**Policy brief**

# Wanted: A New 2030 Climate Target for the EU

## An analysis of key choices for the ambition and scope of a 2030 target

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**In November 2019, the European Commission announced a European Green Deal to achieve climate neutrality by 2050. EU legislators endorsed this goal but are still grappling with a new 2030 target. On 11 December 2020, heads of state agreed on a binding net domestic greenhouse gas emission reduction target of at least 55% compared to 1990 levels, while the European Parliament voted for a 60% target in October 2020. Besides the level, the scope of the target is another important consideration, particularly with regard to the way in which the land-use sector, international navigation and international aviation will be included. Finally, an effective policy framework to achieve these targets will be crucial, with many options now on the table for revising and amending the EU's current climate architecture. Following latest council conclusions, the EU will update its nationally determined contribution (NDC) under the Paris Agreement by the end of the year.**

**Key findings:**

- **Increasing the 2030 target to 55-60% is essential to bring the EU on a pathway that is consistent with climate neutrality by 2050. A 55% target more than doubles the annual rate of reductions compared to the 2005-2019 period and aligns the rates of reductions needed between the 2020-2030 period and the 2030-2050 period. A 60 % target requires nearly a trebling of annual reductions, with lower reductions needed after 2030.**
- **Including the land-use sector aligns the scope of the 2030 target with the 2050 climate neutrality target, but lowers the mitigation efforts needed in other sectors by about 110 $MtCO_2e$ in 2030, which corresponds to about 2% of current base year emissions. This figure may be even higher if policies to increase natural removals will be successful.**
- **The inclusion of sectors with emission increases compared to 1990 raises the reduction effort needed by other sectors. This would be the case if emissions from international navigation is included, which is currently not in the scope of the EU's current NDC. Similarly, reducing the current scope from total international aviation to intra-EU aviation only, would decrease mitigation requirements in other sectors.**
- **The EU's current legislation establishes annual emission budgets for all sectors, through its Emissions Trading System (ETS), the Effort Sharing Regulation (ESR) and the LULUCF regulation. We recommend maintaining an annual budget approach that incentivizes emission reductions in all sectors and all Member States, backed by carbon price signals and instruments to support infrastructural changes.**
- **Instruments to address carbon leakage are needed as long as global action to tackle climate change is not harmonized. They should be designed in a way that fosters similar emission reduction ambitions and strengthens investments consistent with climate neutrality goals.**

## Introduction

In November 2019, the European Commissioned published the European Green Deal, a plan to make the EU's economy sustainable (EC 2019). The main idea of this action plan is to set the EU's economy on a pathway to climate neutrality by 2050. This objective was endorsed in December 2019 by the European Council, which consists of all national governments (EUCO 2019).

Another element of the European Green Deal is the proposal by the European Commission to increase the ambition of the EU's current 2030 target. Based on an impact assessment, the Commission proposed to increase the current target of 40% emission reduction compared to 1990 to a net reduction of at least 55%" (European Commission (EC) 2020a). In October 2020, the European Parliament agreed on a 60 % reduction target. The European Council followed the proposal of the European Commission and endorsed a net domestic reduction target of at least 55 % by 2030 on 11 December 2020 (EUCO 2020). Moreover, the European Council agreed to submit an update of its nationally determined contribution (NDC) under the Paris Agreement still in 2020, including this new mitigation target. The final EU internal target will depend on the outcome of the negotiations between the Parliament, the Council and the European Commission (the so-called trialogue), which will still take some time to conclude.

Achieving the 2030 and 2050 targets will require revising and amending relevant current European legislation and policies. As a first step, a European Climate Law shall be put in place to turn the political commitment of the 2030 target and of climate neutrality by 2050 into a legal obligation. Thereafter, proposals for the revision of the supporting climate target architecture, e.g. the EU ETS, the ESR and the LULUCF Regulation, are expected to be presented by the European Commission in June 2021.

## 1 Ambition of the 2030 target

There is the general question as to what level of greenhouse gas target is fair and a broad range of opinions has been advanced on an adequate 2030 target for the EU. Most stakeholders demand a target in the range of 50 % to 65 % below 1990 levels. A consensus can be seen in the fact that ambition should not been backloaded to higher future reduction needs and that a more harmonized reduction pathway to carbon neutrality by 2050 is needed to bring the EU onto its transition pathway, ensuring a socially fair and accepted transition of the economy.

The European GHG target is supported by a climate target architecture to ensure that not only the reduction is achieved until a certain point in time. In addition, pathways are defined, to keep the emissions under defined emission budgets. These emission budgets to support the current 2030 target are set by the European Emissions Trading System (EU ETS), by the Effort Sharing Regulation (ESR) and by the LULUCF Regulation.

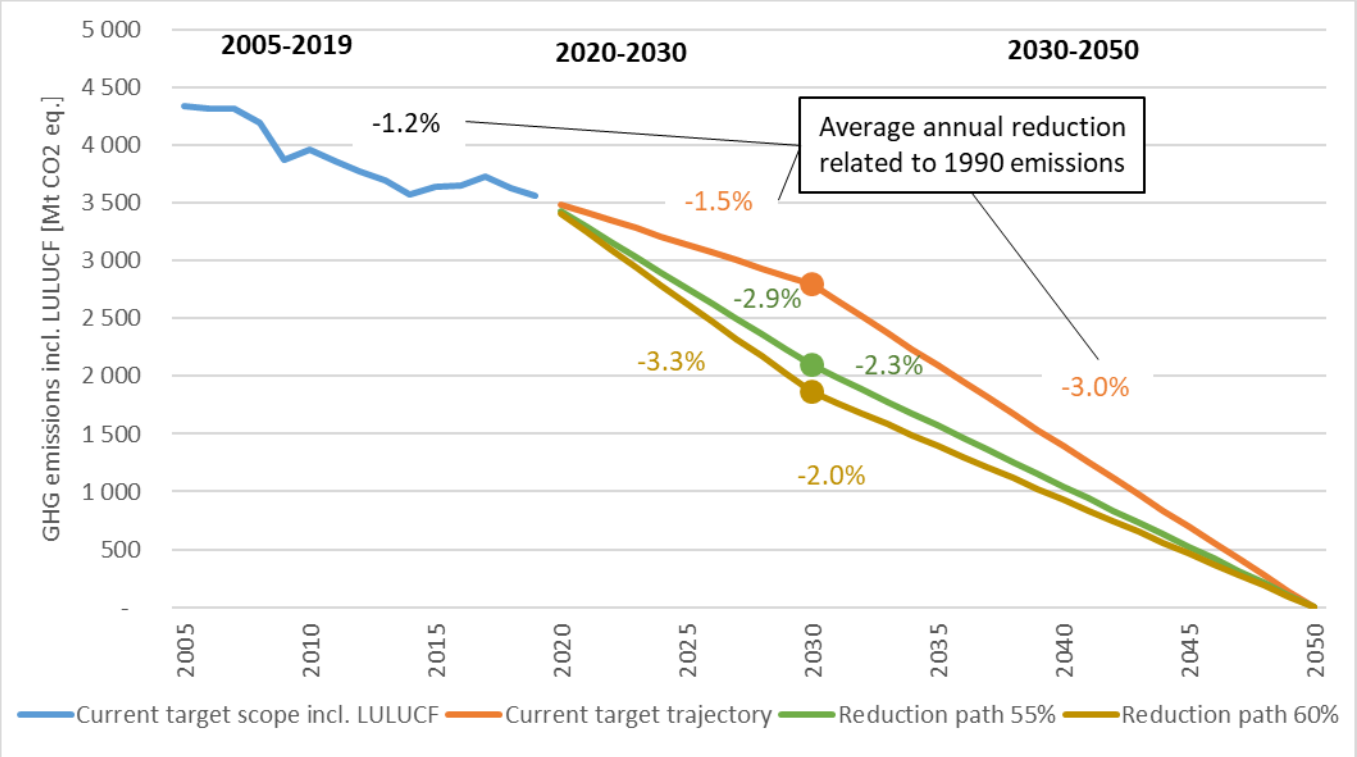
To assess the ambition of GHG targets, both the reduction level and the scope of the covered emissions/removals need to be discussed:

### 1.1 Level of reduction

The proposal to increase the target to 55% is based on the required short-term reductions for achieving climate neutrality by 2050 as well as the technological and economical constraints of the required transition. Climate neutrality in 2050 is quantified as a net-zero GHG emission target in long-term scenarios of the European Commission, but the role of carbon removals (sinks) and the way to achieve this target are still open. As the availability of sinks is clearly restricted, emissions

need to decrease in all sectors, so that the total amount of emissions in 2050 can be balanced with available sinks to achieve net-zero emissions. Average emission reductions need to increase compared to historical reductions (see Figure 1-1).

**Figure 1-1: Pace of reductions to achieve net-zero emissions in 2050**




Source: Öko-Institut based on (European Commission (EC) 2020a) and (EEA 2020)

While a 40 % reduction target would delay the transition to net-zero emissions, a 55 % reduction target harmonizes the future average reduction rates. It helps policymakers and investors to avoid investments that could lock-in emissions which are inconsistent with the climate neutrality goal. Long lifetimes of investments in infrastructure increase the need to provide early signals on sustainable pathways but also cause high challenges for fast transitions. A 55 % reduction target more than doubles the average historical reduction pace since 2005. Different studies have shown that such a target can be achieved in a responsible manner, mitigating negative social and economic impacts associated with the transition (EC 2020b; Oeko-Institut and Agora Energiewende 2020; UBA 2020). A higher reduction target of 60 % would nearly triple current average emission reduction rates by 2030 and subsequently allow lower emission reductions.

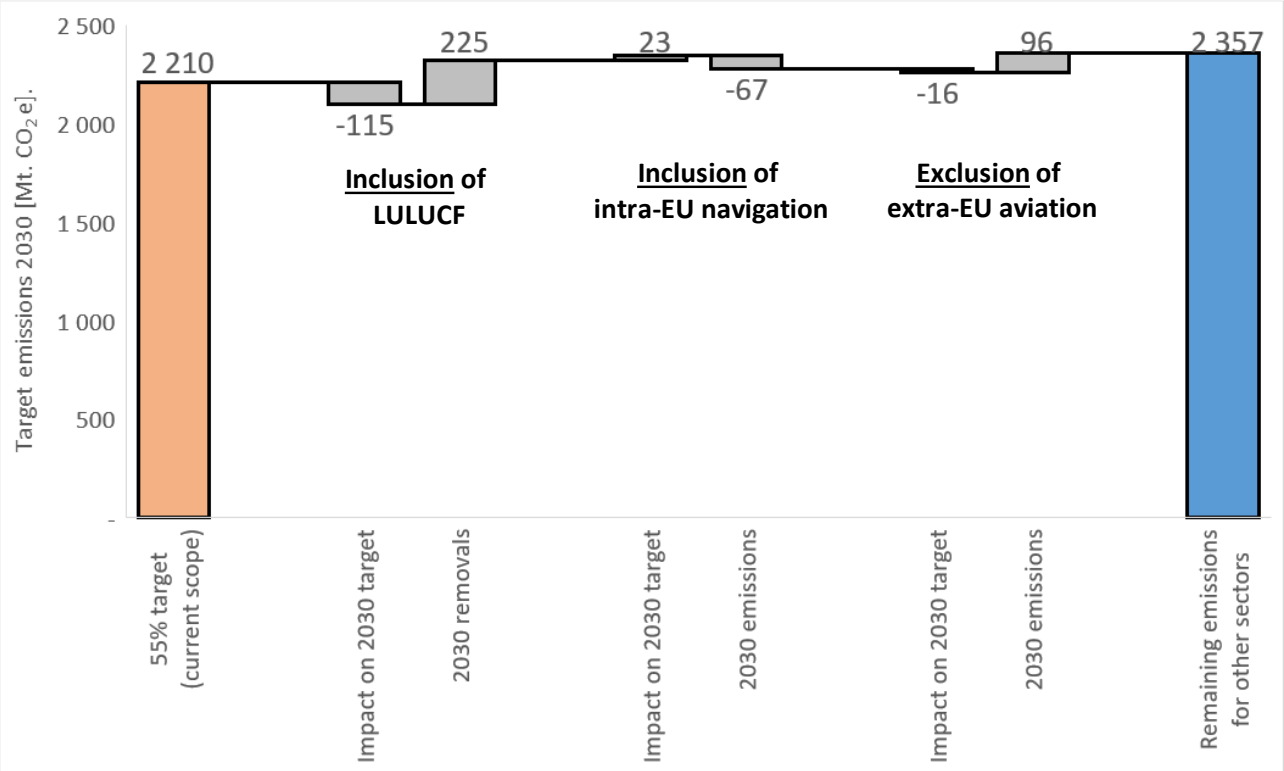
## 1.2 Different scopes of target

The current European greenhouse gas (GHG) target is defined as a domestic 40 % reduction target compared to 1990 emission levels, including all GHG inventory sectors and the entire aviation sector, excluding the land use, land-use change and forestry (LULUCF) sector. The scope of the 55 % reduction target is still under discussion. With the 2030 Climate Target Plan, the European Commission proposes to include LULUCF in the target setting, bringing the 2030 target in line with the net-zero emission target in 2050. The inclusion of navigation emissions and the scope of the included aviation emissions are also open questions. Historical and projected emission developments in these sectors are far from consistent with a reduction of 55 %: While removals in the land-use sector have remained largely unchanged since 1990, emissions from international

transport have increased substantially. These trends are expected to continue until 2030. These changes to the scope still alter the ambition of the target by some percentage points and make comparisons of targets difficult.

If sinks are included in the scope of the target without changing the ambition level, these lower the need to reduce emissions in other sectors. The inclusion of sectors with emission growth compared to 1990 levels increases the reduction efforts needed by other sectors (Figure 1-2).

**Figure 1-2 Target emissions in 2030 and effects of changes in target scope**




Source: Öko-Institut based on the Mix-55 scenario (European Commission (EC) 2020b)

Sectors not covered under the GHG target are not necessarily excluded from regulations, e.g. the LULUCF sector is currently excluded from the target setting for 2030 but covered by the LULUCF Regulation (European Union 2018). However, extra-EU aviation is currently included under the target setting but excluded from the European regulation.

## 1.3 Impacts of increased target

The results presented in the Impact Assessment show the ranges of emission reductions in specific sectors, depending on a variation of policy options. Five scenarios achieve 55 % reductions in their respective scopes. If these emission reductions are translated into the current target scope, these would result in emission reductions of 52 to 54.7 %. In these scenarios, the highest $CO_2$ emission reductions are expected on the energy supply side, with emission reductions of about 74 %, and 71 % in the residential sector compared to 2005 levels. These reductions are strongly related to decreasing energy consumption and high deployment of renewable energies. In the transport sector the modelling only results in relatively low emission decreases of about 22 % compared to 2005. Non-$CO_2$ emissions, mainly from agriculture, but also from waste, fugitive emissions and industrial

processes are decreasing by 37-40 % compared to 2005 levels; fugitive methane emissions have the largest low-cost emission reduction potentials.

The 55 % scenarios assessed do not result in markedly higher energy system costs compared to lower ambition scenarios until 2030. The extension of carbon pricing raises revenues which provide possibilities for reinvestments and for stimulating climate action. They can also provide resources to address social or distributional concerns.

## 2 Implications for European climate target architecture

The current climate target architecture supports the achievement of reductions until the target year and also restricts emissions over the whole period: the EU ETS legislation places an EU wide cap on emissions on activities covered, mostly large stationary installations as well as industrial installations. These installations need to verify their annual emissions and submit the respective amount of emission allowances. The amount of these allowances is restricted; they are mainly traded by auctions but partly given for free to installations in sectors which are in danger of carbon leakage. Currently domestic and intra-EU aviation is covered under the EU ETS, too.

About 60 % of emissions are covered under the Effort Sharing Regulation (ESR), which sets annual emission trajectories for each EU Member State. Under the LULUCF Regulation, Member States need to balance emissions and removals from this sector. Country-specific accounting rules are applied for the forestry category. Each regime (ETS, ESR, LULUCF) is designed in a way that allows trading between Member States, partly with Member State specific restrictions, to account for different national situations. A very limited, and partly country-specific amount of trading between the regimes is possible as well. These three main policies are supported by several Directives, which target the increased use of renewable energies and the decrease of fuel consumption.

The Governance Regulation is the basis of the policy framework. It ensures that the EU is able to fulfill its obligations to the UNFCCC such as reporting of GHG emissions and projections by including them in the European legal code. The Governance Regulation also sets the process for determining Member States' contributions towards the energy and climate targets and a review process in line with the global stocktake under the Paris Agreement.

### 2.1 Upcoming revisions

With the proposal in the Impact Assessment the discussions on changes to this climate architecture is opened: Different policy options have been considered to give a price incentive on $CO_2$ outside of the EU ETS. This includes a possible extension of the EU ETS to the transport and buildings sector, either while retaining these sectors in the ESR or by replacing it. Several options are being discussed regarding the future regulation of LULUCF emissions and removals: providing higher flexibilities with the ESR, creating a new AFOLU sector target together with agriculture or direct incentives for farmers and forest managers. Depending on these options, the future of the ESR is relatively open. Options include the continuation of the current legislation, a system in which some sectors are covered by the EU ETS and the ESR in parallel and a complete replacement of the ESR by the EU ETS and a new AFOLU regime – as well as additional possibilities. In all scenarios presented, a carbon value or price applies for all emissions from international aviation and maritime transport.

Inception Impact Assessments were published by the European Commission in November 2020 and feedback on the intended initiatives was requested. Public consultations are open until mid-February 2021 so that views can be expressed on aspects of EU laws before the Commission finalizes its

proposals. In June 2021 proposals from the Commission are expected on all main elements of the new climate architecture, followed by the usual European decision process between the Commission, the European Parliament and the European Council.

The aim of these revisions will be to find a balanced mix of policies and measures to provide sufficient incentives to reduce energy consumption, to shift from fossil to renewable fuels, to provide clarity for sustainable investments and to preserve / restore / enhance natural sinks. These incentives will be important for all citizens, companies and governments at all levels and will need to consider regional potentials and capacities. A new Just Transition Mechanism shall play an important role: It will provide targeted support to mobilize at least €150 billion over the 2021-2027 period for the most affected regions by addressing the social and economic effects of the transition.

## 2.2 Addressing carbon leakage

Imposing higher standards for climate protection could provide an incentive for companies to shift their production to locations where their environmental impact is not reflected in costs. This carbon leakage would harm the EU's economy without providing benefits to the climate and needs to be addressed by incentives or measures. Under the EU ETS, emission allowances are allocated for free to industry installations which are under risk of carbon leakage. Free allocation is based on product-specific benchmarks. The Commission is also exploring the possibility of a carbon border adjustment mechanism (CBAM) for specific products which enter the European market. The CBAM would be designed to comply with World Trade Organization rules and other international obligations of the EU. In the Impact Assessment, the effects of two different global emission scenarios are analyzed: In the 'Fragmented Action' scenario the EU reaches the enhanced climate targets whereas the rest of the world only implements their current NDCs; the 'Global Action' scenario assumes that the rest of the world is set on a trajectory compatible with 1.5° target as well. In the latter case, the risk of carbon leakage is considerably reduced, and EU industry could benefit from first-mover advantage. Depending on the ambition levels of the EU, the scope of the EU ETS and the ambition of other Parties, the rules for a CBAM need to be designed to address the risk of carbon leakage. In parallel to the revisions mentioned above, the process for an Impact Assessment of a Carbon Border Adjustment Mechanism has also already begun.

# 3 Outlook

The European Commission has started important processes to set the European economy on a pathway to become carbon neutral in 2050. Raising the climate target for 2030 to 55 % is the basic step which entails revisions of the whole European climate target architecture. Higher ambition for 2030 and stringent implementation of revised regulations give a clear signal for investors that tackling the climate crisis is an overarching aim for all dimensions of European society. It invites the whole world to increase the pace of emission reductions and to revise NDCs accordingly. The 2030 target itself still needs a clear definition of the scope and a stringent implementation of the underlying climate policy architecture to ensure economy-wide emission reductions, a fair share between Member States and the minimization of carbon leakage. It is important that the implementation of this increased ambition is conducted in a consistent, transparent and fair way that considers different situations and potentials of Member States. The Covid-19 pandemic has shown how societies are able to react to immediately threatening situations. Emission reductions have been observed in 2020 which do not result from structural changes. Now it is important to use this moment for an economic recovery which does not simply follow the old tracks, but rather incentivizes sustainable investments ready for the transformation of the European economy, in line with biodiversity and natural demands of the ecosystem.

## 4 References

EC - European Commission (2019). The European Green Deal, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee of the Regions. COM(2019) 640 final. Brüssel, 11 Dec 2019. Online available at https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF, last accessed on 20 Dec 2019.

EC - European Commission (2020a): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions, Stepping up Europe's 2030 climate ambistion. Investing in a climate-neutral future for the benefit of our people. COM(2020) 562 final, 17 Sep 2020. Online available at https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com_2030_ctp_en.pdf.

EC - European Commission (2020b): Impact Assessment Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Stepping up Europe’s 2030 climate ambition Investing in a climate-neutral future for the benefit of our people, Commission Staff Working Document (SWD(2020) 176 final), 17 Sep 2020. Online available at https://ec.europa.eu/clima/policies/eu-climate-action/2030_ctp_en, last accessed on 17 Sep 2020.

EEA - European Environment Agency (2020): EEA. EEA greenhouse gas data viewer, 2020. Online available at http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer, last accessed on 14 Oct 2020.

EUCO - European Council (2019): European Council meeting (12 December 2019) – Conclusions (EUCO 29/19). Brussels, 2019. Online available at https://data.consilium.europa.eu/doc/document/ST-29-2019-INIT/en/pdf, last accessed on 29 May 2020.

EUCO - European Council (2020): European Council meeting (10 and 11 December 2020) – Conclusions. Online available at https://www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf, last updated on 11 Dec 2020.

European Commission (2018): European Union. Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU, LULUCF Regulation, 2018.

Oeko-Institut and Agora Energiewende (2020): How to Raise Europe’s Climate Ambitions for 2030:, Implementing a -55% Target in EU Policy Architecture. Berlin, 2020. Online available at https://www.oeko.de/fileadmin/oekodoc/AGORA-EU-Ambition.pdf, last accessed on 24 Aug 2020.

UBA - Umweltbundesamt (2020): Raising the EU 2030 GHG Emission Reduction Target, Implicatios for the ETS and non ETS sectoral targets, Umweltbundesamt. Online available at https://www.umweltbundesamt.de/publikationen/raising-the-eu-2030-ghg-emission-reduction-target, last accessed on 11 Dec 2020.

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