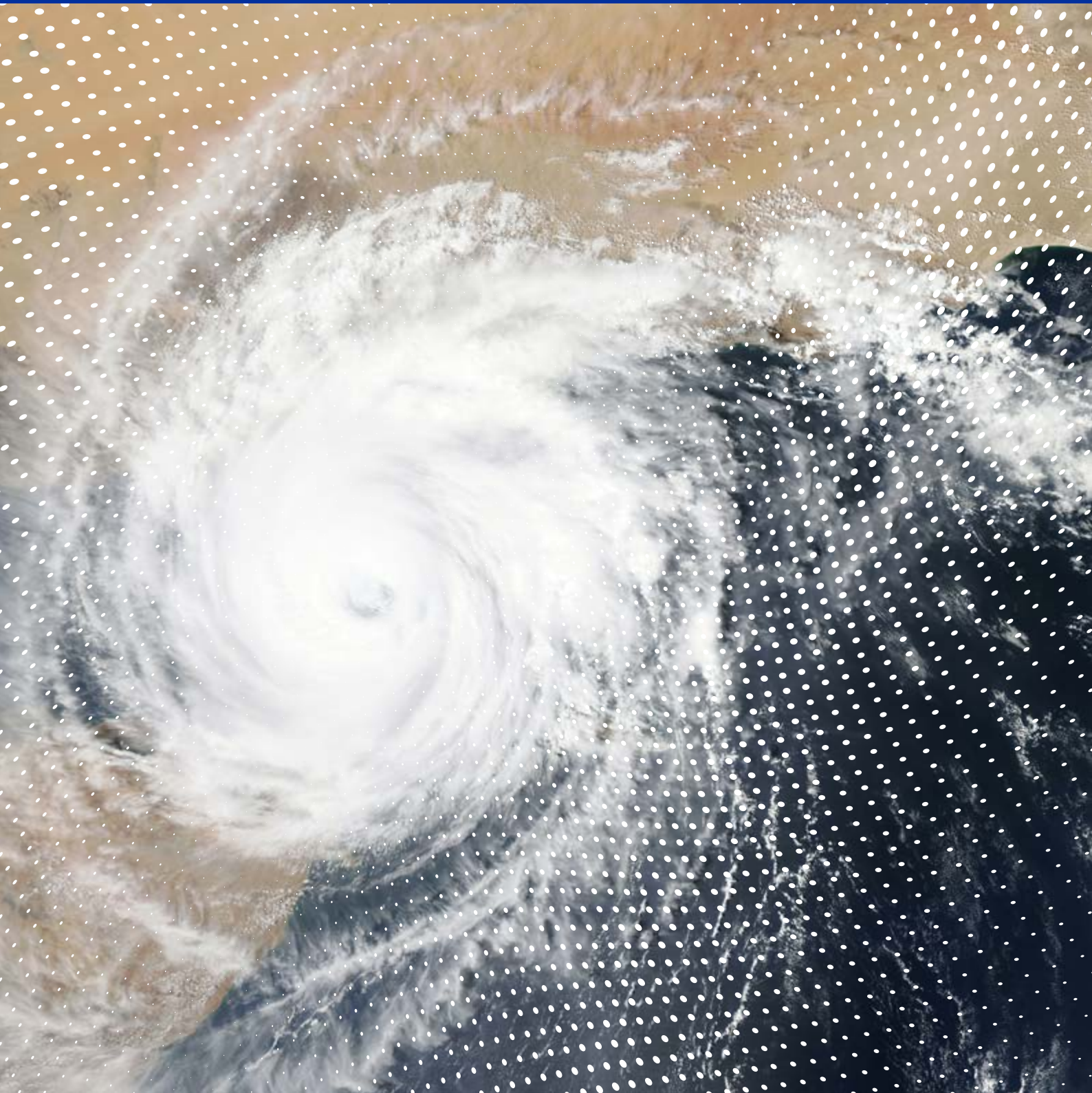


# WHY THE EU MUST STRENGTHEN ITS CLIMATE TARGET

Including in the Emissions Trading System

BRIEFING



# LIFE ETX

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## FURTHER INFORMATION

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## SUMMARY

There are multiple arguments for why the EU'S 2030 climate target aimed to reduce greenhouse gas emissions by at least 55% is not compatible with the 1.5°C temperature goal of the Paris Agreement. The EU thus will need to look at how it can do more. Substantial additional action in all economic sectors and in all EU Member States is needed and possible. Even while substantial reductions - well beyond the 2020 target - have been achieved in the Emissions Trading Scheme (ETS), also the sectors covered by this legislation can do much more. This can be facilitated by a number of improvements to the proposed revision of the ETS Directive, including through rebasing emission levels to actual levels of emissions and by increasing the annual linear reduction factor.

### Minus 55% is not enough

One of the main outcomes of the Glasgow Climate Summit (COP26) of November 2021 is the recognition that the world's governments are failing on the 1.5°C temperature target they set themselves under the 2015 Paris Climate Agreement, and that more needs to be done. All countries, including the European Union and its member States, pledged in Glasgow to review their current commitments. Below we highlight why the EU needs to reduce its emissions well beyond -55% in order to contribute its fair share to the global effort to limit temperature rise to 1.5°C as envisaged by the Paris Agreement.

## 1. WE ARE NOT ON TRACK AND ALL COUNTRIES NEED TO INCREASE ACTION

The planned actions to reduce emissions that countries have submitted to the UN are likely leading to an average global temperature increase of 2.7°C by the end of this century (UNFCCC)<sup>1</sup>. When including pledges that some countries have announced but not yet submitted to the UN, we are on a path towards 2.6°C warming (UNEP)<sup>2</sup>. And when including countries' already existing policies and emission trajectories not covered by such pledges, temperature rise could be limited to 2.4°C (CAT)<sup>3</sup>. All of the above is based on the condition that these pledges and promises will be fully implemented, which is far from given. The only reasonable conclusion is to say the world is set to significantly overshoot the 1.5°C target.

Tackling this failure requires all countries to take significant additional action and hence countries agreed in the Glasgow Climate Pact "to revisit and strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2022".<sup>4</sup> There is nothing in this commitment that indicates this should not apply to the EU and its Member States. If the EU wants to be a credible actor on climate change it needs to take its international commitments seriously.

## 2. COUNTRIES NEED TO CONTRIBUTE ON THE BASIS OF EQUITY

Defining the contribution of each country is an issue of political debate. Under the 1992 Framework Convention on Climate Change countries agreed to reduce emissions on the basis of their (historical) responsibility and their capacity to act.<sup>5</sup> This equity principle makes it evident, that the EU, with its greater than average historical emissions and greater than average economic capacity, needs to deliver more than other countries and regions, both in terms of strong domestic climate action and by providing substantial financial resources to help poorer countries to do their share (as well as to support adaptation and loss and damage action in these countries).

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<sup>1</sup> UNFCCC (2021). Nationally determined contributions under the Paris Agreement. Revised synthesis report by the secretariat. 25 October 2021. [unfccc.int/documents/307628](https://unfccc.int/documents/307628)

<sup>2</sup> UNEP (2021). The Heat Is On. A world of climate promises not yet delivered. Emissions Gap Report 2021. October 2021. [www.unep.org/resources/emissions-gap-report-2021](https://www.unep.org/resources/emissions-gap-report-2021)

<sup>3</sup> Climate Action Tracker (2021). Glasgow's 2030 credibility gap: net zero's lip service to climate action. Warming Projections Global Update. November 2021. [climateactiontracker.org/publications/glasgows-2030-credibility-gap-net-zeros-lip-service-to-climate-action](https://climateactiontracker.org/publications/glasgows-2030-credibility-gap-net-zeros-lip-service-to-climate-action)

<sup>4</sup> UNFCCC (2021). Decision 1/CMA.3. Glasgow Climate Pact. <https://unfccc.int/documents/310497>

<sup>5</sup> Referred to as "common but differentiated responsibility and respective capabilities", also in the Paris Agreement and Glasgow Climate Pact

Moreover, countries agreed that each 2030 pledge (NDC - Nationally Determined Contribution) would need to indicate how a country "*considers that its intended nationally determined contribution is fair and ambitious*".<sup>6</sup> The EU agreed to reduce net greenhouse gas emissions by at least 55% by 2030 (as compared to 1990<sup>7</sup>) and to reach net zero emissions by 2050 as outlined in the EU Climate Law.<sup>8</sup> But the EU does not show how its reduction target fits the UNFCCC's equity principle. It actually does not go further than stating that it considers its NDC to be fair without identifying how the EU's responsibility or capability has been integrated in the decision-making on the 2030 and/or 2050 targets.<sup>9</sup> In fact it would be correct to say this has not happened and consequently it would be fair to say that applying the agreed equity principles to the EU's NDC would lead to a substantially higher 2030 target.

### 3. MULTIPLE INDEPENDENT ASSESSMENTS CALL UPON THE EU TO INCREASE ITS TARGET WELL BEYOND -60%

The Climate Action Tracker (CAT) consortium quantifies and evaluates climate change mitigation targets, policies and actions. In its September 2021 assessment of the EU's 2030 climate target, it concludes: "*The CAT rates EU's climate targets, policies, and finance as "Insufficient". The "Insufficient" rating indicates that the EU's climate policies and commitments need substantial improvements to be consistent with the Paris Agreement's 1.5°C temperature limit. The EU's 2030 emissions reduction target and its policies and action are consistent with 2°C of warming when compared to modelled domestic pathways. The EU is not meeting its fair-share contributions to climate action. To improve its rating, the EU should strengthen its emissions reduction target to at least 62% below 1990 levels, adopt policies necessary to reach this goal, and significantly increase its support for climate action in developing and least developed countries.*"<sup>10</sup>

<sup>6</sup> UNFCCC (2014) Decision 1/CP.20. Lima Call for Climate Action. 14 December 2014. [unfccc.int/news/lima-call-for-climate-action-puts-world-on-track-to-paris-2015](https://unfccc.int/news/lima-call-for-climate-action-puts-world-on-track-to-paris-2015)

<sup>7</sup> All further references to the EU's 2030 greenhouse gas emission reduction target are expressed as compared to 1990. And unless explicit reference is made to the opposite all numbers exclude emissions and removals from LULUCF

<sup>8</sup> EU (2021). [https://ec.europa.eu/clima/eu-action/european-green-deal/european-climate-law\\_en](https://ec.europa.eu/clima/eu-action/european-green-deal/european-climate-law_en)

<sup>9</sup> "The IPCC Special report on Global Warming of 1.5°C shows that pathways limiting warming to 1.5°C typically achieve net zero greenhouse gas emissions at global level in the second half of this century. This enhanced NDC is in line with the EU's agreed objective of achieving a climate-neutral EU by 2050. The EU therefore considers the enhanced NDC to be a fair contribution towards the global temperature goal of the Paris Agreement." In: EU (2020). Update of the NDC of the European Union and its Member States. Submission by Germany and the European Commission on behalf of the EU and its Member States. 17 December 2020. [www4.unfccc.int/sites/NDCStaging/Pages/Search.aspx?k=European%20Union](https://www4.unfccc.int/sites/NDCStaging/Pages/Search.aspx?k=European%20Union)

<sup>10</sup> The Climate Action Tracker is an independent scientific project that tracks government climate action, and measures it against the objectives of the Paris Agreement. CAT (2021). Country assessment of the EU. Update 15 September 2021. [climateactiontracker.org/countries/eu](https://climateactiontracker.org/countries/eu)



A similar message comes from the Paris Equity Check<sup>11</sup> initiative. They developed an approach whereby the limited carbon budget would be divided amongst countries thereby using for each country effort sharing model that is most favourable to the country, reflecting the bottom up approach of the Paris Agreement. With the total budget remaining in line with the 1.5°C target, even with the most favourable approach, countries would face radical emission reduction efforts. For the EU, the researchers indicated that the 2030 climate target should be increased beyond -65% by 2030.<sup>12</sup>

And in another recent scientific contribution from Climate Analytics which modelled 1.5° compatible pathways not based on equity principles but based on the notion of “highest plausible ambition levels”<sup>13</sup>, researchers found the EU would need to reduce its emissions by at least -60% by 2030 to be in line with 1.5°C compatible pathways. The modelled pathways are steep medium-term emissions reduction pathways that remain within what is technically and economically feasible and take into account present day country characteristics, such as the emissions intensity of the economy.

#### **4. ALSO THE UN IS CALLING UPON THE EU TO DO MORE**

The UN Environment Program's 2019 Emissions Gap Report called upon G20 countries to reduce their annual emissions by 7.6% between 2020 and 2030 to meet the 1.5°C temperature limit of the Paris Agreement.<sup>14</sup> Applying this annual reduction factor linearly (starting at EU's 2019 emissions) would lead to emission reductions in the EU of at least 65% in 2030.

#### **5. THE EU UNDER CURRENT POLICIES WOULD EMIT DOUBLE ITS PER CAPITA SHARE OF THE REMAINING GLOBAL CARBON BUDGET**

The IPCC's Sixth Assessment Report (AR6) provides new estimates for the remaining global carbon budget. These estimates illustrate how much CO<sub>2</sub> can be emitted from early 2020 until the world has reached net-zero emissions in order to stay below a certain temperature limit. The remaining carbon budget to limit temperature rise to

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<sup>11</sup> See: [paris-equity-check.org](http://paris-equity-check.org)

<sup>12</sup> Robiou du Pont, Y. e.a (2016). Equitable Mitigation to Achieve the Paris Agreement Goals. Nature Climate Change. December 2016

<sup>13</sup> Climate Analytics (2021). 1.5°C Pathways for Europe: Achieving the highest plausible climate ambition. October 2021. [climateanalytics.org/publications/2021/15c-pathways-for-europe-achieving-the-highest-plausible-climate-ambition](https://climateanalytics.org/publications/2021/15c-pathways-for-europe-achieving-the-highest-plausible-climate-ambition)

<sup>14</sup> UNEP (2019). Emissions Gap Report 2019. November 2019. [www.unep.org/resources/emissions-gap-report-2019](http://www.unep.org/resources/emissions-gap-report-2019)

1.5°C with a 66% likelihood<sup>15</sup> is 400 gigatonnes of CO<sub>2</sub> (GtCO<sub>2</sub>).<sup>16</sup>

Dividing the remaining global CO<sub>2</sub> budget on a per capita basis (which as indicated above would not be in line with the Convention's equity principle) would provide the EU, with around 5% of the world's population, with a carbon budget of around 20 GtCO<sub>2</sub>. However, based on the EU's Climate Law and the legislative proposals under the Fit for 55 package the EU would need a budget of around 40 GtCO<sub>2</sub><sup>17</sup>. Which means that under current climate targets and policies, the EU would need double its per capita share of the remaining global CO<sub>2</sub> budget. These targets and policies are thus not consistent with 1.5°C pathways.

## Emissions have been reduced but not in all sectors

Greenhouse gas emissions in the EU have been reduced by 31% in 2020 as compared to 1990 and even by 34% when including removals from land use and forestry. This is well above the -20% target that was set for 2020, and applying the approximately 3.5% annual reduction that is envisaged to go from the agreed 2020 target to the agreed 2030 target<sup>18</sup> would reduce emissions by 65%.

EU Member States and the European Parliament are currently discussing a range of legislative proposals to ensure implementation of the 2030 target. These discussions offer an opportunity for the EU to further strengthen its 2030 target. An important part of that discussion focuses on the revision of the EU's Emissions Trading System (ETS) which mainly deals with emissions from the power and industry sectors.

While substantial emission reductions have been achieved in the ETS (-41% in 2020 while the target was only -21%, compared to 2005), there is a rather huge difference in emission reductions from the power and the industry sector, and much higher reductions can and must be achieved. The same can be said for the sectors not covered by the ETS where also substantial additional reductions must and can take place.

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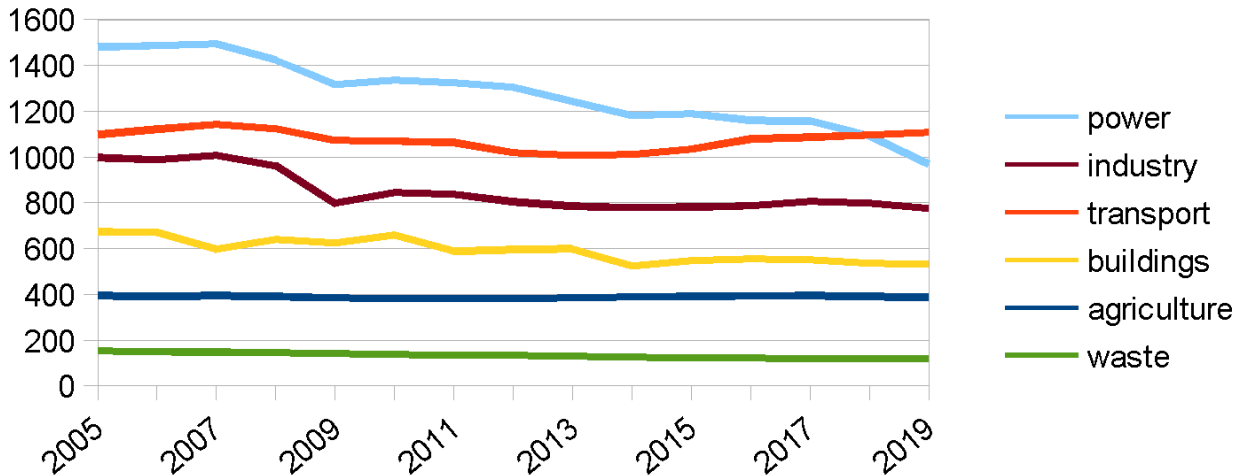
<sup>15</sup> The IPCC's identification of the global carbon budget is based on best available science. The likelihood expresses the certainty IPCC authors have regarding specific numbers. A 66% likelihood represents a higher than average chance that limiting global emissions to 400Mt will allow temperature rise to be limited to 1.5°C. A higher likelihood of 83% would reduce the global budget to 300Mt. A lower likelihood of 50% would increase the budget to 500 Mt

<sup>16</sup> IPCC(2021). Summary for Policy Makers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group 1 to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. August 2021. [www.ipcc.ch/report/ar6/wg1/#SPM](http://www.ipcc.ch/report/ar6/wg1/#SPM)

<sup>17</sup> See: Trio, W (2021). The EU's carbon budget under the fit for 55 package. November 2021. [https://drive.google.com/file/d/1ncu\\_7139EjbWHn3TTMZMwHtVtCSadfLw/view?usp=sharing](https://drive.google.com/file/d/1ncu_7139EjbWHn3TTMZMwHtVtCSadfLw/view?usp=sharing)

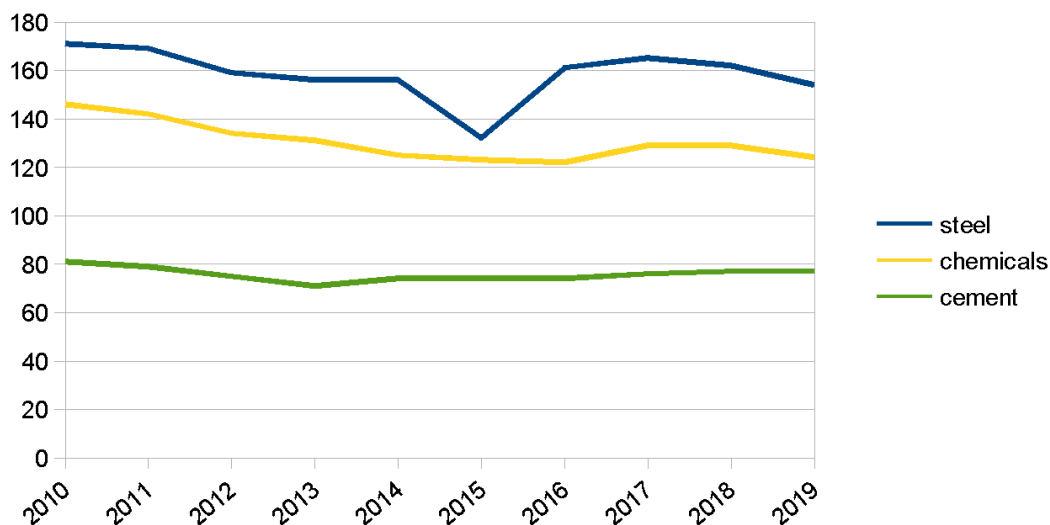
<sup>18</sup> This is not fully straightforward as the 2030 target refers to net greenhouse gas emissions while the 2020 target refers to (gross) emissions

**GRAPH 1**  
**Overview of sectoral emissions in the EU27 from 2005 to 2019 (in MtCO<sub>2</sub>e)**



As indicated in the graph above, especially in the non-ETS sectors emission reductions have been very limited. But also the industrial sector has seen rather limited action, in particular in the last decade as further evidenced in Graph 2 below which shows actual emissions in the three biggest emitting industrial sub-sectors: steel, chemicals and cement.

**GRAPH 2**  
**Comparison of greenhouse gas emissions in the three largest industrial sectors in the EU27 for the period 2010-2019 (in MtCO<sub>2</sub>-e)**





## The ETS needs to be strengthened

As indicated above, the Commission's proposals to revise EU climate policies are not in line with a 1.5°C consistent carbon budget. A more adequate climate target would need to see overall greenhouse gas emissions to be reduced by at least 65% by 2030 and the EU to become climate neutral by 2040. This would halve the EU's carbon budget and fit within the per capita share of the remaining global carbon budget. In order for the EU to provide its fair share, next to these stringent domestic emission reduction targets the EU would also need to provide substantial financial support to climate action in poorer countries.

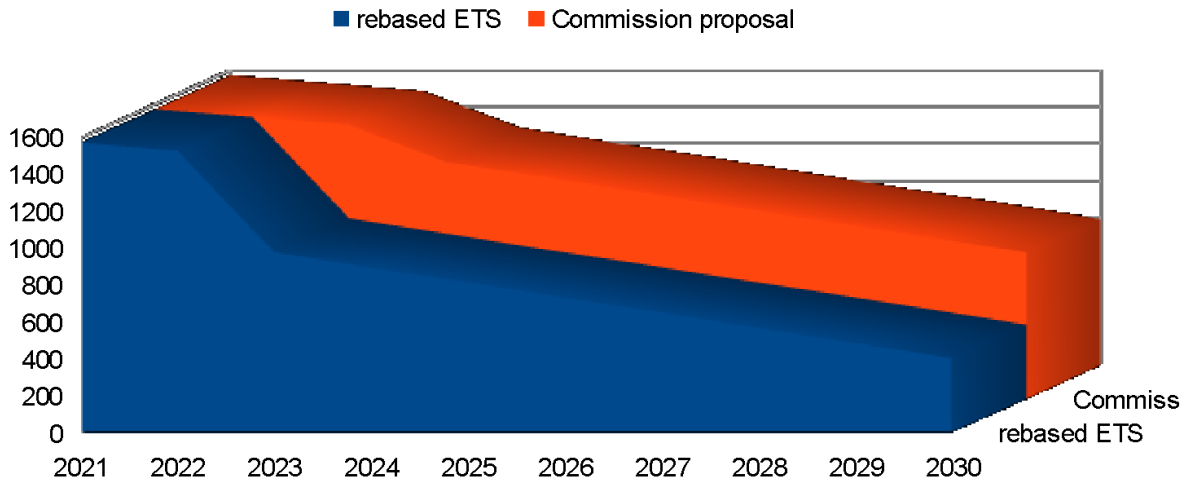
Also the ETS is set to largely overshoot the carbon budget. In order to be consistent with a 1.5°C carbon budget, total EU emissions in the period 2021 to 2030 should be around or preferably below 25 GtCO<sub>2</sub>-e<sup>19</sup>. The current ETS proposal would need 11.9 GtCO<sub>2</sub>-e, almost half of the budget, while the ETS sectors in 2020 were responsible for only 36% of emissions.

Hence emissions in the ETS sectors need to be further reduced. One way could be to adapt the starting level from which annual reductions start. The current proposal envisages to allow 1.572 MtCO<sub>2</sub>-e emissions in 2021. This is well above actual emissions in 2020 which were at 1.224 MtCO<sub>2</sub>-e. In this way it is very likely that for a large part of the decade more emissions allowances will be available than needed which seems opposite to the desire to incentivise further emissions reductions. This can be changed if for instance, from 2023 onwards, emission reductions would be rebased and adjusted to a reduction pathway starting from actual emissions in 2020. While not changing the proposed 4.2% annual linear reduction factor, total emissions in the ETS for the period 2021 to 2030 would be reduced to 8.6Gt which would be more in line with 1.5°C consistent pathways. Obviously, if furthermore the annual linear reduction factor would be increased beyond 4.2%, even more reductions would be possible.

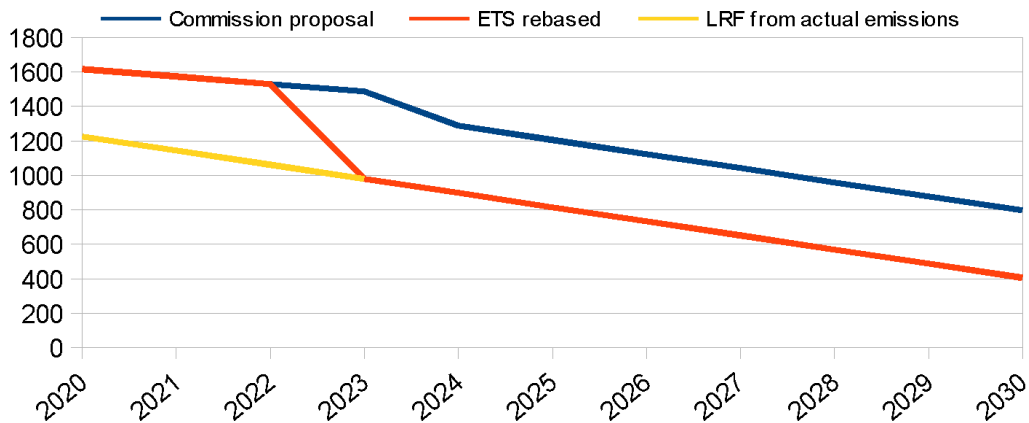
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<sup>19</sup> The IPCC indicated the total carbon budget for a 66% chance to limit temperature rise to 1.5°C to be 400 GtCO<sub>2</sub>. The EU's per capita share, with 5% of the world population, would be 20 Gt of CO<sub>2</sub>. In the most optimistic scenarios whereby the EU achieves carbon neutrality by 2040 and emissions become net negative thereafter, the total 2021-2030 greenhouse gas budget would be around 25 GtCO<sub>2</sub>-e

**GRAPH 3**  
**Comparison between two ETS pathways (in MtCO<sub>2</sub>-e)**



**GRAPH 3BIS**  
**Comparison between ETS pathways (in MtCO<sub>2</sub>-e)**



**Wendel Trio**  
 (10 March 2022)

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