

Climate Dialogues 2020

Session starts: 10-08-2020 00:00:00 [GMT+1]

Session ends: 03-11-2020 23:59:59 [GMT+1]



Multilateral Assessment

A compilation of questions to - and answers by -
Germany
exported on 05 November 2020
by the UNFCCC secretariat

Question by United States of America at Monday, 07 September 2020

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Energy Efficiency Incentive Programme

Can Germany elaborate on the accomplishments of the Energy Efficiency Incentive Programme related to increasing residential efficiency in heating and the labelling scheme for existing heating systems? Are there any lessons learned from implementation of the program that other countries could benefit from?

Answer by Germany

The Energy Efficiency Incentive Programme (APEE) was introduced mainly to support 1) the funding scheme for particularly energy efficient, renewable energy heating systems (MAP) and 2) the combined installation of new, energy efficient heating systems together with additional refurbishment measures at the respective unit. The latter part helped trigger additional refurbishment measures, which in turn led to additional energy and CO2 savings. With the introduction of the exchange programme for old oil-based heating systems („Ölaustauschprämie“) and the revision of the MAP funding scheme at the beginning of 2020, the additional APEE funding for the aforementioned measures was phased out. However and in addition, APEE funding still goes 3) to the market introduction for stationary fuel-cell-based heating units in new-builds and in already existing buildings. The funding support comes in the form of a grant for stationary fuel-cell-based heating units with an electrical capacity range of 0.25 to 5.0 kilowatt via the KfW programme ‘Energy-efficient building and refurbishment – fuel-cell grant’. Applications for supported stationary fuel-cell heating systems has steadily increased since the introduction of the program, namely from 300 in 2016 to more than 4,700 in 2019.

Germany adopted the measure "National Efficiency Label for Old Heating Systems" to contribute to energy and climate policy goals. With this measure, Germany is focusing on providing consumers with information as to the energy efficiency of installed boilers. The aim is to accelerate the replacement of old heating appliances in conjunction with more extensive advisory services to encourage investments by consumers. The measure shows significant energy savings and an evaluation assesses the effect of the measures as positive. It recommends the development of further communication tools and to intensify on-site consultation. A pilot for a possible implementation in cooperation with consumer protective authorities has already been initiated.

Question by United States of America at Monday, 07 September 2020

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Carbon pricing covering transportation and buildings

In the Report on the technical review of the fourth biennial report of Germany, p. 11 of the report noted the Climate Action Programme 2030 and a proposed carbon pricing system covering transportation and buildings. Can Germany elaborate on what kind of transportation and buildings would be affected and any guiding factors on how the carbon price would be established?

Answer by Germany

The national carbon pricing scheme is the central pillar of the Climate Action Programme 2030 to achieve Germany's climate goal. This national emissions trading system (nEHS) will start in 2021 and will cover all emissions not covered by the EU Emissions Trading System (EU ETS) – in particular emissions from the transport and heating sectors. It will thus provide substantial incentives to decrease emissions in these sectors.

The nEHS is designed as a so-called "upstream-system" meaning that it will include all CO₂-causing fuels put on the market, especially petrol, diesel, heating oil, liquified gas, natural gas and coal. However, companies or citizens who use these fuels for heating or driving, for example, do not have to participate in the nEHS themselves. Only the 'distributors' of fuels such as gas suppliers or companies in the mineral oil industry who are obliged to pay energy tax under the Energy Tax Act, have to do so. If the fuel distributors pass on the costs from the nEHS to their customers, they provide the desired financial incentive to reduce emissions. The main goal is that the pricing of fuel emissions results in a cost and makes customers change their behaviour and reduce emissions. The nEHS is geared towards alleviating social impacts. Revenues are used to significantly lower the price of electricity (renewable energy levy) for both households and companies. A lower electricity price will also drive electrification in the transport and building sectors as well as industry.

Question by United States of America at Monday, 07 September 2020

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Waste Heat Prevention Campaign

On p. 27 of the Fourth Biennial Report, the report describes the Waste Heat Prevention Campaign

which provides “financial support for measures to avoid or use industrial waste heat.” Can Germany elaborate on the kinds of industries that have participated? Are there any lessons learned from implementation of the campaign that other countries could benefit from?

Answer by Germany

The waste heat campaign (financial support program) started in May 2016. By the end of 2018, the program had successfully stimulated over 1,300 investments in ambitious projects to avoid and use waste heat. The projects supported lead to annual savings of 1.4 Mt CO₂ and 5.5 TWh of final energy. In total, an investment volume of 2.5 billion euros was initiated in the German economy. The program was open to companies of all sizes (i.e. SMEs and non SMEs) and actual projects cover(ed) all sectors of industry and commerce. This includes measures in small bakeries as well as large energy-intensive companies such as steelworks and cooper huts.

A key success factor of the program was its technology-open and quality-orientated approach. In principle, all measures to avoid and use waste heat were eligible for funding. The condition was the submission of a qualified waste heat concept by an energy expert. This pushed the development of a waste heat policy and specialization of energy experts on waste heat issues.

The technology-open approach was integrated into the successor funding program "Energy Efficiency in Industry", with which not only waste heat projects but all types of energy efficiency measures are addressed. This program started in January 2019. SMEs (non SMEs) can get support of up to 40% (up to 30%) of the qualified investment cost including the draw-up of the necessary energy concept. Support is available either as a direct grant or in combination with a loan. More information (only in German) can be found at https://www.bafa.de/DE/Energie/Energieeffizienz/Energieeffizienz_und_Prozesswaerme/Modul4_Energiebezogene_Optimierung/modul4_energiebezogene_optimierung_node.html; and www.kfw.de/295; or contact buero-iib2@bmwi.bund.de.

Question by Republic of Korea at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Mitigation actions

Among the Germany’s policies and measures in energy sector, Market Incentive Programme for Renewable Energies (PaM 38) and Renewable Energy Sources Act (PaM 3) are expected to have the greatest mitigation impact. Could Germany provide more information on how Germany has assessed emissions reduction potential of two Renewable Energy related PaMs, and separated the reduction effect of the two?

Answer by Germany

The Market Incentive Programme is an instrument designed to encourage the use of renewable energies primarily in the heating market (buildings), whereas the Renewable Energy Sources Act supports the use of renewable electricity generation.

In the case of the market incentive programme, the determination of the emission reduction is based on the displacement of fossil fuels for the thermal conditioning of buildings, whereas the basis for measuring the emission reduction in the electricity sector is the displaced fossil electricity generation.

Question by Australia at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Penetration of renewable energy

The Fourth Biennial Report (p.9) it states that, 'Renewable energy's share in gross electricity consumption rose to 37.8 % in 2018' and on (p.24) 'under the with-measures scenario (WMS), renewable energy will account for between roughly 40 and 45 % of gross electricity consumption in 2025 and between 55 and 60 % in 2035' What measures are in place to ensure Germany's electricity grid can successfully manage high penetrations of renewable energy?

Answer by Germany

The integration of higher shares of renewables requires substantial expansion of transmission and distribution grids in Germany. According to Germany's grid development plan, the transmission grid needs to be expanded by approx. 10.000 km of reinforced or new lines. The necessary concrete projects are fixed by Law (Federal Requirement Act; "Bundesbedarfsplangesetz"). This law is currently amended in order to incorporate the grid projects which are necessary to reach the new goal in the electricity sector which amounts to a renewable share of 65% of gross electricity consumption in 2030. Furthermore, several changes in the law in order to accelerate the planning and approval procedures have been implemented. The progress of the procedures is closely monitored.

[Question by Australia](#) at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Agriculture emissions reductions

The Fourth Biennial Report (p.49), it states that 'By 2016, emissions from agriculture were almost 18 % lower than in 1990, but they were 3% higher than in 2005. By 2020, emissions under the WMS fall by 20% compared with 1990 to over 63 Mt CO₂e. Emissions are expected to fall by almost 23% by 2035 compared to 1990 to 61.5 Mt CO₂e. This demonstrates that agriculture emissions decrease more strongly between 1990 and 2005, than from 2005 to 2035. What are some of the barriers to achieving emissions reductions in the agriculture sector?

[Answer by Germany](#)

The reason for the fast decreasing emissions after 1990 lies in structural changes in agriculture after the reunification of Germany and a strong reduction of cattle farming in eastern Germany. Since 2014 Germany again experiences a continuous reduction of cattle numbers every year together with the decrease of nitrogen fertilizer input and thereof nitrogen surpluses. Improved legislation on nitrogen surpluses has overcome a serious barrier to achieve emission reductions in this area. It is expected, that nitrogen surpluses will continue to be reduced in the next years, also because of legislative measures to protect ground water. With the implementation of the Climate Protection Program 2030 in 2019 additional financing has been made available to support farmers in investing in technologies reducing emissions

[Question by Australia](#) at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: achieving the 2020 target

The Fourth Biennial Report (p.9), it states 'current projections indicate that [measures] are not sufficient to achieve Germany's ambitious climate target for 2020.' Is this still the case?

[Answer by Germany](#)

Preliminary GHG data for the year 2019 indicate a further reduction by 54 million t CO₂(eq) since

2018. This corresponds to a 35,7 % reduction relative to 1990. In 2020, we expect a further drop in emissions predominantly due to the pandemic. So ultimately, we will come closer to the 2020 target than calculated in the projections cited in the BR.

In October 2019, the German government agreed the Climate Action Programme 2030 to ensure we achieve the 2030 reduction targets in time.

Question by Japan at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Outreach on policies and measures progress on Climate Change

Japan recognizes that the dissemination of information on the progress of each policy and measure towards achieving the 2020 and 2030 emission reduction targets, as reported in the BR, is very important from the perspective of raising awareness about climate change. Please share any outreach measures you are implementing to publish and communicate the progress of main policies and measures towards the target in 2020 and 2030. Also, if you publish the information online, please provide the URLs of them.

Answer by Germany

Every year the federal government compiles and publishes data on annual greenhouse gas emissions in the sectors energy, transport, buildings, industry, agriculture and waste. Additionally, preliminary data are calculated and published every March for the preceding calendar year. Those data are publically available on the website of the German Environment Agency: www.umweltbundesamt.de

The annual Climate Action Report has hitherto reported on implementation of the federal government's Climate Action Programme 2020, on emission trends in the various areas of action and on the reduction effects expected by 2020.

In order to review implementation and progress towards achieving its greenhouse gas reduction targets regularly, the federal government will continue to prepare Climate Action Reports every year after 2020 and take corrective action where necessary. The Climate Action Reports follow the existing format to show progress in implementing the current climate action programmes under the Climate Action Plan 2050, the latest emissions trends in the various areas of action and an estimate of the reductions expected from upcoming steps.

Reports are available in English language at www.bmu.de/PU633 . The 2019 version is not translated yet and available in German language only: www.bmu.de/DL2532 .

In addition, starting in 2021, an external council of experts will review the compliance with the 2030 climate targets and the progress made in each sector, based on the above mentioned preliminary emission data.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Renewable energy output

Given the high building sector growth outlook and the potential for energy use in the building sector to form a sizeable emissions source, could Germany please indicate any efforts it is taking to increase its renewable energy output given the continued use of combined heat and power with natural-gas plants.

Answer by Germany

There are two general programs for the integration of renewable energies within the building sector.

The basis is the market incentive program (MAP), which has been modified in key points, to promote systems for the use of renewable energies in the heating market. The amended guideline came into force on 01/01/2020.

In new buildings, solar collector systems are funded with 30% and biomass / heat pump systems with 35% of the eligible costs, provided they meet the relevant minimum technical requirements. In existing buildings, i.e. those in which a heating or cooling system has been in operation for more than 2 years at the time of the application and is to be replaced or upgraded, the following systems are funded: Solar thermal systems, biomass plants, efficient heat pumps, hybrid heaters, „renewable ready“ gas boilers and oil heaters.

The new Building Energy Law (GEG), contains requirements for the energetic quality of buildings, the creation and use of energy certificates and the use of renewable energies in buildings. The GEG was passed in the Bundestag on June 18, 2020 and will come into force on November 1, 2020. The European requirements for the total energy efficiency of buildings are fully implemented and the regulation of the lowest energy building is integrated into the unified energy saving law. The current level of energy requirements for new buildings and renovations is not tightened. Further increases in construction and housing costs should be avoided.

What is new is that the obligation to use renewable energies for new buildings can in future also be fulfilled by using electricity generated from renewable energies close to the building. Flexibility options for meeting the energy-related new building standards are also new. These relate in particular to the options for crediting electricity generated from renewable energies close to the building and gaseous biomass in the energy balance.

There is also a regulation to restrict the installation of new oil heating systems from 2026 in accordance with the stipulations in the cornerstones of the climate protection program 2030. This regulation also applies from 2026 to the installation of new boilers fed with solid fossil fuels (e.g. coal heating systems).

In accordance with the climate protection program 2030 and its stipulations, a clause was included in the GEG to review the energy requirements for new buildings and existing buildings in 2023.

The existing co-generation (CHP)-support scheme has undergone an extensive review process during the last months. Modern CHP systems will replace coal-fired power plants in the future. With the latest amendment to the Combined Heat and Power Act (KWKG) with a resolution of July 3, 2020, the federal government aims to support the coal phase-out. CHP systems have to adapt to an energy system that is increasingly characterized by volatile feed-in renewable energies. For this reason, it is necessary that CHP systems react more strongly to electricity market signals in the future and make their operation more flexible. At the same time, CHP can only make a contribution to achieving the climate targets if plants, especially their heat supply, are decarbonised by pooling with renewable heat generators in heating networks. These two goals, flexibilization and decarbonization, are the leitmotifs of the amended KWKG, which was extended until the end of 2029. The key points are:

- Extension of funding for CHP systems by five years until December 31, 2029, increases planning and investment security
- Conversion of the coal replacement bonus to a one-off performance bonus, increases the incentive to switch to gas
- Limitation of the eligible full load hours to 3,500 per year, creates the incentive to build flexible systems that do not run continuously
- Introduction of a south bonus, encourages more electricity with the same heat output in the south
- Introduction of a bonus for innovative renewable heat, increases the incentive to integrate renewables in CHP heating networks
- Introduction of a bonus for electrical heat generators, increases the flexibility of the CHP plant by securing the heat supply when the CHP plant is not running
- Adjustment of the invest support to (new) heating networks, increases and simplifies the incentive to growing proportions of CHP and renewables in heating networks
- Provisional increase in the funding cap from 1.5 billion to 1.8 billion euros.

With a view to increasing the share of renewable energy sources (RES) in heat distribution with the programm „Heating Networks 4.0“ GER currently provides funding for the construction and expansion of heat grids, where those grids are fed by large shares (minimum of 50%) of renewables or waste heat.

GER sees district heating as an important cornerstone for the transformation of the heat sector as they allow for an integration of different low carbon technologies (heat pumps, geothermal and solar thermal, etc.) or waste heat and storages.

Moreover, the grid itself serves as an effective heat storage device and provides flexibility in heat supplies.

Therefore, Germany is currently setting up a comprehensive funding program („Federal Funding for Efficient HEating Networks“) in addition to the existing scheme.

The new program will encompass funding for the gradual transformation of existing, fossil fuelled heat grids into modern, efficient low temperature grids fed predominantly from RES and waste heat.

It will fund all necessary individual transformation steps within existing district heating structures provided that the grid operator has produced a long-term transformation plan which shows that the individual measures will eventually add up to an overall transformation of the entire grid.

Question by New Zealand at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Germany's climate budget

Germany's BR4 indicates that Germany will not meet its 2020 target (to decrease GHG emissions by 40 per cent by 2020 compared with 1990). How is this being mitigated in Germany's overall climate budget?

Answer by Germany

In its national climate policy, Germany defined overall emission reduction targets relative to 1990 emissions, rather than choosing a GHG budget approach.

This changed with the new Federal Climate Act that came into force in December 2019. It defines annual emission budgets for the sectors energy, industry, transport, buildings, agriculture, and waste, starting in the year 2020 and up to 2030. If, from the year 2021, greenhouse gas emissions are above or below the relevant permissible annual sectoral emission budgets, the differential is subtracted from or added to the residual annual sectoral emission budget in equal parts to the years until 2030, keeping the overall budget constant.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: International transport emissions

What programmes/ policies does Germany have to estimate and model the emissions from international transport, including fuel sold to ships and aircraft?

Answer by Germany

With respect to international transports departing from Germany (both flights and navigation), the amounts of fuels used and, therefore, the resulting CO₂ emissions are estimated as follows:

In a first step, domestic fuel use is calculated rather precisely (following country-specific tier3 approaches) based on very specific flight and ship movement data, respectively.

Here, for navigation, specific inland consumptions are calculated for all kinds of navigation activities covered by the GHG emissions inventory: domestic (civil) navigation, fishing and military navigation.

For civil aviation, calculations and modelling take place in TREMOD-AV (TRansport EMission MOdel AViation), hosted and maintained by the ifeu institute (Institut für Energie- und Umweltforschung Heidelberg gGmbH).

For maritime navigation ship-specific information and ship movement data are compiled and processed within a model hosted by the Federal Maritime and Hydrographic Agency (BSH Hamburg).

These amounts are then deducted from the annual over-all inland fuel deliveries as provided in the National Energy Balances for Germany.

The remaining amounts are then allocated to international civil aviation and international maritime navigation, respectively.

For further information please refer to the latest National Inventory Report for the German Greenhouse Gas Inventory (NIR 2020).

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Impact of Federal Government fiscal incentives on transport sector emissions

What are the estimated effects on emissions, mode shift and public transport infrastructure, of the Federal Government fiscal incentives (as reported in BR4)? How are these policies and measures expected to impact on the 2020 target, in the context of transport sector emissions?

Answer by Germany

The fiscal incentives mentioned in BR4 are part of the German “Climate Action Programme 2030” (adopted in October 2019) and comprise the promotion of electric vehicles, public transport, electrification of freight transport and support for fuel cells.

There are already two studies available which estimate the impact of measures for the transport sector overall:

(1) Treibhausgasmindernwirkung des Klimaschutzprogramms 2030

(<https://www.umweltbundesamt.de/publikationen/treibhausgasmindernwirkung-klimaschutzprogramm-2030> / summary report, German only, English abstract pages 5/6)

(2) Energiewirtschaftliche Projektionen und Folgeabschätzungen 2030/2050

(<https://www.bmwi.de/Redaktion/DE/Publikationen/Wirtschaft/klimagutachten.html> / German only)

So far, there is no separate information available on particular measures or packages of measures such as fiscal incentives. Study (1) identifies additional 22 mio. tonnes reduction (from 150 to 128 mio. tonnes), study (2) 23 mio. tonnes (from 148 to 125 mio. tonnes) regarding the base/trend for the transport sector in total. Study (1) specifies, that this reduction is attributed to CO2-fleet targets for cars/LDV/HDV (8 mio. tonnes), the carbon pricing mechanism (6 mio. tonnes), sustainable fuels (3 mio. tonnes) and other measures (5 mio. tonnes, fiscal incentives among these).

But the full report on study (1) will be published mid October at the above address und will include an impact assessment on individual measures. This full report will also contain an English summary.

The measures of the German "Climate Action Programme 2030" are aiming for results in medium- and long-term. Their impact on the 2020 target is therefore very limited, also because most measures are currently just in process of being implemented.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Reduction in transport sector emissions through carbon pricing mechanism

How is the new carbon pricing mechanism, introduced by the Climate Action Law, expected to reduce transport sector emissions?

Answer by Germany

See the answer to the question by New Zealand on the fiscal incentives on transport sector emission: The carbon pricing mechanism accounts for 6 mio. tonnes reduction (UBA 2020: Treibhausgasminderungswirkung des Klimaschutzprogramms 2030, study (1)).

The national emissions trading system (nEHS) will increase the price of fuel emissions also in the transport sector and will thus induce customers to switch towards low-emission mobility options. For details on nEHS, see the answer to the Question from the U.S. on carbon pricing .

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: New technologies in waste sector

What new technologies are expected to play a major role in limiting and reducing emissions from Germany's waste sector?

Answer by Germany

German regulations already ask waste management actors to use state of the art technology (including standards for emission reduction).

Therefore, in Germany a full modern infrastructure with approximately 15000 facilities has been established. The standard procedure is: separate collection, recycling (with high recycling rates), treatment (incineration or stabilisation) of residual waste and prohibition of landfilling of untreated waste. Costs are borne (through the polluter pays principle) by the waste generators.

A new technology used for reducing climate-damaging emissions from landfills is the ventilation and capture of the emitted gases.

Question by Japan at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: The role of LULUCF in achieving carbon neutrality in 2050

'The Climate Action Plan 2050 has been established to achieve GHG neutrality by 2050, while the LULUCF sector is projected to change from a sink to a source after 2020. What additional policy measures, if any, are being considered in the LULUCF sector to achieve the goals of the Climate Action Plan 2050?

Answer by Germany

Within the framework of the Climate Protection Program 2030, which was released in 2019, Germany has decided to support LULUCF-activities such as humus conservation and formation in arable land, conservation of permanent grassland, peatland protection (including reduction of use of peat in substrates), conservation and sustainable management of forests and timber use. Starting in 2020 Germany will spend 790 Mio. € dedicated to achieve the Climate Action Plan 2050. Germany will stimulate natural sinks in the LULUCF-sector by supporting farmers and foresters in their efforts to maintain and enhance the LULUCF sink.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Planned measures to reduce emissions

Does Germany have planned measures to reduce emissions from sources other than solid waste (i.e. municipal and industrial wastewater, sludge, compost)?

Answer by Germany

Biowaste is largely kept separate and collected separately in order to enable fermentation and composting. These take place in systems that collect gases that are harmful to the climate and use them for energy generation.

Question by Japan at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Utilization of projection

We understand that Germany submits Projections Report biennially based on the EU's MMR Regulation. In relation to this, we would like to ask the following questions: 1. We understand that the Climate Action Programme 2020 was developed based on the 2013 Projections Report. Is there a mechanism and/or process in place to ensure that the results of Projections Report prepared biennially are used for developing and/or revising the current and future policies on a regular basis? 2. BR4 provides the URL link to the 2019 Projections Report in the German version. If there is the English version, could Germany please provide the URL link?

Answer by Germany

Regarding questions 1: Projection results are an integral component of the annual Climate Report the federal government submits to the national parliament. Projections play a major role in the general decision whether and how to revise climate policies.

Starting in 2021, the German government is obliged by the national climate act to monitor each year the achievement of the annual sectoral emission budget. The monitoring is based on GHG inventory

data, rather than projection results. In case a sector does exceed its annual emission budget, projection results will be considered in the further analysis of causes and remedies.

Regarding question 2: The translation of the 2019 Projections Report is ongoing, but not finished yet. Reports of the previous years are available in English language at www.bmu.de/PU633; The German language version is available at www.bmu.de/DL2532.

Question by Japan at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Reports and mechanism for tracking progress of policies and measures

According to page 35 of BR4, the German government publishes the climate action report, annual monitoring report, and progress report entitled "Energy and the Future" every four years. In relation to this, we would like to ask the following questions: 1. What is the difference between these three reports? Could Germany please provide more information regarding each report's objective, content, and how it is utilized (for the current and future policies)? 2. We understand that the climate action report evaluates the progress of each measure included in the Climate Change Action Programme 2020. What actions will be taken if the progress is not on track? 3. BR4 provides the URL links to the above mentioned three reports in the German version. If there is an English version, could Germany provide the URL links to the English version?

Answer by Germany

Regarding question 1: The above mentioned annual monitoring report and progress report refer to Germany's longterm energy strategy. The monitoring report is the core of monitoring the energy transition process. It illustrates, on the basis of a set of indicators, how the transition advances, and where there is a need for additional action. The development of GHG emissions in the energy sector is only one among several indicators in this monitoring process. Other indicators refer, for example, to the security of energy supply or the development of energy prices. Once every three years the monitoring report is complemented by the more comprehensive progress report. It analyses developments in more depths and points out trends. Other than the monitoring report that focuses on past developments, it also looks into the future and projects, whether the longterm targets of the energy strategy are likely to be met, or whether additional measures might be required.

The climate action report, meanwhile, takes stock on the implementation of climate policies and measures and on GHG emission trends. It includes information on the energy sector, but also on non-energy-related GHG emissions, e.g. from industrial processes or agriculture.

Regarding question 2: A specific process for working continuously towards the national GHG mitigation targets has been established in the new Federal Climate Act.

If annual sectoral emission budgets defined in the Act are exceeded, the federal government ministry in charge of the sector concerned has to present an immediate action programme for the relevant sector. The programme shall ensure compliance with the annual sectoral emission budgets in the subsequent years.

Regarding question 3: The latest progress report, published in 2019, is available at:

<https://www.bmwi.de/Redaktion/EN/Publikationen/Energie/second-progress-report-energy-transition.html> . With regard to the energy transition monitoring report, we may refer you to an earlier version (from 2018) which is available in English language:

<https://www.bmwi.de/Redaktion/EN/Publikationen/Energie/sechster-monitoring-bericht-zur-energiewende-langfassung.html> . English language versions of the Climate Action Reports are available at www.bmu.de/PU633 . The 2019 version is not translated yet and available in German language only: www.bmu.de/DL2532.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Commercial Waste Regulation

Germany's BR4 states that the Commercial Waste Regulation implements the requirements of the five-stage hierarchy of waste in the area of commercial municipal waste. Can Germany provide more details of the five-stage hierarchy and its requirements?

Answer by Germany

Article 4 of the EU Waste Framework Directive establishes the following waste hierarchy, which shall apply as a priority order in waste prevention and management legislation and policy:

- (a) prevention;
- (b) preparing for re-use;
- (c) recycling;
- (d) other recovery, e.g. energy recovery; and
- (e) disposal.

When applying this waste hierarchy, Member States shall take measures to encourage the options that deliver the best overall environmental outcome and take into account the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability, protection of resources as well as the overall environmental, human health, economic and social impacts.

The waste hierarchy of Article 4 of the EU Waste Framework Directive has been implemented into national German law via adoption of Article 6 of the German Circular Economy Act. It also applies to Commercial Waste.

Question by New Zealand at Monday, 07 September 2020

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Emissions reduction ambitions for agricultural sector

As part of their national contribution to the Effort Sharing Decision, has Germany adopted any specific reduction ambitions for the agriculture sector, or for emissions of gases associated with agricultural activities (i.e. CH₄ and N₂O)?

Answer by Germany

Yes, Germany has developed five measures related to the agricultural sector as a part of the national Climate Protection Program 2030:

1. Reduction of nitrogen surpluses

We have already achieved a lot with the legal changes that have taken place in the fertilizer legislation. Further adjustments are in the planning stage. As a result, we anticipate a further reduction in nitrogen surpluses - including a reduction in ammonia and nitrous oxide emissions. The fertilizer package is also to be supported by promoting gas-tight, low-emission slurry storage facilities and emission-reducing spreading technology. The federal states also have a duty here.

Reduction potential: between 1.9 to 7.5 million t CO₂ equivalents annually

2. Energetic use of farm manure

The second important measure concerns the energetic use of farm manure of animal origin and agricultural residues in biogas plants. The increased use of farm manure in biogas plants and the gastight storage of fermentation residues are to be promoted with new instruments accompanying the Renewable Energy Sources Act (EEG). Here it is particularly important that we find sensible connection options for the systems that are currently funded under the EEG.

Reduction potential: between 2.0 and 2.4 million t CO₂ equivalents annually.

3. Expansion of organic farming

The expansion of organically farmed areas is also a climate measure. This is primarily due to the saving of mineral fertilizers, the production of which produces greenhouse gases. We want to further develop legal provisions in favor of particularly environmentally friendly methods such as

organic farming or other particularly sustainable methods of land management and optimize legal and financial support. We already significantly increased the federal program for organic farming and other forms of sustainable agriculture (BÖLN) last year.

Reduction potential: between 0.4 to 1.2 million t CO2 equivalents annually.

4. Emissions reductions in animal husbandry

We want to realize further savings potential in animal husbandry and animal nutrition. In addition to research and breeding, the future development of animal populations will be important. Funding measures should be geared more towards animal welfare, taking into account the environmental impact and the savings in emissions.

Reduction potential: between 0.3 and 1.0 million t CO2 equivalents annually

5. Increase in energy efficiency

The technology used in agriculture and horticulture can be further improved in terms of their energy requirements. The federal program for energy efficiency in agriculture and horticulture will be continued and further developed and the use of renewable energies will be promoted.

Reduction potential: between 0.9 to 1.5 million t of CO2 equivalents annually.

Question by Canada at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Coal phase out

Germany has recently adopted into law a coal phase-out by 2038, with review points beginning in the mid-2020s. Could Germany provide more information on the expected scope of these review points and whether these could allow for a more accelerated phase out?

Answer by Germany

On 3 July 2020, German legislators took the final step to set the phase-out of coal in motion. This concluded the legislative procedure for the phase-out of coal power in Germany – the Act on the Phase-out of Coal (Kohleausstiegsgesetz) and the Act on Structural Change in Coal Mining Areas (Strukturstärkungsgesetz Kohleregionen) – and implemented the central elements of the recommendations by the Commission on Growth, Structural Change and Employment.

The Act on the Phase-out of Coal determines that by the end of 2022, coal-fired power plant capacities will be reduced from the current level of more than 40 gigawatts (GW) to only 30 GW – 15 GW each for hard coal and lignite. Further power plants will gradually be taken off the market

between 2023 and 2030. The goal is to reduce the total capacity of coal-fired power plants on the market to 17 GW – 9 GW lignite / 8 GW hard coal – by 2030. The last coal-fired power plant in Germany will go offline by 2038 at the latest.

In the years 2022, 2026, 2029 and 2032, the Federal Government will review on a scientific basis, including defined criteria and associated indicators, the effects of the reduction and phase-out of coal-based electricity generation on security of electricity supply, on the number and installed capacity of plants converted from coal to gas, on the maintenance of heat supply and on electricity prices and reviews the achievement of the defined target level of remaining coal capacities and the contribution to achieving the associated climate action targets.

From the 2026 review onwards, Germany will also evaluate whether the phase out date (currently 2038 at the latest) can be brought forward by three years to 2035, thus allowing for a more accelerated phase out.

[Question by](#) Canada at Monday, 07 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Developing the Climate Protection Act

In November of 2019, the German parliament passed its first major national climate law which, among a series of policies and measures, makes legally binding a 2030 target of 55% reduction of 1990 levels by 2030. Can Germany elaborate on the process of drafting this legislation? What was the scope of public consultation or engagement?

[Answer by](#) Germany

To adopt a Germany Climate Change Act was part of the coalition agreement from 2018 between the governing parties. In September 2019 the heads of the governing parties agreed on the key aspects of the legislation. As part of the following negotiations within government on the Environmental Ministry's draft legislation, the draft was published and counties and associations were invited to send their written comments. Subsequently, cabinet approved the final draft and it was introduced to the parliamentary legislative procedure. Whilst there was a strong support for more stringent climate policies and the legislation in parts of the public, it was seen as too rigorous with certain associations and Members of Parliament.

Question by China at Friday, 04 September 2020

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Additional measures

According to TRR, Germany may face the challenge to achieve 2020 target. What the main additional measures will Germany take in order to narrow the gap?

Answer by Germany

According to preliminary GHG emission data, Germany achieved a 35,7% reduction relative to 1990 by the year 2019, and expects emissions to drop further in 2020. In the end, the gap will be smaller than calculated in the projections cited in the BR.

To realize further emission reductions, the federal government agreed the Climate Action Programme 2030 in October 2019, which includes a broad portfolio of GHG mitigation measures, including the introduction of a CO2 price for fuels and the gradual phase-out of coal-fired power plants.

Question by China at Friday, 04 September 2020

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: Assumptions on projections

Taking considerations of the Covid-19, does Germany have any adjustment on the assumptions on its WEM and WAM projections for 2020 and 2030?

Answer by Germany

The upcoming projection report 2021 – which will no longer include projections for the year 2020 – will consider the impact of the Covid-19 on GHG emissions. It will be based on the latest statistical and analytical data on economic and energy price development where effects from Covid-19 are factored in.

Question by China at Friday, 04 September 2020

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 07 September

Title: LULUCF conversion

According to BR4 (page 50), the LULUCF sector is going to become a source of greenhouse gas emissions in 2020. Could Germany provide clarifications on the conversion of LULUCF sector from carbon sink to carbon source?

Answer by Germany

According to the latest projection report, the entire LULUCF-sector in Germany develops from a sink to a source of greenhouse gases between 2015 and 2020. This is due to largely unchanged high, projected greenhouse gas emissions in the areas of arable land and grassland (and to a lesser degree peatlands), with a simultaneous decrease in the sink performance of forests. The latter effect is predominantly due to large areas being afforested within a short period of time after 1945 during the post-war years which are now ready for use. The sustainable use of these forests often makes sense both from an economic point of view and as a measure in the context of climate adaptation, since some of these forest areas are pure coniferous forests that are to be gradually converted into stable and climate-flexible mixed forests with predominantly native tree species.

Due to the use of wood and a shift in the age group ratio, the sink effect of the forests is reduced from around 75 million t CO₂ equivalents in 1990 to a low of just under 12 million t CO₂ equivalents in 2020 and then increases again.

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Session closed at 03-11-2020
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