

## **Background paper: Climate Action Programme 2020**

On 3 December 2014 the German cabinet adopted the Climate Action Programme 2020. This programme contains measures to be implemented by 2020 in order to reach Germany's goal of cutting greenhouse gas emissions by at least 40 percent compared with 1990.

### **Starting situation**

In 2007 Germany set itself the target of reducing its greenhouse gas emissions by 40 percent by 2020 compared with 1990. In 1990 there were emissions of around 1250 million tonnes CO<sub>2</sub> equivalent; the target for 2020 is therefore 750 million tonnes. According to the latest estimates, Germany emitted around 950 million tonnes CO<sub>2</sub> equivalent in 2013. This equates to a reduction of 23.8 percent.

Further reductions will be achieved by 2020 through measures adopted before 2014. Current projections show that measures adopted and implemented so far will lead to a greenhouse gas reduction of around 33 to 34 percent by 2020, with a one percent margin of error. This means a climate mitigation gap of 5 to 8 percentage points. Considerable additional efforts are required to close this gap.

### **The programme**

The action programme comprises nine components. It lists the contribution each component can make to closing the mitigation gap, where this can be quantified. In total, the action programme will lead to a reduction of around 62 to 78 million tonnes CO<sub>2</sub> equivalent in 2020 compared with the current projection for 2020. In addition to this a further 3 to 4 million tonnes can be saved through soft, cross-sectoral measures, which means that the programme can bring about a total reduction of 82 million tonnes.

When estimating reduction impacts in the various sectors, possible overlaps of the impact of different measures were taken into account to prevent double counting. It is also important to bear in mind that there are measures that are difficult to quantify but can still make a tangible contribution, for example advice and information for consumers. The Climate Action Programme 2020 covers the emissions of all sectors in accordance with the source principle. For each sector it describes the starting situation, outlines measures and, where possible, lists the contribution they are expected to make to reducing greenhouse gas emissions.

## The measures

### Overview

Key policy measures	Contribution to greenhouse gas emission reduction (million t CO <sub>2</sub> equivalent)
<b>National Energy Efficiency Action Plan (NAPE)</b> (without measures in the transport sector)	approx. 25 - 30 million t (including energy efficiency in buildings)
Strategy on <b>climate-friendly building and housing</b> (contains NAPE measures specific to buildings)	In total approx. 5.7 - 10 million t (1.5 - 4.7 million t of which in addition to NAPE)
Measures in the <b>transport</b> sector	approx. 7 - 10 million t
Reduction in non-energy-related emissions in the sectors:	
• <b>industry, commerce/trade/services and waste management</b>	3 - 7.7 million t
• <b>agriculture</b>	3.6 million t
<b>Emissions trading reform</b>	Dependent on decisions at EU level on structure
<b>Further measures, especially in the electricity sector</b>	22 million t
<b>TOTAL:</b>	<b>62 - 78 million t</b>

**Climate mitigation gap: 5 to 8 percentage points  $\pm$  62.5 to 100 million tonnes CO<sub>2</sub> equivalent**

### Component 1: National Energy Efficiency Action Plan (NAPE)

On 3 December the Cabinet also adopted the National Energy Efficiency Action Plan (NAPE). This plan is geared towards increasing energy efficiency in buildings, energy-saving as a way of generating returns and a business opportunity and individual responsibility for energy efficiency. The German government will introduce a competitive tendering model for energy efficiency, promote contracting, further develop existing energy efficiency programmes and initiate energy efficiency networks. Numerous other measures also aim to achieve additional emission reductions of 25 to 30 million tonnes CO<sub>2</sub> equivalent as a result of increased energy efficiency.

### Component 2: Strategy on climate-friendly building and housing

The goal being striven for - an almost climate neutral building stock by 2050 - means that we have to lay the right foundations today. The strategy on climate-friendly building and housing links the energy efficiency strategy for buildings outlined in the NAPE with more far-reaching climate-relevant measures. Examples of specific measures include extending support for district-based approaches to urban energy modernisation and for local climate action projects.

As part of the strategy on climate-friendly building and housing we will work with the Alliance for Affordable Housing and Building (Bündnis für bezahlbares Wohnen und Bauen) to address overarching issues concerning housing, urban development, the development of rural areas and the challenges of demographic change. In this context, the German government is aware that climate-friendly building is only possible if housing remains affordable for people on low incomes. Cultural and social aspects, such as the specific characteristics and challenges of villages, towns and districts and their infrastructures as units, are incorporated into considerations on climate-friendly building and housing.

### **Component 3: Climate action measures in the transport sector**

The planned measures in the transport sector aim to contribute around 7 to 10 million tonnes CO<sub>2</sub> equivalent to closing the climate mitigation gap. With these measures, the German government is also pursuing the goals for the transport sector contained in the Energy Concept:

- to save around 10 percent of final energy consumption in transport by 2020 and around 40 percent by 2050 (reference year 2005) and
- to significantly increase the market share of electric vehicles on the road to 1 million by 2020 and 6 million by 2030.

Structuring freight and passenger transport in a climate-friendly way, strengthening green modes of transport such as rail transport, public transport and cycling, greater use of electric drives and promoting efficiency of drives in motor vehicles are key elements of the measures in this sector.

### **Component 4: Reducing non-energy-related emissions in industry, commerce, trade, services, waste management and agriculture**

The German government is aiming to increase waste avoidance, recycling, reuse and resource efficiency. A further field of action is to reduce emissions of fluorinated gases that are particularly climate damaging.

In the waste sector, ventilation at landfills offers further potential for savings. We will expand corresponding support programmes.

In the agriculture sector, the German government plans to amend the Fertiliser Application Ordinance (Düngeverordnung) and increase the share of organic farming. Conserving permanent grassland and protecting moorland also help protect the climate, even though this sector (land use and land use change) will not be credited to the national target.

### **Component 5: Reforming emissions trading**

We are striving for a reform of the emissions trading scheme. It is a question of safeguarding the central role of emissions trading as a harmonised European climate policy instrument and creating effective incentives to reduce emissions. In the short term, current excess allowances need to be reduced quickly and effectively. And in the long term, emissions trading must make a key contribution to reaching the EU's target of at least a 40 percent reduction by 2030 compared with 1990.

## **Component 6: Energy sector**

In addition to effective reform of emissions trading, to achieve emission reductions in the energy sector the expansion of renewable energies will continue and the fossil-fuel power plant fleet will be modernised. This modernisation brings an additional contribution of 22 million tonnes to closing the climate mitigation gap. The Federal Minister for Economic Affairs and Energy will present a legislative proposal on this in 2015. By 2050, power generation in Germany needs to be almost carbon-free in order to reach the national and European climate targets.

## **Component 7: The model function of the state**

The state must serve as a model when it comes to climate action. Key areas for action include improving the energy efficiency of public premises, public procurement, reviewing climate-damaging subsidies and amending the German government's programme of measures on sustainability from 2010.

## **Component 8: Research and development**

Research and development are also essential to achieving the gradual decarbonisation of our economy. Two central elements are transformation research and energy research, especially in the fields of renewables and energy efficiency.

## **Component 9: Consultation, awareness raising and initiatives at all levels**

Consultation, awareness raising and initiatives at all levels on climate action supplement the action programme. Numerous cross-sectoral projects and programmes for local authorities, industry and consumers - for example training and further education - contribute to cutting greenhouse gas emissions, even though this cannot be defined in concrete numbers.

In a federal system like Germany's, the federal states (Länder) and local authorities have a crucial role to play. Accordingly, the programme refers to climate action programmes by the Länder and at local level. Major groups in society have also introduced 84 individual climate measures. These are hard to quantify but they will nevertheless contribute to climate mitigation.

## **Implementation**

We will begin implementing the programme immediately. An annual climate action report will ensure that we are on the right path. It will contain the current trends in emission development in the various fields, present the level of implementation and provide an overview of the expected mitigation impacts up to 2020.

Furthermore, the German government will set up a national climate action alliance with representatives of all groups of society. This alliance will support implementation of adopted measures, help potential that is currently classed as not quantifiable to be fully exploited and identify further options for action.

## **The process**

Following publication of a principles paper at the end of April 2014, the Länder, local authority associations and major groups in society were invited to submit proposals on

closing the climate mitigation gap. Within two months over 500 external proposals were submitted, which were then compiled in clusters of comparable measures. Additionally, the impacts of measures introduced since November 2012 on greenhouse gas emissions were quantified.

The quantified clusters and further proposals by the German government formed the basis of further work. The estimated contribution to emission reductions, the economic costs and benefits and implementability by 2020 were relevant criteria in drawing up the programme.