in gross final energy consumption, overall (RES%) and electricity (RES-E%)

EU27 Wind & Solar expected capacity additions (GW)



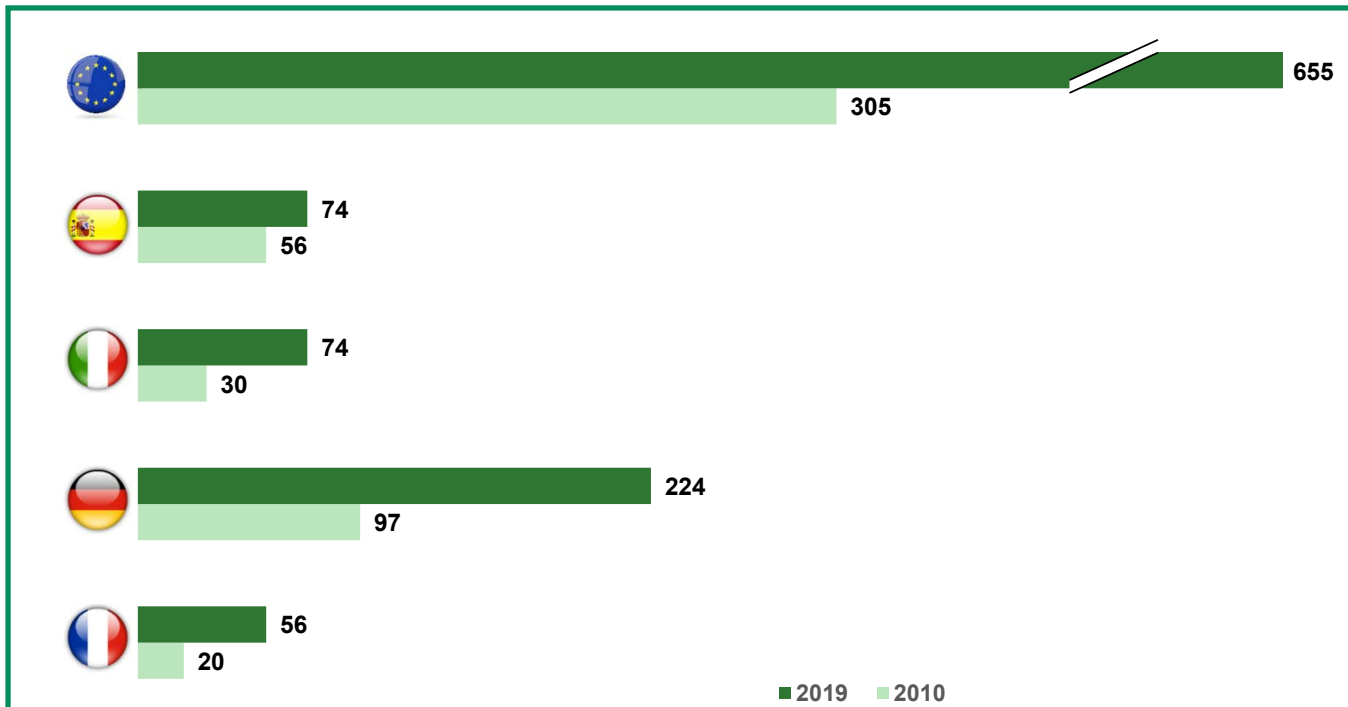
Sources: 1. European Commission, EC's 2030 Target Plan Impact Assessment policy scenarios (excluding ALLBNK scenario). 2. Enerdata. 3. internal EU Member States National Energy and Climate Plans assessment 4. EC's 2030 Target Plan Impact Assessment policy scenarios (using upper capacity values – excluding ALLBNK scenario). UK excluded.

RES deployment in major European Countries

Europe should accelerate investments in renewable resources to limit rising temperatures to 1.5C by 2050



Renewable resources & waste (TWh)*



The leading new Res technologies

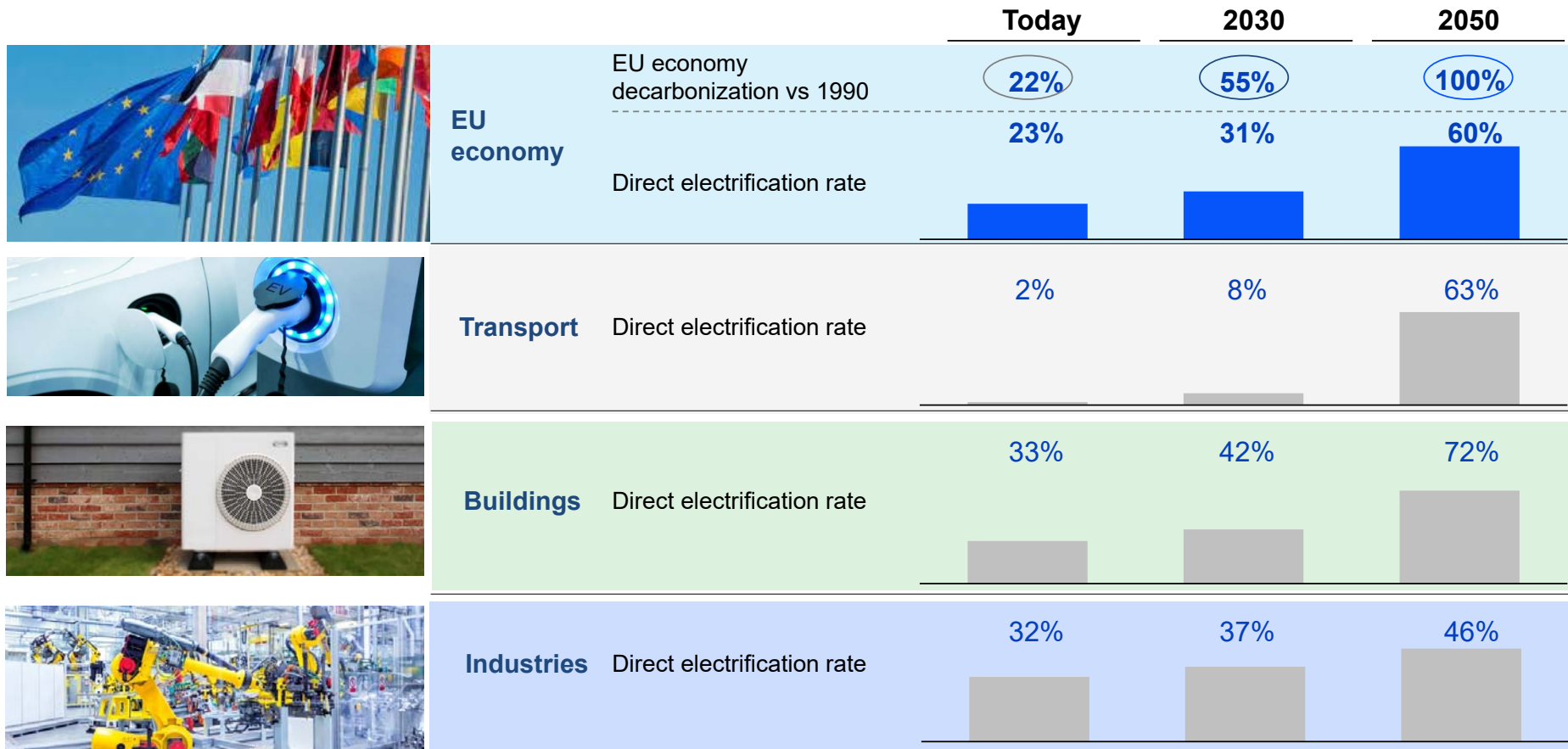


* Hydro excluded
Source: BNEF

Deeper decarbonization requires more electrification



Paris targets will require at least 60% of electricity penetration in the EU final energy demand



Source: "Sustainable paths for EU increased climate and energy ambition" Compass Lexecon, Enerdata and Enel Foundation, 2020

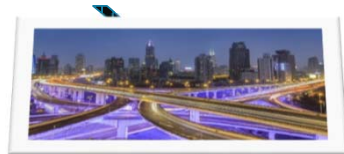
Renewables and electrification are key

The consensus is that decoupling will be increasingly driven by decarbonized electricity



2050
vs 2015

In the future



Optimized energy uses ...

-43%
Final Energy
Demand



... will be met with increasingly decarbonized power from RES ...

+490%
RES in
power mix



.. and be electrified through efficient technologies (EVs, heat pumps, h2)...

+88%
Electricity
production



... growing levels of energy efficiency ...

-66%
Final Energy
Intensity of GDP



... and driving CO₂ emissions to net-zero...

-100%
CO_{2e} emissions



Carbon neutrality

Source: "Sustainable paths for EU increased climate and energy ambition" Compass Lexecon, Enerdata and Enel Foundation, 2020