The European Union's strive for decarbonisation

Advancing the green transition in 27 diverse countries

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The European Union (EU) aims to become the world's first climate-neutral continent by 2050. The first milestone is to reduce GHG emissions by 55% in 2030 compared to 1990. Since the emission reductions were only estimated at 32% by 2020, substantial climate policy measures are required.

This paper aims to illustrate how a complex set of policy measures underpinned by the EU decision-making process facilitates the green transition of 27 diverse countries by using the example of the European Commission's "Fit for 55" package from July 2021 and a few other elements of the European Green Deal. Some measures are in place, others are still under negotiation within the EU.

The EU has a unique institutional set-up with supranational elements which enable binding legislation to be imposed on the Member States. The European Commission ensures comprehensive economic and technical preparation of EU legislation covering all the economic sectors, based on intensive stakeholder engagement. The governments of the 27 Member States take part in deciding the EU's climate policy measures and they are, to a large degree, responsible for the implementation.

The 27 countries have different starting points, and diverse political and economic interests must be reconciled to foster agreement on the necessary climate policies. The 2030 climate target is to be reached collectively, and national circumstances are considered. The countries will have individual national climate targets, and substantial financing will be available to advance the green transition and sustain the competitiveness of the EU. And the climate agenda is generally supported by the EU's citizens who are concerned over climate change and support ambitious climate targets.

It is too early to assess whether the EU will reach the 2030 target of 55% GHG emission reductions, which was adopted only in 2021. The climate agenda has been complicated by an energy supply crisis emerging in 2021 and exacerbated by the Russian invasion of Ukraine as well as severe drought and nuclear power outages in 2022. Coal consumption increased, at least temporarily. But the crisis essentially reinforced the commitment to renewable energy and energy savings to ensure energy security and import independencies. The 27 Member States are required to outline their efforts contributing to emission reductions, and an update of these national plans is due in 2023/2024, providing a first indication whether the EU is on track to reach the 2030 target. The Commission will continuously assess the progress and propose further measures as necessary to decarbonise Europe.

1. Introduction

In December 2019, the objective of achieving a climate-neutral EU by 2050 was affirmed by the European Council (the heads of state or government of the 27 EU countries). At the same time, the EU leaders endorsed a strategy to reach climate neutrality, the so-called "European Green Deal" presented by the European Commission.

The European Green Deal recognises the need for all EU actions and policies to play a role in achieving climate neutrality and sets out a roadmap for legislative and non-legislative measures to attain this goal. Main elements are decarbonising the energy sector, renovating buildings to cut energy use, supporting industry to innovate, and encouraging greener transportation.[1]

One of the first implementation pieces was the European Climate Law, which entered into force in July 2021. The European Climate Law establishes a legally binding EU target of net-zero GHG

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Note: All the weblinks referenced in this paper were accessed on 4 April 2023.

[1] EUR-Lex, European Commission, "Communication From The Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - The European Green Deal", COM(2019) 640 final, 11.12.2019, https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN.

emissions by 2050 and increases the EU's key climate target for 2030 from 40% to 55% GHG emission reductions compared to 1990. Other elements include the establishment of the European Scientific Advisory Board on Climate Change, which will provide independent scientific advice, and a commitment to engage with sectors to prepare sector-specific roadmaps, charting the path to climate neutrality in different areas of the economy.[2]

In July 2021, the Commission proposed another centre piece of the European Green Deal, the so-called "Fit for 55" package aimed at reaching the new 2030 target. The package consists of several interrelated proposals, which either modify existing legislation or introduce new measures in a range of policy areas and economic sectors. The proposals include an expansion of the EU's emissions trading system, higher targets for renewable energy and energy efficiency, advancing decarbonisation of the transport sector, and providing financial support for the green transitioning.

Climate policies are not new to the EU as they were initiated in the 1990s in the run-up to the Kyoto Protocol, which called for emission reductions by 2012 of an average of 5% compared to 1990. The EU committed to an 8% cut and fulfilled the target.[3] In 2007, the EU agreed on three key targets for 2020: 20% cut in GHG emissions compared to 1990; 20% energy from renewables; and 20% improvement in energy efficiency. By 2020, the 20-20-20 climate targets were reached by the EU.[4]

EU climate policy has been built up step-by-step with learning-by-doing as a key feature, gradually fostering support for more effective solutions. For instance, the EU's emissions trading system was initially based on allocation of allowances by Member States, mainly as free handouts to private companies. Though generally known to be sub-optimal, it was a necessary step to get the system in place. However, based on the experience, consensus grew that better solutions were needed, and allocation was changed to be based on auctioning and EU-wide performance benchmarks.[5]

While climate policies originated from environmental policies, decarbonisation is now part of the EU's energy policies. This was confirmed by the launch of the new framework for EU energy policies in 2015, the so-called Energy Union, which targets energy security; a fully integrated European energy market; energy efficiency; *decarbonisation*; and research, innovation, and competitiveness.[6] Energy has been a focal point throughout the EU's history. The EU originates from the European Coal and Steel Community, which started cooperation on coal in 1951; the European Atomic Energy Community, which started cooperation on nuclear energy in 1957; and the European Economic Community, which started broader economic cooperation in 1957. The national markets of the Member States remained fairly isolated from each other until the Single European Act came into force in 1987, aiming for free movement of goods and services within the Member States. To enable cross-border energy trading, the liberalisation of the electricity and gas markets was initiated in the 1990s. Common energy policies have been gradually strengthened since then and is now pursued within the framework of the Energy Union.

This paper will focus on climate policies, while the functioning and development of the European energy markets and infrastructure are not discussed. Section 2 illustrates the vast differences between the Member States. Section 3 describes the wide range of policy tools aimed at advancing decarbonisation in all 27 countries. Section 4 presents key elements of the unique EU decision-making process underpinning the climate policies. Section 5 describes the governance mechanism established to ensure implementation of climate policies. Section 6 focuses on recent energy developments and the outlook for the 2030 target. Section 7 provides some concluding remarks.

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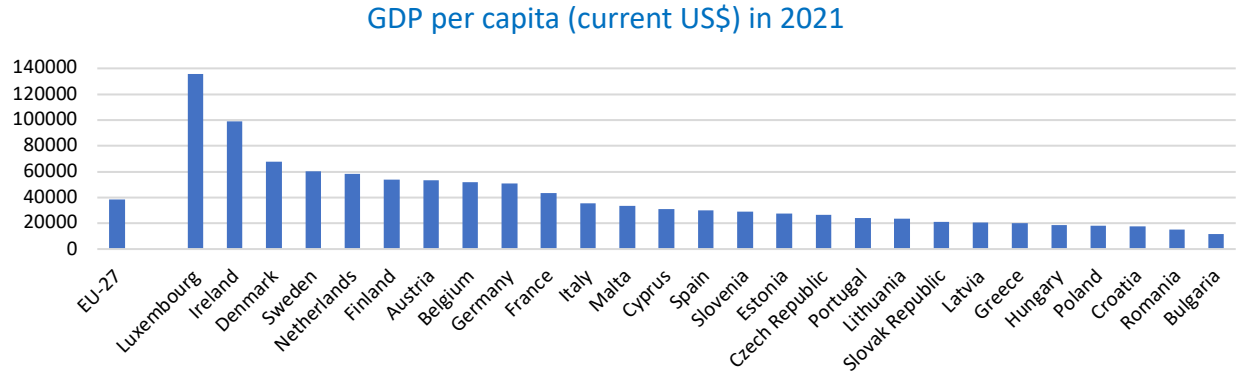
[2] European Commission, website, "European Climate Law", https://ec.europa.eu/clima/policies/eu-climate-action/law_en.
[3] European Commission, website, "Kyoto 1st Commitment Period 2008-12", https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-made-cutting-emissions/kyoto-1st-commitment-period-2008-12_en.
[4] European Environment Agency, website, "EU achieves 20-20-20 climate targets", https://www.eea.europa.eu/highlights/eu-achieves-20-20-20.
[5] Jos Delbeke and Peter Vis, Editors' introduction to "EU Climate Policy Explained", p.1, 2016.
[6] European Commission, website, "Energy Union", https://energy.ec.europa.eu/topics/energy-strategy/energy-union_en.

2. Different starting points for the 27 Member States

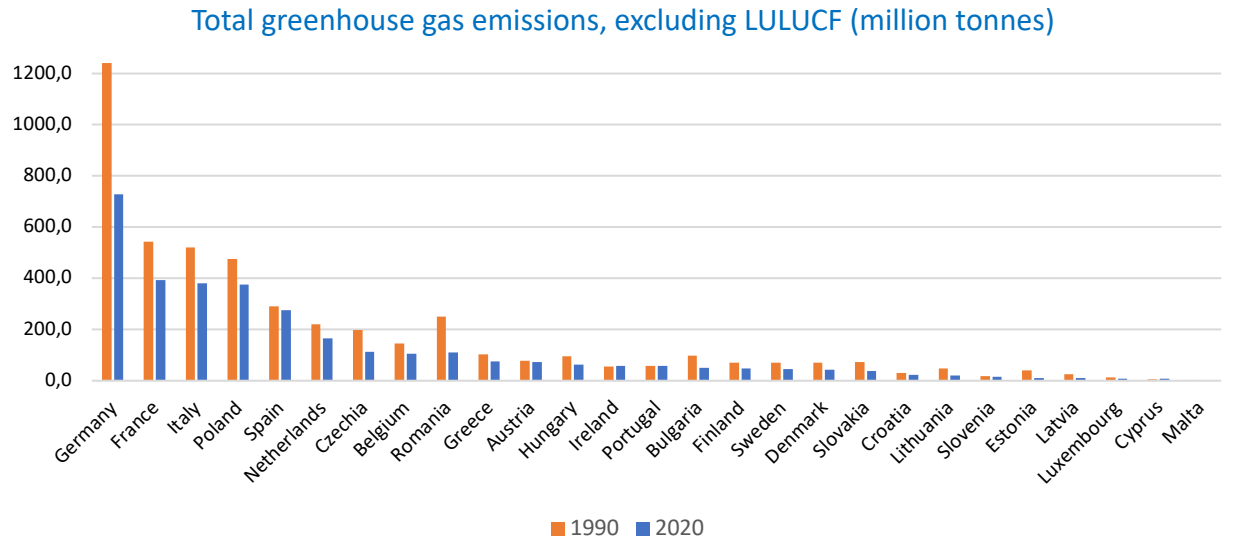
The EU is a unique partnership between 27 countries committing to common values and goals despite being quite different from each other. In the following, a brief overview of the countries' economic situation, GHG emissions, and energy mix will illustrate some basic differences that are useful to keep in mind.

The economic starting point varies significantly for the 27 Member States. The EU-27 is the second largest economy in the world, and the GDP per capita was 38,234 USD in 2021. However, the GDP per capita of the 27 countries varies from 11,635 USD (Bulgaria) to 135,683 USD (Luxembourg).



Source: The World Bank, World Bank Indicators, https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=EU.

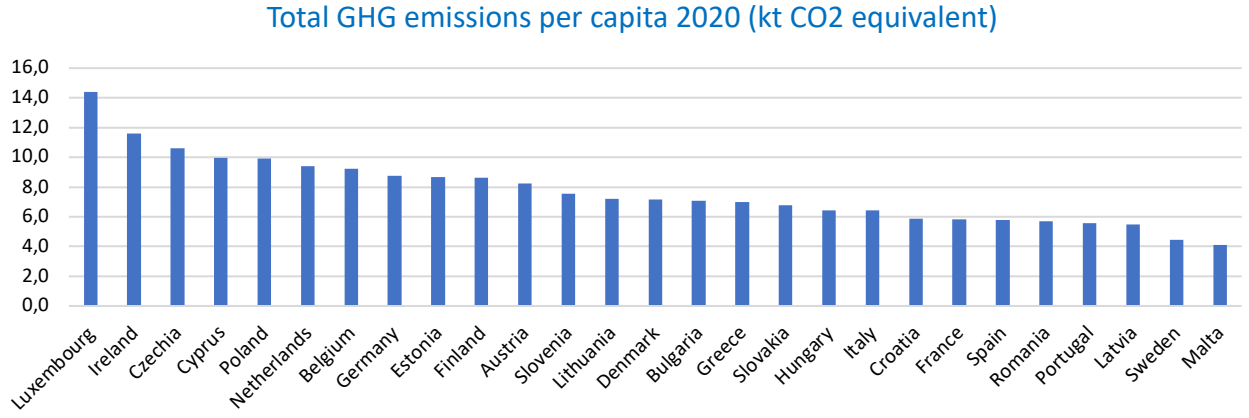
The level of GHG emissions and the reduction of these also vary greatly between countries. Overall, the EU reached GHG emission reductions of 24% in 2019. Factors included an increase in the use of renewables, a switch from coal to gas for power generation, and improvements in energy efficiency.[7] In 2020, the EU's GHG emissions decreased significantly and were 32% below the 1990 level, to a large degree due to the impact of the COVID-19 pandemic on energy consumption (see Section 6). Nevertheless, looking at the individual countries, two countries actually experienced a small increase in emissions since 1990 (Ireland and Cyprus), and for three countries the emissions decreased only slightly (Spain, Austria, and Portugal), cf. the figure below.



Source: European Environment Agency, "Annual European Union greenhouse gas inventory 1990–2020 and inventory report 2022 - Submission to the UNFCCC Secretariat", 27 May 2022, p. VIII, https://www.eea.europa.eu/publications/annual-european-union-greenhouse-gas-1.

[7] European Environment Agency, website, "Is Europe reducing its greenhouse gas emissions?", https://www.eea.europa.eu/themes/climate/eu-greenhouse-gas-inventory.

As expected, the most populous EU countries are the largest emitters nominally. In 2020, Germany remained the largest emitter in the EU, followed by France, Italy, Poland, and Spain. However, the picture changes when turning to GHG emissions per capita. Now, Luxembourg is the largest emitter, followed by Ireland, Czechia, Cyprus, Poland, and Netherlands, cf. the figure below. The countries with the least GHG emissions per capita are Malta, followed by Sweden, Latvia, and Portugal.



Source: European Environment Agency, website, "EEA greenhouse gases - data viewer", https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer.

The energy mix differs considerably between the Member States. Overall, fossil fuels are prevalent in the EU-27's total energy mix. In 2020, the energy mix was made up mainly by five sources: petroleum products (35%), natural gas (24%), renewable energy (17%), nuclear energy (13%), and solid fossil fuels (12%).

However, the shares vary between the 27 countries. Petroleum products account for a significant share in Cyprus (87%), Malta (86%), and Luxembourg (60%), while natural gas accounts for 40% in Italy and 38% in the Netherlands. Renewables have the highest share in Sweden (49%) and Latvia (40%), while nuclear energy makes up 41% of energy available in France and 25% in Sweden and Slovakia, respectively. More than half of energy available in Estonia (53%) and 41% in Poland comes from solid fossil fuels.[8]

Renewable energy sources are gaining ground in the power sector and made up 37% of gross electricity consumption in the EU in 2020. Renewable resources accounted for more than half of the electricity consumed in Austria, Sweden, Denmark, Portugal, Croatia, and Latvia. Wind and hydropower each accounted for around one-third of the total electricity generated from renewable sources (36% and 33%, respectively). The remaining one-third of electricity came from solar power (14%), solid biofuels (8%), and other renewable sources (8%).[9]

The dependency on energy imports also varies considerably between the Member States. Overall, more than half of the EU's energy needs were met by net imports (58%) in 2020. But the import dependency rate ranges from over 90% in Malta, Cyprus, and Luxembourg to 10% in Estonia. In 2020, the EU mainly depended on Russia for imports of crude oil, natural gas, and solid fossil fuels, followed by Norway for crude oil and natural gas.[10]

Hence, the green transition will be more challenging to some countries than others due to, for instance, the current energy mix or economic circumstances. However, the 2030 target of 55% reductions in GHG emissions is set to be reached collectively, not by each of the 27 Member States, and the different starting points and capacities of the individual countries are considered.

[8] Eurostat, website, "Where does our energy come from?", https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2a.html.
[9] Eurostat, website, "Renewable energy on the rise: 37% of EU's electricity", https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220126-1.
[10] Eurostat, website, "From where do we import energy?", https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html.

3. Key policy tools to advance decarbonisation in all Member States

A wide range of measures are necessary to reach the ambitious 2030 climate target collectively. In the following, the European Commission's Fit for 55 proposals from 14 July 2021 will illustrate how common measures applied to economic sectors across the Member States are to be combined with individual national climate targets and financial support.

Common measures applied to key economic sectors across the EU include:

- Strengthening the EU emissions trading system for electricity and district heating, energy-intensive industry, and commercial aviation, and expanding it to cover maritime activities as well as fuels used in road transport and buildings. It is combined with an adjustment mechanism targeting imports of carbon-intensive products to prevent carbon leakage.
- Increasing carbon removals from land use, land use change, and forestry (LULUCF).
- Stricter measures regarding transport, including CO2 emission standards for cars and vans, alternative fuels infrastructure, sustainable aviation fuels, and greener fuels in shipping.
- Higher targets for renewable energy and energy efficiency.
- An alignment of energy taxation to promote clean technologies and remove outdated exemptions and reduced rates that encourage the use of fossil fuels.

Individual national climate targets acknowledging the different starting points and capacities of the 27 countries are applied to:

- Emissions from road transport, agriculture, buildings, small industries, and waste.
- The net removal of carbon from LULUCF.
- The share of renewable energy in the energy mix and the improvement in energy efficiency.

The availability of financial support is enhanced significantly to facilitate the green transitioning in all Member States and to advance innovation in low-carbon technologies and processes.

3.1 Climate measures applied to economic sectors across the EU

The EU emissions trading system. Around 40% of total EU emissions come from the production of electricity and district heating, energy-intensive industry, and commercial aviation. The emissions trading system (EU ETS) is a key tool for reducing GHG emissions cost-effectively in these sectors.

A cap is set on the total amount of certain GHGs emitted by installations covered by the system. The cap is reduced over time so that total emissions fall. Within the cap, companies receive or buy emission allowances, which they can trade with one another as needed. After each year, a company must surrender allowances to cover all its emissions. Otherwise, heavy fines are imposed. If a company reduces its emissions, it can keep the spare allowances to cover its future needs or sell them to a company that is short of allowances. Revenues from the sale of allowances in the EU ETS mostly feed into the Member States' budgets.[11]

The Commission has proposed that emissions from the EU ETS sectors are reduced by 61% by 2030 compared to 2005 levels, instead of only 43% under the existing legislation, to account for the increase in the 2030 target from 40% to 55% reductions in GHG emissions. To this end, the Commission has proposed a one-off reduction in the overall emissions cap by 117 million allowances and a steeper annual emissions reduction of 4.2% (instead of the current 2.2% per year).

It is also proposed to include emissions from maritime activities in the EU ETS. The proposed extension will cover CO2 emissions from ships above 5,000 gross tonnage and will be applied to 100% of emissions from ships voyaging within the EU and ships at berth in EU ports, and 50% of emissions from voyages starting or ending outside the EU. To facilitate a smooth start, the

[11] European Commission, website, "EU Emissions Trading System (EU ETS)", https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en#a-cap-and-trade-system.

surrendering of obligations will be gradually increased in the first three years (20%, 45%, and 70% of verified emissions reported for 2023, 2024, and 2025, respectively). Allowances will need to be surrendered for 100% of verified emissions in 2027 (for 2026 emissions).

In addition, it is proposed to introduce a new, separate emissions trading system to cover emissions from fuels used in road transport and buildings. The proposal for road transport and buildings will regulate fuel suppliers rather than households and car drivers, (i.e. not the actual emitter but the entity responsible for the release of consumption of fuels). The new system is designed to start in 2026.[12][13] To address the social impacts of the extension of emissions trading to road transport and buildings, the Commission has also proposed a Social Climate Fund, cf. Section 3.3.

A new carbon border adjustment mechanism (CBAM) is proposed to target imports of carbon-intensive products (iron and steel, cement, fertiliser, aluminium, and electricity generation). Essentially, EU importers will have to buy carbon certificates corresponding to the carbon price that would have been paid, had the goods been produced under the EU's carbon pricing rules. Hence, the CBAM will equalise the price of carbon between domestic products and imports. While designed to respect World Trade Organization (WTO) rules and other international obligations of the EU, CBAM aims at preventing carbon leakage, i.e. that companies based in the EU could move carbon-intensive production abroad to take advantage of lax standards, or that EU products could be replaced by more carbon-intensive imports.[14]

Land use, land use change, and forestry (LULUCF). The LULUCF sector absorbs more carbon than it releases into the atmosphere, due to the ability of trees and plants to absorb CO2. In 2020, European forests and soils removed 230 MtCO2e (megatonnes of carbon dioxide equivalent) from the atmosphere, i.e. around 7% of the EU's total GHG emissions. But the sink has declined since 2014.[15] The European Commission has proposed a revision of the LULUCF regulation which sets rules for emission reductions and carbon removals. Currently, the "no-debit" rule requires that emissions within the LULUCF sector are compensated by at least an equivalent amount of removals. The Commission has proposed the overall target of 310 MtCO2e carbon removals by 2030 and binding national targets of minimum net removals for each Member State.[16]

Transport. The transport sector is responsible for around 25% of GHG emissions in the EU, while cars and vans alone account for around 15% of the EU's CO2 emissions.[17][18] The European Commission has proposed new CO2 emission standards for cars and vans, including a 100% reduction target by 2035, implying that all new cars and vans in the EU must be zero-emission vehicles from 2035. By 2030, it was proposed that CO2 emissions are to be reduced by 55% for new cars and 50% for new vans compared to 2021 levels.[19] Further measures were proposed to increase

[12] EUR-Lex, European Commission, "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757", COM(2021) 551 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0551.

[13] European Commission, website, "Increasing the ambition of EU emissions trading", https://ec.europa.eu/clima/eu-action/european-green-deal/delivering-european-green-deal/increasing-ambition-eu-emissions-trading_en.

[14] European Commission, website, "Carbon Border Adjustment Mechanism: Questions and Answers", https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3661.

[15] European Environment Agency, "Trends and projections in Europe 2022", p. 8, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.

[16] EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) 2018/841 as regards the scope, simplifying the compliance rules, setting out the targets of the Member States for 2030 and committing to the collective achievement of climate neutrality by 2035 in the land use, forestry and agriculture sector, and (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of progress and review", COM(2021) 554 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52021PC0554.

[17] Council of the European Union, website, "Infographic - Fit for 55: towards more sustainable transport", https://www.consilium.europa.eu/en/infographics/fit-for-55-afir-alternative-fuels-infrastructure-regulation/.

[18] Council of the European Union, website, "Infographic - Fit for 55: why the EU is toughening CO2 emission standards for cars and vans", https://www.consilium.europa.eu/en/infographics/fit-for-55-emissions-cars-and-vans/.

[19] EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's

greener fuels in the aviation and maritime sectors and ensure enough infrastructure for cars, trucks, ships, and planes to charge or fuel with alternative fuels such as hydrogen and liquified methane.[20]

Renewable energy. Since around 75% of total GHG emissions in the EU are energy-related, renewable energy is seen as key to emission reductions.[21] The European Commission has proposed that the 2030 EU target for renewable energy sources in the energy mix is increased from 32% to 40%. It also proposed the introduction or enhancement of sectorial sub-targets in the fields of transport, buildings, and industry where progress with integrating renewables has been slower to date. The Member States will set individual national targets.[22]

Energy efficiency. Energy efficiency is also central to climate policies because saving energy implies lower GHG emissions. The European Commission has proposed an additional reduction of energy consumption of 9% by 2030 compared to the 2020 baseline scenario projections, which corresponds to 39% and 36% energy efficiency targets for primary and final energy consumption, respectively (instead of the current 32.5%). Consequently, the EU's overall energy consumption should be no more than 1,023 Mtoe (million tonnes of oil equivalent) of primary energy and 787 Mtoe of final energy by 2030. The Member States will set individual national targets.[23]

Energy taxation. The European Commission has proposed to align the taxation of energy products with EU energy and climate policies, promote clean technologies, and remove outdated exemptions and reduced rates that currently encourage the use of fossil fuels. Fuels should be taxed according to their energy content and environmental performance, rather than their volume. The way in which energy products are categorised for taxation purposes should be simplified to ensure that fuels most harmful to the environment are taxed the most. Exemptions for certain products and home heating should be phased out, so that fossil fuels can no longer be taxed below minimum rates. Fossil fuels used as fuel for intra-EU air transport, maritime transport, and fishing should no longer be fully exempt from energy taxation in the EU.[24]

3.2 Individual national climate targets applied to the Member States

The sectors of road transport, agriculture, buildings, small industries, and waste amount to 60% of the EU's GHG emissions.[25] For these sectors, the reduction target differs for the 27 countries, based on GDP per capita with a limited amount of targeted corrections. Generally, Member States with higher GDP per capita have higher emission reduction targets. However, an approach based solely on GDP per capita would create relatively higher costs for some countries to reach their targets, so the targets are adjusted to reflect cost-effectiveness.

The updated so-called "effort sharing" proposed by the European Commission is to take into account the increase in the GHG emission reduction target from 40% to 55% by 2030 compared to 1990, or from 29% to 40% by 2030 compared to 2005.[26] The Commission's proposal includes

increased climate ambition", COM(2021) 556 final, 14.7.2021, https://eur-lex.europa.eu/resource.html?uri=cellar:870b365e-eecc-11eb-a71c-01aa75ed71a1.0001.01/DOC_1&format=PDF.

[20] Council of the European Union, website, "Fit for 55", https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/.

[21] Council of the European Union, website, "Infographic - Fit for 55: how the EU plans to boost renewable energy", https://www.consilium.europa.eu/en/infographics/fit-for-55-how-the-eu-plans-to-boost-renewable-energy/.

[22] EUR-Lex, European Commission, "Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652", COM/2021/557 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0557.

[23] European Commission, website, "Energy Efficiency Directive", https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en.

[24] European Commission, website, "Revision of the Energy Taxation Directive", https://taxation-customs.ec.europa.eu/green-taxation-0/revision-energy-taxation-directive_en.

[25] Council of the European Union, website, "Infographic - Fit for 55: reducing emissions from transport, buildings, agriculture and waste", https://www.consilium.europa.eu/en/infographics/fit-for-55-effort-sharing-regulation/.

[26] European Commission, website, "Increasing the ambition of the EU's Effort Sharing Regulation", https://ec.europa.eu/clima/eu-action/european-green-deal/delivering-european-green-deal/increasing-ambition-eus-effort-sharing-regulation_en.

individual national 2030 targets from -10% to -50% emission reductions compared to 2005, cf. the table below.

National GHG emission reduction targets compared to 2005

EU-27	**40%**	**Latvia**	-17%
Belgium	-47%	**Lithuania**	-21%
Bulgaria	-10%	**Luxembourg**	-50%
Czechia	-26%	**Hungary**	-18.7%
Denmark	-50%	**Malta**	-19%
Germany	-50%	**Netherlands**	-48%
Estonia	-24%	**Austria**	-48%
Ireland	-42%	**Poland**	-17.7%
Greece	-22.7%	**Portugal**	-28.7
Spain	-37.7%	**Romania**	-12.7%
France	-47.5%	**Slovenia**	-27%
Croatia	-16.7%	**Slovakia**	-22.7%
Italy	-43.7%	**Finland**	-50%
Cyprus	-32%	**Sweden**	-50%

Source: EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of The Council amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement", COM(2021) 555 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0555.

As mentioned earlier, individual national targets are also recognised in other parts of the EU's climate policies, including LULUCF carbon removals, renewable energy, and energy efficiency.

3.3 Financial support for the green transition

Since the green transition will be expensive, the European Commission has vowed to raise at least 1 trillion EUR to support sustainable investments up to 2030 as part of the European Green Deal.

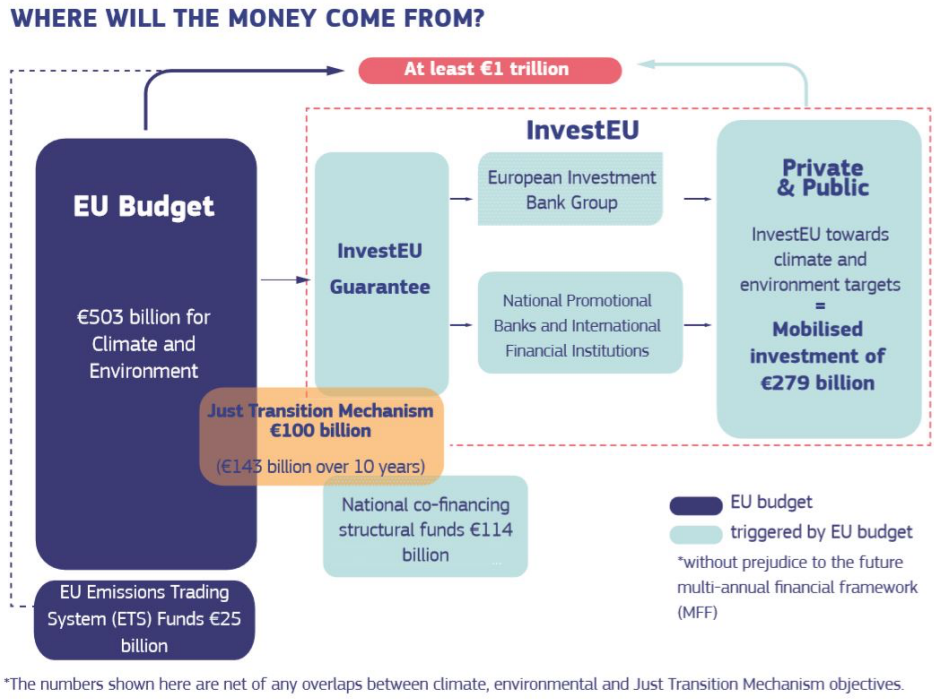
The EU budget will play a significant role. The budget is multiannual, and it amounts to 1.211 trillion EUR for the current period of 2021-2027. It is funded by customs duties on imports from outside the EU; a small part of the VAT collected in the Member States; GNI-based contributions from Member States; and (since 2021) a national contribution based on the amount of non-recycled plastic packaging waste.[27][28] Furthermore, the temporary NextGenerationEU instrument of 806.9 billion EUR supports the Member States' recovery from the COVID-19 pandemic as well as the twin green and digital transition. NextGenerationEU is funded through borrowing in the markets. Up to 250 billion EUR will be funded by issuing NextGenerationEU Green Bonds which will finance climate-related expenditure as identified in the Member States' so-called Recovery and Resilience plans.[29]

Currently, the largest share of the budget is spent on strengthening economic, social, and territorial cohesion in the EU, but other sizeable areas include agricultural policy, innovation and research, and assistance to countries outside the EU. A substantial part of EU funding is managed jointly by the Commission and the national authorities, but the ultimate responsibility for the budget lies with the Commission, which must ensure that every euro spent is recorded and accounted for.[30]

More than half of the 1 trillion EUR for the green transition will come from the EU's budget and the EU's emissions trading system, cf. the figure below. In addition, the so-called InvestEU Programme

[27] European Commission, website, "Own resources", https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/revenue/own-resources_en.
[28] The Commission has proposed further sources, including revenue from the emissions trading system, but this has not been agreed yet.
[29] European Commission, website, "NextGenerationEU", https://commission.europa.eu/strategy-and-policy/eu-budget/eu-borrower-investor-relations/nextgenerationeu_en.
[30] European Commission, website, "Spending", https://european-union.europa.eu/institutions-law-budget/budget/spending_en.

will mobilise more than 372 billion EUR of public and private investment through an EU budget guarantee of 26.2 billion EUR.[31] National contributions are expected to amount to 114 billion EUR.



Source: European Commission, website, "The European Green Deal Investment Plan and Just Transition Mechanism explained", https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24.

The focus on climate action has already been strengthened in the EU budget's long-standing financial instruments to support development in the EU's countries and regions. For instance, the European Regional Development Fund (ERDF) aims to strengthen economic, social, and territorial cohesion in the EU by correcting imbalances between its regions, and 30% of ERDF's operations are expected to contribute to climate objectives.[32] Another example is the Cohesion Fund, which provides support to Member States with a GNI per capita below 90% of the EU-27 average to strengthen the economic, social, and territorial cohesion of the EU (currently Bulgaria, Czechia, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia). The Cohesion Fund supports investments in the field of environment and transport infrastructure, and 37% of the Cohesion Fund is expected to contribute specifically to achieving climate neutrality by 2050.[33]

However, four financial instruments deserve special mentioning since they are either new or expected to be enhanced. The Just Transition Mechanism was established as part of the European Green Deal in connection with the EU Budget for 2021-2027. The establishment of a Social Climate Fund is part of the European Commission's Fit for 55 proposals from July 2021, which also include enhancements of the Modernisation Fund and the Innovation Fund.

The Just Transition Mechanism

As part of the European Green Deal, the Just Transition Mechanism was launched in connection with the multiannual EU budget for 2021-2027. The Just Transition Mechanism focuses on ensuring a fair and just transition to a green economy, leaving no one behind.

Support is available to all Member States, focusing on regions that are the most carbon-intensive or with the most people working in fossil fuels. Member States get access by preparing territorial just

[31] European Commission, website, "InvestEU Fund", https://investeu.europa.eu/what-investeu-programme/investeu-fund_en.
[32] European Commission, website, "European Regional Development Fund", https://ec.europa.eu/regional_policy/en/funding/erdf/.
[33] European Commission, website, "Cohesion Fund", https://ec.europa.eu/regional_policy/en/funding/cohesion-fund/.

transition plans that cover the period up to 2030, identifying the territories that should get the most support. However, if a Member State has not committed to implementing the objective of a climate-neutral EU by 2050, only 50% of the annual allocations for that Member State will be made available.[34] The Just Transition Mechanism consists of 3 pillars:

- The Just Transition Fund of 19.2 billion EUR in current prices is expected to mobilise around 25.4 billion EUR in investments.
- The InvestEU "Just Transition" scheme will provide a budgetary guarantee under the InvestEU programme and an InvestEU Advisory Hub that will act as a central entry point for advisory and technical assistance requests. It is expected to mobilise 10-15 billion EUR in mostly private sector investments.
- The Public Sector Loan Facility will combine 1.5 billion EUR of grants financed from the EU budget with 10 billion EUR of loans from the European Investment Bank, to mobilise 18.5 billion EUR of public investment.

For people and citizens most vulnerable to the transition, the Just Transition Mechanism aims to facilitate employment opportunities in new sectors and offer re-skilling opportunities; improve energy-efficient housing; and facilitate access to clean, affordable, and secure energy.

For companies and sectors active in or comprising carbon-intensive industries, the Just Transition Mechanism will support the transition to low-carbon technologies and economic diversification based on climate-resilient investments and jobs; create attractive conditions for public and private investors; provide easier access to loans and financial support; and invest in the creation of new firms, SMEs and start-ups, and research and innovation activities.

For Member States and regions with high dependence on fossil fuel and carbon-intensive industries, the Just Transition Mechanism will support the transition to low-carbon and climate-resilient activities; create new jobs in the green economy; invest in public and sustainable transport; provide technical assistance; invest in renewable energy sources; improve digital connectivity; provide affordable loans to local public authorities; and improve energy infrastructure, district heating, and transportation networks.[35]

The Just Transition Platform has been launched to help EU Member States and regions unlock support available through the Just Transition Mechanism. The Platform is a single access point to information about the support for the EU territories most affected by the transition. It provides technical assistance and advice, including a dedicated helpdesk. The Platform also promotes sharing of knowledge and exchanges of best practices to a wide range of stakeholders, particularly in regions dependent on fossil fuels or carbon-intensive industries.

The Just Transition Platform organises regular events for all stakeholders and gives the floor to financial actors, social partners, business representatives, youth organisations, and transition experts to discuss the needs and challenges of a just transition. Another key initiative involves four Working Groups focusing on steel, cement, chemicals, and horizontal stakeholder strategy.[36] The Working Groups provide a forum for stakeholders involved in the transition process in carbon-intensive regions. The Working Groups aim to share knowledge and good practices on challenges, impacts, and strategies, and to find practical solutions and tools to tackle local challenges and mitigate the adverse effects of the transition process. They meet at least twice a year, and the

[34] EUR-Lex, "Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund", https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056.
[35] European Commission, website, "The Just Transition Mechanism: making sure no one is left behind", https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en#just-transition-fund.
[36] European Commission, website, "About the Just Transition Platform", https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform/about_en.

members come from national, local, and regional authorities; associations representing regional, local, urban, and other public authorities; organisations representing economic and social partners; and bodies representing civil society, such as non-governmental organisations.[37]

The Social Climate Fund

As part of the Fit for 55 package, the European Commission proposed the creation of a Social Climate Fund in the amount of 72.2 billion EUR over the period of 2025-2032, aiming to address the social and distributional impact of the proposed new emissions trading system for buildings and road transport. The Fund is to be financed by the EU budget and, as of 2026, the revenues from the new emissions trading for buildings and road transport. The financial envelope of the Fund should correspond to 25% of the expected revenues from the inclusion of buildings and road transport.

The Fund is to benefit all Member States, but a maximum financial allocation is calculated for each Member State by means of an allocation key, providing added support to Member States that are more impacted by the inclusion of the building and road transport in the emissions trading system.

Based on social climate plans to be developed by the Member States, the Social Climate Fund is to support measures benefitting vulnerable households, micro-enterprises[38], and transport users. The Member States may finance temporary income support as well as measures and investments identified in their plans to improve the energy efficiency of buildings; decarbonise heating and air-conditioning in buildings, including the integration of energy from renewable sources; and grant improved access to zero- and low-emission mobility and transport. Payments from the Social Climate Fund is conditional on achievement of the milestones and targets included in the Plans.[39]

The Modernisation Fund

As part of the Fit for 55 package, the European Commission proposed an increase in the Modernisation Fund, which supports the 10 lower-income Member States modernise their energy systems (Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia). The Fund was established as part of the EU emissions trading system and is currently funded by revenues from the auctioning of 2% of the total emission allowances for 2021-2030, i.e. around 48 billion EUR (at 75 EUR/tCO2), depending on the carbon price.

The Commission proposes auctioning an additional 2.5% of the total emission allowances to finance the energy transition of the 10 Member States mentioned above, plus Greece and Portugal. The increased funding is to support modernising the power sector and wider energy systems, boosting energy efficiency, and facilitating a just transition in coal-dependent regions.

The Modernisation Fund operates under the responsibility of the beneficiary Member States, the European Investment Bank (EIB), and the European Commission. Member States may combine the funding with national funds as well as other support programmes such as the Cohesion Fund, the European Regional Development Fund, and the Just Transition Fund.[40][41]

The Innovation Fund

As part of the Fit for 55 package, the European Commission proposed an increase in the Innovation Fund, which supports innovation in low-carbon technologies and processes across all Member

[37] European Commission, website, "Just Transition Platform Working Groups", https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform/groups_en.
[38] An enterprise that employs fewer than 10 persons and whose annual turnover or annual balance sheet does not exceed 2 million EUR.
[39] EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of the Council establishing a Social Climate Fund", COM(2021) 568 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021PC0568.
[40] European Commission, website, "Modernisation Fund", https://climate.ec.europa.eu/eu-action/funding-climate-action/modernisation-fund_en#type-of-support-and-synergies-with-other-instruments.
[41] EUR-Lex, European Commission, "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757", COM/2021/551 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0551.

States. The Fund was established as part of the EU emissions trading system, and it provides around 38 billion EUR (at 75 EUR/tCO2) of support, depending on the carbon price, primarily funded by the auctioning of 450 million emission allowances in the period 2020-2030. It is one of the world's largest funding programmes for the demonstration of innovative low-carbon technologies, aiming to bring to the market industrial solutions to decarbonise Europe.

The goal is to help businesses invest in clean energy and industry to boost economic growth, create local future-proof jobs, and reinforce EU technological leadership on a global scale. This is done through calls for large and small-scale projects focusing on:

- innovative low-carbon technologies and processes in energy-intensive industries, including products substituting carbon-intensive ones,
- carbon capture and utilisation (CCU),
- construction and operation of carbon capture and storage (CCS),
- innovative renewable energy generation,
- energy storage.[42]

The Commission proposes that the scope of the Fund is extended to support innovation in low-carbon technologies and processes that concern the consumption of fuels in the buildings and road transport sectors. It is also proposed that the Fund supports investments to decarbonise the maritime transport sector, including investments in sustainable alternative fuels such as hydrogen and ammonia that are produced from renewables. To ensure that sufficient funding is available within the extended scope, the Commission proposes supplementing the Fund with 50 million emission allowances from the EU emissions trading system as well as 150 million emission allowances from the new emissions trading system for the buildings and road transport sectors, i.e. an addition of 15 billion EUR (at 75 EUR/tCO2) in total, depending on the carbon price.[43]

The Innovation Fund complements other instruments such as Horizon Europe, which mainly focus on earlier research phases. Horizon Europe is the EU's key funding programme for research and innovation with a budget of 95.5 billion EUR, which aims to tackle climate change, achieve the UN's Sustainable Development Goals, and boost the EU's competitiveness and growth.[44] Funding from the Innovation Fund can be combined with funding from Horizon Europe and other support programmes such as the Modernisation Fund and the Just Transition Fund as well as private financing.[45]

4. The EU decision-making process facilitating support for climate policies

The EU has a unique institutional set-up with supranational elements enabling binding legislation to be imposed on the Member States. A distinctive decision-making process is in place to ensure the Member States' support of common measures such as climate policies.

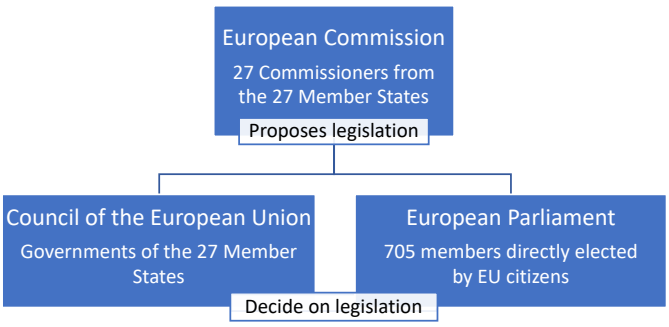
The European Commission is responsible for proposing new legislation, while the Council of the European Union and the European Parliament are the decision-making bodies, cf. the figure below.

[42] European Commission, website, "What is the Innovation Fund?", https://climate.ec.europa.eu/eu-action/funding-climate-action/innovation-fund/what-innovation-fund_en#other-forms-of-support-and-funding-synergies.
[43] EUR-Lex, European Commission, "Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757", COM/2021/551 final, 14.7.2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0551.
[44] European Commission, website, "Horizon Europe", https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en.
[45] European Commission, website, "What is the Innovation Fund?", https://climate.ec.europa.eu/eu-action/funding-climate-action/innovation-fund/what-innovation-fund_en#other-forms-of-support-and-funding-synergies.

The 27 heads of state or government meet in the European Council, which defines the EU's overall political direction and priorities, traditionally by adopting conclusions. It does not adopt EU laws.[46]

The Fit for 55 proposals follow the EU's ordinary legislative procedure where the three main institutions come to agreement on legislation, cf. the box below. After the Commission presented the proposals on 14 July 2021, they were sent to the Council - where the governments of the 27 Member States are represented - and to the Parliament whose 705 members are directly elected by voters in the 27 Member States.

Main decision-making bodies in the EU



The proposals were then negotiated and amended in the Council and the Parliament, respectively. By end-June 2022, the Council had reached a common position (or "general approach") on most of the Fit for 55 proposals.[47] Similarly, the Parliament had approved its position on most of the Fit for 55 proposals by end-June 2022. Subsequently, the two institutions engaged in negotiations on each of the proposals. A proposal is not finalised until the Council and the Parliament reach agreement and finally adopt the legislation.

Decision-making in the EU – the ordinary legislative procedure

There are three main institutions involved in EU decision-making:

- The European Commission, representing the EU's overall interests,
- The Council of the European Union, representing the EU governments,
- The European Parliament, representing the EU citizens.

The European Commission proposes initiatives, while the Council of the European Union and the European Parliament are the decision-making bodies. EU policies are typically decided through the ordinary legislative procedure where the three main institutions come to agreement on legislation.

Once the Commission has presented its proposal, both the Parliament and the Council review it and can propose amendments. Typically, the Parliament, the Council, and the Commission then meet to see if they can agree on a complete set of amendments. If the Commission does not agree with any amendments, the Council can only overrule the objection by unanimous decision. If the Commission considers that the amendments excessively change the proposal, it has the right to withdraw its proposal.

If the three institutions do not agree on a common text, a second reading takes place. During the second reading, the Parliament and the Council can propose further amendments. The Parliament can also block the proposal if it cannot agree with the Council.

If the Parliament and the Council agree on the amendments, the proposal can be adopted. If they cannot agree, a conciliation committee is set up to try to find a solution. Both the Parliament and the Council can block the proposal during this final second reading stage.

A proposal is adopted into law when the Parliament and Council agree on a joint text, and it is published in the EU's Official Journal.

Source. European Union, website, "European Union policy area setting process", https://european-union.europa.eu/institutions-law-budget/decision-making-process/legislation_en.

In the following, the Commission, the Council, and the Parliament are briefly described (see the Annex for further information). Additionally, the EU citizens are mentioned since they are generally concerned over climate change which is likely to affect the EU's decision-making bodies.

4.1 The European Commission

The European Commission is key to facilitating support as the body responsible for proposing policy measures. The Commission presents proposals on its own initiative or responds to invitations from the European Council, the Council of the European Union, the European Parliament, and citizens. The Commission also enforces EU law together with the European Court of Justice and implements EU policies and the EU budget.

[46] European Commission, website, "About the European Council", https://www.consilium.europa.eu/en/european-council/.
[47] The Council of the European Union, website, "Fit for 55", https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/.

The Commission is led by 27 Commissioners - one from each Member State - and they are supported by around 32,000 employees.[48] The Commission is organised into policy departments, known as Directorates-General (DGs). DGs are similar to ministries, and each of them refer to one or more Commissioners. DGs develop, implement, and manage EU policy, law, and funding programmes in their respective areas of competence. In addition, service departments deal with administrative issues, and executive agencies manage programmes set up by the Commission.[49]

The Commission prepares laws and policies transparently, based on evidence and engagement of stakeholders. This is referred to as Better Regulation. Citizens, businesses, and other stakeholders can contribute to the preparation of proposals through participation in consultation activities ranging from public consultations to workshops, hearings, and surveys. Once a draft text is finalised by the responsible DG, having taken into consideration the input received, it is submitted for inter-service consultation. All relevant policy departments of the Commission are consulted.

Depending on the level of political importance, an initiative for a new policy or law is either agreed by the 27 Commissioners during their weekly meetings using the oral procedure, or by written procedure. Oral procedure involves a debate and agreement on the initiative by the Commissioners. The written procedure implies that the Commissioners give their consent in writing.[50] The Commission functions on the principle of collegiality, and the 27 Commissioners are equally responsible for the decisions made.

Stakeholder engagement takes place at all stages of the legislative and policymaking process. The main platform for feedback during preparation of the Commission's proposals is the "Have your say" portal.[51] As regards existing laws and reduction of the regulatory burden, improvements may be suggested at the "Have your say: Simplify!" portal.[52] The Commission also reaches out during implementation of policies as illustrated by the four Working Groups focusing on steel, cement, chemicals, and horizontal stakeholder strategy, established in connection with the Just Transition Platform. The Commission has launched multiple initiatives to engage all parts of society in the green transition. For instance, the Commission announced in 2022 that 100 cities will participate in the "EU Mission for climate-neutral and smart cities by 2030"; they represent 12% of the EU's population, and they will receive 360 million EUR from Horizon Europe in 2022-23 to start the innovation paths towards climate neutrality. There was an overwhelming interest from 377 cities to join the mission, so the Commission is planning support also for the cities that were not selected.[53]

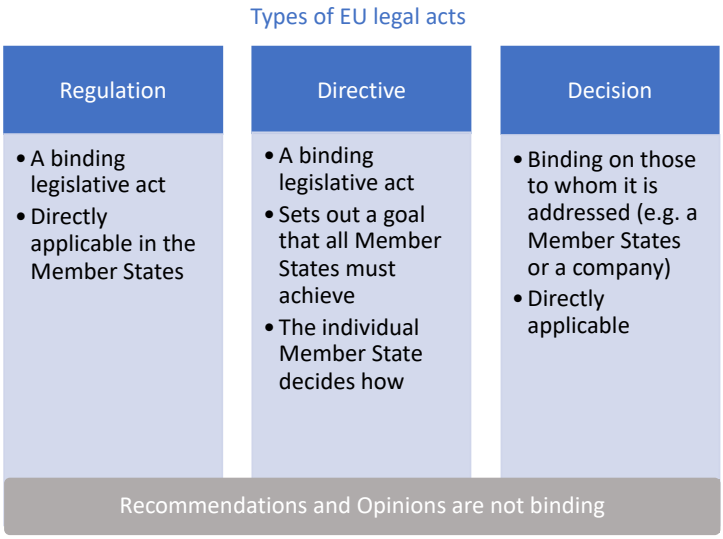
Stakeholder engagement also takes place in the 27 Member States and in the European Parliament. While the involvement of stakeholders generally differs between the countries, all Member States are, for instance, required to consult citizens, businesses, and regional authorities during the drafting of their national energy and climate plans, cf. Section 5. The Parliament reaches out to stakeholders regularly, e.g. through hearings organised by the parliamentary committees.

4.2 The Council of the European Union and the European Parliament

The Member States' participation in decision-making is essential since they are, to a large degree, responsible for the implementation of climate policies. The Member States must ensure that their actions are consistent with EU law and adopt the legislation necessary to give effect to EU Law.

[48] European Commission, website, "Commission staff", https://ec.europa.eu/info/about-european-commission/organisational-structure/commission-staff_en.
[49] European Commission, website, "How the Commission is organised", https://ec.europa.eu/info/about-european-commission/organisational-structure/how-commission-organised_en.
[50] European Commission, website, " How decisions are made", https://commission.europa.eu/strategy-and-policy/decision-making-process/how-decisions-are-made_en.
[51] European Commission, website, "Have your say", https://ec.europa.eu/info/law/better-regulation/have-your-say_en.
[52] European Commission, website, "Have your say: Simplify!", https://ec.europa.eu/info/law/better-regulation/have-your-say-simplify_en.
[53] European Commission, website, "Commission announces 100 cities participating in EU Mission for climate-neutral and smart cities by 2030", https://ec.europa.eu/commission/presscorner/detail/en/IP_22_2591.

Several of the Fit for 55 proposals are so-called regulations – e.g. the national emission reduction targets and the CO2 emission standards for cars and vans - which are directly applicable in the 27 Member States once they are agreed by the 3 main bodies of the EU.



Many others of the Fit for 55 proposals are so-called directives – e.g. the targets for renewable energy and energy efficiency - which only sets out goals that all EU countries must achieve. It is up to the individual Member State to devise its own laws to achieve the goals. The Commission monitors whether the Member States apply EU law properly (including transposing it into national law) and if they do not, the Commission may take legal action requesting compliance by initiating a so-called infringement procedure. If a Member State fails to comply, the Commission may eventually ask the European Court to impose penalties.[54]

In the Council, the wide-ranging Fit for 55 proposals are negotiated in different configurations of the Council depending on the specific subject: Environment; Energy; Transport; and Economic and Financial Affairs. The relevant Ministers of each of the 27 countries participate in the regular Council meetings where decisions are taken. More than 150 working parties and committees comprised of officials from all the Member States help prepare the work of ministers in the different Council configurations.[55] The decision-making is facilitated by the General Secretariat of the Council which has around 3,000 employees.[56] The General Secretariat helps organise and ensure the coherence of the Council's work. The Commission takes part in the meetings of the Council.

In the Parliament, decisions are taken by the 705 members coming from all the 27 Member States in the so-called plenaries. The plenaries are chaired by the President of the European Parliament who is elected by the members. The President calls upon speakers and directs the voting procedure. The Parliament has 20 parliamentary committees, which consist of between 25 and 88 MEPs. When the Fit for 55 proposals were presented by the Commission, each proposal was assigned to one (or multiple) of the parliamentary committees depending on the subject, and members of the relevant committees were appointed to draw up reports. The relevant parliamentary committees vote on these reports and possibly amend them before they are ready for the plenary. Members of the European Parliament are organised by political affiliation, not nationality.[57] They are assisted by the Parliament's staff of around 8,100 people.[58]

By end-March 2023, the Council and the Parliament had agreed on most of the Fit for 55 proposals from July 2021. On 28 March 2023, the Council and the Parliament adopted the CO2 emissions standards for cars and vans; the emission reductions and carbon removals in the LULUCF sector; the Member States' national emissions reduction targets; and part of the emissions trading system legislation. These will enter into force on the twentieth day following that of their publication in the

[54] European Commission, website, "Applying EU law", https://commission.europa.eu/law/law-making-process/applying-eu-law_en#eu-law.
[55] Council of the European Union, website, "The decision-making process in the Council", https://www.consilium.europa.eu/en/council-eu/decision-making/.
[56] Council of the European Union, website, "Careers at the General Secretariat of the Council", https://www.consilium.europa.eu/en/general-secretariat/jobs/.
[57] European Parliament, website, "Organisation", https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation.
[58] European Parliament, website, "How many people work in the Parliament?", https://www.europarl.europa.eu/news/en/faq/21/how-many-people-work-in-the-parliament.

Official Journal of the European Union. In addition, provisional agreement had been reached on the Social Climate Fund; the renewable energy targets; the energy efficiency targets; the carbon border adjustment mechanism; and part of the emissions trading system legislation, including the Modernisation Fund and Innovation Fund. By end-March 2023, these measures awaited final adoption by the Council and the Parliament. The remaining proposals on transport and taxation were still under negotiation between the Council and the Parliament (based on their respective positions), or within each of the two institutions.[59]

The Commission's proposals undergo changes during the negotiations, reflecting the influence of the Member States and the Parliament. For example, the Commission proposed a Social Climate Fund with funding of up to 72.2 billion EUR in the period of 2025-2032 but the Council and the Parliament provisionally agreed on the smaller amount of 65 billion EUR in the shorter period of 2026-2032. While the Commission proposed the possibility of Member States providing temporary direct income support, the Council and the Parliament agreed to apply a ceiling for temporary direct income support of 37.5% of the costs of the social climate plans. The Council and the Parliament supported that the fund would benefit all Member States and kept the allocation method proposed by the Commission while increasing the minimum share per Member State.[60]

The ordinary legislative procedure ensures that EU legislation – in this case the Fit for 55 proposals – only enters into force if it is supported by the governments of the Member States as represented in the Council as well as the European parliamentarians representing the Member States' citizens.

4.3 The EU citizens

The citizens of the 27 Member States are an important factor affecting the decision-making in the EU. Citizens participate in national elections determining the governments that represent their countries in the Council of the European Union, and they elect the members of the European Parliament. Citizens also engage with the European Commission as it reaches out for feedback to legislative measures. Citizens can even initiate proposals by the Commission through a successful European Citizens' Initiative, which requires 1 million signatures.

The European citizens are generally quite concerned over climate change. A Eurobarometer survey conducted in 2021 found that nearly nine in ten Europeans found it important that both their national government (88%) and the EU (87%) set ambitious targets to increase the use of renewable energy and support energy efficiency improvements by 2030. And 75% of respondents believed that their national government was not doing enough to tackle climate change.

The survey also found that more than 93% of the EU citizens believed that climate change is a serious problem. A longer-term analysis in the survey reveals that since 2015, the feeling that climate change is a very serious problem has gained ground in 23 EU Member States and by at least 10 percentage points in 14 countries, most notably in Estonia (63%, +29 percentage points), Ireland (81%, +22), the Netherlands (80%, +22), and Latvia (59%, +22). On the other hand, it has lost ground in three countries, particularly in Romania (66%, -8), Bulgaria (75%, -5), and Greece (84%, -3). In 2021, the respondents most concerned that climate change is a very serious problem came from Portugal (91%), Cyprus (89%), Malta (86%), Greece (84%), and Italy (84%).

Furthermore, the survey revealed positive sentiments regarding economic aspects of the green transition. Around three quarters believed that promoting EU expertise in clean technologies could help create new jobs in the EU (78%); that acting on climate change would lead to innovation that

[59] Council of the European Union, website, "Timeline - European Green Deal and Fit for 55", https://www.consilium.europa.eu/en/policies/green-deal/timeline-european-green-deal-and-fit-for-55/.
[60] The Council of the European Union, website, "'Fit for 55': Council and Parliament reach provisional deal on EU emissions trading system and the Social Climate Fund", https://www.consilium.europa.eu/en/press/press-releases/2022/12/18/fit-for-55-council-and-parliament-reach-provisional-deal-on-eu-emissions-trading-system-and-the-social-climate-fund/.

will make EU companies more competitive (78%); and that the costs of the damage due to climate change would be higher than the costs of the investments needed for a green transition (74%).[61]

5. The governance mechanism ensuring implementation of climate policies

The Member States' engagement in the climate agenda is crucial since the implementation is, to a large degree, the responsibility of the Member States. A governance mechanism has been adopted to enable the achievement of the objectives of the Energy Union and, in particular, the 2030 targets for GHG emission reductions, renewable energy, and energy efficiency. The Member States commit to policy measures and the European Commission assesses their efforts while taking into account their different starting points and capabilities.

Hence, each Member State is required to prepare an integrated national energy and climate plan (NECP) for the period 2021-2030, outlining how it intends to contribute to the EU's 2030 targets for GHG emission reductions, renewable energy, and energy efficiency. The 27 countries submitted their first draft NECPs to the Commission by 31 December 2018. These were analysed by the Commission with an overall assessment and country-specific recommendations published in June 2019. Member States were then required to submit their final NECPs by 31 December 2019 while taking the Commission's recommendations into account.

When preparing the NECPs, Member States are required to engage the public. This includes setting reasonable timeframes to allow the public to be informed, participate, and express its views. A summary of the public's views is attached to the NECP.[62] For example, Denmark has a structure in place where relevant stakeholders get the opportunity to take part in a hearing via the so-called EU Special Committee. The Committee consists of around 100 stakeholders, interest groups, organisations, non-governmental organisations, companies, and public institutions. The Committee was consulted during a 10-day period, and Denmark submitted a summary of the feedback received and how those views were taken into account in the final plan.[63]

The Member States are also required to develop national long-term strategies looking forward to 2050 and to ensure consistency between long-term-strategies and the 10-year NECPs. Finally, the 27 countries are required to provide annual data on GHG inventories. Under the UNFCCC, the EU and its Member States are required to develop, regularly update, publish, and report to the Conference of the Parties national inventories of emissions by sources and removals by sinks of all GHGs using comparable methodologies agreed by the Conference of the Parties.

The Commission provided its assessment of the first NECPs in 2020.[64] Under the existing and planned measures, the GHG emissions were projected to be 41% below 1990 levels in 2030, surpassing the EU's then 40% reduction target. The share of renewable energy was estimated to reach a range of 33.1% to 33.7% in 2030, surpassing the 32% target. For energy efficiency, the Commission estimated a gap in reaching the EU's 32.5% target: the aggregated reduction was estimated at 29.7% for primary energy consumption and 29.4% for final energy consumption.[65] The Member States were required to prepare progress reports on the implementation of their NECPs by March 2023.

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[61] European Commission, "Special Eurobarometer 513 - Climate Change", p. 7 and 24, 2021, https://ec.europa.eu/clima/system/files/2021-07/report_2021_en.pdf.

[62] The European Commission, website, "National energy and climate plans (NECPs)", https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en.

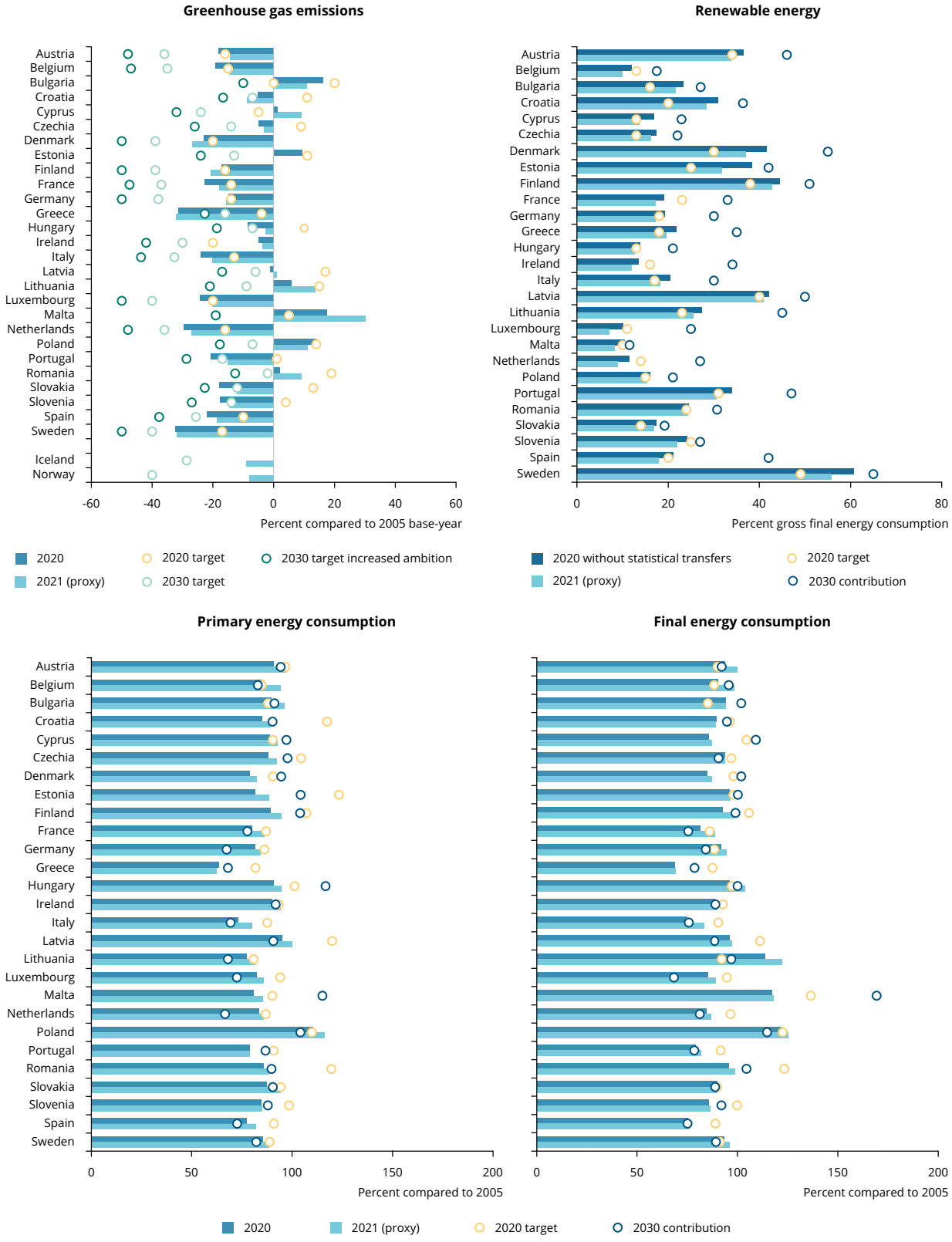
[63] Danish Ministry of Climate, Energy and Utilities, "Denmark's Integrated National Energy and Climate Plan", December 2019, p. 14ff, https://energy.ec.europa.eu/system/files/2020-01/dk_final_necp_main_en_0.pdf.

[64] The European Commission, website, "National energy and climate plans (NECPs)", https://energy.ec.europa.eu/topics/energy-strategy/national-energy-and-climate-plans-necps_en.

[65] EUR-Lex, "Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions - An EU-wide assessment of National Energy and Climate Plans", COM(2020) 564 final, 17.9.2020, https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1600339518571&uri=COM:2020:564:FIN.

There are large differences between Member States with respect to their 2020 and 2030 targets and contributions in the areas of GHG emission reductions, renewable energy share, and energy efficiency in terms of final and primary energy consumption, cf. the figure below.

National achievement of 2020 targets and progress towards 2030 targets and contributions



Source: European Environment Agency, "Trends and projections in Europe 2022", p. 30, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.

Since the finalisation of the first NECPs, the European Climate Law has come into force, increasing the EU's GHG emission reduction target from 40% to 55%. More funding for the green transitioning has been made available, and the Commission has provided the Fit for 55 proposals aimed at reaching the increased 2030 climate target.

The Member States are required to provide updated NECPs by June 2023, and the Commission provided guidance for the preparation of these updates in December 2022.[66] Subsequently, the updated NECPs will be assessed by the Commission, and it will issue recommendations to the individual Member State if the targets and contributions in its updated NECP are seen as insufficient. The 27 countries will then finalise their updated NECPs by June 2024.[67]

6. Recent developments and outlook for the EU's 2030 climate target

The EU has already shown its ability to achieve ambitious climate targets while respecting the different capabilities of the 27 Member States. Most recently, the EU-27 achieved its 2020 climate targets. In 2020, GHG emissions were 32% below 1990 levels, which exceeded the 2020 target of a 20% reduction. Renewable energy accounted for a 22% share of gross final energy consumption in 2020, two percentage points more than the target. The EU-27 also overachieved its 2020 energy efficiency target to improve by 20%.

However, the overachievement in energy efficiency and the strong reduction in GHG emissions from 24% to 32% below 1990 levels from 2019 to 2020 were, to a large degree, due to the COVID-19 pandemic, according to the European Environment Agency. National lockdowns, travel restrictions, and the closing of national borders in the first half of 2020 led to short-term improvements in the environment and largely accounted for the decrease in GHG emissions. Nevertheless, early estimates of developments in 2021 are promising. The rebound in economic activity in 2021 was expected to imply higher emissions, but GHG emissions are only estimated to increase 5% from 2020 to 2021 and remain below the 2019 pre-COVID levels.[68]

The COVID-19 pandemic is not the only crisis affecting GHG emissions in the EU. An energy supply crisis emerged in mid-2021, resulting in substantial increases in energy prices and uncertainty about energy supplies.[69] In 2021, average wholesale gas prices reached a record 49 EUR/MWh, with daily peaks as high as 183 EUR/MWh. By comparison, gas prices oscillated between 15 and 25 EUR/MWh between 2010 and 2019.

The high gas prices led to a switch from gas to coal in the power system, and CO2 emissions from the power system increased by 8.3% from 2020 to 2021. Nevertheless, CO2 emissions remained 7.3% lower than that of 2019, following the long-term progressive decarbonisation of the EU power system.[70]

The energy crisis intensified in 2022. Russia's invasion of Ukraine in February 2022 contributed to continued high gas price uncertainty and gas shortages. At the same time, an unprecedented

[66] EUR-Lex, Official Journal of the European Union, European Commission, "Commission Notice on the Guidance to Member States for the update of the 2021-2030 national energy and climate plans", 29.12.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX%3A52022XC1229%2802%29&from=EN.

[67] EUR-Lex, "Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council", https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0001.01.ENG.

[68] European Environment Agency, "Trends and projections in Europe 2022", p. 16, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.

[69] Ibid, p. 7.

[70] EUR-Lex, European Commission, "Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Accelerating the transition to climate neutrality for Europe's security and prosperity - EU Climate Action Progress Report 2022", p. 3, COM(2022) 514 final, 26.10.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0514&from=EN.

drought across Europe led to the lowest level of hydro generation since at least 2000, and there were widespread unexpected French nuclear outages just as German nuclear units were closing.[71]

Consequently, the consumption of coal rose, and coal's share in the EU's electricity generation increased from 14.5% in 2021 to 16% in 2022, according to the thinktank Ember. However, the trend was largely temporary, since the last four months of 2022 saw coal generation below 2021 levels. The 26 coal units brought back as emergency standby ran at just 18% average utilisation throughout Q4 2022, and nine of the 26 units did not provide any generation. These standby additions added only 0.9% to the EU's coal generation in 2022. Despite importing 22 million tonnes of extra coal throughout 2022, the EU only used a third of this and the surplus two-thirds remained unused.

A larger rebound to coal in power generation was prevented by a fall in electricity demand as well as an uptake in solar and wind energy. In 2022, wind and solar reached a record high and generated 22% of the EU's electricity, for the first time overtaking fossil gas (20%) and remaining above coal power.[72] Coal generation has fallen by 44% since 2000, going from 30% of the EU's electricity mix in 2000 to 16% in 2022.[73]

Hence, recent data suggest that the EU has stayed the course set out by the European Green Deal despite the energy crisis. The severe challenges to the EU's energy security have reinforced the commitment to phase out fossil fuels, reduce energy consumption, and increase renewable energy.

However, the energy supply crisis and ensuing high energy prices exacerbated by Russia's invasion of Ukraine demonstrated how import dependencies may severely impact people as well as industry economically. And looking ahead, access to manufacturing of clean technologies and stable supply chains for these will be key to the EU's green transition.

In this context, the EU is facing challenges due to import dependency on clean technologies and critical raw materials, but also because subsidies world-wide may lead to relocation of European clean tech companies. China's subsidies have long been twice as high as those in the EU, relative to GDP, which has distorted the market and ensured that the manufacturing of a number of net-zero technologies is currently dominated by China. China's pipeline of announced investments in clean technologies exceeds 280 billion USD (approximately 260 billion EUR).[74] Furthermore, the United States' Inflation Reduction Act (IRA) adopted in 2022 will mobilise over 360 billion USD by 2032 (approximately 330 billion EUR).[75] The IRA provides substantial subsidies for green technologies such as wind turbines and electric vehicles, but only if they are mainly processed and assembled in North America. Consequently, the EU is preparing an industrial plan to ensure the EU's competitiveness and access to clean tech manufacturing.

In the following, the EU's energy response to Russia's invasion of Ukraine as well as the EU's plan to strengthen the clean tech industry are described, before turning to the outlook for reaching the EU's 2030 climate target.

6.1 Energy response to Russia's invasion of Ukraine

The EU is highly dependent on Russia for imports of fossil fuels, as mentioned in Section 2. However, due to the Russian invasion of Ukraine, the European Council (the 27 heads of state or government) agreed to phase out the EU's dependency on Russian fossil fuel imports in March 2022.

[71] Ember, "European Electricity Review 2023", p.4, 31 January 2023, available for download at https://ember-climate.org/insights/research/european-electricity-review-2023/#supporting-material-downloads.
[72] Ibid, p. 4-6.
[73] Ibid, p. 57.
[74] European Commission, "Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - A Green Deal Industrial Plan for the Net-Zero Age", p. 2, COM(2023) 62 final, 1.2.2023, https://commission.europa.eu/system/files/2023-02/COM_2023_62_2_EN_ACT_A%20Green%20Deal%20Industrial%20Plan%20for%20the%20Net-Zero%20Age.pdf.
[75] Ibid, p. 3.

The EU leaders invited the European Commission to propose a so-called "REPowerEU" plan, which would reduce the reliance on fossil fuels; diversify energy supplies; further develop a hydrogen market for Europe; speed up the development of renewables; improve the interconnection of European gas and electricity networks; reinforce EU contingency planning for security of supply; and improve energy efficiency and the management of energy consumption.[76]

In May 2022, the Commission presented the REPowerEU plan, backed by financial and legal measures to build the necessary energy infrastructure and system. The Commission estimated that additional investments of 210 billion EUR would be needed to end Russian energy imports by accelerating the green energy transition and adapting industry and energy infrastructure to different energy sources and suppliers.

The REPowerEU plan aims to accelerate the move away from fossil fuels and builds on the Fit for 55 package. The proposals included increasing the EU's 2030 target for renewables further from 40% to 45% and raising the EU's energy efficiency target further from 9% to 13%. The plan also involved a faster roll out of solar and wind energy projects as well as renewable hydrogen deployment. Other measures included increasing the production of biomethane and investing in an integrated and adapted gas and electricity infrastructure network. Since gas supplies were particularly challenged, each Member State was required to ensure that underground gas storages located in its territory were filled to at least 80% of their aggregated capacity by 1 November 2022.[77]

The Commission also updated the EU's external energy strategy, which expanded on the path to independence from Russian energy. An EU Energy Platform was launched to facilitate joint gas and hydrogen purchases, thereby pooling demand and coordinating infrastructure use. The Commission initiated negotiations with gas producers around the world to increase European gas supplies. The Commission stepped up work on partnerships with countries where the potential for renewable hydrogen is particularly high. A Memorandum of Cooperation on Hydrogen was concluded with Japan in December 2022.[78] Other key actions included working with international partners to ensure well-functioning oil markets and alternative fuel supply for nuclear power plants dependent on Russian nuclear fuel.[79]

The EU's energy dependency on Russia decreased considerably in 2022, also due to several packages of sanctions imposed by the EU. For natural gas, Russia's share in EU imports dropped from 31.3% in the first quarter of 2022 to 18.8% in the fourth quarter of 2022, and Norway and the United States became larger gas providers than Russia. For petroleum oils, Russia's share in EU imports decreased from 26.0% to 9.9% during 2022, and the United States and Norway each provided more petroleum oils than Russia.[80] The EU's gas storage filling was above 91% by mid-October 2022.[81]

[76] European Council, "Informal meeting of the Heads of State or Government - Versailles Declaration", 11 March 2022, https://www.consilium.europa.eu/media/54773/20220311-versailles-declaration-en.pdf.
[77] European Commission, website, "REPowerEU", https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/REPowereu-affordable-secure-and-sustainable-energy-europe_en.
[78] METI, website, "Memorandum of Cooperation on Hydrogen between the Ministry of Economy, Trade and Industry of Japan and the European Commission, on behalf of the European Union", https://www.meti.go.jp/press/2022/12/20221202004/20221202004-1.pdf.
[79] EUR-Lex, European Commission, "Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU external energy engagement in a changing world", JOIN(2022) 23 final, 18.5.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=JOIN%3A2022%3A23%3AFIN&qid=1653033264976.
[80] Eurostat, website, "EU imports of energy products - recent developments", https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_imports_of_energy_products_-_recent_developments.
[81] EUR-Lex, European Commission, "Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - State of the Energy Union 2022 (pursuant to Regulation (EU) 2018/1999 of the Governance of the Energy Union and Climate Action), p. 2, COM/2022/547 final, 18.10.2022, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0547&from=EN.

6.2 The EU's industrial plan for reaching net-zero emissions

The European Commission presented the "Green Deal Industrial Plan for the Net-Zero Age"[82] on 1 February 2023. The Commission noted that the economic shape of the net-zero age will be set in the next few years, and that the EU has a good starting point since the clean tech industry already manufactures products of high quality that are used world-wide. However, the transformation of industry must be accelerated to ensure access to the manufacturing capacity necessary for the green transition. The Industrial Plan builds on four pillars:

1. Improving the regulatory environment. A Net-Zero Industry Act is to identify goals for net-zero industrial capacity and provide a regulatory framework suited for its quick deployment, ensuring simplified and fast-track permitting, promoting European strategic projects, and developing standards to support the scale-up of technologies across the EU. In addition, a Critical Raw Materials Act is to ensure access to raw materials vital for manufacturing key technologies, and a reform of the electricity market design is to make consumers benefit from the lower costs of renewables.

2. Facilitating faster access to sufficient funding. A temporary relaxation of the State aid rules is to simplify procedures and facilitate the deployment of renewable energy and the decarbonization of the industry and also enable support for clean tech manufacturing that is at risk of relocation.[83] The Commission will facilitate the use of existing EU funds for clean tech innovation, manufacturing, and deployment, including the REPowerEU, InvestEU, and the Innovation Fund. Additionally, the Commission will propose a European Sovereignty Fund before summer 2023.

3. Enhancing skills in the technologies required by the green transition. The EU is already taking action to address skills-related challenges posed by the twin green and digital transition. However, the Commission suggests establishing Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries, such as raw materials, hydrogen, and solar technologies. It will also consider how to facilitate access of third country nationals to EU labour markets in priority sectors, as well as measures to foster and align public and private funding for skills development.

4. Opening trade for resilient supply chains. The Commission will continue to develop the EU's network of Free Trade Agreements and other forms of cooperation with partners to support the green transition. The Commission will also protect the Single Market from unfair trade in the clean tech sector and will use its instruments to ensure that foreign subsidies do not distort competition in the Single Market.[84]

The Commission followed up and amended the State aid rules on 9 March 2023 after consultation of the Member States.[85] Temporary relaxations of the rules were already in place to enable individual Member States' subsidies to cushion the economic impact of the energy crisis and to promote renewable energy. However, they were set to expire at the end of 2023. For renewable energy, they were prolonged until end-2025 and also expanded and simplified. Hence, producers of all renewable energy sources may be supported. This is also the case for industrial companies that accelerate electrification, the use of green hydrogen and hydrogen-derivative fuels, and energy efficiency.

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[82] European Commission, "Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - A Green Deal Industrial Plan for the Net-Zero Age", COM(2023) 62 final, 1.2.2023, https://commission.europa.eu/system/files/2023-02/COM_2023_62_2_EN_ACT_A%20Green%20Deal%20Industrial%20Plan%20for%20the%20Net-Zero%20Age.pdf.

[83] European Commission, website, "Remarks by Executive Vice-President Vestager on the proposal for a State aid Temporary Crisis and Transition Framework", 1 February 2023, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_23_527.

[84] European Commission, website, "The Green Deal Industrial Plan: putting Europe's net-zero industry in the lead", 1 February 2023, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

[85] European Commission, website, "State aid: Commission adopts Temporary Crisis and Transition Framework to further support transition towards net-zero economy", 9 March 2023, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1563.

In addition, it was decided to enable investment support for strategic equipment such as batteries, solar panels, wind turbines, heat-pumps, electrolysers, and carbon capture usage and storage technologies as well as for production of key components and production or recycling of related critical raw materials until end-2025. The support will be capped at a certain percentage of the investment costs and nominal amounts, depending on the location of the investment and the size of the beneficiary to take into account social cohesion objectives. Small and medium-sized enterprises as well as companies located in so-called disadvantaged regions are eligible for higher support. The Member States may grant even higher support if the aid is provided via tax advantages, loans, or guarantees. Finally, the Member States may match the subsidies offered by third countries if there is a risk of a clean tech company diverting investments to third-country locations. In order to preserve the social cohesion of the EU, matching aid requires that at least three Member States are involved unless the investment is in a disadvantaged area of the EU.[86]

In March 2023, the Commission also presented the Net Zero Industry Act[87] to scale up the EU's manufacturing of clean technologies. Eight strategic technologies are to receive particular support:

1. Solar photovoltaic and solar thermal technologies,
2. Onshore and offshore renewable technologies,
3. Battery/storage technologies,
4. Heat pumps and geothermal energy technologies,
5. Electrolysers and fuel cells,
6. Sustainable biogas/biomethane technologies,
7. Carbon capture and storage (CCS) technologies,
8. Grid technologies.

Each of the eight technology groups refer to the final product as well as the main upstream components (e.g. ingots, wafers, and solar cells for solar modules; nacelles, towers, and blades for wind turbines).

The eight net-zero technologies are subject to a headline benchmark: that the manufacturing capacity in the EU approaches or reaches at least 40% of the Union's annual deployment needs by 2030. The EU industry is still strong in areas such as wind turbines and heat pumps, but the EU is overall a net importer of clean technologies. China produces 98% of the solar panels used in the EU. And last year, China overtook Germany to become the world's second-largest car exporter, as even European manufacturers are now producing electric cars in China for the European market.[88]

In order to speed up the installation of new clean tech manufacturing capacities, the Act directs the Member States to set up faster and less cumbersome permitting processes as well as single points of contact in each Member State. It also introduces regulatory sandboxes to help develop and test innovative net-zero technologies in a controlled environment for a limited amount of time. In addition, the Act includes an EU objective of reaching 50 million tonnes of annual operational CO2 injection capacity by 2030 and sets requirements for the EU's oil and gas producers to contribute to this goal. Furthermore, the Act introduces sustainability and resilience criteria in public procurement and auctions to boost the demand for renewables.

The need for a skilled workforce is addressed by setting up specialised Academies to provide training and education on net-zero technologies and by designing training courses to reskill and upskill

[86] European Commission, "Temporary Crisis and Transition Framework - Factsheet", available for download at https://ec.europa.eu/commission/presscorner/detail/en/fs_23_1575.
[87] EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of the Council on stablishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem (Net Zero Industry Act)", COM(2023) 161 final, 16.3.2023, https://eur-lex.europa.eu/resource.html?uri=cellar:6448c360-c4dd-11ed-a05c-01aa75ed71a1.0001.02/DOC_1&format=PDF.
[88] European Commission, website, "No Green Deal without strong European clean tech manufacturing I Blog of Commissioner Thierry Breton", 1 February 2023, https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_23_530.

workers in cooperation with Member States, industry, social partners, and other stakeholders. A Net-Zero Europe Platform is set up to facilitate cooperation, coordination, and knowledge sharing between the Commission and the Member States, and representatives of the net-zero industry, organisations, or established Industrial Alliances and partnerships can be invited to the Platform.

The Commission also presented a Regulation and a Communication on critical raw materials[89] in March 2023, aimed at ensuring the EU's access to critical raw materials that are indispensable for a wide set of strategic sectors, including the net-zero industry. The EU relies almost exclusively on imports for many critical raw materials which implies a high level of supply risk. For example, heavy rare earth elements, used in permanent magnets that are utilised in wind turbines or electric vehicles, are exclusively refined in China.

The Critical Raw Materials Act sets benchmarks for the EU's capacities and diversification by 2030:

- Extracting at least 10% of the EU's annual consumption of strategic raw materials (where reserves allow),
- Processing at least 40% of the EU's annual consumption of strategic raw materials,
- Recycling at least 15% of the EU's annual consumption of strategic raw materials,
- Diversifying so no more than 65% of the Union's annual consumption of each strategic raw material at any relevant stage of processing comes from a single third country.

The Act reduces the administrative burden and simplifies permitting procedures for critical raw materials projects, and the Commission will work with EIB and other InvestEU implementing partners to scale up support for investment in the critical raw materials supply chain. The Commission also proposes to establish a Raw Materials Academy as part of the Net Zero Academies to reskill and upskill a workforce for the critical raw material value chain in Europe. Furthermore, the Commission will reach out to international partners to support the diversification of supply chains through new international mutually supportive partnerships.[90]

Additionally, the Commission presented a reform of the EU electricity market[91] to boost renewables in the power system, better protect consumers from volatile energy prices, and enhance industrial competitiveness. The consumers will have a wider choice of contracts and be able to lock in secure, long-term price contracts to avoid excessive risks and volatility. Consumers will also be able to invest in wind or solar parks and sell excess rooftop solar electricity to neighbours, not just to their supplier. The Member States are obliged to establish suppliers of last resort so that no consumer ends up without electricity. Member States will also be required to assess their electricity needs and establish objectives to increase non-fossil flexibility. The Member States will have the possibility to introduce new support schemes especially for demand response and storage.

To enhance the competitiveness of the EU's industry, the reformed electricity market design is to improve access to longer-term contracts between energy producers and consumers to protect against price volatility. Public support for renewable energy investments will be in the form of two-

[89] EUR-Lex, European Commission, "Proposal for a regulation of the European Parliament and of the Council establishing a framework for ensuring a secure and sustainable supply of critical raw materials", COM(2023) 160 final, 16.3.2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0160, and "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A secure and sustainable supply of critical raw materials in support of the twin transition", COM(2023) 165 final, 16.3.2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A165%3AFIN&qid=1679058289812.

[90] European Commission, website, "Critical Raw Materials: ensuring secure and sustainable supply chains for EU's green and digital future", https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1661.

[91] EUR-Lex, European Commission, "Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) 2019/943 and (EU) 2019/942 as well as Directives (EU) 2018/2001 and (EU) 2019/944 to improve the Union's electricity market design", COM(2023) 148 final, 14.3.2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0148&qid=1679410882233, and "Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) No 1227/2011 and (EU) 2019/942 to improve the Union's protection against market manipulation in the wholesale energy market", COM/2023/147 final, 14.3.2023, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0147&qid=1679411047615.

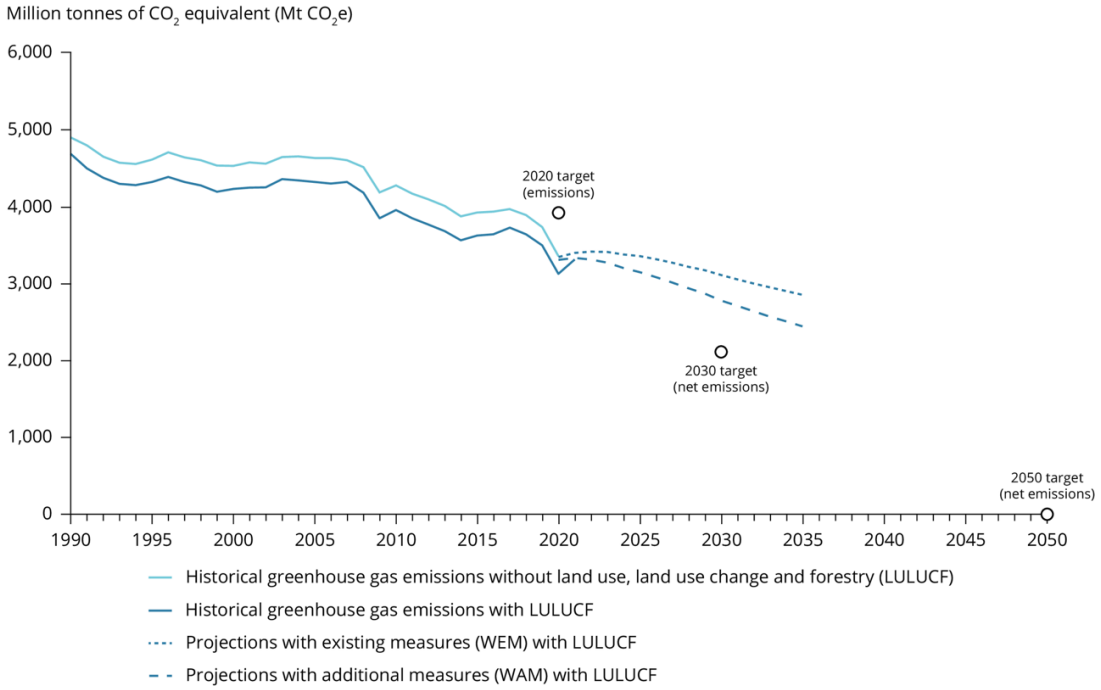
way Contracts for Difference, where the Member States guarantee a stable price to producers and consumers, and excess revenues will be channelled to consumers. There will also be new obligations to facilitate renewables integration into the system and enhance predictability for generation. These include transparency obligations for system operators as regards grid congestion, and trading deadlines closer to real time.[92]

The amendments of the State aid rules were applicable as of 9 March 2023, whereas the proposals on net-zero industries, critical raw materials, and the electricity market are to be discussed and agreed by the European Parliament and the Council before entering into force.

6.3 Prospects for reaching the 2030 GHG emission reduction target

GHG emissions in the EU have declined rapidly in recent years, falling to 32% below 1990 levels by 2020, and the EU is on track to further reducing the GHG emissions considerably. However, currently the planned efforts are only projected to result in 41% emission reductions by 2030 compared to 1990. There is a notable gap to the new 55% target, cf. the figure below.

Historical trends and future projections of EU greenhouse gas emissions



Source: The European Environment Agency, website, "Total greenhouse gas emission trends and projections in Europe", https://www.eea.europa.eu/ims/total-greenhouse-gas-emission-trends.

In order to reach the target of a 55% reduction in GHG emissions by 2030 compared with 1990 levels, emissions would need to decline by 134 MtCO2e per year on average. This is less than the significant reduction in emissions accomplished between 2018 and 2019 (156 MtCO2e), which was driven by a substitution of coal with gas and renewable energy sources in the power sector. But it is more than double the average reduction achieved between 1990 and 2020 (52 MtCO2e).

The GHG projections were mainly reported by the Member States in 2021 and do not reflect efforts to reach the new 55% target for 2030 established by the European Climate law in 2021. In the next submission of GHG projections and national climate and energy plans, the Member States will need to consider the EU policy proposals of the Fit for 55 package and the REPowerEU plan to bring the 2030 target within reach.[93]

[92] European Commission, website, "Commission proposes reform of the EU electricity market design to boost renewables, better protect consumers and enhance industrial competitiveness", 14 March 2023, https://ec.europa.eu/commission/presscorner/detail/en/IP_23_1591.
[93] European Environment Agency, "Trends and projections in Europe 2022", p. 16, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.

At the same time, the unfolding of the COVID-19 pandemic and the energy supply problems will continue to impact energy consumption and GHG emissions. Estimates suggest that GHG emissions from the energy sector increased by 7% from 2020 to 2021.[94]

However, the energy crisis has prompted an accelerated deployment of clean technologies. The thinktank Ember has analysed recent industry forecasts, and the trends are particularly positive for solar energy, heat pumps, and electric vehicles. Ember finds that the EU is on course to achieve 45% renewables by 2030, corresponding to the target of the REPowerEU plan. In case of strengthened policy and financial support, a more optimistic outlook would boost the renewables share to 50%.

Hence, solar energy deployment increased 47% in 2022 compared to 2021, and the market outlook from SolarPower Europe reveals that the exponential growth is expected to continue, more than fulfilling the expectations of Fit for 55 and REPowerEU. Additionally, the electrification of heating and transport continues to set records, which reduces the consumption of fossil fuels. In 2022, the total stock of heat pumps reached around 20 million units. The European Heat Pump Association estimates that the REPowerEU targets requires around 20 million units by 2026, meaning that the target was fulfilled 4 years early. The total fleet of electric vehicles reached approximately 6.1 million in 2022. While the 30 million electric vehicles by 2030 required by Fit for 55 and REPowerEU may seem far away, outlooks from the automotive industry are promising, expecting between 40 and 84 million electric vehicles by 2030. At the same time, the wind industry is struggling with supply chain issues and inflationary impacts on prices, but market outlooks still expect deployment to reach the levels required for Fit for 55.[95]

Developments over the years indicate that the energy sector has been particularly targeted for emission reductions but also that there is ample room for improvement in all economic sectors. The largest reduction in GHG emissions (43%) has taken place in the energy supply sector (e.g. power and heat production; oil and gas extraction and refining; and coal mining), but the sector remains responsible for the highest share of emissions in the EU (26%) in the preliminary estimates for 2021. Industrial activities emitted 21% of the total emissions in 2021, which was 24% below 2005 levels. The buildings sector accounted for 15% of total EU emissions in 2021, and emissions have fallen by 21% since 2005. However, the transport sector (excl. international aviation and shipping) was the second largest emitter in 2021, responsible for 22% of total emissions in the EU, and emissions were only 8% below 2005 levels. Agriculture was responsible for about 11% of EU emissions, and the preliminary estimates for 2021 indicate that agricultural emissions are about the same as in 2005.[96]

7. Concluding remarks

The European Climate Law entered into force in 2021, demonstrating the EU's political will to decarbonise the European continent. In the shorter term, achieving the target of 55% emission reductions by 2030 will be key to success. However, projections based on the existing policies suggest that only 41% GHG emission reductions will be reached by 2030.

The climate agenda has been complicated by energy supply shortages emerging in 2021. The energy crisis intensified in 2022 with the Russian invasion of Ukraine, which prompted the EU to initiate the phasing-out of fossil fuels imported from Russia. At the same time, Europe experienced unprecedented drought and unexpected French nuclear power outages while Germany was phasing out its nuclear plants. Consequently, coal consumption increased, at least temporarily.

[94] European Environment Agency, "Trends and projections in Europe 2022", p. 21, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.
[95] Ember, "Fit for the future, not Fit-for-55", 28 February 2023, https://ember-climate.org/insights/research/fit-for-the-future-not-fit-for-55/.
[96] European Environment Agency, "Trends and projections in Europe 2022", p. 22-26, 26 October 2022, available for download at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022.

Nevertheless, the energy supply crisis has reinforced the EU's commitment to boosting renewable energy and saving energy while phasing out fossil fuels to ensure energy security as well as less dependency on energy imports. As deteriorating geopolitical developments are posing risks to the EU's decarbonisation goal, the EU is also preparing an industrial plan to speed up the necessary industrial transformation, reducing its import dependencies and aiming to ensure its access to clean technologies and raw materials, which will be key to the green transition. The EU is dedicated to being a key player in the age of decarbonisation, also in cooperation with its partners world-wide, as demonstrated by the Memorandum of Cooperation on Hydrogen concluded with Japan.

Reaching the EU's 2030 target is a daunting task and maybe even more so when considering the diversity of the 27 countries that make up the EU. However, the EU decision-making process implies that the climate targets and common climate policy measures adopted by the EU are indeed supported by the Member States. The Commission provides comprehensive economic and technical preparation of EU measures and ensures intensive stakeholder engagement and transparency, fostering qualified solutions and support.

The vast differences in the Member States' starting points and capabilities are acknowledged through individual national climate targets. At the same time, considerable financial support is available to advance the countries' green transition and to promote innovation in green technologies, which will foster economic growth and competitiveness. And the endeavours to decarbonise are generally backed by the population; according to surveys, most EU citizens support ambitious climate targets and believe that acting on climate change will lead to innovation that will make EU companies more competitive.

It is the clear goal of the European Green Deal to transform the EU into a resource-efficient and competitive economy where there are no net GHG emissions in 2050 and where economic growth is decoupled from resource use. And it is recognised that there is no "silver bullet" measure that will facilitate the goal. Strengthening the emissions trading system and increasing energy efficiency and renewable energy will be key elements. Reinforcing research and innovation will be crucial, since much of the GHG emission reductions expected by 2050 require green technologies that are not yet fully developed. But the challenges are complex and interlinked, and all EU's actions and policies are to contribute to the green transition and must continue to be strengthened as needed. The Fit for 55 proposals presented in July 2021 only represent some of the initial elements. The Commission has already launched numerous other proposals, including additional Fit for 55 proposals, the REPowerEU plan, and the Green Deal Industrial Plan for the Net-Zero Age.

Nevertheless, adoption of measures such as the first Fit for 55 package and the REPowerEU plan will be instrumental to clearing the path for achieving the 2030 target. And fulfilment of the 55% target will require more ambitious national efforts than currently presented in the 27 Member States' national energy and climate plans. The national plans are to be updated in 2023/2024, and these will provide a first indication whether implementation efforts are indeed being stepped up.

Most likely, the updated plans will show progress, but not enough to reach the overall EU target of 55% GHG emission reductions by 2030. Looking ahead to 2050, the target of net-zero GHG emissions will be even more challenging, requiring further decarbonisation of energy, a transformation of industry and all its value chains as well as sustainable buildings, transport, and agriculture. Adapting human behaviour to opt for sustainable choices will be essential to reaching the climate targets.

The EU institutions will have to continue pushing the green transition and implementation of the necessary measures. The EU's climate agenda is a work in progress, and the Commission will assess developments and continuously propose further strengthening of climate policies as necessary to realise the visionary European Green Deal and decarbonise Europe to limit global warming.

Annex - The main EU institutions involved in decision-making

There are three main institutions involved in EU decision-making:

- The European Commission, representing the EU's overall interests,
- The Council of the European Union, representing EU governments,
- The European Parliament, representing EU citizens.

EU policies are usually decided through the ordinary legislative procedure where the three institutions come to agreement on legislation. The European Commission proposes initiatives, while the Council of the European Union and the European Parliament are the decision-making bodies.

In the following, an overview of the organisation and legislative work process of each of the three institutions is provided.

The European Commission

The European Commission is the EU's politically independent executive arm. The Commission promotes the general interest of the EU by proposing and enforcing legislation as well as by implementing EU policies and the EU budget. Hence, the Commission is responsible for drawing up proposals for new EU legislation, and it implements the decisions of the European Parliament and the Council of the EU. The Commission also negotiates international agreements for the EU.[97]

The Commission is led by 27 Commissioners - one from each Member State - and they are supported by around 32,000 employees.[98] The Commission is organised into policy departments, known as Directorates-General (DGs). DGs develop, implement, and manage EU policy, law, and funding programmes. In addition, service departments deal with administrative issues and executive agencies manage programmes set up by the Commission.[99] Each of the DGs is assigned to one or more Commissioners, cf. the box below.

The Commission proposes laws and policies on its own initiative or responds to invitations from:

- the European Council (heads of state or government of each EU country),
- the Council of the European Union (government ministers from each EU country),
- the European Parliament (directly elected by EU citizens),
- EU citizens, following a successful European Citizens' Initiative (which requires 1 million signatures).

The Commission prepares laws and policies transparently, based on evidence and taking into account the views of citizens and stakeholders. This is referred to as Better Regulation.[100] Once the draft text is finalised, having taken into consideration the input received on the initiative, it is submitted for inter-service consultation. All relevant departments of the Commission are consulted.

Depending on the level of political importance, an initiative for a new policy or law is either agreed during the Commissioners' weekly meetings, using the oral procedure, or by written procedure. Oral procedure involves a debate and agreement on the initiative by the Commissioners. Alternatively, the Commissioners give their consent to a new initiative in writing. This can only be sought after the agreement of the legal department and any departments consulted during the preparation.[101]

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[97] European Union, website, "European Commission", https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/european-commission_en.
[98] European Commission, website, "Commission staff", https://ec.europa.eu/info/about-european-commission/organisational-structure/commission-staff_en.
[99] European Commission, website, "How the Commission is organised", https://ec.europa.eu/info/about-european-commission/organisational-structure/how-commission-organised_en.
[100] European Commission, website, "Planning and proposing law", https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law_en.
[101] European Commission, website, "How decisions are made", https://ec.europa.eu/info/strategy/decision-making-process/how-decisions-are-made_en.

The 27 Commissioners and the 34 DGs[102]

PRESIDENT Ursula von der Leyen
Directorate-General COMM - Communication

EXECUTIVE VICE-PRESIDENT Frans Timmermans
Directorate-General CLIMA - Climate Action

EXECUTIVE VICE-PRESIDENT Margrethe Vestager
Directorate-General COMP - Competition

EXECUTIVE VICE-PRESIDENT Valdis Dombrovskis
Directorate-General TRADE - Trade

HIGH REPRESENTATIVE/VICE-PRESIDENT Josep Borrell Fontelles

VICE-PRESIDENT Maroš Šefčovič

VICE-PRESIDENT Věra Jourová

VICE-PRESIDENT Dubravka Šuica

VICE-PRESIDENT Margaritis Schinas

COMMISSIONER Johannes Hahn
Directorate-General BUDG – Budget
Directorate-General HR - Human Resources and Security
Directorate-General DIGIT – Informatics
Directorate-General SCIC – Interpretation
Directorate-General DGT - Translation

COMMISSIONER Mariya Gabriel
Directorate-General EAC - Education, Youth, Sport and Culture
Directorate-General JRC - Joint Research Centre
Directorate-General RTD - Research and Innovation

COMMISSIONER Nicolas Schmit
Directorate-General EMPL - Employment, Social Affairs and Inclusion (also Helena Dalli)

COMMISSIONER Paolo Gentiloni
Directorate-General ECFIN - Economic and Financial Affairs
Directorate-General EUROSTAT - Eurostat - European statistics
Directorate-General TAXUD - Taxation and Customs Union

COMMISSIONER Janusz Wojciechowski
Directorate-General AGRI - Agriculture and Rural Development

COMMISSIONER Thierry Breton
Directorate-General CONNECT - Communications Networks, Content and Technology
Directorate-General DEFIS - Defence Industry and Space
Directorate-General GROW - Internal Market, Industry, Entrepreneurship and SMEs

COMMISSIONER Elisa Ferreira
Directorate-General REGIO - Regional and Urban Policy
Directorate-General REFORM - Structural Reform Support

COMMISSIONER Stella Kyriakides
Directorate-General SANTE - Health and Food Safety
Directorate-General HERA - Health Emergency Preparedness and Response Authority

COMMISSIONER Didier Reynders
Directorate-General JUST - Justice and Consumers (also Helena Dalli)

COMMISSIONER Helena Dalli
Directorate-General EMPL - Employment, Social Affairs and Inclusion (also Nicolas Schmit)
Directorate-General JUST - Justice and Consumers (also Didier Reynders)

COMMISSIONER Ylva Johansson
Directorate-General HOME - Migration and Home Affairs

COMMISSIONER Janez Lenarčič
Directorate-General ECHO - European Civil Protection and Humanitarian Aid Operations

COMMISSIONER Adina Vălean
Directorate-General MOVE - Mobility and Transport

COMMISSIONER Olivér Várhelyi
Directorate-General NEAR - European Neighbourhood and Enlargement Negotiations

COMMISSIONER Jutta Urpilainen
Directorate-General INTPA - International Partnerships

COMMISSIONER Kadri Simson
Directorate-General ENER - Energy

COMMISSIONER Virginijus Sinkevičius
Directorate-General ENV – Environment
Directorate-General MARE - Maritime Affairs and Fisheries

COMMISSIONER Mairead McGuinness
Directorate-General FISMA - Financial Stability, Financial Services and Capital Markets Union

The Commission functions on the principle of collegiality. Decisions are taken collectively by the College of Commissioners, which is responsible to the European Parliament for decisions taken. Each of the 27 Commissioners carries the same weight within the decision-making process, and they are equally responsible for the decisions made.

Collegiality guarantees:

- the quality of the decisions taken, since each Commissioner must be consulted on every proposal,
- institutional independence, because decisions are adopted without partisan pressure,

[102] European Commission, website, "The Commissioners", https://commissioners.ec.europa.eu/index_en and "Departments and executive agencies", https://commission.europa.eu/about-european-commission/departments-and-executive-agencies_en.

- the sharing of political responsibility across all Commissioners, even when decisions are reached by majority decision.

The College can also decide on issues by voting on them. In this case, a majority of members of the College needs to vote in favour of the decision in order for it to be adopted. Each member of the Commission has one vote, and they can only cast their vote in person.[103] When the initiative is agreed by the Commission, the proposal is sent to the Council and the Parliament, when following the ordinary legislative procedure.

The College of Commissioners is appointed every five years, most recently in 2019. The first step is that the European Council (EU heads of state or government) proposes a presidential candidate to the Parliament. The proposed candidate usually comes from the largest political group in the Parliament since the choice of candidate must take into account the recent results of the election to the Parliament. The Parliament approves the new Commission President by an absolute majority (half of all MEPs, plus one). If the proposed candidate does not obtain the required majority, the European Council has to propose another candidate within one month.

The next step is that the European Council, in agreement with the Commission's President, adopts a list of candidate Commissioners, one for each Member State. These Commissioners-designate appear before the parliamentary committees in their prospective fields of responsibility. Each committee then meets to draw up its evaluation of the candidate's expertise and performance, which is sent to the President of the Parliament. A negative evaluation may prompt candidates to withdraw from the process. For example, the three original candidates from France, Romania, and Hungary were replaced during the appointment process in 2019. The full Commission needs to be approved in a single vote of consent by the Parliament. After the 27 Commissioners have been approved by the Parliament, they are formally appointed by the European Council, acting by a qualified majority.[104]

The Council of the European Union

The Council of the European Union is the voice of the governments of the 27 Member States. In the Council, government ministers from all the EU countries meet to discuss, amend and adopt laws, and coordinate policies. Council meetings take place in Brussels, except for three months (April, June, and October) when they are held in Luxembourg. In most cases, the Council decides together with the European Parliament through the ordinary legislative procedure.[105]

The Council's decision-making is facilitated by the General Secretariat of the Council, which has around 3,000 employees. The General Secretariat of the Council helps organise and ensure the coherence of the Council's work.[106] More than 150 working parties and committees help prepare the work of ministers who examine proposals in the different Council configurations. These working parties and committees are comprised of officials from all the Member States.

A Commission proposal passes through three levels at the Council:

1. The working party,
2. Permanent Representatives Committee (Coreper),
3. Council configuration.

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[103] European Commission, website, "Decision-making during weekly meetings", https://ec.europa.eu/info/about-european-commission/organisational-structure/how-commission-organised/political-leadership/decision-making-during-weekly-meetings_en#thecollegialityofcommissiondecisions.
[104] European Parliament, website, "How are the Commission President and Commissioners appointed?", https://www.europarl.europa.eu/news/en/faq/7/how-are-the-commission-president-and-commissioners-appointed.
[105] European Union, website, "Council of the European Union", https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/council-european-union_en.
[106] Council of the European Union, website, "Careers at the General Secretariat of the Council", https://www.consilium.europa.eu/en/general-secretariat/jobs/.

This ensures that there is technical scrutiny of the proposal at the working party level, political responsibility for it at the ministers' level, as well as scrutiny by ambassadors in Coreper, who combine technical expertise with political consideration.

1. The working party

The Presidency of the Council, with the assistance of the General Secretariat, identifies and convenes the appropriate working party to handle a proposal.

A working party begins with a general examination of the proposal, and then makes a line-by-line scrutiny of the proposal. There is no formal time limit for a working party to complete its work; the time taken depends on the nature of the proposal. There is also no obligation for the working party to present an agreement, but the outcome of their discussions is presented to Coreper.

2. Permanent Representatives Committee (Coreper)

Coreper treatment of the proposal depends on the level of agreement reached at the working party level. If agreement can be reached without discussion, items appear on Part I of the Coreper agenda.

If further discussion is needed because agreement has not been reached in the working party, items are listed in Part II of the Coreper agenda. In this case, Coreper can:

- try to negotiate a settlement itself,
- refer the proposal back to the working party, perhaps with suggestions for a compromise,
- pass the matter up to the Council.

Most proposals feature on the agenda of Coreper several times, as they try to resolve differences that the working party has not overcome.

3. Council configuration

If Coreper has been able to finalise discussions on a proposal, it becomes an 'A' item on the Council agenda, meaning that agreement is expected without debate. As a rule, around two-thirds of the items on a Council agenda will be for adoption as 'A' items. Discussion on these items can nevertheless be re-opened if one or more Member States so request. The 'B' section of the Council agenda includes points:

- left over from previous Council meetings,
- upon which no agreement was reached in Coreper or at working party level,
- that are too politically sensitive to be settled at a lower level.

The results of Council votes are automatically made public when the Council acts in its capacity as legislator. If a member wants to add an explanatory note to the vote, this note will also be made public if a legal act is adopted. In other cases, when explanations of votes are not automatically published, it can be made public on the request of the author.

As the Council is a single legal entity, any of its 10 configurations can adopt a Council act that falls under the remit of another configuration.[107] The configurations of the Council are:

- Agriculture and Fisheries
- Competitiveness
- Economic and Financial Affairs
- Environment
- Employment, Social Policy, Health, and Consumer Affairs
- Education, Youth, Culture and Sport
- Foreign Affairs

[107] Council of the European Union, website, "The decision-making process in the Council", https://www.consilium.europa.eu/en/council-eu/decision-making/.

- General Affairs
- Justice and Home Affairs
- Transport, Telecommunications and Energy

Council meetings are attended by representatives from each Member State at a ministerial level. Participants can therefore be ministers or state secretaries. They have the right to commit the government of their country and cast its vote. The Commissioners responsible for the areas concerned are also present at Council meetings.

Meetings are chaired by the minister of the Member State holding the rotating 6-month Council Presidency. For instance, the Council meetings are chaired by Sweden in the first half of 2023 and Spain in the second half of 2023. The exception is the Foreign Affairs Council, which is usually chaired by the High Representative of the Union for Foreign Affairs and Security Policy. The Council can vote only if a majority of its members is present. The Council takes its decisions by a simple majority, qualified majority, or unanimous vote, depending on the subject. Most decisions in the Council are taken by qualified majority, i.e. 55% of member states must vote in favour, and they must represent at least 65% of the total EU population. A blocking minority requires at least four countries.

The Council meets in a public session when it discusses or votes on a proposal for a legislative act. The first deliberation on important non-legislative proposals is also public. In addition, the Council regularly holds public debates on important issues affecting the interests of the EU and its citizens. The debate on the General Affairs Council's 18-month programme, the priorities of the other Council configurations, and the debate on the Commission's five-year programme are public.[108]

When the Commission presents a proposal, the text is examined simultaneously by the Council and the Parliament. This examination is known as a 'reading'. There can be up to three readings before the Council and the Parliament agree on or reject a legislative proposal when following the ordinary legislative procedure.

When the Council negotiates a Commission proposal, it may sometimes adopt a political agreement pending first reading position of the Parliament, also known as a 'general approach'. A general approach agreed in the Council can help speed up the legislative procedure and even facilitate an agreement between the two institutions, as it gives the Parliament an indication of the Council's position prior to their first reading opinion. The Council's final position, however, cannot be adopted until the Parliament has delivered its own first reading opinion.[109]

The European Parliament

The European Parliament consists of 705 members directly elected by the EU citizens every five years, most recently in 2019. The number of members for each country is roughly proportionate to its population. However, no country can have fewer than 6 or more than 96 members, and the total number cannot exceed 705.[110]

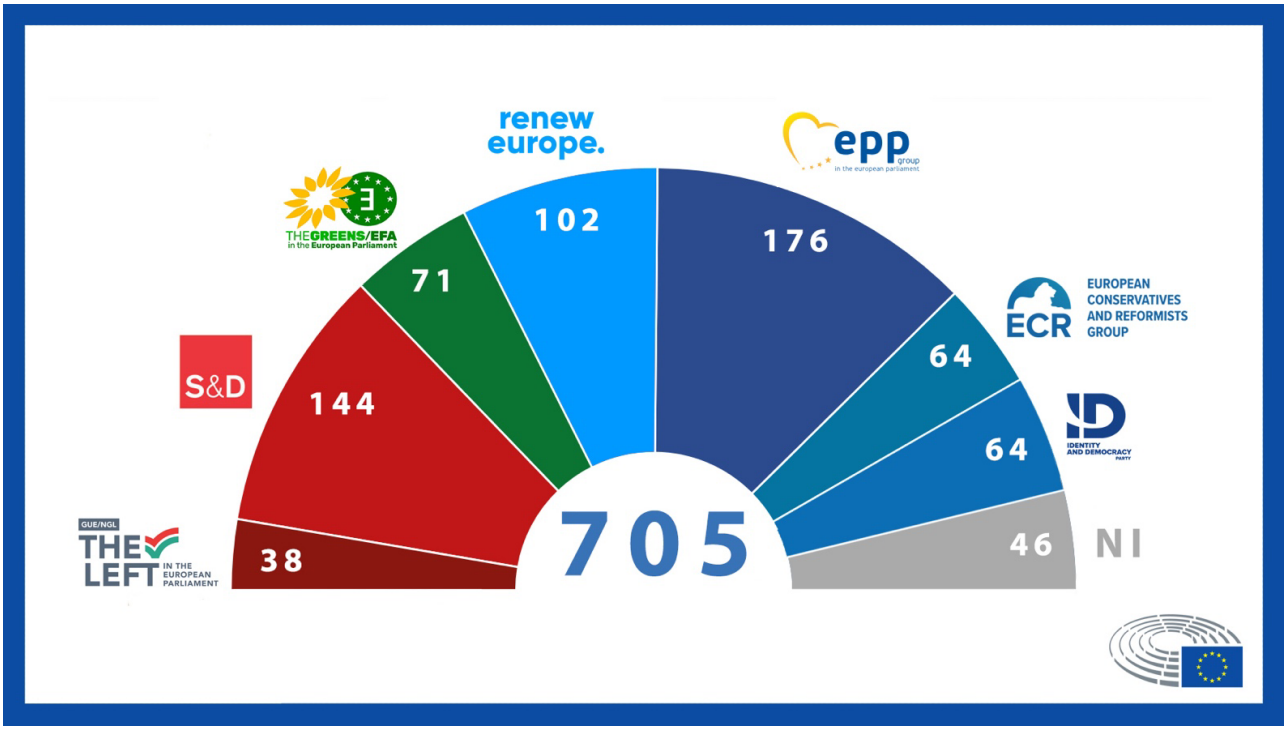
The Parliament adopts and amends EU legislation and decides on the annual EU budget on an equal footing with the Council. The Parliament also has a range of supervisory and control powers, enabling oversight over other EU institutions to monitor the proper use of the EU budget and to ensure the correct implementation of EU law.[111]

[108] Council of the European Union, website, "Council configurations", https://www.consilium.europa.eu/en/council-eu/configurations/.
[109] Council of the European Union, website, "The decision-making process in the Council", https://www.consilium.europa.eu/en/council-eu/decision-making/.
[110] European Union, website, "European Parliament", https://european-union.europa.eu/institutions-law-budget/institutions-and-bodies/institutions-and-bodies-profiles/european-parliament_en.
[111] European Parliament, website, "Supervisory powers", https://www.europarl.europa.eu/about-parliament/en/powers-and-procedures/supervisory-powers.

The Parliament is headed by the President of the European Parliament who is elected by the members for a renewable term of 2.5 years, i.e. half the lifetime of a Parliament. The President oversees the work of the Parliament and represents the Parliament vis-à-vis the outside world and in its relations with the other EU institutions.[112] Currently, the President is Roberta Metsola from Malta.

Members of the Parliament (MEPs) are organised according to political affiliation, not nationality. In order to form a political group, 23 members are required, and at least one-quarter of the Member States must be represented in the group. Members may not belong to more than one political group. Each political group has its own internal organisation and appoints a chair (or two co-chairs in some groups), a bureau, and a secretariat.

Currently, there are seven political groups in the European Parliament: Group of the European People's Party (Christian Democrats); Group of the Progressive Alliance of Socialists and Democrat; Renew Europe Group; Group of the Greens/European Free Alliance; Identity and Democracy Group; European Conservatives and Reformists Group; and The Left Group.[113] The figure below shows the current distribution of seats in the Parliament.



Note: Seat distribution by political group on 16 February 2023. NI stands for Non-Inscrits, French for non-attached, who are not part of a group.
Source: European Parliament, website, "Parliament's seven political groups", https://www.europarl.europa.eu/news/en/headlines/eu-affairs/20190612STO54311/parliament-s-seven-political-groups.

The Parliament's decisions are taken by the 705 members, and they are assisted by the Parliament's staff of around 8,100 people.[114] The members are divided among 20 parliamentary committees which carry out the political and legislative work of the Parliament. A committee consists of between 25 and 88 members and has a chair, a bureau, and a secretariat. The composition of the committees reflects the weight each political group has in Parliament as a whole. The committees meet once or

[112] European Parliament, website, "The President of the European Parliament", https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/the-president.
[113] European Parliament, website, "The political groups of the European Parliament", https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/political-groups.
[114] European Parliament, website, "How many people work in the Parliament?", https://www.europarl.europa.eu/news/en/faq/21/how-many-people-work-in-the-parliament.

twice a month in Brussels, and their debates are held in public.[115] The committees receive independent input from Parliament's research services (e.g. studies, briefings, and in-depth analyses). Workshops and panels are organised to enable MEPs to exchange views with experts on subjects associated with parliamentary business or subjects of current interest.

When a legislative text - such as a Fit for 55 proposal - is presented by the Commission, it is assigned to one (or multiple) of the parliamentary committees depending on the subject, and a Member of the European Parliament, working in one of the parliamentary committees, is appointed to draw up a report. The draft report can be modified following the adoption of amendments tabled by the members. The original text and the amendments, including compromise amendments agreed by the political groups, are then voted on by the full committee. The report adopted by the committee is submitted to the so-called plenary for approval.[116]

All the 705 members participate in the plenary which is the final step of the Parliament's internal decision-making on a legislative text. The plenary sessions are chaired by the President of the European Parliament who calls upon speakers and directs the voting procedure, putting amendments and legislative resolutions to the vote and announcing the results. Plenary debates can be followed live on the Parliament's website.[117]

The Parliament normally takes decisions by an absolute majority of votes cast, and at least one third of the MEPs need to be present for the result of a vote to be valid. When the legislative text has been revised and agreed in plenary, Parliament has adopted its position. The next step will be negotiations with the Council, when following the ordinary legislative procedure.

The Commission and the Council take part in the plenaries to facilitate collaboration between the institutions in the decision-making process. If Parliament so requests, the representatives of the two institutions may also be called upon to make declarations or to give an account of their activities in response to questions put to them by MEPs.[118]

As mentioned in connection with the European Commission above, the Parliament has the right to approve the Commission. The Parliament can also censure the Commission and ultimately dismiss it. So far, none of the eight motions of censure brought before Parliament has been adopted. In 1999, the Commission headed by Jacques Santer stepped down before the Parliament forced its resignation due to allegations of fraud and mismanagement.

The Parliament ensures democratic control over the Commission, which regularly submits reports to the Parliament, including an annual report on EU activities and on the implementation of the budget. Once a year, the President of the Commission gives a State of the Union address to the Parliament. The Parliament regularly invites the Commission to initiate new policies and the Commission is required to reply to oral and written questions from MEPs.[119]

[115] European Parliament, website, "The Committees of the European Parliament", https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/organisation/committees.
[116] European Parliament, "A quick look at Parliamentary committees", p. 9 and 11, March 2021, https://www.europarl.europa.eu/cmsdata/236967/About-committees-booklet-EN.pdf.
[117] European Parliament, website, "Plenary", https://www.europarl.europa.eu/plenary/en/home.html.
[118] European Parliament, website, "How plenary works", https://www.europarl.europa.eu/about-parliament/en/organisation-and-rules/how-plenary-works.
[119] European Parliament, website, "Supervisory powers", https://www.europarl.europa.eu/about-parliament/en/powers-and-procedures/supervisory-powers.