



The EU climate target: What's in the numbers?

Why different actors are proposing different targets for reducing the EU's greenhouse gas emissions by 2030

50, 55, 60, 65% – various stakeholders from the Member States and EU institutions to civil society have put forth differing thresholds for greenhouse gas (GHG) emissions cuts needed to meet the Paris Agreement goals. This policy briefs looks at the different considerations in setting the level of the EU 2030 GHG emissions target.

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The EU is in the process of revising its 2030 greenhouse gas (GHG) emissions reduction target.

The target is measured as a percentage cut from 1990, and it is currently set at 40%. However, it was agreed in 2014 before the signature of the Paris Agreement and its goal of “pursing efforts” to limit temperature rise to 1.5C, and the EU's subsequent objective for climate neutrality by 2050.

Many^{1,2}, including the [European Commission](#), consider the target to be unambitious and out of line with any reasonable trajectory toward meeting the Paris temperature goals.

1 <https://climateactiontracker.org/countries/eu/>

2 <https://www.cer.eu/insights/moving-back-finish-line-eus-progress-climate>

In any case, the EU is already on track to reduce emissions by around 45% by 2030, if current legislation is effectively implemented, [according to the European Commission](#).

The EU 2030 target will now be made legally binding through the European Climate Law, along with the goal of climate neutrality by 2050. The law will have to be agreed between the European Council and European Parliament.

Setting a GHG reduction target is a balance of a number of factors, including:

- investment costs in the short term
- possible economic and social disruption to different sectors and populations, and our ability to mitigate these problems over different time periods
- the scope of the target (including LULUCF, international aviation, maritime, international credits?)
- [calculations](#) around “backloading” or “frontloading” of emissions cuts
- a [calculation](#) of what year emissions need to be brought to net zero in line with a [fair burden](#) sharing approach between countries
- the anticipated costs of climate change, and the ability of a country to adapt to higher levels of climate change implied by slower action
- a political calculation about the benefits of leadership in terms of shifting the actions of other countries ([particularly ahead of COP26 and global NDC resubmissions](#)).

More conservative Member States, including Poland, Czechia, Hungary and Bulgaria, had resisted raising the target, and have been very cautious about any increase, arguing that a higher target risks being unduly costly and too rapid for their relatively carbon intensive, and less wealthy economies. However, it appears that most of these countries have now moved toward accepting a 55% target.

The European Commission has proposed a 55% target, also broadly supported by more ambitious Member States, including Austria, France, Italy, Latvia, Luxembourg, Netherlands, Portugal, Slovenia, Sweden and Spain.

Nordic countries Finland and Denmark signalled a shift to 60% following the EP vote in October 2020 after initially supporting 55%. The Commission's impact assessment argues that “a target of over 55% would front-load the efforts strongly. At the same time, the challenges associated

with an even faster transition would increase.”³ Furthermore it states that 50-55%, “fits a representative set of modelling exercises looking at achievable and responsible global emission pathways.”

The assessment asserts that that a 50-55% target is “responsible” and consistent with “mitigating all negative social and economic impacts associated with the transition.” It continues to emphasise that IPCC SR1.5 concludes that a 1.5C degree temperature increase can be achieved if global climate neutrality is achieved by 2070 and negative emissions are deployed thereafter.

The European Parliament voted for a 60% target. However, the largest political group, the European People’s Party (EPP), supported 55%, deeming that the higher target is “overambitious” and “endangers jobs”. The EPP abstained from the vote in the Parliament, and hopes the European Council will stick to a 55% target.

CAN Europe, a coalition of NGOs active on climate policy, has proposed 65% and has published a number of studies which it claims show that 65% is not only feasible but brings economic benefits. This position is built around the need to reach net zero by 2040 (including increases in the carbon sink)⁴.

Contrary to the Commission, CAN claims the “energy transition can become the motor of economic recovery. Investment costs are lower than the costs of the dramatic climate change impacts and more than over-compensated by benefits such as employment, savings in fossil fuel imports and avoided environmental damage.” Indeed, a number of studies suggest that a rapid energy transition could have major benefits for employment and innovation overall and throughout the EU, although it will certainly pose challenges in specific industries and regions, which is why an a comprehensive and ambitious approach to Just Transition is vital.⁵

Member States’ individual targets: The case of Denmark

Some individual Member States have already set their own ambitious targets for net zero, such as Finland aiming for 2035.

³ https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/impact_en.pdf

⁴ <http://www.caneurope.org/docman/climate-energy-targets/3645-can-europe-65percent-is-feasible-sep20/file>

⁵ University of Cambridge Institute for Sustainability Leadership (CISL). (2020). Developing the EU’s ‘competitive sustainability’ for a resilient recovery and dynamic growth. Cambridge, UK: the Cambridge Institute for Sustainability Leadership. <https://www.cisl.cam.ac.uk/resources/low-carbon-transformation-publications/developing-the-eus-competitive-sustainability-for-a-resilient-recovery-and-dynamic-growth>

Denmark is currently aiming for net zero emissions by 2050 and has set a 70% target for 2030.

This is in part an exercise in political leadership, as the government itself has acknowledged it still does not have a concrete plan for how to reach this target. This will be developed through sectoral action plans in the near-term future.

However, the country hopes that the political signal and stated commitment will help to unlock greater ambition within the EU and internationally.

What is in the target matters

The EU's original 40% target, for example, does not include international shipping, and emissions and removals from land use, land use change and forestry (LULUCF).

The Commission proposes, however, to include these in the new target. This changes the calculations significantly (the LULUCF sink currently accounts for roughly 6% of EU emissions in 1990), so comparing the targets directly is not possible. In addition, the EC is proposing to include increases in carbon sink in the target, meaning the target would now be a net target rather than an absolute emissions reduction target.

One problem with this approach has to do with [how permanent negative emissions are](#). Some negative emissions are in fact rather temporary when we look at the decadal or century timescale needed to confront climate change. This has major implications and de facto means that the EU will continue to be able to emit more than if the goal were absolute.

The European Parliament has rejected this approach in its vote on the European Climate Law. Another important factor is whether "international credits" for emissions cuts made in other countries and purchased will count toward the target.

Backloading or frontloading

There are different approaches, to whether emissions cuts can or should be backloaded or frontloaded. This refers to the speed and distribution of emissions cuts over the years between now and the eventual climate neutral year. Some [argue that emissions cuts](#) should be frontloaded, to spark the rapid eventual change in energy and economic systems that

will lead to deep cuts and lead to innovation and decreased costs over time.

Others argue that it will be easier, and cheaper overall to make large cuts in future years as those systems start to become operational and achieve economies of scale, and as low emissions technologies reach maturity (though it should be noted that this still requires significant up-front investment in order to begin this trajectory, and is *not* simply a *carte blanche* to defer action, but rather a determination about the timing of likely large-scale emissions reductions). For example, the EC assumes that emissions reductions will become easier in the future, after 2030, not before.

The risk of “backloading” emissions⁶ is that it merely defers action, and that every delay in emissions cuts increases the damage done, as well as potentially triggering climate “tipping points”,⁷ abrupt and irreversible changes in the climate equilibrium of the planet which worsen warming feedback loops, greatly worsening our situation.

Scientifically guided emissions cuts?

How can we evaluate the different proposed targets compared to scientific advice for meeting the Paris goals? The UNEP Gap Report for 2019 calculated that to meet the Paris Agreement goal of holding the temperature rise to 1.5 C, global emissions need to be cut by 7.6% annually until 2030, and by 2.7% to keep below 2C.⁸

Applying this specific global logic in a narrow sense to the EU, IEEP has calculated that this would result in roughly a 70% cut by 2030 for the 1.5C goal.⁹

However, this is a purely “mechanical” calculation, and would not necessarily be possible to implement due to the scale of change needed within ten years. In addition, different approaches can assume more or less “negative emissions” in the future to keep the temperature below 2C, and even to overshoot 1.5C and then reduce the temperature with negative emissions. It is worth stressing that almost all of the IPCC scenarios assume a significant amount of increased “negative emissions” from

⁶ European Systemic Risk Board. (2016) Too late, too sudden: Transition to a low-carbon economy and systemic risk. Reports of the Advisory Scientific Committee No 6. https://www.esrb.europa.eu/pub/pdf/asc/Reports_ASC_6_1602.pdf

⁷ Nature. (2019) Climate tipping points — too risky to bet against. <https://www.nature.com/articles/d41586-019-03595-0>

⁸ UN Environment Program, (2019) Emissions Gap Report 2019, <https://www.unenvironment.org/resources/emissions-gap-report-2019>

⁹ Based on EU-28 emissions of 4392 MtCO₂e in 2018. See EEA report on Trends and drivers of EU greenhouse gas emissions 2020. <https://www.eea.europa.eu/publications/trends-and-drivers-of-eu-ghg>

technological and natural sinks deployed in the future to keep to the temperature goals.

Some scientists believe that the assumptions about future GHG removals are far too optimistic, given uncertainties about the scale of future sinks, their permanence, the feasibility of negative emissions technologies, and the risks of “climate tipping points” which rapidly accelerate heating.¹⁰ Realistically it will be impossible to reach the 1.5C target without much larger scale negative emissions, or an a change in the magnitude of emissions reductions.

Climate justice and fair shares

However, even this larger scale reduction ignores the question of whether the EU should be doing more than just the global average.

The EU-28 is responsible for about 22% of all historical GHG emissions¹¹ while representing below 7% of the global population¹². It also has better capacity than most countries to implement climate mitigation and adaptation policies. So, a higher goal would arguably be more consistent with a fair distribution of the burden globally, and the present pace of emissions cuts is not consistent with most fair share calculations.¹³

However, a political and economic judgement is needed as to whether such an ambitious target would be feasible, which for the moment it does not appear to be in the short term. To compensate for this gap the EU must engage in helping international partners to cut their emissions through climate finance, capacity building, and knowledge transfer. In this way the EU can still lead the way in the fairest way reasonably possible.

A recent SEI/Oxfam study revealed that between 1990-2015, a period in which cumulative global emissions almost doubled [link to our blog this point], the richest 10% of the world's population (c.630 million people) were responsible for 52% of the cumulative carbon emissions – depleting the global carbon budget by nearly a third (31%) in those 25 years alone, while the poorest 50% (c.3.1 billion people) were responsible for just 7% of cumulative emissions, and used just 4% of the available

10 <https://www.carbonbrief.org/analysis-why-the-ipcc-1-5c-report-expanded-the-carbon-budget>

11 Ritchie, H. (2019) “Who has contributed most to global CO2 emissions?” Our World in Data. <https://our-worldindata.org/contributed-most-global-co2>

12 European Parliamentary Research Service Blog. (2019) EU-28 And World Population. <https://epthinktank.eu/2019/06/04/demographic-outlook-for-the-european-union-2019/figure-1-eu-28-and-world-population/>

13 Robiou du Pont, Y., Jeffery, M. L., Gütschow, J., Rogelj, J., Christoff, P., & Meinshausen, M. (2016). Equitable mitigation to achieve the Paris Agreement goals. *Nature Climate Change*, 7(1), 38–43. <https://doi.org/10.1038/nclimate3186>

carbon budget.¹⁴ It is still the wealthiest individuals who are causing the bulk of GHG emissions.

The EU still “exports” emissions to other countries through product and energy imports, meaning that the EU’s domestic production emissions represent a lower level than the consumption emissions it is responsible for.

Many of the drops in production emissions in European countries mask the “export” of these emissions in recent decades.¹⁵ In addition, certain recent successes in reducing emissions are generated through the import and burning of woody biomass for energy, where the emissions are credited outside of the European Union – or even, under the current US administration, outside the Paris Agreement framework altogether.¹⁶

Conclusions

There are significantly higher risks and damages associated with every increment of higher global warming, and global emissions continue to rise and have not even begun to fall, let alone at the rates envisioned by the UNEP Gap Report.

EU leadership is very much needed ahead of other international commitments in the lead-up to COP26 in 2021 when leaders will submit updated commitments under the Paris Agreement. China’s recent announcement of climate neutrality by 2060 has already given positive momentum for other countries to follow-suit, and the EU could add to this dynamic.

Whatever happens, global emissions must peak and start dropping as soon as possible, and we saw at COP21 that international commitment on the issue needs to be unlocked by combined leadership from major emitters. The headline GHG target is obviously very important, because the ambition of all other EU climate policy will be calibrated to meet this target.

However, it can be argued that the most important thing is not the specific target chosen, but rather to ensure that there is a rapid “ratchet” mechanism to increase ambition periodically, in line with progress and science, while focusing attention on the means of implementation. For example, as in the case of the Montreal Protocol protecting the ozone

14 Oxfam, SEI. (2020) CONFRONTING CARBON INEQUALITY Putting climate justice at the heart of the COVID-19 Recovery. <https://assets.oxfamamerica.org/media/documents/Confronting-Carbon-Inequality.pdf>

15 Hausfather, Zeke. (2017) “Mapped: The world’s largest CO2 importers and exporters” Carbon Brief. <https://www.carbonbrief.org/mapped-worlds-largest-co2-importers-exporters>

16 Norton, M., Baldi, A., Buda, V., Carli, B., Cudlin, P., Jones, M. B., Korhola, A., Michalski, R., Novo, F., Oszlányi, J., Santos, F. D., Schink, B., Shepherd, J., Vet, L., Walloe, L., & Wijkman, A. (2019). Serious mismatches continue between science and policy in forest bioenergy. *GCB Bioenergy*, 11(11), 1256–1263. <https://doi.org/10.1111/gcbb.12643>

layer,¹⁷ which was more successful than imagined, despite higher than anticipated costs, partly due to proactive engagement by the private sector, flexibility, the recognition of differentiated responsibilities and provision of adequate finance for developing economies. It is important that solutions are implemented as rapidly as possible, with the support needed for all parties, and responsibility taken by polluters – regardless of the target.

Another approach could be to focus more on legally binding sectoral targets – an approach so far avoided at the EU level, except in the delimitation between ETS sectors (energy, heavy industry, and aviation) and Effort Sharing sectors (sectors not included in ETS), and starting in 2021 Land Use, Land-Use Change, and Forestry (LULUCF). The advantage of this approach would be that sectors which have not reduced their emissions sufficiently, such as transport, industry, and agriculture, would have clear accountability for achieving their targets through innovation and investment without being able to rely on deep emissions elsewhere to cover for their failure. This is an explicitly less flexible approach, but could provide a clear goal which industries would need to work toward, and ultimately more certain environmental benefits, and a higher possibility of over-achieving targets. However, it would also be more complicated to implement from a governance point of view than a single economy-wide target due to the multiple stakeholders involved. Part of the EU's philosophy until now has been that Member States need flexibility to choose different approaches to reduce emissions in a way best suited to their individual circumstances. A binding sectoral target approach would reduce that flexibility, potentially increasing costs. Member State specific sectoral targets could help to reduce this problem, but would open up the possibility of even more complicated and protracted negotiations.

Whatever approach is taken, now is the time for rapid, ambitious climate action. We have the technology and the political instruments to begin rapid decarbonisation, mainly through the rapid deployment of low cost renewable energy, large scale electrification, and significant improvements in energy efficiency of buildings to begin with, although a large range of measures are needed across all sectors, including agriculture, transport, carbon storage, transport, and industry.

There is no reason to see higher targets as a threat to jobs; quite the contrary, [targeted climate spending could be the stimulus measure needed coming out of the COVID-19 pandemic.](#)

¹⁷ Charveriat, Celine. (2015) Is Paris more like Kyoto or Montreal? Oxfam Blogs. <https://oxfamblogs.org/fp2p/is-paris-more-like-kyoto-or-montreal/>

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