CAN
CLIMATE ACTION NETWORK
Europe

# No cheating from the start

## 2030 climate targets for EU Member States

Brussels, July 2016

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# SUMMARY

The discussions on how to reduce greenhouse gas emissions not covered by the EU's Emissions Trading Scheme tend to focus on how to divide the 2030 target among Member States. However, other issues are as important, as they equally impact the EU's emissions budget for the period 2021-2030. This includes the decision on the emissions level that reductions will have to start from in 2021. Increasing the ambition at the starting point in 2021 has the same impact on the EU's carbon budget as increasing the 2030 target.

There are different options to define the starting point, each having benefits for different groups of countries. It will be essential for the EU's contribution to the Paris Agreement that for each country the starting point is set as ambitiously as possible. Choosing the option with the highest environmental integrity will reduce the EU's carbon budget, as compared to the default option, by at least 850 million tonnes of greenhouse gas emissions, which is more than the 2014 emissions of Germany and France combined. For most countries this will mean that the starting point should be based on a linear trajectory from their 2016-2018 average emissions, while for the few countries that will fail to reach their 2020 target, a linear trajectory from their 2020 target should be used to define their starting point.


# Introduction

EU Heads of State and Government decided in October 2014 to reduce greenhouse gas emissions by at least 40% by 2030 as compared to 1990 levels. In order to do so, the Council specified that emissions covered by the Emissions Trading Scheme (ETS) should be reduced by 43% by 2030, and those not covered by the ETS by 30% by 2030, both as compared to 2005 emission levels.

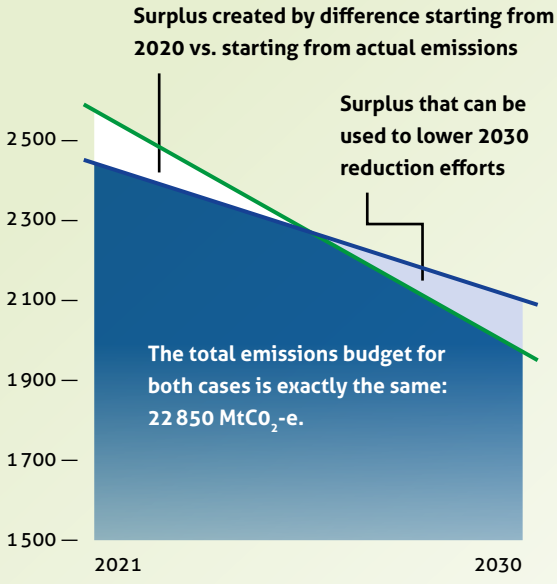
The Council further decided that the EU-wide target for the non-ETS emissions would need to be translated into individual targets for the 28 EU Member States on the basis of their economic capacities. On top, for the 11 richest Member States, the target would be adjusted to the countries' opportunities for cost-effective emission reductions.

# The starting point is important!

While a lot of attention will go to which target will be proposed for each Member State for 2030, it is important to realize that the European Commission's proposal will contain a ten year carbon budget for each Member State for the period 2021 to 2030. The total amount of polluting greenhouse gases that each country will be allowed to emit in the period 2021 to 2030 will be determined by the emissions level set for the starting point in 2021 as well as by the 2030 target. In other words, 1% more emissions at the starting point has the same effect on the EU's emission budget as decreasing the 2030 target by 1%.

Graph 1 illustrates how the same budget is achieved by starting from the current 2020 target or starting from projected emissions in 2020[1]. As non-ETS emissions are projected to be 5% below the target in 2020, a budget based on a pathway from the agreed 2020 target towards -30% in 2030, would allow countries to limit their reduction efforts to 25% in 2030, instead of reducing emissions by 30% (all as compared to 2005 emission levels[2]).

GRAPH 1: **Emission budgets under two scenarios: 1) starting from the 2020 target and 2) from (projected) annual emissions in 2020, while using the same total carbon budget (in $MtCO_2$-e)**




1 Based on: European Environment Agency: Trends and Projections in Europe 2015. Tracking progress towards Europe's climate and energy targets. October 2015.

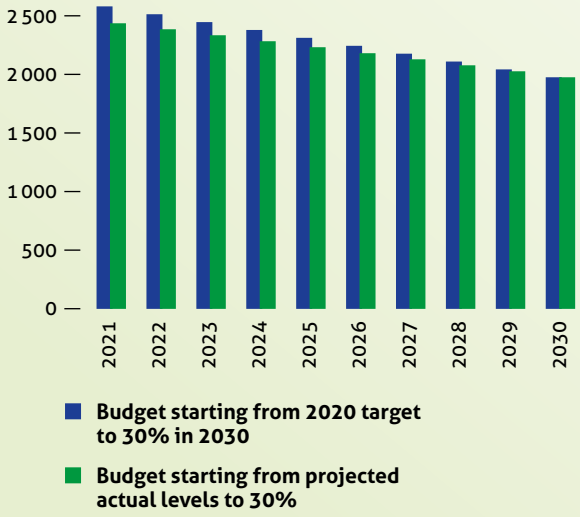
2 Throughout this document we are using the latest EEA greenhouse gas inventory for defining the 2005 base year level (see box 2 for further explanation)

As the EU is not allowed to reduce its 2030 target under the Paris Agreement, adopting a more ambitious starting point will reduce the total emissions budget and therefore lead to more emissions reductions. The lower the starting point in 2021, the lower total emissions will be over the period 2021 to 2030. This would be welcome as countries have all agreed there is a need to increase the level of ambition of the climate pledges in order to achieve the Paris objectives. On top, starting from actual emissions will prevent the built up from the start of unused emission allowances that have proven to disturb the system until now.

Graph 2 illustrates the reductions achieved by starting from (projected) actual emissions rather than from the 2020 target in a pathway to a 30% reduction by 2030.

While it is clear that starting from the level of actual emissions provides more environmental integrity, the challenge is how to define those figures. The final numbers for countries' actual emissions in 2020 will not be available at the moment the emissions budget for 2021 will have to be calculated. Therefore, a political decision will have to be made on how to set the starting point emissions level.

GRAPH 2: **Annual emission budgets under two scenarios: 1) starting from the 2020 target and 2) from (projected) annual emissions in 2020, towards a -30% target in 2030 target (in $MtCO_2$-e)**

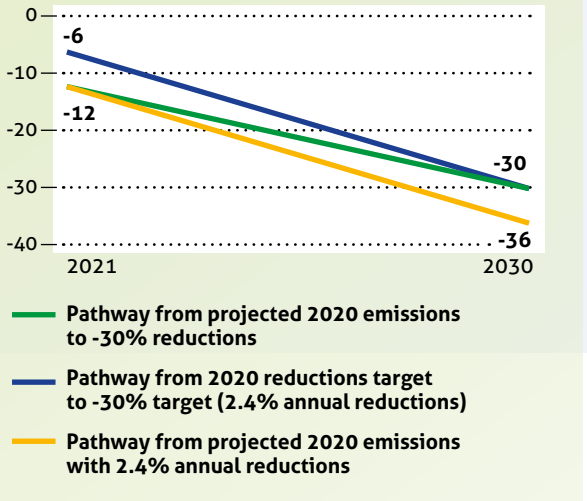



## BOX 1: Setting ambitious starting levels: one element to increase ambition

The EU's 2030 targets were defined more than a year before the Paris Summit, and there is a clear need to align them with the objectives of the Paris Agreement. In order for the EU to make its fair contribution to achieving the objectives of keeping temperature rise well below 2°C, and pursuing efforts to limit it to 1.5°C, it will need to substantially increase its 2030 targets. There is currently no process in place for this revision. Therefore, the European Commission's proposal for setting national targets must include a clause that allows the EU to rapidly adapt Member States' targets when the overall contribution of the EU to the Paris Agreement is revised. Given the results of the Brexit referendum, such a clause will need to be integrated anyway. Brexit would require a revision of the targets of the EU27 Member States, even if the EU is only intending to keep its current low level of ambition[3].

A more ambitious approach, that would better reflect the outcome of the Paris Agreement would be to not only set the starting point at the lowest emissions level in 2020, but also to keep the annual reduction that would be needed to reduce emissions from -10% in 2020 to -30% in 2030. Doing this would require an annual reduction of 2.4% (of 2005 emissions). Having this annual reduction start from projected actual emissions would bring the non-ETS target to -36% in 2030. See graph 3 for the budget difference this would bring. Actual emissions in 2020 may be even lower than the current projections as Member States have been very conservative in projecting their emission reductions for the next six years: they projected to reduce emissions by only 1% for the whole period of six years, as compared to a 12% reduction they already achieved over the last six years.

GRAPH 3: **Emission reduction pathways based on different starting points and using similar annual reductions (in % as compared to the updated 2005 base year levels)**




3 Please note that all numbers in this briefing have been calculated on the basis that the UK has not left the EU yet. For the core concept of the briefing, a potential Brexit would slightly change the numbers but not the conclusions.

# How to define actual emissions in 2020

Defining the emissions level of the starting point in 2021 will have to be done at a moment when the actual emissions for 2020 will not be known yet. The Commission faced the same problem when setting the starting level for the current non-ETS budget in the Effort Sharing Decision (ESD)[4]. They defined the ESD starting point in 2013 on the basis of Member States' average emissions for 2008, 2009 and 2010. As the October 2014 Council Conclusions indicated that the current legislation should be the basis for future rules, the default option for the Commission would be to define a country's 2021 starting point as equal to their 2016-2018 average emissions.

On the basis of current projections from Member States, the European Environment Agency estimates average total non-ETS emissions, based on existing measures, in 2016-2018 to be 2 525 million tonnes of $CO_2$ equivalent ($MtCO_2$-e)[5].

Given the above, we assume that this will be the default starting point. The default emissions budget for the EU for the period 2021 to 2030 would be 22 583 $MtCO_2$-e.

## BOX 2: Defining the level of emissions in 2005

There is potentially some confusion over the exact amount of emissions in 2005. A scope correction has been applied to reflect the current scope of the ETS and incorporate changes in terms of countries, activities and gases. The 2020 target for non-ETS emissions was defined on the basis of total non-ETS emissions of 2 914 $MtCO_2$-e[6]. The latest EU's greenhouse gas inventory identifies non-ETS emissions in 2005 at 2 818 $MtCO_2$-e[7]. We have used this updated number throughout this briefing to define both the 2005 baseline emissions level, as well as the 2030 target of -30% (1 973 $MtCO_2$-e).

4 The Effort Sharing Decision (ESD) regulates emission reductions in the non-ETS sectors up to 2020. The Commission is expected to propose replacing the ESD by another legislative proposal for the period after 2020.

5 See: European Environment Agency: Trends and Projections in Europe 2015. Tracking progress towards Europe's climate and energy targets. October 2015.

6 As indicated in: European Environment Agency: Trends and Projections in Europe 2015. Tracking progress towards Europe's climate and energy targets. October 2015.

7 This number is a result of a calculation based on the guidance in the EEA's 'Analysis of key trends and drivers in greenhouse gas emissions in the EU between 1990 and 2014' of July 2016, which states "Non-ETS emissions have been calculated by subtracting scope-corrected ETS emissions, $CO_2$ from domestic aviation and NF3 emissions from total GHG emissions excluding LULUCF and including indirect $CO_2$ emissions. International aviation has been included in the ETS (using GHG inventory data).", and based on the EEA's ETS and Greenhouse gas data viewer.

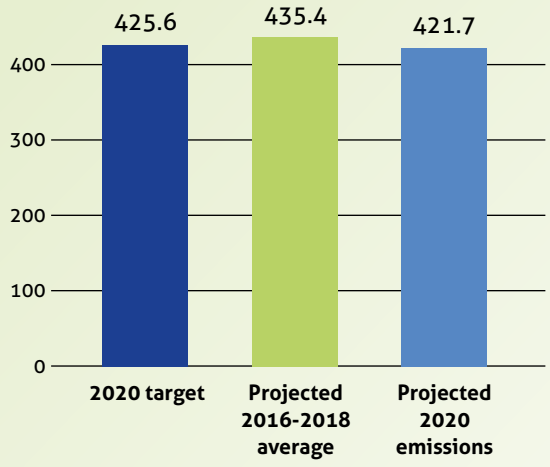
**This default option has two major drawbacks:**

1. **It does not adequately reflect the emission levels we will reach in 2020; and**
2. **It benefits those countries that are failing to reach their 2020 targets.**

# Countries who will fail to reach their 2020 targets should not be rewarded for that

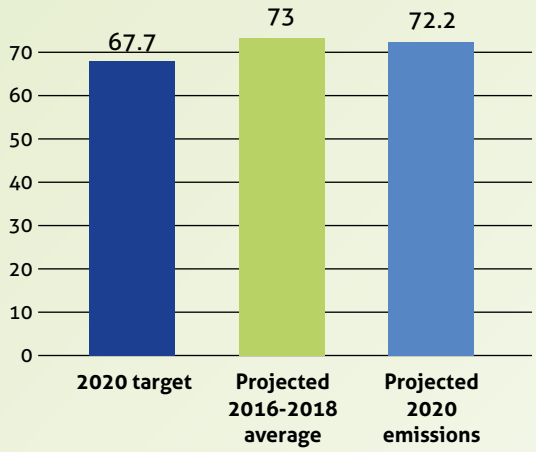
The default option to set the 2021 starting point at the average emissions level for 2016-2018 would benefit a number of countries that are not on track to achieve their 2020 target or whose average emissions in 2016-2018 would still be higher than their target (see Table1 at the end of this briefing). There are eight countries who potentially would be allowed to start from an emissions level that is higher than their 2020 target. Graph 4 illustrates this for Germany, who is one of four countries that are on track to achieve their targets but would benefit from defining the starting point on the basis of its projected 2016-2018 average. The other countries in this situation are Denmark, Finland and the UK.

GRAPH 4: **2021 emissions budgets for Germany based on their 2020 target or on their projected 2016-2018 average emissions, compared to their projected actual emissions in 2020 (in $MtCO_2$-e)**



Graph 5 illustrates the different options for the starting point for Belgium. Belgium, together with Austria, Ireland and Luxembourg is projected to fail to reach its 2020 target. In the default option it would be rewarded for that as its emissions level in 2021 would be higher than its target in 2020.

GRAPH 5: **2021 emissions budget for Belgium based on their 2020 target or on their projected 2016-2018 average emissions, compared to their projected actual emissions in 2020 (in $MtCO_2$-e)**




In both cases, the default option does not incentivise these eight countries to make extra efforts to still reach their 2020 target. Rewarding countries for not reaching their target is not acceptable and would contradict the European Commission's efforts to get countries to implement their EU commitments. Two solutions have been proposed to overcome this major failure of the default option:

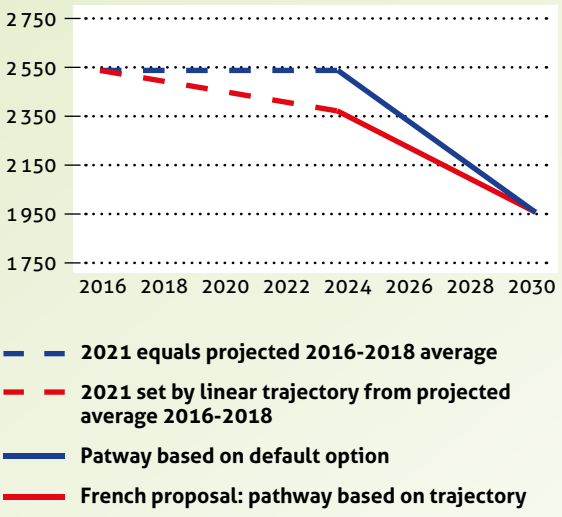
1. **Setting the starting point on the basis of a linear trajectory (the French proposal);**
2. **Setting the starting point for any Member State at their lowest level of emissions in all the different options (the German proposal).**

# The French proposal: A trajectory from 2016-2018 emissions

This proposal both tackles the problem that the average 2016-2018 emissions do not adequately reflect further reductions that will be achieved after 2018, and avoids that countries who are on track to achieve their 2020 target (such as Denmark, Finland, Germany and the UK) would start from a level of emissions that is higher than their 2020 target. The proposal suggests drawing a linear trajectory from 2016-2018 average emissions to the 2030 target and setting the starting level in 2021 at the level of this trajectory in 2021. Graph 6 illustrates difference between this proposal and the default option.

This approach would result in a 2021 starting point of 2 355 $MtCO_2$-e (-16% below 2005 levels). The total EU 2021-2030 emissions budget for the non-ETS sectors would be 21 641 $MtCO_2$-e, 850 Mt lower than the default option, a reduction greater than the 2014 emissions of Germany and France combined.

GRAPH 6: **Difference between starting point emissions level being set on the basis of projected 2016-2018 average emissions or on the basis of a linear trajectory from projected 2016-2018 average emissions (in $MtCO_2$-e)**

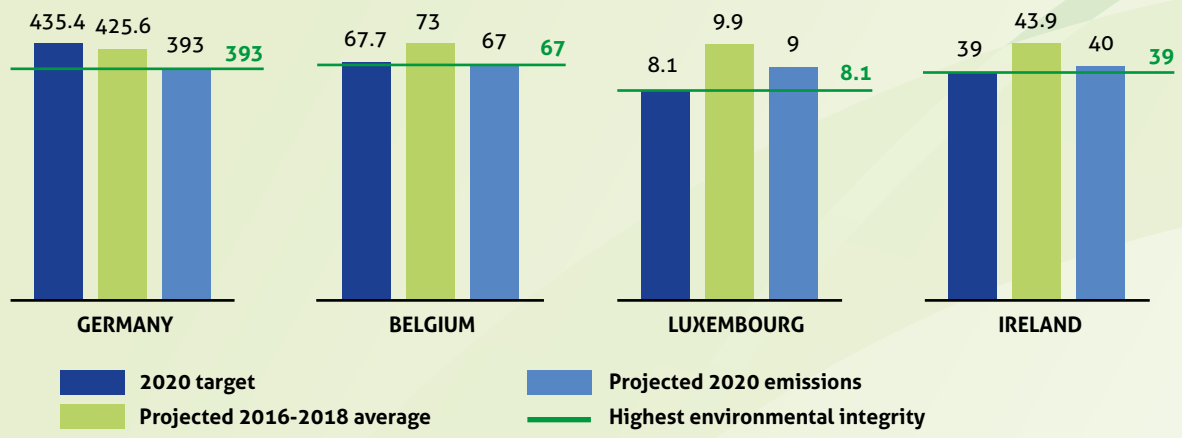


# The German Proposal: Never above the 2020 target

Even when using this linear trajectory approach, with current projections, Ireland and Luxembourg would still be allowed to emit more carbon in 2021 than their 2020 target, as shown in Graph 7.

Therefore it is crucial that next to adopting a linear trajectory approach, a provision is added that no country can have an emissions level at the starting point that is higher than its 2020 target. This provision will have a limited impact on total emissions when combined with the French proposal explained above. But it would be an important adjustment to ensure countries keep having an incentive to meet their binding 2020 targets. A combination of this provision with the default approach would have a considerable impact, as the eight countries mentioned take up a substantial amount of total emissions in the EU.

GRAPH 7: **2021 emissions budgets based on different options (in $MtCO_2$-e)**




## CONCLUSIONS

In light of the high ambitions expressed in the Paris Agreement, the EU needs to define the emissions level at the starting point in 2021 in such a way that they ensure the highest environmental integrity. CAN Europe therefore calls for a change to the current (ESD) rules on setting the starting point:

- **For the majority of Member States, the starting point for 2021 should be set on the basis of a trajectory from actual 2016-2018 emissions (French proposal);**
- **For those countries for which this trajectory would have an emissions level in 2020 that is higher than the emissions level of their 2020 target, the starting point should be set on the basis of a trajectory from their 2020 target.**

## TABLE 1: Starting points for each Member State based on different scenarios[8]

| | 2016-2018 ($MtCO_2$-e) (WEM[9]) | 2020 target ($MtCO_2$-e) | Best choice when using combination 2016-2018 average and 2020 target | Linear reduction from 2016-2018 (WEM) | Best choice when using combination 2016-2018 trajectory and 2020 target |
|---|---|---|---|---|---|
| **Austria** | 51.4 | 48.8 | **2020 target** | 48 | Trajectory |
| **Belgium** | 73.0 | 67.7 | **2020 target** | 67 | Trajectory |
| **Bulgaria** | 23.2 | 28.8 | 2016-2018 | 23 | Trajectory |
| **Croatia** | 16.9 | 21.0 | 2016-2018 | 17 | Trajectory |
| **Cyprus** | 2.9 | 5.9 | 2016-2018 | 4 | Trajectory |
| **Czech Republic** | 59.6 | 67.7 | 2016-2018 | 58 | Trajectory |
| **Denmark** | 31.3 | 30.5 | **2020 target** | 29 | Trajectory |
| **Estonia** | 5.6 | 6.5 | 2016-2018 | 5 | Trajectory |
| **Finland** | 29.5 | 28.4 | **2020 target** | 27 | Trajectory |
| **France** | 353.8 | 359.3 | 2016-2018 | 328 | Trajectory |
| **Germany** | 435.4 | 425.6 | **2020 target** | 393 | Trajectory |
| **Greece** | 45.7 | 61.2 | 2016-2018 | 48 | Trajectory |
| **Hungary** | 38.8 | 58.2 | 2016-2018 | 42 | Trajectory |
| **Ireland** | 42.9 | 39.0 | **2020 target** | 40 | **2020 target** |
| **Italy** | 273.7 | 294.4 | 2016-2018 | 259 | Trajectory |
| **Latvia** | 8.8 | 9.9 | 2016-2018 | 8 | Trajectory |
| **Lithuania** | 12.8 | 15.5 | 2016-2018 | 13 | Trajectory |
| **Luxembourg** | 9.9 | 8.1 | **2020 target** | 9 | **2020 target** |
| **Malta** | 0.9 | 1.2 | 2016-2018 | 1 | Trajectory |
| **Netherlands** | 105.4 | 107.0 | 2016-2018 | 99 | Trajectory |
| **Poland** | 188.5 | 202.3 | 2016-2018 | 181 | Trajectory |
| **Portugal** | 39.4 | 51.2 | 2016-2018 | 40 | Trajectory |
| **Romania** | 72.9 | 88.4 | 2016-2018 | 73 | Trajectory |
| **Slovakia** | 22.5 | 26.5 | 2016-2018 | 22 | Trajectory |
| **Slovenia** | 11.1 | 12.5 | 2016-2018 | 11 | Trajectory |
| **Spain** | 203.0 | 214.2 | 2016-2018 | 192 | Trajectory |
| **Sweden** | 33.3 | 37.2 | 2016-2018 | 32 | Trajectory |
| **UK** | 332.9 | 327.1 | **2020 target** | 307 | Trajectory |
| **EU-28** | **2'5252** | **2'644** | **2'494** | **2'376** | |

## TABLE 2: Comparing the different options

| | 2021 starting point (in $MtCO_2$-e) | Reductions below 2005 emissions (scope corrected) | 2021-2030 budget (in $MtCO_2$-e) | Difference with default option |
|---|---|---|---|---|
| **2016-2018 average (default option)** | 2 525 | -10.4% | 22 491 | 0 |
| **2020 target** | 2 644 | -6.2% | 23 085 | +594 |
| **Combination of both options above** | 2 494 | - 11.5% | 22 335 | -156 |
| **2016-2018 linear trajectory** | 2 355 | -16.4% | 21 641 | -850 |

8 Based on: Öko-Institut: EU effort sharing for the 2021-2030 period. Setting GHG targets for EU Member States. February 2016; and own calculations.
9 WEM = projections based on existing policies and measures.


Climate Action Network (CAN) Europe is Europe's largest coalition working on climate and energy issues. With over 130 member organisations in more than 30 European countries – representing over 44 million citizens – CAN Europe works to prevent dangerous climate change and promote sustainable climate and energy policy in Europe.

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