

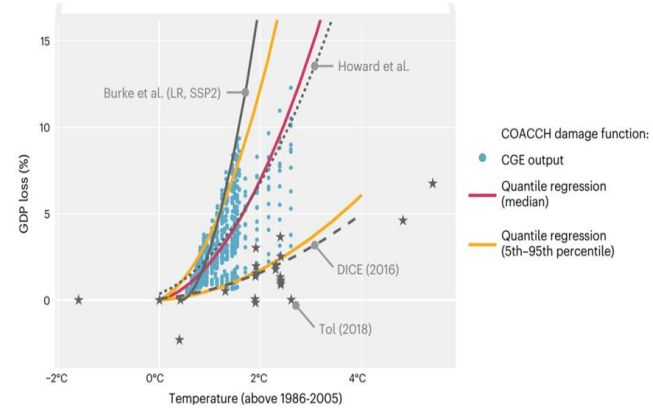
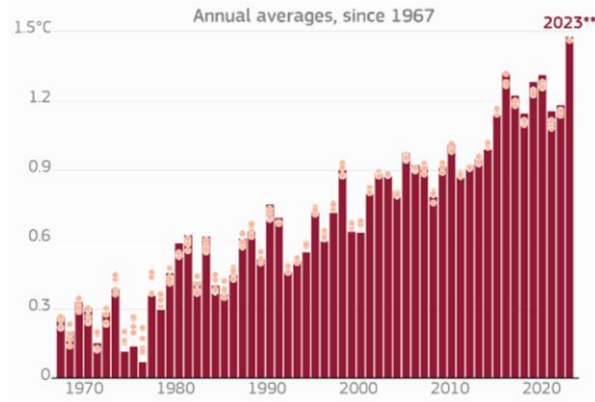


2040 climate target

EESC, 18 March 2024

*Vicky Pollard, DG CLIMA,
Bert Saveyn, DG ENER*

The need for global climate action



- Climate change is intensifying rapidly
- Need to cut greenhouse gas emissions sharply and rapidly & prepare for impacts of climate change
- The COP28 & Global Stocktake: parties set minimum expectations for action; the world is moving towards the path taken by the EU

The 2040 Target Communication

- Responds to the Climate Law;
 - Recommends a 2040 climate target;
 - Legislative proposal for the 2040 target – next Commission;
 - Fit for 55 framework and other measures agreed for 2030 remain unchanged;
 - The design of the post-2030 policy framework – in the coming years
 - Basis for new NDC to be submitted in 2025
- **This Communication launches a debate**

1. A comprehensive vision for the EU beyond 2030

- Opportunities for investment, quality jobs and a strong industrial ecosystem
- Lead in developing the clean tech markets of the future
- Clean, low carbon , affordable energy, sustainable food, materials
- Resilient against future crises
- Strengthened open strategic autonomy
- Remaining a global leader and trusted partner in climate action

3. The recommended 2040 target

- A 90 % net GHG reduction compared to 1990 levels

To meet this target, the analysis shows that, in 2040:

- Remaining “gross” GHG emissions in the EU should be less than 850 Mt CO₂-eq
- Carbon removals (land-based and industrial) should reach up to 400 Mt CO₂

Indicative GHG budget for 2030-2050 of 16 GtCO₂eq

Based on a detailed impact assessment & corresponding to the advice of the ESABCC



Strasbourg, 6.2.2024
SWD(2024) 63 final

PART 1/5

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT REPORT

Part 1

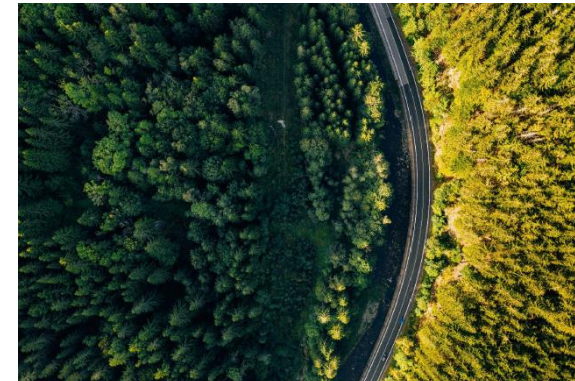
Accompanying the document

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

Securing our future

**Europe's 2040 climate target and path to climate neutrality by 2050 building a
sustainable, just and prosperous society**

{COM(2024) 63 final} - {SEC(2024) 64 final} - {SWD(2024) 64 final}



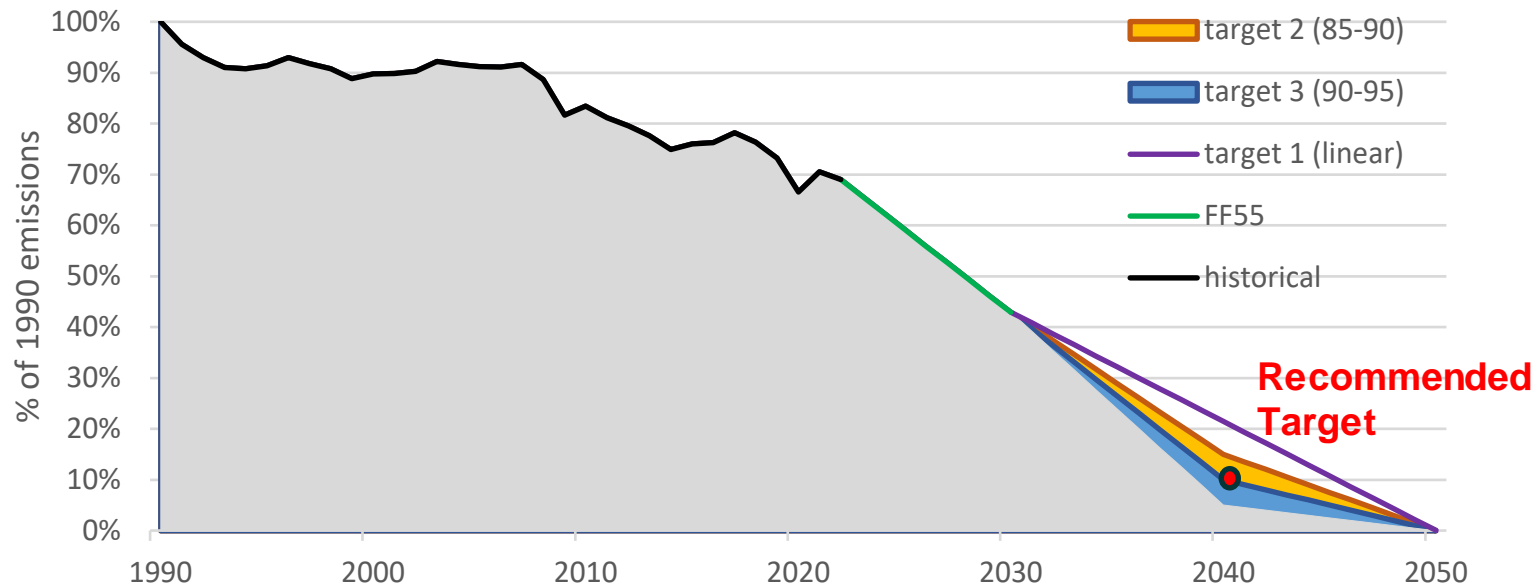
**Scientific advice for the
determination of an EU-wide 2040
climate target and a greenhouse
gas budget for 2030–2050**

European Scientific
Advisory Board on
Climate Change



The 2040 target and a pathway to climate neutrality

Profile of the net GHG emissions over 1990-2050



The recommended 2040 target

- The lowest GHG budget- 16Gt CO₂-eq over 2030-2050, the only one that corresponds with the ESABCC advice
- **Strategic Autonomy**- greatest benefits in terms of energy independence and protection against fossil fuel price shocks
- **Cost of fossil fuel imports falls significantly** (from 4.1% of GDP in 2022, 2.4% in 2023, to less than 1.4% of GDP in 2040, 0.6% last decade) – EUR 2.8 trillion saving over 2031-2050
- Faster investment in novel low carbon technology deployment, larger domestic market for clean tech for an EU industrial base, **better placed for global clean technology race**.
- The investment needed for 2031-2050 is similar across options – the recommended target brings some energy system investment forward to 2031-2040 and then requires less investment in 2041-2050 than other options
- Energy system costs are similar across options 2031-2040

Enabling conditions

- The **full implementation** of the agreed 2030 framework
- **Competitiveness** of European industry and agriculture
- Greater focus on **Just Transition** - leaving no one behind
- A **level playing field** with international partners
- **Open Dialogue** on the post 2030 framework

4. Delivering the 2040 target

- Delivering the 2040 target depends on full implementation of the 2030 climate and energy framework – Member States' update of the NECPs
- Development of a post-2030 framework & broader policy framework
 - An economy that delivers for people
 - The EU's energy system
 - An industrial decarbonisation deal
 - Decarbonising transport and improving mobility
 - Land, food and bioeconomy
 - A comprehensive investment agenda

An economy that delivers for people

- Most vulnerable people are the most exposed to climate change impacts
- EU Climate agenda can reduce poverty and inequalities, alongside support policies and investment

A just and fair transition

- Addressing impacts that vary by region and sector
- Addressing energy and transport poverty
- Investing in skills, support for labour market transition and targeted income support
- EU Cohesion Policy, Just Transition Fund, well targeted use of Social Climate Fund, complemented by national measures
- Effective Social Dialogue

Based on a decarbonised energy system

- Electrification of the economy remains key to decarbonisation
- The power sector is the first to decarbonise (by 2040)
- Renewable energy will become the backbone of the energy system
- However, all low carbon energy solutions are necessary (including, nuclear, energy efficiency, storage, CCS, CCU, carbon removals, etc.)

Summary of energy indicators (1/2)

	2030	2040	2050
Policy relevant indicators			
Energy-related CO2 reductions vs 2005	-58%	-94%	-103%
RES share in Gross FEC	42.4%	75%	89%
FEC reduction vs 2015	-19%	-36%	-40%
Energy indicators - Supply			
Gross Available Energy (Mtoe)	1160	1018	1032
- Fossil fuels	663	275	150
- of which for non-energy use	96	96	80
- of which captured	1.8	13.3	24
- Nuclear	139	129	142
- Renewables	328	613	691
Net imports (Mtoe)	572	267	153
Import dependency (%)	50%	26%	15%
Hydrogen production (Mtoe)	9	100	185
e-Fuels production (Mtoe)	2	37	60

- Fossil fuels use decrease substantially by 2040 (for energy use -80% vs 2020)
- By 2050 most fossil fuels used for non-energy purposes (plastic, fertilizers,...)
- RFNBOs production scales up exponentially between 2030 and 2040
- Overall Energy Consumption decreases

Note: simplified version of the table 10 from the IA main document, section 6.2.1.

Summary of energy indicators (2/2)

	2030	2040	2050
Energy indicators – Power generation			
Gross electricity generation (TWh)	3362	5212	6922
Net installed power capacity (GW)	1617	2525	3256
- Fossil fuels	238	156	142
- Nuclear	94	71	71
- Renewables	1285	2298	3027
Storage and flexibility options (GW)	172	275	238
Final Energy			
Final Energy Consumption (Mtoe)	764	604	555
Electricity share in FEC	33%	51%	62%
e-Fuels share in FEC	0%	5%	7%

- Electrification of the economy: generation almost doubles between 2020 and 2040.
- Renewables drive the expansion.
- Increased deployment of battery storage to provide flexibility.

Note: simplified version of the table 10 from the IA main document, section 6.2.1.

Industry decarbonisation deal

- EU competitiveness needs stable and affordable clean energy, and is a basis for technological sovereignty and economic security;
- Attention for Energy Intensive Industries;
- Need an enabling framework to mobilise private capital and investment,
- Need to ensure more attractive incentives for clean tech manufacturing so that the EU retains industrial capacity;
- Circular economy and bio-economy for climate and resource savings, opportunities for growth and jobs
- Growing need for industrial carbon management and carbon removals;

Land, food and bioeconomy (1)

- Farmers and foresters provide vital services to society, economy and environment:
 - ✓ Healthy food and food security
 - ✓ Bio-based materials and bio-energy
 - ✓ Environmental services, resilience
- Farmers and foresters are at the frontline of climate hazards:
 - ✓ Droughts and water scarcity, heatwaves, fires
 - ✓ Storms & floods

Land, food and bioeconomy (2)

- Potential for faster emissions reductions & enhance carbon removals:
 - ✓ Effective policies and incentives for food value-chain
 - ✓ Carbon farming & precision farming as a win-win for farmers and climate
 - ✓ Fair competition and level playing field

With:

- A Whole-of-food-sector approach
- CAP support the transition to new sustainable practices and business models
- 16 ● Strategic Dialogue on the future of EU agriculture

A comprehensive investment agenda

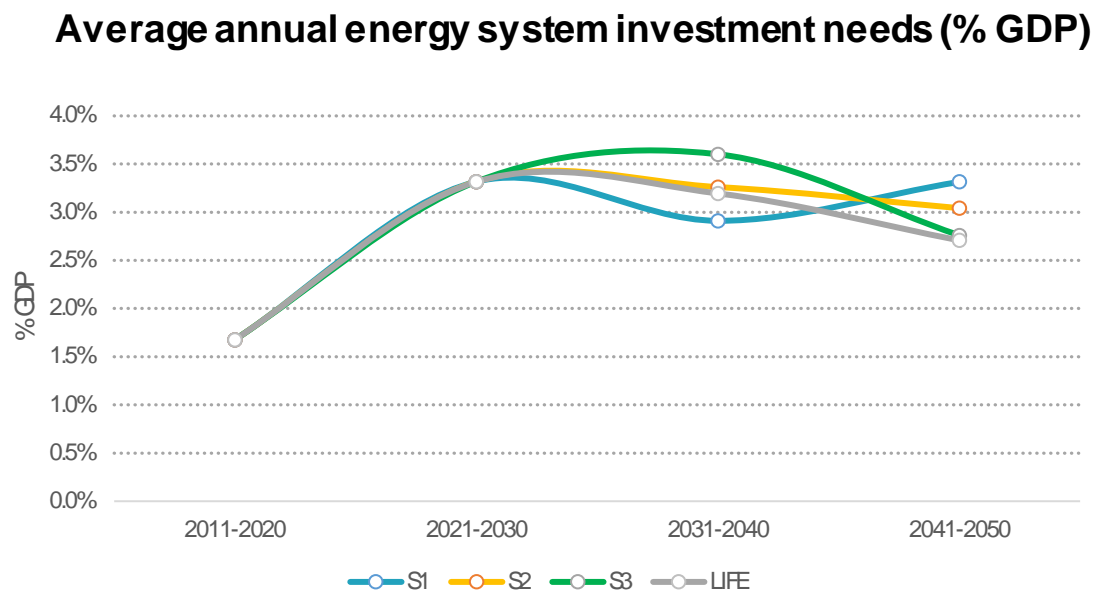


Figure 103 of the IA Annex 8, section 2.2.1

- € 660 bn per year on average between 2030 and 2050 (across all trajectories)
- € 710 bn per year in 1st decade (2031-2040) under preferred option, and then less in 2041-2050
 - LIFE- lifestyles and circular economy reduce investment needs by € 45bn
- The 2040 target gives regulatory certainty for long-term investments implementing the 2030 targets
- Focus on bottlenecks in the energy system such grids, flexible demand, and storage

A comprehensive investment agenda (1/2)

- In a context of very intense global competition, the EU needs to become more attractive;
- EU Capital Markets Union needs to be deepened;
- Use of financial instruments to be simplified;
- EU sustainable finance framework to be further finetuned;
- Public support to be strategically deployed to catalyse and de-risk private investment
- EIB and other financial institutions critical to mobilise private investments

A comprehensive investment agenda (2/2)

- Fiscal space to be preserved for investment (within debt sustainability)
- Innovation Fund and national ETS revenues are important basis for future-proof investments
- To be complemented by EU budget geared towards low carbon investments

Conclusions

- Securing the prosperity and well-being of current and future generations requires the EU to continue its transformation to climate neutrality and a sustainable, competitive economy, resilient to climate hazards, geo-political risks and free of critical dependencies
- Enabling conditions must be in place to achieve the necessary GHG reductions and carbon removals
- Demonstrating the EU's determination to stay at the forefront of the cleantech revolution, manufacturing, opportunities and jobs
- Signal to the rest of the World- commitment to the Paris Agreement, multilateral action and providing the example and means to act.

Thank you



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