



DELIVERING THE **EUROPEAN GREEN DEAL**

The key role of ENERGY sectors

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1. The key role of energy sector: what are the leading strategies?

2. Energy and Fit for 55: reshaping our system

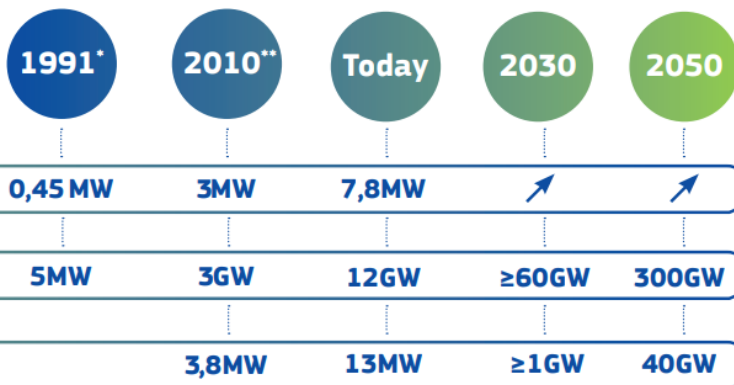
EUROPEAN GREEN DEAL – ENERGY

Key elements driving energy actions:

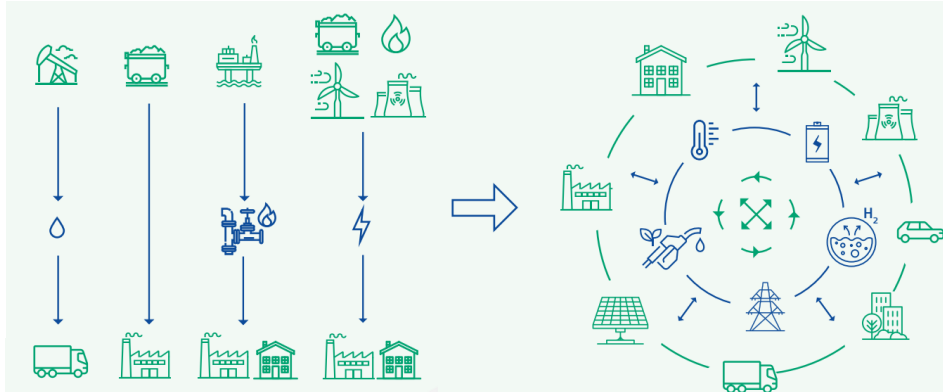
- **Prioritising** energy efficiency - **energy savings**;
- Electrifying where we can – **boosting renewables**; and
- **Innovating** where we cannot electrify – eg by using more **low-carbon fuels and hydrogen**.

EUROPEAN GREEN DEAL – guiding ENERGY strategies

Offshore Renewable Strategy

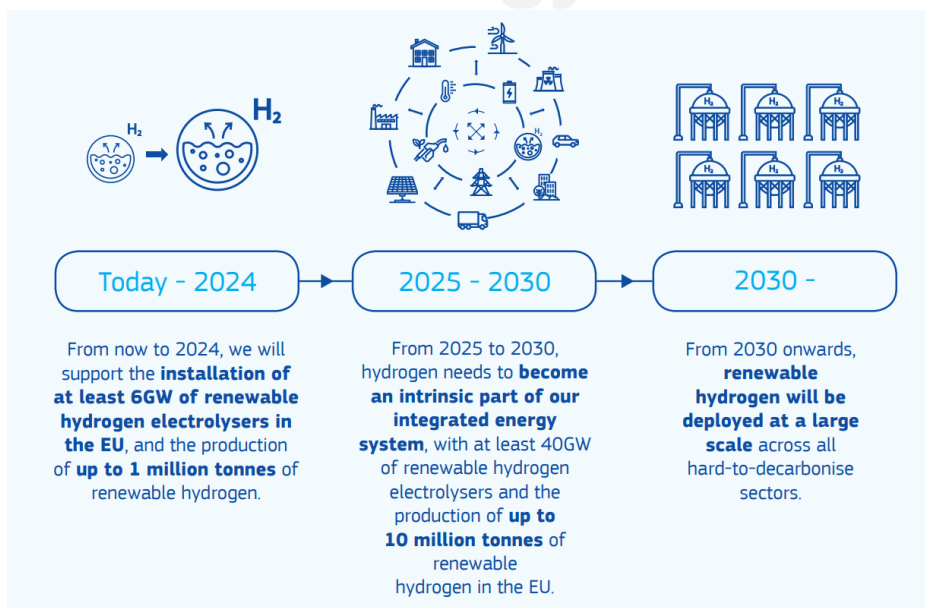


Energy Systems Strategy



Hydrogen Strategy

Methane Strategy



Renovation Wave



Tackling **energy poverty** and **worst-performing buildings**



Renovation of **public buildings** such as schools, hospitals and public administrations



Decarbonisation of **heating and cooling**

Energy Infrastructure TEN-E

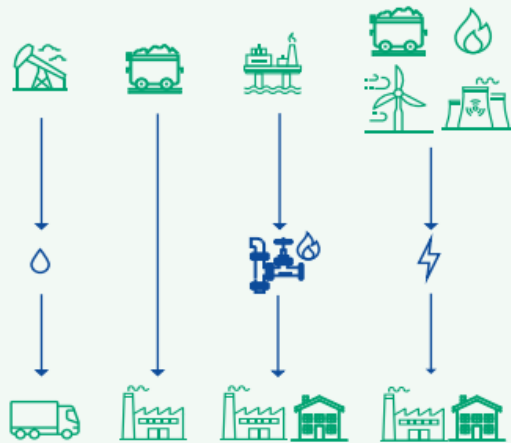


Energy System Integration strategy

Three pillars of the strategy:

1. A more **efficient and “circular”** system where waste energy is captured and re-used
2. A **cleaner power system** with more direct electrification of end-use sectors such as industry, heating of buildings and transport;
3. A **cleaner fuel system** for hard-to-electrify sectors like heavy industry or transport

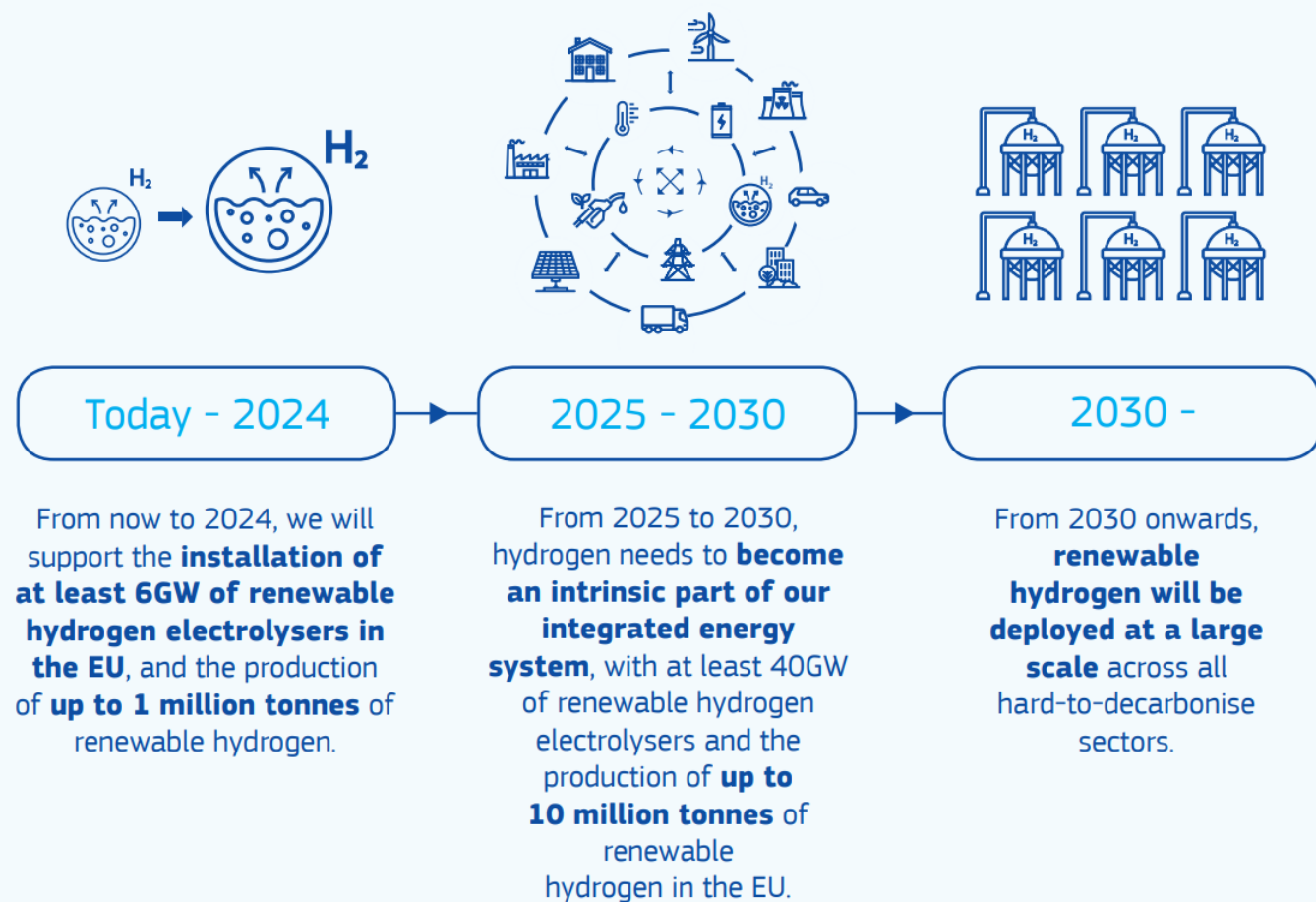
The energy system today : linear and wasteful flows of energy, in one direction only



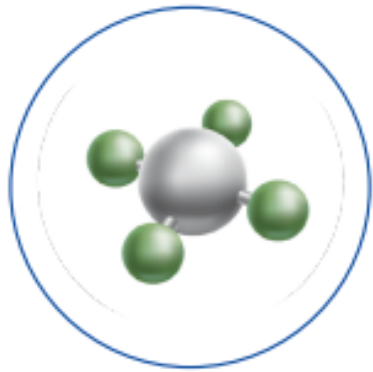
Future EU integrated energy system : energy flows between users and producers, reducing wasted resources and money



Hydrogen strategy



Methane reduction strategy



Methane (CH₄) is the second biggest contributor to climate change after carbon dioxide (CO₂).

Reducing worldwide methane emissions by **50% over the next 30 years** could mitigate global temperature change by 0.18°C by 2050. It is an important building block for the Paris Agreement.

Methane is also **a powerful local air pollutant**, causing serious health problems.

Accelerating action on methane is **essential to achieve climate neutrality by 2050**, and reduce greenhouse gas emissions by at least 55% by 2030.

Offshore Renewable strategy

Main elements of the strategy



Investment

- ▶ Encourage the necessary investment to effectively develop offshore renewable technologies - estimated at almost €800 billion between now and 2050
- ▶ Increase certainty for investors and smooth the path for investments, ease bottlenecks, and find the best combination of public and private finance



Regional Cooperation

- ▶ Promote cross-border cooperation, in particular in the North Sea, Baltic Sea, Mediterranean Sea, Black Sea, Atlantic Ocean, and outermost regions and overseas territories
- ▶ Promote a pan-European supply chain involving multiple regions, in coastal and inland areas
- ▶ Enhance maritime spatial planning for a successful large-scale deployment of offshore renewable energy and the sustainable use of our sea space and resources



Predictable Legal Framework

- ▶ Promote innovative projects that will ensure a cost-effective deployment of offshore renewable energy
- ▶ Give certainty to promoters and reduce risk for investors



Strengthening Supply Chains and Supporting Continuous Innovation

- ▶ Maintain and develop European technological and research leadership
- ▶ Upgrade port infrastructure to support deployment and connection of offshore energy
- ▶ Boost the full industrial value chain in Europe, including skills and labour support

1991*

2010**

Today

2030

2050

Average power capacity of offshore wind turbine

0,45 MW

3MW

7,8MW

↗

↗

EU offshore wind energy capacity

5MW

3GW

12GW

≥60GW

300GW

Ocean energy capacity (e.g. wave, tidal)

3,8MW

13MW

≥1GW

40GW



Introduce mandatory sustainability assessment and increase scrutiny from the Commission



Facilitate rapid electrification (double the share of renewable electricity production)



Support decarbonising the gas sector (e.g. through the development of hydrogen infrastructure)



Scale up offshore renewables grids across European seas



Update infrastructure categories ending support for oil and natural gas infrastructure



Accelerate the take-up of innovative solutions such as smart grids



Speed up planning and improve rules for obtaining permits, including for offshore grids (e.g. a single national authority)



Enable a more integrated energy system



Increase transparency and public participation via consultation



Create growth and jobs, supporting the economic recovery

Energy infrastructure: TEN-E revision



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Renovation Wave strategy

To reduce emissions by at least 55% in 2030 and build the foundations for a climate neutral Europe by 2050, the Renovation Wave aims to **renovate 35 million inefficient buildings by 2030**.

85-95% of buildings in the EU are expected to still be standing in 2050. **Renovating them is essential to reducing emissions and energy use.**

As announced by President von der Leyen, the **New European Bauhaus** will match style with sustainability. It will promote sustainable design and nature-based materials.

Renovation Wave Priorities



Tackling **energy poverty** and **worst-performing buildings**



Renovation of **public buildings** such as schools, hospitals and public administrations



Decarbonisation of **heating** and **cooling**



➤ **40%**
of energy
consumed



➤ **36%**
of energy-related
greenhouse gas
emissions



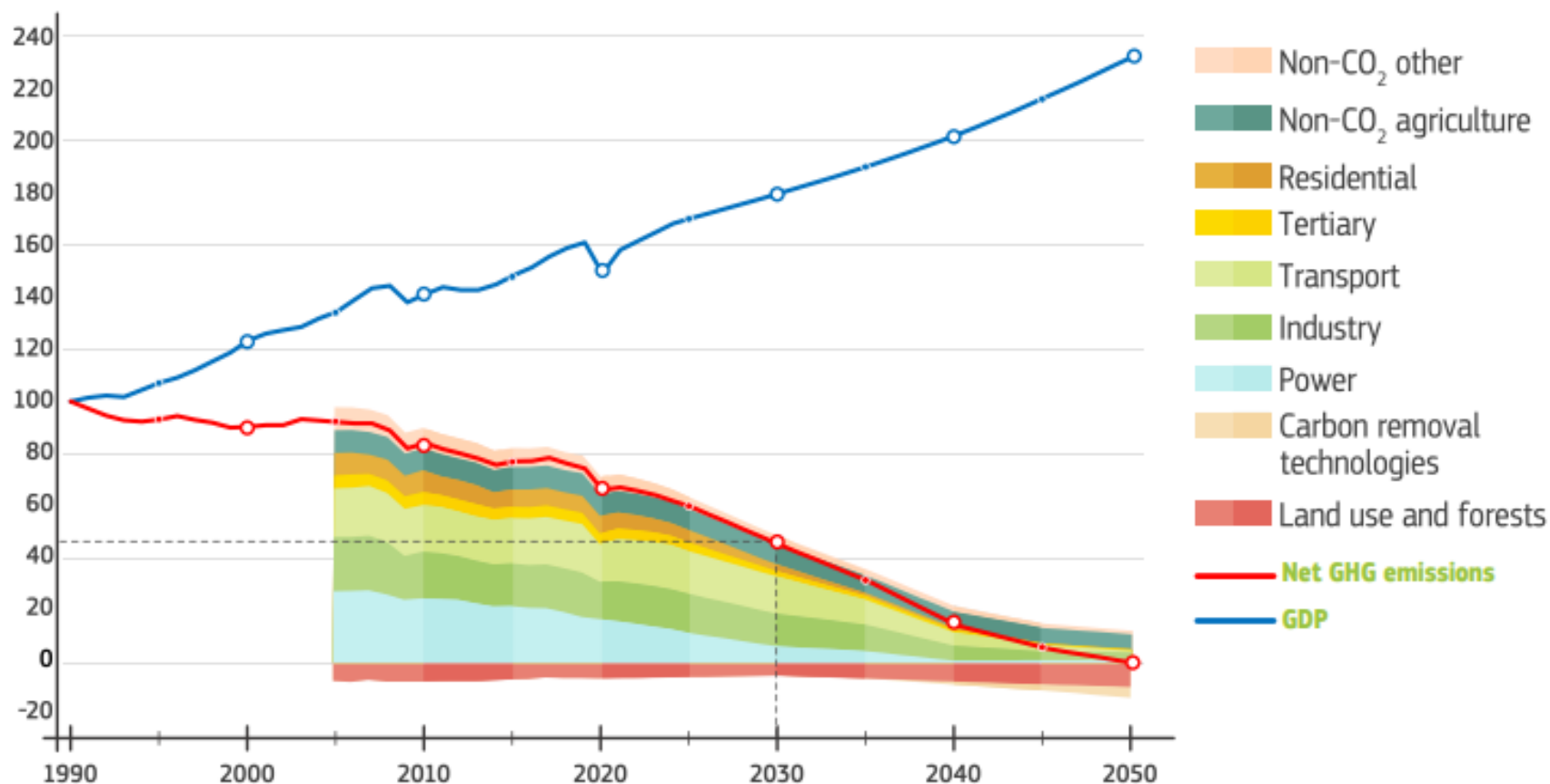
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Fit for 55?

Europe has a strong track record of **cutting emissions whilst growing its economy**. Achieving our new target of 55% greenhouse gas emissions by 2030 will require action across all sectors.

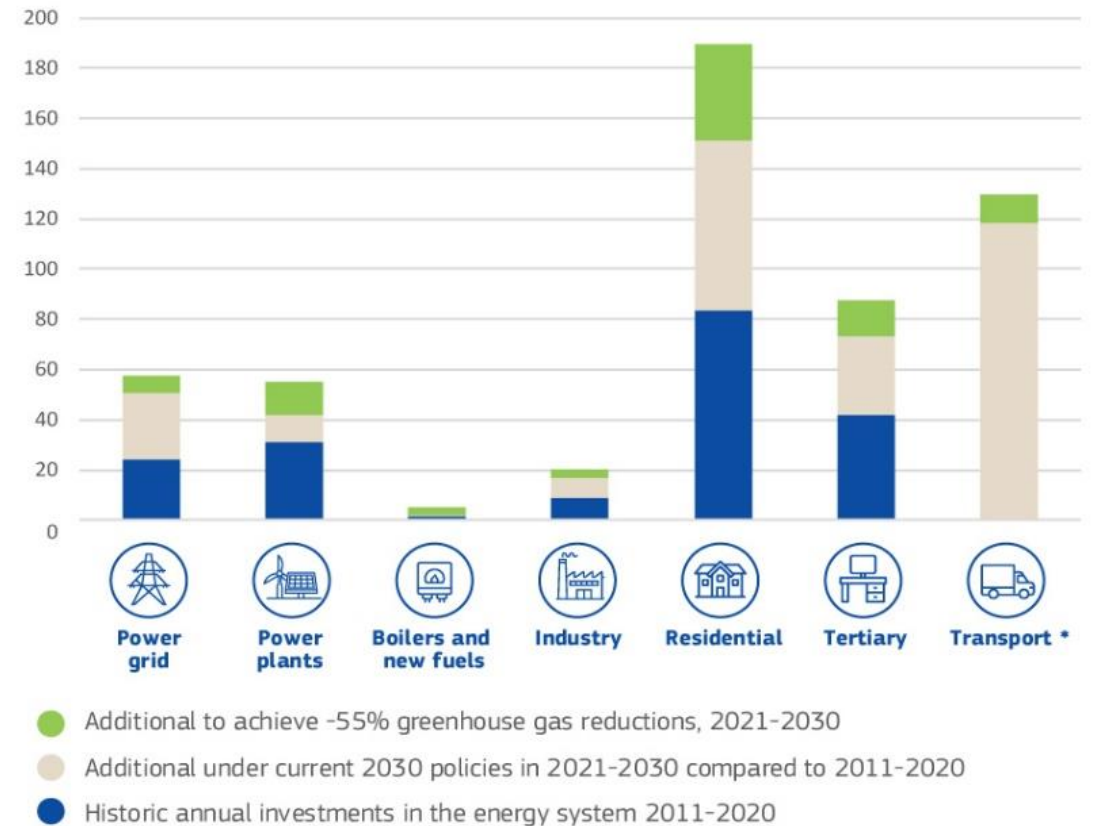


Climate Target Plan

The Climate Target Plan published in September 2020 shows that “at least 55% target” by 2030:

- 1) is feasible;
- 2) will put us on the right trajectory towards climate neutrality by 2050;
- 3) requires more effort and contribution of all sectors of economy

Average annual investment 2011-2020 and additional investment 2021-30
under existing policies and to achieve -55% greenhouse gas emission reductions
(in billion EUR 2015)

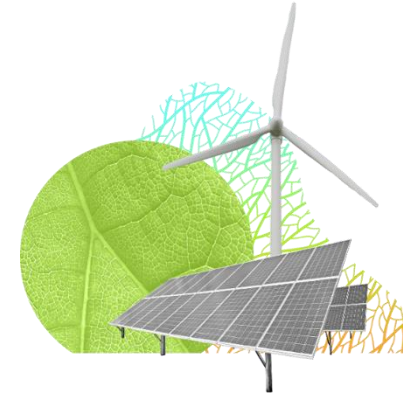


* transport only shows additional investment

Climate Target Plan – Investment Challenge

Fit for 55 Package: Revising the Energy Efficiency Directive

- Indicative Member State contributions to the EU-level energy efficiency target
- Reinforcement of the Energy Efficiency First Principle
- Measures to alleviate energy poverty and boost consumer empowerment
- The **public sector will be required to renovate 3% of its buildings** each year to drive the renovation wave



17.0-17.4%

Current energy efficiency savings for primary and final energy consumption (in 2019)

32.5%

Current EU 2030 non-binding target (relative to 2007 projections)

36-39%

New EU 2030 binding target for final and primary energy consumption

Fit for 55 Package: Revising the Renewable Energy Directive

- Increased renewables ambition in key sectors (heating and cooling, transport, industry, buildings)
- Boosting the deployment of and the investment in renewable energy
- Sustainable bioenergy reinforced criteria in line with the EU Biodiversity Strategy

Renewables in the EU energy mix



19.7%

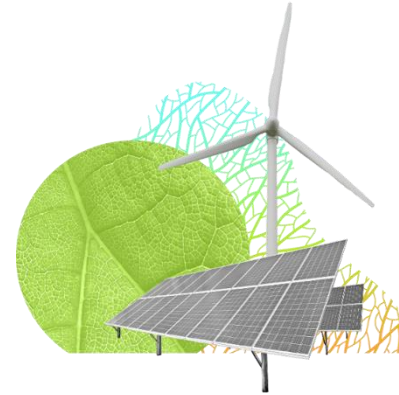
Current renewables share (in 2019)

32%

Current EU 2030 target

40%

New EU 2030 target



EUROPEAN GREEN DEAL

– ENERGY next steps

Next steps in the energy sector in Q4 2021

- Targeted revision of the **Energy Performance of Buildings Directive**;
- Package on **competitive, decarbonised gas markets**, including renewable hydrogen; and
- New regulation to reduce **methane emissions in the energy sector**.

European Union's climate and energy diplomacy

- external dimension of the European Green Deal

EU Foreign Affairs Council Conclusions on Climate and Energy Diplomacy (January 2021)

- The **Council Conclusions** call for **EU's leadership** for continued global ambition on climate action, and **they specify several areas** (from sustainable finance through trade policy to the environment) where there is scope for immediate or medium-term impact.
- Further, they recognise the **centrality of the global energy transition** for our climate goals.
- They underline the EU's ambition for ensuring a **just transition** and for reaching out in **solidarity to our partners**, inspired by the related EU experiences and initiatives.
- In this context, the Council adopted language on the **move away from fossil fuels, in particular coal**.

Principles of EU energy and climate diplomacy

- The commitment to achieve carbon neutrality by 2050 empowers the EU to **lead on the climate and clean energy transition also internationally**.
- The EU urges all countries to **align** trade promotion, green finance, aid and foreign investment strategies with their **domestic climate pledges** and **Paris Agreement** commitments.
- The EU will hold **further dialogue with partners around the world** in accordance with their GHG reduction potential and, within its means, **support** them in their transition.
- It is especially important to **collaborate with fossil fuel supplying countries in a just transition**, leaving no region, sector, or individual, behind.

What actions for EU energy and climate diplomacy?

- The EU has valuable **expertise in energy market integration**. The EU can strengthen the capacity of partner countries to put **energy efficiency first, integrate more renewables in their energy system**, and make the energy transition more **cost-effective**.
- EU energy policy and diplomacy should safeguard and promote **stable and open global energy markets** to ensure that energy sources are secure, sustainable and affordable **for all citizens**. It should be aligned with international measures that recognises the vital role of energy for economic and personal development.
- The EU also commits to working on critical supply chains and **make raw materials more sustainable**;

Energy Cooperation with China

- High-level EU-China Energy Dialogue
- EU-China Energy Cooperation Platform (www.ececp.eu)





Thank you

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