



Climate Action Plan 2050

Principles and goals of the German government's climate policy

- Executive Summary -

Origins of the Climate Action Plan

In their coalition agreement of 2013, the CDU, CSU and SPD agreed that "In the light of the European targets and the outcomes of the 2015 Climate Change Conference in Paris, in Germany we want to define an emissions reduction pathway with a final target of 80 to 95 percent lower greenhouse gas emissions compared to 1990 by 2050. We will augment this target with concrete measures, drawn up through a broad dialogue (Climate Action Plan)."

From June 2015 to March 2016, the Länder, municipalities, associations and citizens compiled joint proposals for strategic climate measures to be effective by 2030. In March 2016 they presented the resulting catalogue containing 97 proposals for measures to the Federal Environment Minister.

In drafting the Climate Action Plan 2050, the German government considered this catalogue alongside the findings of scientific reports and scenarios in the light of the Paris Agreement. The German cabinet adopted the Climate Action Plan 2050 in November 2016.

What the Climate Action Plan 2050 represents

The Climate Action Plan provides guidance to all areas of action in the process to achieve our domestic climate targets in line with the Paris Agreement. These areas of action are energy, buildings, transport, trade and industry, agriculture and forestry.

Key elements are:

- Long-term target: based on the guiding principle of extensive greenhouse gas neutrality in Germany by the middle of the century.
- Guiding principles und transformative pathways as a basis for all areas of action by 2050.
- Milestones and targets as a framework for all sectors up to 2030.
- Strategic measures for every area of action.
- Establishment of a learning process which enables the progressive raising of ambition envisaged in the Paris Agreement.



Anchoring in international climate action

The agreement adopted at the international climate summit in Paris in December 2015, which entered into force on 4 November 2016, is the first climate agreement which places obligations on all countries. Under the Paris Agreement, the international community made a binding commitment to the goal of keeping global warming well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius.

The agreement gives all parties the clear task of consistently implementing the necessary climate measures. For the EU and Germany this means resubmitting or updating their Nationally Determined Contributions (NDC) by 2020 and, as of 2025 for the post-2030 period, making their NDCs progressively more ambitious.

The EU climate and energy policy directly affects Germany's climate policy. Greenhouse gas emissions in the EU are dealt with equally by the European Emissions Trading Scheme (ETS) and the EU Effort Sharing Decision (ESD).

The German government recognises effective emissions trading as a key climate action instrument of the EU for the energy sector and (some areas of) industry. Therefore, at EU level, Germany will advocate strengthening the ETS.

The goal: extensive greenhouse gas neutrality by 2050

In 2010, the German government decided to reduce greenhouse gas emissions by 80 to 95 percent by 2050 compared to 1990 levels. The German government reaffirms this long-term target and in pursuing it will make an appropriate contribution to implementing the commitment made in Paris, also with a view to the goal set out in the Paris Agreement of achieving global greenhouse gas neutrality in the second half of the century.

As a leading industrialised nation and the EU member state with the strongest economy, we have already geared our Climate Action Plan to the guiding principle of extensive greenhouse gas neutrality by the middle of the century. Germany's per capita greenhouse gas emissions are higher than the EU average, and considerably higher than the global average. It must also be borne in mind that the sum of the NDCs that are the backbone of the Paris Agreement is not yet enough to keep global warming below 2 degrees. Therefore, the onus is on all parties to go beyond their current targets.



Strategy for modernising the national economy

In the framework of the agreed targets, the German government is taking a technology neutral and innovation friendly approach. The government firmly believes that open competition to produce the best ideas and technologies will advance Germany further along the path towards greenhouse gas neutrality. The Climate Action Plan 2050 is a strategy for modernising our economy and provides guidance for all areas of action up to 2050 and for upcoming investments, especially for the period up to 2030. By specifying clear framework conditions, the strategy will help avoid stranded investments and structural breaks.

The Climate Action Plan introduces a paradigm shift. In future, renewable energies and energy efficiency will be the standard for investments. In this way, the Climate Action Plan 2050 creates the necessary conditions to keep Germany's economy competitive in a decarbonising world.

Guiding principles for 2050 and milestones for 2030

Based on the climate targets for 2050 the Climate Action Plan formulates guiding principles, milestones and measures for all areas of action. Like the Climate Action Programme 2020, the Climate Action Plan 2050 defines the areas of action on the basis of the source principle generally used in international greenhouse gas reporting. Under this principle emissions arising, for instance, through the use of electric household appliances are attributed to the energy sector as the "source" of the electricity and hence of the emissions. The Climate Action Plan 2050 addresses the areas of action energy, buildings, transport, industry, agriculture, land use and forestry. It also sets out overarching targets and measures.

The guiding principle presents a 2050 vision for each area of action, while milestones and measures focus on 2030. An evaluation of available climate scenarios and analyses of the transformation needed in the different areas of action helped inform these guiding principles and milestones. Under the interim target for 2030, Germany's total greenhouse gas emissions need to be reduced by at least 55 percent compared to 1990 by 2030 at the latest (reference value: 1,248 million tonnes total emissions of CO₂ equivalent). In the Climate Action Plan 2050 the German government has agreed for the first time on sectoral targets which set the framework up to 2030 for the proportional reduction of greenhouse gases in the areas of action considered. A comprehensive impact assessment will be carried out for these, the results of which will be discussed with the social partners, thus allowing adjustments to the sectoral targets in 2018.



Emissions from areas of action set out in definition of the target:

Area of action	1990 <i>(in million tonnes of CO₂ equivalent)</i>	2014 <i>(in million tonnes of CO₂ equivalent)</i>	2030 <i>(in million tonnes of CO₂ equivalent)</i>	2030 <i>(reduction in % compared to 1990)</i>
Energy sector	466	358	175 – 183	62 – 61 %
Buildings	209	119	70 – 72	67 – 66 %
Transport	163	160	95 – 98	42 – 40 %
Industry	283	181	140 – 143	51 – 49 %
Agriculture	88	72	58 – 61	34 – 31 %
Subtotal	1209	890	538 – 557	56 – 54 %
Other	39	12	5	87%
Total	1248	902	543 – 562	56 – 55 %

Selected strategic measures

Below is a description of some of the strategic measures contained in the Climate Action Plan 2050:

- The German government will set up a commission for growth, structural change and regional development. This commission will be based at the Federal Ministry for Economic Affairs and Energy and will work together with other government ministries as well as with the Länder, municipalities, trade unions and representatives of affected businesses, branches of industry and regional stakeholders. Realistic prospects for the necessary transformation process need to be established for affected businesses and regions. Strategies derived from this and concrete steps for implementation need to be agreed on and the prerequisites for financing established. To enable the commission to begin its work at the start of 2018 and present results preferably by the end of 2018, preparatory work should commence in the current legislative period. To support the structural change, the commission is to develop a mix of instruments targeting economic development, structural change, social compatibility and climate action. This will include



the investments required in sectors and regions affected by the structural change and the financing of these investments.

- The Climate Action Plan contains a road map towards an almost climate-neutral building stock. A key component here is the gradual further development of energy standards for new buildings and existing stock undergoing extensive refurbishment. Another important aspect is to focus funding on heating systems based on renewable energy sources.
- A climate strategy for road transport will outline how greenhouse gas emissions can be reduced by 2030, taking into consideration the corresponding proposals made at EU level. The strategy will address emissions from cars, light and heavy commercial vehicles and issues related to GHG-free energy supply, the requisite infrastructure and the interlinking of sectors (through electric mobility).
- Working together with industry, the German government will launch a research and development programme aimed at reducing greenhouse gas emissions from industrial processes and guided by the target of greenhouse gas neutrality. The option of industrial CO₂ recycling (carbon capture and utilisation, CCU) will be taken into account in this context.
- Together with the Länder, the German government will advocate the complete implementation and stringent execution of provisions laid down for fertilisers, in particular the Fertilisers Ordinance and the planned statutory ordinance on good professional practice regarding the handling of nutrients in agricultural processes. This is to ensure that the target value of 70 kilogram of nitrogen per hectare, set out in the German National Sustainable Development Strategy, will be reached between 2028 and 2032.
- Focus in land use and forestry is on the preservation and improvement of carbon sequestration through carbon sinks in forests. To achieve this, efforts will be geared towards expanding Germany's forests. In addition, the German government will advocate that in the Joint Task for the Improvement of Agricultural Structures and Coastal Protection, the funding area "forests" should place greater emphasis on combating climate change.
- Finally, a review will be carried out on ways to gradually further develop Germany's tax system with a view to achieving the climate targets for 2050. The German government will strengthen economic incentives which encourage polluters to reduce their environmental pollution and move towards more sustainable production and



consumption patterns. In order to do so, climate-damaging incentives of various taxes will also be reviewed.

A learning process

The Climate Action Plan 2050 outlines a gradual transformation in technology, industry, society and culture. This transformation will be achieved through a learning process involving the scientific community and accompanied by a public dialogue process.

The Climate Action Plan 2050 will be regularly updated in accordance with the Paris Agreement. In line with the mechanism set out in the Paris Agreement for progressively raising the ambition of national climate policies, the interim targets and milestones, the transformative paths chosen and the measures they entail will be continuously reviewed for consistency with target achievement. If necessary, measures will be adapted to keep up with technical, societal, political, social and economic developments and changes and with the latest scientific findings.

Programmes of measures

The plan will be fleshed out with programmes of measures which will be drawn up in collaboration with the German Bundestag. The first programme will be adopted in 2018 and quantified in terms of its greenhouse gas emission reduction effects. The programmes of measures will be designed in participation with the existing Climate Action Alliance. The work will include assessing and politically evaluating economic, social and ecological impacts of suggested measures.

The status of implementation of the respective programmes of measures will be presented in the annual climate action report, first submitted in 2015, thus allowing swift policy adjustments to be made if necessary.

The German version of the German Climate Action Plan 2050 can be downloaded from www.bmub.bund.de/N53483/.