



SDG7 Energy Compact of Germany

A next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change

As part of the High-Level Dialogue on Energy in New York in September 2021, Germany contributes to galvanise on SDG7 with the presentation of the German Energy Compact. As a Global Theme Champion for the energy transition, Germany is committed to adopting a national Energy Compact to contribute positively to the SDGs and the Nationally Determined Contributions to achieve the Paris Agreement.

The energy sector plays a crucial role on the path towards GHG neutrality by 2045. Electricity generated from renewable sources provides the basis for the decarbonisation of the whole economy through direct and in hard-to-abate sectors indirect electrification. The energy policy triangle consisting of affordability, energy security and environmental / climate compatibility is the guiding principle of the German energy transition. The main pillars of the energy transition in Germany are: boosting energy efficiency, cutting energy consumption and further expanding renewable energy in order to cover the remaining demand, while phasing out nuclear and coal-fired power plants and transitioning to an overwhelmingly decarbonised power system in the 2030s.

Within this framework, Germany is committed to further enhancing the ambition and implementation of our current energy targets – listed below – as required. Events that currently necessitate such adjustments include an April 2021 ruling by the Constitutional Court, which requires the government to make sure that current and future generations contribute their fair share to mitigation efforts. Adjustments will also be necessary in light of the “Fit for 55” initiatives that the European Commission is proposing to implement the European Union’s new 2030 target of reducing greenhouse gas emissions by at least 55% compared to 1990. Without question, the adjustment of climate targets will therefore also require adjustments to the energy-related targets and measures listed below.

SECTION 1: AMBITION

1.1. Ambitions to achieve SDG7 by 2030. [Please select all that apply, and make sure to state the baseline of each target]

(Member States targets could be based on their NDCs, energy policies, national five-year plans etc. targets for companies/organizations could be based on their corporate strategy)

<input type="checkbox"/> 7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.	Target(s): Time frame: Context for the ambition(s):
<input type="checkbox"/> 7.2. By 2030, increase substantially the share of renewable energy in the global energy mix.	Target(s): <ul style="list-style-type: none"> • 30% share of renewable energy in gross final energy consumption by 2030. • Increasing the proportion of total electricity consumption covered by renewable energy sources to 65% by 2030 and achieving an overwhelmingly decarbonised power system in the 2030s. • These renewable energy targets are subject to changes in light of the amendment of the Federal Climate Change Act. Time frame: <ul style="list-style-type: none"> • see above Context for the ambition(s): <ul style="list-style-type: none"> • In addition, green hydrogen, both as a fuel and a feedstock, will be a key sector coupling technology, allowing Germany to increasingly use renewable energy in hard-to-abate sectors <u>where direct electrification is challenging</u>, in particular parts of the industry and transport sector. In order to satisfy the growing domestic demand of green hydrogen, Germany will need to facilitate imports and support the development of a well-functioning international market. To achieve this, Germany initiated the project H2 Global. H2Global is an auction-based concept to support the ramp-up of green hydrogen (H2) and green PtX products. Under the concept, the gap between the purchasing and sales prices for green H2 and its derivatives would be temporarily offset in order to incentivise investments in H2-projects. Beyond that Germany will intensify the dialogue with the current exporters of fossil fuels in order to prevent future crises and ensure a participation of these countries in scaling up a global hydrogen market. Germany will open “hydrogen diplomacy offices” in Moscow, Riyadh, Abuja and Luanda in 2021 to facilitate dialogue activities.

<input type="checkbox"/> 7.3. By 2030, double the global rate of improvement in energy efficiency.	<p>Target(s):</p> <ul style="list-style-type: none"> Reducing primary energy consumption by 30% by 2030 and 50% by 2050 (compared to 2008). This target also needs to be adjusted in light of the amendment of the Federal Climate Change Act and the foreseen adjustment of the EU's 2030 target for energy efficiency in light of the new EU 2030 climate target. <p>Time frame:</p> <ul style="list-style-type: none"> see above <p>Context for the ambition(s):</p> <ul style="list-style-type: none"> To achieve these targets Germany adopted the 2050 Energy Efficiency Strategy, which provides the framework for the implementation of the Energy Efficiency Roadmap up to 2050 stakeholder process. Due to recently raised ambitions, the Energy Efficiency Roadmap now foresees a time frame until 2045, and not only describes the development paths for energy efficiency, but also proposes specific measures to cut energy consumption via a dialogue with representatives of science, commerce and civil society.
<input type="checkbox"/> 7.a. By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.	<p>Target(s):</p> <ul style="list-style-type: none"> Reduce energy poverty in partner countries and provide affordable, reliable and sustainable energy to households, social institutions and businesses, among others; Improve energy efficiency in the power sector (electricity), but also construction, industry and transport sectors, thereby reducing greenhouse gas emissions; and Systematically support ambitious partner countries in developing and implementing transformative energy policies away from fossil fuels towards renewable energies to protect the climate. <p>Time frame:</p> <ul style="list-style-type: none"> now - ongoing <p>Context for the ambition(s):</p> <ul style="list-style-type: none"> Within the framework of German international development cooperation the Federal Ministry for Economic Cooperation and Development currently supports 32 developing countries and emerging economies worldwide through technical as well as financial assistance (TA and FA) in their energy transitions with an annual budget of around EUR 2.5 billion. The TA lays the foundation for the transformation of energy systems by providing policy advice on conducive administrative, legislative, political and financial frameworks and building local capacity. FA is provided through a branch of the German state-owned development bank KfW called "KfW Entwicklungsbank" which supports the energy transition in partner countries with preferential loans. Through its International Climate Initiative (IKI) with an annual budget of almost EUR 600 million, the Federal Ministry for Environment, Nature Conservation and Nuclear Safety supports sustainable energy projects in Africa, Asia, and Central and Latin America. Out of more than 100 energy-related projects and a total annual funding volume of EUR 390 million, more than 50 projects have energy as their key focus. Project activities often include policy implementation, policy advisory, capacity building and developing financial instruments in the respective partner countries.
<input type="checkbox"/> 7.b. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of support.	<p>Target(s):</p> <p>Time frame:</p> <p>Context for the ambition(s):</p>

1.2. Other ambitions in support of SDG7 by 2030 and net-zero emissions by 2050. [Please describe below e.g., coal phase out or reforming fossil fuel subsidies etc.]

<p>Target(s):</p> <ul style="list-style-type: none"> Reducing greenhouse gas emissions by at least 65% by 2030 compared to 1990 levels and further to at least 88% by 2040, and becoming climate neutral by 2045 [these new targets are still to be confirmed]; Phasing out the use of coal for power generation by 2038 at the latest, with reviews regarding whether a phase out can already be achieved by 2035. Phasing out the use of nuclear energy for power generation by 2022. Ensuring a socially just transition towards a GHG-neutral economy.
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Time frame:

- See above

Context for the ambition(s):

- The Federal Climate Change Act (2019, government proposal to amend the Act in May 2021) codifies the GHG reduction targets into law and specifies (annual) maximum emissions by sector between 2020 and 2030 (for energy, industry, buildings, transport, agriculture, waste and others). The various federal ministries are obliged to make sure that the annual emissions targets for their respective field are met.
- The conditions for the phase-out of coal are created by the Act on Structural Change in Coal Mining Areas, which inextricably links structural development and coal phase-out.
- Carbon pricing of GHG emissions from fuels, where these emissions are not covered by EU emissions trading, is codified by the German Fuel Emission Allowance Trading Act (BEHG), which was passed in 2019 and is designed to help reach national climate targets, including the long-term target of greenhouse gas neutrality. The National Allowance Trading for Fuel Emissions took effect as of 1 January 2021.

SECTION 2: ACTIONS TO ACHIEVE THE AMBITION

2.1. Please add at least one key action for each of the elaborated ambition(s) from section 1. *[Please add rows as needed].*

7.a.1: Germany provides approximately EUR 2.5 billion for international development cooperation in the energy sector annually. For the realisation of target 7.a. this funding amount will be maintained or increased, according to the nationally available funds (future financial allocations depend on parliamentary decisions).	Now - 2030
7.a.2: Improving the supply of rural communities with sustainable, decentralised renewable energy through the Green People's Energy Initiative. The focus is on the active involvement of citizens, municipalities, cooperatives and private investors in the development and expansion of renewable energy and its productive use. German energy cooperatives (<i>Energiegenossenschaften</i>) serve as a role model for the project. The initiative is being implemented through TA and FA in nine partner countries in Sub Saharan Africa (Ethiopia, Benin, Côte d'Ivoire, Ghana, Mozambique, Namibia, Zambia, Senegal and Uganda) since 2019.	Now - 2023 (and prospective follow-up activities)
7.a.3: Support of partner countries in the production of green hydrogen and green hydrogen-based products (<i>Power-to-X, PtX</i>) for the decarbonisation of hard-to-abate sectors (e.g. chemical, steel and cement industry; aviation and shipping). To this end, Germany will drive forward the construction of PtX production facilities on a near-industrial scale in some partner countries via several funding programmes and via auctions for green hydrogen and its derivatives via the "H2 Global" scheme.	Now - 2030

SECTION 3: OUTCOMES

3.1. Please add at least one measurable and time-based outcome for each of the actions from section 2. *[Please add rows as needed].*

<i>Outcome</i>	<i>Date</i>
Action 7.a.2.: <ul style="list-style-type: none"> • Establishment of 30 "citizen energy partnerships" for a direct exchange between German or European actors of the energy transition and Africa • Supply of 750 micro, small and medium-sized enterprises, as well as 375 social institutions, with renewable energy 	Now - 2023 (TA)
Action 7.a.3: <ul style="list-style-type: none"> • Construction of a PtX reference plant with around 100 MW electrolysis capacity for the production of green hydrogen in Morocco • Successful auctions commissioning long term contracts to supply green hydrogen derivatives from international hydrogen production sites to Germany on a near-industrial scale (ca. 500 MW). 	Now - 2033

SECTION 4: REQUIRED RESOURCES AND SUPPORT

4.1. Please specify required finance and investments for **each** of the actions in section 2.

The German state-owned development bank KfW facilitates the energy transition through e.g. concessionary loans for energy-efficient construction as well as installations supplying electricity and heat (e.g. photovoltaics, water, wind, biogas, plants for the generation of electricity and heat). In addition, the Federal Office of Economics and Export Control (BAFA) promotes energy-efficient technologies such as combined heat and power plants, air-conditioning and refrigeration systems or heating networks.

4.2. [For countries only] In case support is required for the actions in section 2, please select from below and describe the required support and specify for which action.

[Examples of support for Member States could include: Access to low-cost affordable debt through strategic de-risking instruments, capacity building in data collection; development of integrated energy plans and energy transition pathways; technical assistance, etc.]

<input type="checkbox"/> Financing	Description
<input type="checkbox"/> In-Kind contribution	Description
<input type="checkbox"/> Technical Support	Description
<input checked="" type="checkbox"/> Other/Please specify: International Exchange and Partnership	Germany welcomes the exchange of experiences with countries worldwide on policies, regulations and supporting measures facilitating the energy transition. One important forum for this exchange is the annual Berlin Energy Transition Dialogue (BETD) hosted by the German Federal Ministry for Economic Affairs and Energy and the Federal Foreign Office, which brings together decision-makers from governments and the energy sector involved in the energy transition from across the globe. Furthermore, the Federal Ministry for Economic Affairs and Energy is engaged in a close policy and business dialogue with more than 20 countries in order to further accelerate the global energy transition and to make it economically viable and socially attractive for everyone. These energy partnerships consist of a high-level intergovernmental dialogue on energy policy, combined with thematic working groups. The trusting and regular dialogue and mutual exchange of experiences that take place in these partnerships are a key pillar of the continued expansion of renewable energy, the dissemination of efficient technologies and the development of global hydrogen markets.

SECTION 5: IMPACT

5.1. Countries planned for implementation including number of people potentially impacted.

- National and global level
- The energy transition in Germany is a long-term overall strategy, which embraces all sectors of the economy and is embedded within the overall goal of achieving a GHG-neutral economy by 2045. It aims to restructure the energy supply to make it secure, economic and environmentally compatible. For this restructuring process, we need not only cost-efficient instruments but also public acceptance. As the lead ministry for the energy transition, the Federal Ministry for Economy Affairs and Energy has conducted numerous studies on the macroeconomic effects of the energy transition (incl. on energy imports, employment effects, effects on energy security, air quality and GHG emissions mitigation). In addition, various industrial associations have conducted detailed surveys and analysis on various aspects of the energy transition.

5.2. Alignment with the 2030 Agenda for Sustainable Development – Please describe how **each** of the actions from section 2 impact advancing the SDGs by 2030.

[up to 500 words, please upload supporting strategy documents as needed]

The Agenda 2030 for Sustainable Development as well as the Paris Agreement are guiding frameworks for Germany's international cooperation in the energy sector. Actions in the field of energy are aiming at the climate-neutral coverage of the energy demand while working towards a complete decarbonisation of the energy sector thus promoting the achievement of SDG 7 (ensure access to affordable, reliable, sustainable and modern energy for all) as well as SDG 13 (take urgent action to combat climate change and its impacts). The positive effects of a demand-driven energy supply are essential for economic and social development and thus go even beyond the climate goals and the SDG 7 target.

5.3. Alignment with Paris Agreement and net-zero by 2050 - Please describe how **each** of the actions from section 2 align with the Paris Agreement and national NDCs (if applicable) and support the net-zero emissions by 2050.

[up to 500 words, please upload supporting strategy documents as needed]

See 5.2.

SECTION 6: MONITORING AND REPORTING

6.1. Please describe how you intend to track the progress of the proposed outcomes in section 3. Please also describe if you intend to use other existing reporting frameworks to track progress on the proposed outcomes.

Framework for monitoring progress with regard to German energy transition targets

The Federal Climate Change Act creates a new legally binding framework for climate protection in Germany and uniquely combines emission targets, a monitoring system and immediate remedies in case of non-compliance. If emissions exceed the permissible sector budget (for energy, industry, buildings, transport, agriculture, waste and others), the federal ministry responsible for this sector has to present an immediate action programme to get the emission reductions back on track. An expert council reviews the underlying assumptions to ensure a robust assessment of the anticipated impact. Each year, accurate emission data for the various sectors are collected by the Federal Environment Agency and published in March of the following year. This is to ensure the transparency and continuity of successful monitoring. Furthermore, the Federal Ministry for Economic Affairs and Energy has been appointed as the lead ministry for the monitoring process for the German Energiewende “Energy of the Future”. At the heart of the monitoring system is the annual Energy Transition Monitoring Report providing a fact-based overview of the current status of progress regarding the implementation of the energy reforms in Germany. Every three years the Monitoring Report is supplemented by a strategic Progress Report on the Energy Transition with deeper analysis on whether or not Germany is on track to achieve its targets and recommend additional measures to be taken if necessary.

SECTION 7: GUIDING PRINCIPLES CHECK LIST

Please use the checklist below to validate that the proposed Energy Compact is aligned with the guiding principles.

I. Stepping up ambition and accelerating action - Increase contribution of and accelerate the implementation of the SDG7 targets in support of the 2030 Agenda for Sustainable Development for Paris Agreement

I.1. Does the Energy Compact strengthen and/or add a target, commitment, policy, action related to SDG7 and its linkages to the other SDGs that results in a higher cumulative impact compared to existing frameworks?

Yes No

I.2. Does the Energy Compact increase the geographical and/or sectoral coverage of SDG7 related efforts? Yes No

I.3. Does the Energy Compact consider inclusion of key priority issues towards achieving SDG7 by 2030 and the net-zero emission goal of the Paris Agreement by 2050 - as defied by latest global analysis and data including the outcome of the Technical Working Groups? Yes No

II. Alignment with the 2030 agenda on Sustainable Development Goals – Ensure coherence and alignment with SDG implementation plans and strategies by 2030 as well as national development plans and priorities.

II.1. Has the Energy Compact considered enabling actions of SDG7 to reach the other sustainable development goals by 2030? Yes No

II.2. Does the Energy Compact align with national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps? Yes No

II.3. Has the Energy Compact considered a timeframe in line with the Decade of Action? Yes No

III. Alignment with Paris Agreement and net-zero by 2050 - Ensure coherence and alignment with the Nationally Determined Contributions, long term net zero emission strategies.

III.1. Has the Energy Compact considered a timeframe in line with the net-zero goal of the Paris Agreement by 2050? Yes No

III.2. Has the Energy Compact considered energy-related targets and information in the updated/enhanced NDCs? Yes No

III.3. Has the Energy Compact considered alignment with reaching the net-zero emissions goal set by many countries by 2050? Yes No

IV. Leaving no one behind, strengthening inclusion, interlinkages, and synergies - Enabling the achievement of SDGs and just transition by reflecting interlinkages with other SDGs.

IV.1. Does the Energy Compact include socio-economic impacts of measures being considered? Yes No

IV.2. Does the Energy Compact identify steps towards an inclusive, just energy transition? Yes No

IV.3. Does the Energy Compact consider measures that address the needs of the most vulnerable groups (e.g. those impacted the most by energy transitions, lack of energy access)? Yes No

V. Feasibility and Robustness - Commitments and measures are technically sound, feasible, and verifiable based a set of objectives with specific performance indicators, baselines, targets and data sources as needed.

V.1. Is the information included in the Energy Compact based on updated quality data and sectoral assessments, with clear and transparent methodologies related to the proposed measures? Yes No

V.2. Has the Energy Compact considered inclusion of a set of SMART (specific, measurable, achievable, resource-based and time based) objectives? Yes No

V.3. Has the Energy Compact considered issues related to means of implementation to ensure feasibility of measures proposed (e.g. cost and financing strategy, technical assistant needs and partnerships, policy and regulatory gaps, data and technology)? Yes No

SECTION 8: ENERGY COMPACT GENERAL INFORMATION

8.1. Title/name of the Energy Compact

SDG7 Energy Compact of Germany

8.2. Lead entity name (for joint Energy Compacts please list all parties and include, in parenthesis, its entity type, using entity type from below)

Federal Ministry for Economic Cooperation and Development (BMZ)

8.3. Lead entity type

Government

Local/Regional Government

Multilateral body /Intergovernmental Organization

Non-Governmental Organization (NGO)

Civil Society organization/Youth

Academic Institution /Scientific Community

Private Sector

Philanthropic Organization

Other relevant actor

8.4. Contact Information

Federal Ministry for Economic Cooperation and Development (BMZ) | Germany | Division 422 | Energy; Hydrogen; Raw Materials; Infrastructure | RL422@bmz.bund.de

8.5. Please select the geographical coverage of the Energy Compact

Africa Asia and Pacific Europe Latin America and Caribbean North America West Asia Global

8.6. Please select the Energy Compact thematic focus area(s)

Energy Access Energy Transition Enabling SDGs through inclusive just Energy Transitions Innovation, Technology and Data Finance and Investment.

SECTION 9: ADDITIONAL INFORMATION (IF REQUIRED)

Please provide additional website link(s) on your Energy Compact, which may contain relevant key documents, photos, short video clips etc.