



Federal Ministry
for Economic Affairs
and Energy

Towards a sustainable economy

*Second report on sustainability by the Federal Ministry
for Economic Affairs and Energy*



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Introduction

Germany and Europe are facing major challenges. Protecting our climate and the environment will require decisive action. The digital transformation is radically changing the world of business and work, and society as a whole. Demographic change is increasing the need to act to recruit skilled workers, and is prompting new questions for the welfare systems. In addition, the fight against the COVID-19 pandemic is creating huge challenges for Germany, Europe and the international community. However, these challenges could also be a great opportunity for a sustainable transformation. Sustainable action can help prevent new crises and make our economy and society more resilient. We need to put economic growth on a sustainable footing. There are economic, ecological and social aspects to this. We want people to be able to live in dignity whilst at the same time protecting our natural resources in the long term.

The United Nations' 2030 Agenda for Sustainable Development with its 17 sustainable development goals or in short SDGs serves as a guideline for tackling these challenges. In order to implement the 2030 Agenda goals, the Federal Government decided in March 2021 to enhance its National Sustainable Development Strategy. The Federal Ministry for Economic Affairs and Energy (BMWi) has actively contributed to this enhancement of the National

Sustainable Development Strategy. The National Sustainable Development Strategy is being implemented against the backdrop of the European Commission's European Green Deal, which aims at making the European Union climate-neutral by 2050 and sets out sector-specific initiatives for de-carbonising the economy. The European Green Deal is also a comprehensive growth strategy that seeks to build a competitive and resilient economy by combining climate and environmental action with economic stimuli.

In order to both master the enormous challenges that lie ahead and meet the sustainable development goals, innovation and investment are required. This is key for adding value to the economy and for protecting our prosperity. The use of market-based approaches can help link up SDG 8 (Decent work and economic growth) with the other sustainable development goals in a number of different areas. A good example for this is the European emissions trading system, which provides market-based incentives for boosting climate action (SDG 13: Climate action). Policies focusing on the sustainable transformation of the economy not only help achieve economic, ecological and social sustainability goals, but also modernise the economy and society.

Within the Federal Government, the Federal Ministry for Economic Affairs and Energy has the lead responsibility for the implementation of **SDG 7** (Affordable and clean energy) and **SDG 8** (Decent work and economic growth). As will be shown in this report, it is also committed to pursuing the other SDGs by making specific contributions towards their attainment.

Each chapter of this report presents activities undertaken by the Federal Ministry for Economic Affairs and Energy which contributes to the implementation of **SDG 8**. Chapter 1 describes the economic

policy environment that is needed in Germany to boost sustainable development across the board. Chapter 2 shows the wide range of measures the ministry is undertaking to help individual industries become more sustainable. In light of the particular importance of innovation and digitalisation, chapter 3 focuses on the ministry's initiatives in this area. Chapter 4 then goes on to present the ministry's wide range of activities for transforming our energy system as the basis for meeting **SDG 7**. Finally, chapter 5 explores how the ministry is adhering to the principle of sustainability in its own administrative actions and on its premises.



Chapter 1

Economic policy sets a policy framework for developing the economy in line with the sustainable development goals



Economic policy seeks to provide a framework that allows us to successfully tackle the major societal challenges like demographic change, climate action and digitalisation whilst at the same time safeguarding the competitiveness of Germany's economy.

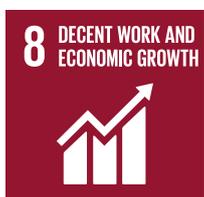
Before being exposed to the external economic shock triggered by the COVID-19 pandemic, Germany had seen a decade of uninterrupted economic growth. Between 2010 and 2019, gross domestic product (in price-adjusted terms) had increased by 1.9% on average each year. This positive development was also reflected by some of the other indicators used in the National Sustainable Development Strategy for measuring progress towards achieving **SDG 8** such as the level of public debt. In the same time period, Germany reduced its level of debt from 82.4% to 59.8%, complying with the Maastricht debt rule – which serves as the target for this indicator – for the first time since 2002.

Economic growth – the basis for sustainable development

In order to ensure a development that is economically and ecologically viable in the long term, the Economic Affairs Ministry advocates a sustainable economic policy. Economic growth is making a key contribution to a society's prosperity and people's quality of life. It is an important basis for rising incomes, new and secure jobs and an effective welfare state, and gives the public sector more room to act. If economic growth coincides with high levels

of employment and competitive companies, it becomes easier to make the necessary shift towards a climate-neutral economy as it raises acceptance among the population and companies and creates the necessary technical and financial capacities. In simple terms, economic growth is the result of innovation and investment. It reflects economic activity and efforts to improve, enhance and enable new business models, processes and products. Without innovation and technological progress, we will not be able to master the challenges that lie ahead. This is particularly true when it comes to making our economy and society more environmentally friendly.

However, economic policy is not just looking at increases in gross domestic product and other indicators related to **SDG 8** such as net borrowing, the level of government debt and the employment ratio. The concept of 'welfare' has also many more aspects to it – including social and ecological developments – that play a key role for economic policy decision-making. This is why the Economic Affairs Ministry advocates supplementing the traditional analysis of GDP development in the national economic reports such as the Annual Economic Report by additional aspects.



Putting public procurement on a sustainable footing

The public sector buys large amounts of products and services, making it an important market participant that also serves as a role model for private-sector players. The Economic Affairs Ministry therefore advocates designing procurement policy in a way that ensures that the aspect of sustainability is taken into account in the public sector's procurement activities. In March 2020, the Federal Government adopted the revised version of the [General Administrative Regulation on the Procurement of Energy-Efficient Services](#) that had been presented by the Economic Affairs Ministry. With this revision of the Administrative Regulation, the Federal Government is ensuring a high level of energy efficiency in the Federal Government's procurement processes. Procurement officers are required to always buy the goods and products that have the highest energy efficiency class available on the label within the meaning of the EU's regulation on energy labelling. Alternatively, in cases where there are (currently) no products on the market that provide this high a level of energy efficiency, the product with the highest achievable level of energy efficiency is to be bought. This rule applies irrespective of whether a contract is awarded as part of a purely national or European tender procedure.

Picking up on another requirement from the Climate Action Programme 2030, the Federal Government is planning to devise – before the federal election in September 2021 – an administrative regulation that will make climate-friendly procurement a requirement for Federal Government procurement

offices in cases where products and services that are particularly relevant for the climate are being procured.

Since October 2020, the new nationwide procurement statistics have recorded data on whether procurement offices are actually making use of the newly created room for taking sustainability criteria into account.

In order to provide public-sector clients with the information they need about potential legal grounds for excluding a bidder from a procurement procedure – such as economic crime or other serious criminal offences – the Competition Register is currently being established at the Bundeskartellamt and is to be launched during the course of 2021. The establishment of the Competition Register thus has a direct impact on achieving **SDG 16.3** on corruption prevention.

Fostering regional development

The Economic Affairs Ministry is making use of its regional policy instruments to support regions that are structurally weak and work towards a convergence of living standards across Germany. By promoting private-sector investment and business-related infrastructure, the disadvantages of these regions are to be offset and regional differences in economic development thus reduced. This is an important contribution to implementing **SDGs 8 and 11** and in particular **SDG 10**. On 1 January 2020, the Federal Funding System for Structural Development Regions was launched, reorganising and

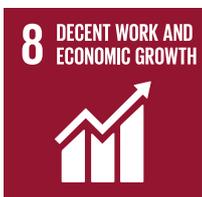
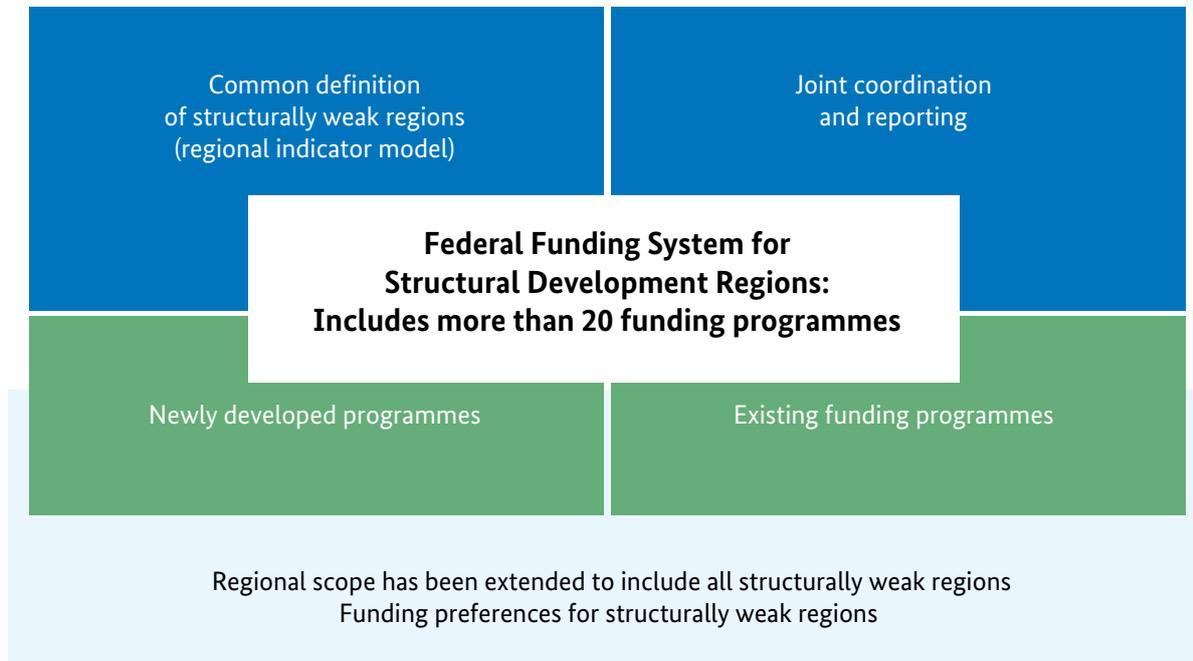


Figure 1: The Federal Funding System



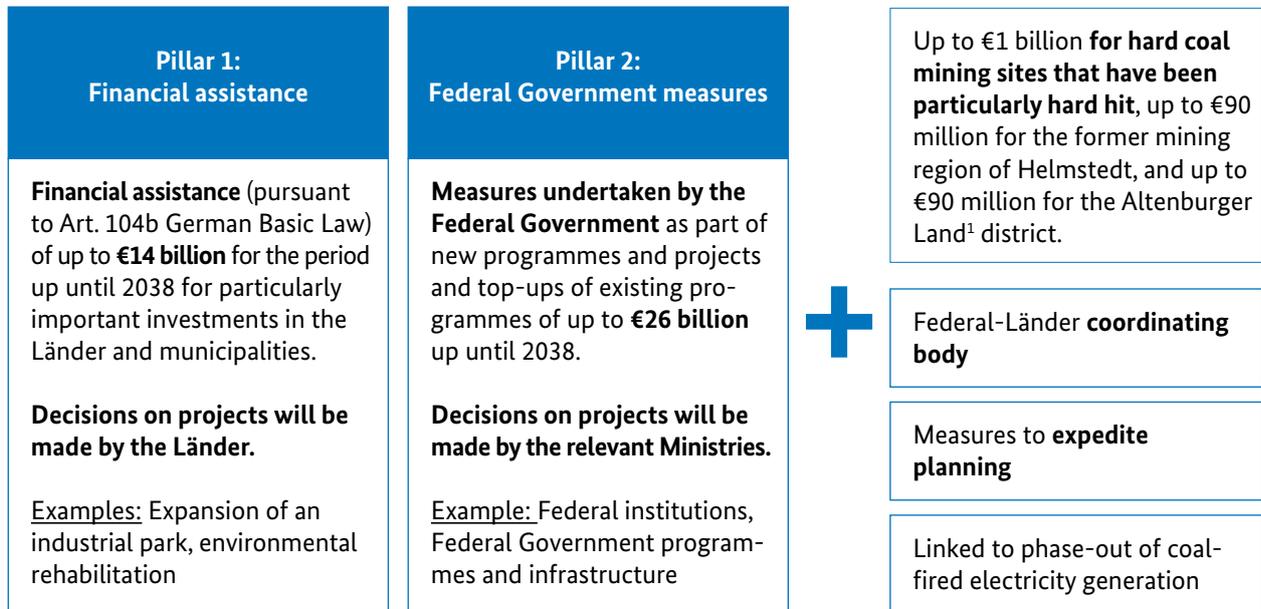
Source: Federal Ministry for Economic Affairs and Energy

pooling regional assistance schemes to create a unified system. Funding programmes formerly restricted to eastern Germany have been extended to cover all structurally weak regions, no matter whether these are located in the eastern or western part of the country. Also, funding measures that are available nation-wide are being equipped with special terms which offer targeted support for regional economic development (cf. Figure 1).

Phasing out coal-fired power is one of the greatest economic and societal challenges for the decades to come. The Federal Government's Structural Strengthening Act for Mining Regions is opening up long-term prospects for coal-mining regions that are affected by structural change, focusing on a sustainable development that combines ecological, economic and social aspects. Lignite-mining areas will receive up to €14 billion in financial

assistance until 2038 for significant investments aimed at promoting structural change. In addition, up to €26 billion has been earmarked for further measures within the remit of the Federal Government, including top-ups for research and funding programmes, the expansion of transport infrastructure projects, and the establishment of federal institutions in the areas affected. Additionally, some selected hard-coal-mining regions and the former mining region of Helmstedt will receive up to €1.09 billion. The Free State of Thuringia will receive up to €90 million from the funds allocated to the mining area of Central Germany (Mitteldeutsches Revier) to provide assistance to its Altenburger Land district. A joint coordination body of the Federation and the Länder will ensure that the funding for the lignite-mining areas is disbursed. Figure 2 provides an overview of the measures described.

Figure 2: Measures under the Structural Strengthening Act for Mining Regions



¹ From funds allocated to the mining area of Mitteldeutsches Revier in accordance with Art. 3(1) No.3 of the Investment Act for Mining Regions (InvKG).

Source: Federal Ministry for Economic Affairs and Energy

The regional and structural policy measures undertaken by the Economic Affairs Ministry also strengthen the ‘Leave no one behind’ (LNOB) principle set out in the 2030 Agenda for Sustainable Development. This principle describes the responsibility of society to include everyone as it moves towards sustainable development. LNOB aims to enable social, economic and political inclusion and to provide equal opportunities to all people.

Fostering SME development, cutting red tape and closing the skills gap

One of the key characteristics of the German economy is the importance of SMEs: more than 99% of all German companies are small and medium-sized enterprises. These companies account for more than half of our economic output and almost 60% of jobs. Approx. 82% of apprentices in Germany do their vocational training in an SME. SMEs’ business practices are marked by continuity and long-term planning. This means that they are highly responsible in their dealings with staff, customers and business partners. It also means that these firms are deeply rooted in their region. German SMEs also perform well on innovation. All of this means

that SMEs are contributing in many ways towards achieving **SDGs 8, 9, 11 and 12**. The Economic Affairs Ministry wants Germany’s SMEs to embrace new challenges and remain vibrant, strong, and innovative. This is why the ministry is working on many levels to strengthen SMEs’ competitiveness, their capacity to innovate, and their ability to create jobs. This helps make further progress on implementing **SDGs 8 and 9**.

In order to relieve pressure on the economy, the Economic Affairs Ministry advocates cutting red tape for both individuals and companies. The third Bureaucracy Reduction Act (BEG III) is relieving companies of a financial burden of more than €1.1 billion per year. The Act makes use of the opportunities of digitalisation to cut out much of the paperwork in many areas. Key elements include the introduction of the electronic incapacity for work notification, improved rules for the retention of tax-related data processing systems, and digital alternatives to paper-based registration forms in hotels. Also, people starting out in business will only need to submit their advance VAT return once a quarter – rather than once a month. The major part of the Act entered into force in January 2020, with a number of individual provisions becoming effective in the period up until January 2022.

As demographic change and digitalisation progress, securing a sufficient supply of skilled labour will be one of the most important challenges that the German economy and all stakeholders from the political, business and scientific arena will be facing in the decades to come. Closing the skills gap is an issue that is relevant for **SDGs 8 and 9** and for **SDGs 4, 1, 2 and 10**. The skills gap faced by many industries and regions is a barrier to growth. The impact of the COVID-19 pandemic will not fundamentally change this situation in the medium to long term. Even though the demand for labour has dropped in many business sectors, it seems that the crisis is not considerably affecting occupations where there is a skills gap (such as occupations in the construction, software and IT services sectors). In order to ensure that companies will continue to be able to make full use of their potential, the Federal Government is intensifying its focus on training and skills development programmes for skilled professionals in Germany as well as measures to improve the compatibility of work and family life. The [Centre of excellence for securing the supply of skilled labour](#) (KOFA), which is receiving funding from the Economic Affairs Ministry, serves as the contact point for all questions surrounding the recruitment, retention and training of employees, particularly for SMEs, which are facing special



challenges in this area. Another key pillar of the Federal Government's efforts to secure a sufficient supply of skilled labour is the recruitment of additional labour from across the European Union. In addition, measures aimed at attracting labour from third countries are to be stepped up. Important initiatives here include the [Make it in Germany](#) web portal – a central contact point and source of information for skilled professionals and companies – the advisory services provided by the Central Advisory Service for the Recognition of Professional Qualifications for skilled professionals from abroad who are interested in working in Germany, and pilot projects aimed at proactively recruiting skilled professionals from third countries.

Developing a sustainability reporting framework for businesses that is practically feasible

Corporate sustainability reporting is an important lever for fostering sustainable development. Sustainability reports – which supplement the mandatory financial reports – disclose information to business partners, investors and the public about a company's activities and their economic, social and ecological impact on the environment and society, and about the impact of external changes such as climate change on a company's activities and its business model. Sustainability reports are often compiled as separate reports and elaborate on the non-financial information provided in the management report. Some companies are required by law to prepare a sustainability report, for example to comply with their obligations under the Act to Strengthen Companies' Non-Financial Reporting in their Management or Group Management Report (CSR Directive Implementation Act), whilst others choose to submit a report voluntarily.

Chapter 2

Supporting companies' efforts to become more sustainable



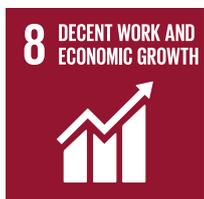
Providing funding for initiatives by individual sectors that promote sustainable economic activity

The German **industrial sector** has served for decades as the basis for economic growth and secure jobs. Its strong research activities are spurring the development of innovative and high-quality products that are sought after globally. The industrial sector is thus making an important contribution to achieving SDGs 8, 9 and 12. Given its fundamental importance for the German economy, the industrial sector also has a special responsibility to address global challenges such as climate change (SDG 13). The Economic Affairs Ministry is supporting the industrial sector as it adapts to these challenges. The [Steel Action Concept](#) is a good example here. Its aim is to ensure strong, internationally competitive and climate-neutral **steel production** in Germany in the long term. Transforming the production processes in the steel industry is an important step towards making the industrial sector climate neutral and a structural policy opportunity to safeguard Germany as a steel production hub in the long term. This is why the Federal Government is providing support to the German steel industry for implementing projects that promote low-carbon, carbon-neutral and zero-carbon steel production.

Climate action entails a shift to low-emission **mobility**. The automotive industry is facing a massive change which will require it to be innovative. Germany wants to become not only a lead market for but also a leading provider of **electric mobility**.

This will require developing innovative vehicles, drive systems and components and ensuring that electric vehicles are integrated in the electricity grids and the transport networks. The German industrial sector needs to maintain its technological leadership also in the field of electric mobility, and to successfully sell its electric vehicles and the systems, components and services associated with them on the German and international markets. The expansion of the charging infrastructure creates the preconditions for successful electric mobility. Under the Electric Mobility Infrastructure in Buildings Act (GEIG), buildings are to be equipped with ducting and charging infrastructure for electric mobility. The Act will make a contribution to promoting the use of electric vehicles. Targeted fleet replacement programmes and premiums for electric vehicles are facilitating the shift to lower-emission vehicles. Targeted incentives for investment in new technologies are also being set by the additional funding made available for research and innovation in the field of battery cell manufacturing, the supplier industry for vehicles, shipping and aviation. These measures accelerate progress towards **SDG 13**, as well as SDGs 9 and 11.

The Federal Government Coordinator for the Maritime Industry – a position that has been based at the Economic Affairs Ministry since 2000 – is advocating a more sustainable **shipping sector**, for example by providing targeted funding for the introduction of climate-friendly fuels and propulsion systems for ships. In order to mitigate climate change and meet the emission reduction targets set by the International



Maritime Organisation (IMO), new innovative engines that can run on less carbon-intensive or zero-carbon fuels need to be developed. The Coordinator for the Maritime Industry is seeking to speed up the technological development in Germany and to provide funding for this. Under the Maritime Research Programme, €54 million is being made available in 2021 for research and development projects and €30 million for the [Innovative Shipbuilding Safeguards Competitive Jobs](#) funding programme. The Maritime Agenda 2025 calls for the development of international environmental standards that will help to prevent distortions of competition within the industry. These measures help accelerate progress towards [SDGs 13 and 9](#) and also contribute to the achievement of [SDG 14](#).

The Economic Affairs Ministry and in particular the Federal Government Coordinator of German Aerospace Policy based there are providing support for the **aviation industry** – which has been hard hit by the COVID-19 pandemic – to shift to more climate-friendly technologies. One of the most important programmes here is the Federal Government's [German Aviation Research Programme \(LuFo VI\)](#). One of its funding priorities is climate-friendly technologies, for example in the area of hybrid-electric flight. Key enabling technologies here are hybrid propulsion systems based on hydrogen in combination with fuel cells and battery systems. These measures, too, help accelerate progress in particular towards [SDG 13](#), but also [SDG 9](#).

Another important sector of the German economy – not least in terms of the number of jobs and training places it provides and its contribution to rural development – is **tourism**. The global and German tourism industries have suffered severe losses as a result of the COVID-19 pandemic. The Economic Affairs Ministry will continue to closely follow developments in this sector and provide support. The tourism industry can have a positive effect on the development of other economic sectors such as hospitality, retail and all local supply structures. Development of the tourism industry thus not only accelerates progress towards [SDG 8](#) but also [SDGs 10 and 11](#). The development of the local tourism industries falls within the responsibility of the Länder. However, to account for the national importance of a large number of tourism-related aspects, Germany created the office of the Federal Government Commissioner for Tourism at the end of 2005 – a role which is based at the Economic Affairs Ministry. In order to ensure the success of the German tourism industry in the long term, [key points for a national tourism strategy](#) were adopted in 2019. The strategy has three goals: Firstly, domestic value added is to be increased, thus fostering economic growth. Secondly, the quality of life of the people living in Germany is to be improved on a lasting basis. Thirdly, tourism is to make a contribution to economic and social stability around the world.



The development of **retail trade** is a key element in the sustainable development of cities and municipalities. Even before the start of the COVID-19 pandemic, demographic change, changed consumer behaviour, technological innovation, and digitalisation had caused structural change in retail trade. This change has been accelerated by the COVID-19 pandemic. In order to flag up new prospects in this structural change, the Economic Affairs Ministry has developed the [Retail Dialogue Platform](#) and, in October 2020, set up the Round Table on Reviving City Centres – a process that seeks to prevent city centres becoming ghost towns and counteract supply deficits in rural areas. The workshops organised by the Economic Affairs Ministry are encouraging the development of creative solutions, dialogue on best practices and the linking up of different stakeholders from city centres. The digital transformation is posing particular challenges for small and medium-sized retail shop operators. This is why the [‘Mittelstand 4.0 Centre of Excellence for Retail’](#) was launched in July 2019. Here, interested entrepreneurs can receive free-of-charge support on digitalisation in the form of online courses, workshops, business consultations and podcasts. This accelerates progress towards [SDGs 8, 10, 11 and 12](#).

Making efficient use of resources and boosting the circular economy

The State Secretaries' committee on sustainable development in its decision of 26 October 2020 asked the Economic Affairs Ministry to identify fundamental economic policy issues where action could be taken to move towards a circular economy by taking into account the large number of existing projects and strategies, including standards, and by working with the other ministries and the business and professional associations. The **circular economy** is about establishing and closing materials cycles within the limits of technical and economic feasibility, thus minimising the use of non-renewable resources and the level of waste and harmful emissions. In a broader sense, the concept of the circular economy covers not only technical aspects, but also economic issues such as business models (sharing economy/platform economy), (intellectual) property, the data economy, regional economic structures and public procurement. Figure 3 visualises the concept of the circular economy. The Economic Affairs Ministry is currently working towards implementing the decision adopted by the State Secretaries' committee's decision.

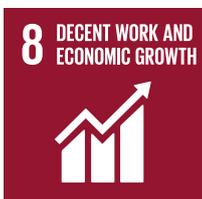
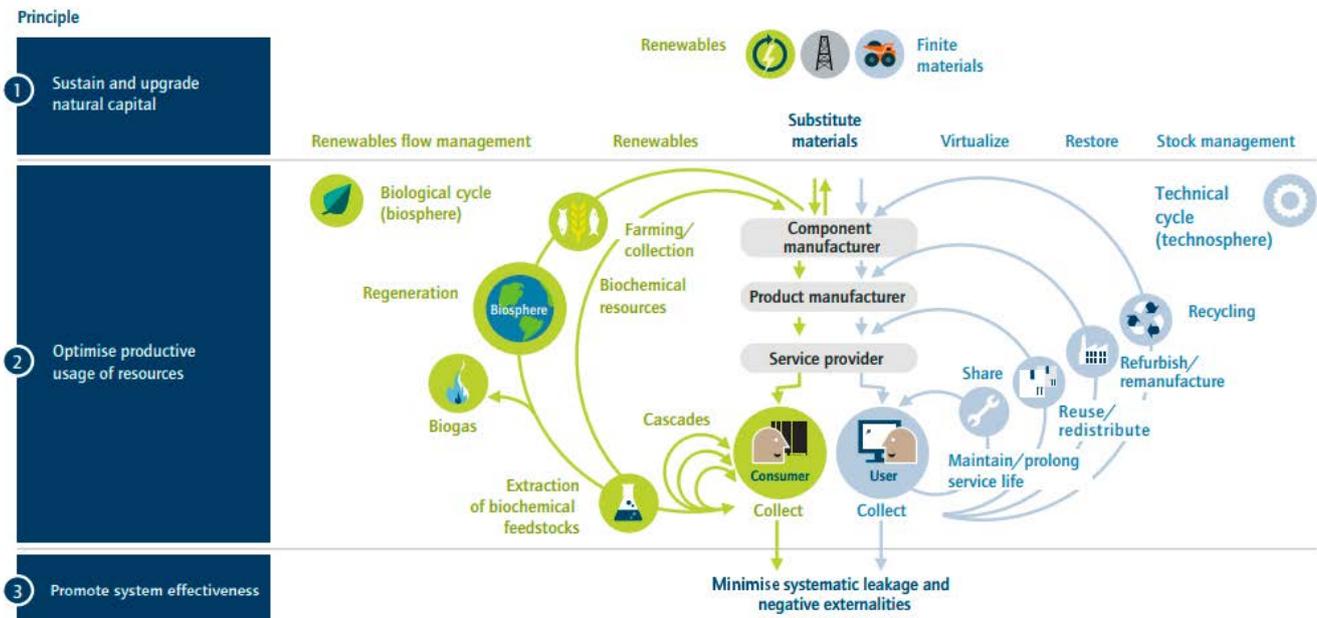


Figure 3: Concept of the circular economy



Source: Weber, T./Stuchtey, M. (Eds.): Deutschland auf dem Weg zur Circular Economy – Erkenntnisse aus europäischen Strategien (Vorstudie), München 2019 (Germany on its way to a circular economy – conclusions drawn from European strategies (preliminary study), Munich 2019)

Lightweighting is a key enabling technology and a design philosophy that aims at reducing a product’s weight whilst at the same time improving its properties. It thus promotes resource efficiency. The Economic Affairs Ministry is helping companies implement lightweighting solutions by fostering an efficient transfer of knowledge across different technologies between industry stakeholders. The Lightweighting Initiative, with the various fora and networking opportunities it provides, serves as a central contact point for German businesses. This initiative is being supplemented by additional targeted funding measures and the Lightweighting

Forum. The Economic Affairs Ministry’s measures on lightweighting are a further contribution towards achieving **SDG 12**.

The Economic Affairs Ministry’s [Industrial Bioeconomy Funding Programme](#) supports the transfer of bioeconomic products and procedures from the lab to industrial practice. The **industrial bioeconomy** is a game changing technology and can boost the development towards a closed and climate-friendly circular economy. It allows for the development of completely new products and manufacturing procedures that are based on the sustainable use of resources, the replacement of fossil resources with biological ones and the use of waste. This initiative primarily helps achieve **SDGs 12 and 13**.



Raw materials are an essential basis for the generation of industrial output in both Germany and

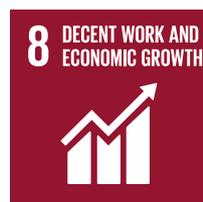
Europe. For Germany as a technology hub, a secure supply of raw materials is key. This also entails the responsibility to work towards a sustainable and socially acceptable extraction and a sparing use of raw materials. In January 2020, the Federal Government adopted its [Raw Materials Strategy](#). One of the Strategy's aims is to help companies achieve a secure and sustainable supply of raw materials. This accelerates progress towards a number of SDGs (particularly [SDG 12](#), but also [SDGs 1, 3, 14, and 15](#)).

Assuming responsibility for sustainable development in international trade relations

For many years, Germany has been one of the globally leading nations in the international trade of goods and services. Germany accounts for more than seven percent of global trade. Large parts of the German economy are dependent on exports, which also highlights the importance of international trade for employment. One in four jobs in Germany depends directly or indirectly on exports. The Economic Affairs Ministry therefore advocates open markets that are guided by clear rules. In the area of trade policy – a matter that falls within the competence of the European Union – the ministry has the lead responsibility for developing the

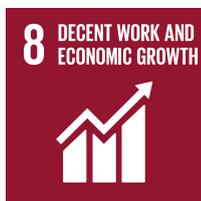
German position and representing it at European and international level. The European Commission's new trade strategy, which was published in February 2021, seeks to support the European Union's economic recovery from the COVID-19 pandemic. It focuses both on the modernisation of the World Trade Organisation (WTO) and on strengthening the bilateral trade agenda, and also looks at environmental and digital issues. The Economic Affairs Ministry strongly supports this within its field of competence, thus making a contribution to the achievement of a number of SDGs at international level.

Companies operating at an international level also carry a responsibility for complying with sustainability and human rights standards. This is also set out in the United Nations Guiding Principles on Business and Human Rights. Taking this into account, the Federal Government adopted the [National Action Plan for Business and Human Rights \(NAP\)](#) in 2016, which clearly states that companies are expected to comply with their human rights obligations including along their global value chains. The Economic Affairs Ministry is actively involved in the national and European law-making activities undertaken in this area, advocating the establishment of clear and practicable rules that will foster a joint global understanding of corporate social responsibility on human rights, create legal certainty for companies, empower the persons affected, and deliver a level playing field. By doing so, the Economic Affairs Ministry is contributing to the achievement of [SDGs 8 and 17](#).

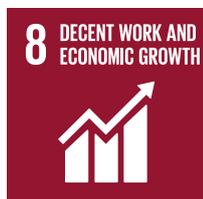


The Federal Government supports German companies' activities in foreign markets. The Economic Affairs Ministry has a wide range of different instruments for this. The German **chambers of commerce abroad**, which are receiving funding from the ministry, have a great level of expertise and are well connected in the countries where they are based. They therefore serve as the first point of contact for companies interested in developing and exploring the potential of markets abroad. This holds particularly true for fast-growing and new sustainability markets. The chambers build networks with key stakeholders from government, the authorities and the business sector and link these up with the right German experts. This leads to the establishment of flagship projects and robust cooperation projects which supplement and reinforce the Federal Government's funding activities. The Economic Affairs Ministry's [Market Entry Programme](#) (MEP) and its **Export Initiatives** support small and medium-sized companies as they venture onto new markets, develop existing ones, and build a sustainable presence and networks. The Export Initiatives are also designed to transfer sustainable innovations to new markets and target regions. This helps create new jobs both in Germany and abroad. The Economic Affairs Ministry's measures in this area support achievement of SDGs 3, 6, 7, and 13, and, indirectly also other SDGs such as SDGs 1, 8, and 9.

For example, the German Environmental Technologies Export Initiative supports manufacturers and service providers in the fields of sustainable water management, recycling, sustainable mobility, clean air, and noise control in their efforts to break into markets abroad, particularly those of emerging economies and developing countries. In light of tightening regulations on healthcare systems around the world, the Healthcare Export Initiative allows small and medium-sized enterprises to master foreign market mechanisms and place their goods and services onto markets abroad. It thus promotes a sustainable modernisation and expansion of healthcare systems around the world. The Economic Affairs Ministry's Energy Export Initiative helps German providers of climate-friendly energy solutions enter new markets abroad. When approving this initiative, the Bundestag stated that a key objective for this initiative was to combat climate change by exporting climate-friendly energy technology 'made in Germany' and related services to countries across the world. The Africa Business Network is facilitating the export of innovative sustainable technologies to Africa, for example under its healthcare industry projects in North Africa, its food processing projects in West Africa, and through its water sector expert who is based at the German-Arab Chamber of Industry and Commerce in Cairo.



The Federal Government is helping companies finance their export projects by providing them with export credit guarantees (better known as Hermes guarantees). The aspect of sustainability has long played an important role in the government's assessment of whether an export project is eligible for funding. The focus here is on **SDGs 8 and 9**; however, **SDGs 7 and 10** are also important. The environmental, social and human rights standards ensure that this is not at the expense of other SDGs. At the time this report is being conducted, considerable work is being undertaken to adapt the Hermes instrument to Germany's climate policy targets (**SDG 13**). It is important to note that the instrument is self-sustaining and therefore financially sustainable.



Chapter 3

Innovation and digitalisation are
drivers for sustainable development

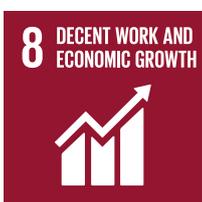


Back in November 2019, the State Secretaries' committee on sustainable development highlighted the importance of consistently taking into account sustainability aspects in the innovation process right from the start, particularly in the context of digitalisation. This is to ensure that opportunities for sustainable development are being used and risks for communities and the environment avoided. Additionally, it is to strengthen companies' capacity to innovate and contribute to a more widespread use of innovations. Digitalisation offers major opportunities for sustainable development. The use of digital technology can bring about change that will help meet the goals set out under the National Sustainable Development Strategy. Digital technologies are a requirement for making the energy transition and the transport transition possible. They are a prerequisite for low-energy and resource-efficient production processes, help us optimise the circular economy, improve the level of security, and enable elderly people to lead self-determined lives in their own homes. However, the impact of new technologies can sometimes be ambivalent, leading to economic, social and ecological consequences that are in conflict with the sustainable development goals.

In 2020, the **Digital Summit** and its large network discussed how digitalisation could become a driving force for sustainable development. The Digital Summit raised awareness for the full range of opportunities opened up by digitalisation and organised events, exhibitions and showcases to inspire participants to emulate its approaches. It also discussed the use of energy and resources of the digital systems themselves, which is related to a considerable rise

in the computing and storage capacities needed and will thus require the further expansion of computing centre infrastructure. In order to ensure that as digitalisation picks up speed, achievement of the climate targets is not undermined, our digital infrastructure needs to become highly energy-efficient. The Economic Affairs Ministry is seeking to set up a voluntary register for computing centres by coordinating closely with the industry. Its aim is to make available data on the energy use and energy efficiency of large computing centres in Germany, and if possible across Europe, and thus create competition for the highest level of efficiency among the operators.

The Economic Affairs Ministry believes that well-functioning competition is key for a positive development of the economy and therefore for the implementation of **SDG 8**. The rising level of digitalisation is leading to a shift in economic power, creating new challenges for **competition policy**. Large digital and platform businesses benefit from network effects and economies of scale and can thus gain considerable market power and extend it across market boundaries. As a result, digital markets often have a tendency towards monopolisation. In order to ensure effective competition and free access to digital markets, the Economic Affairs Ministry prepared the ARC (Act against Restraints of Competition) Digitisation Act, which entered into force at the beginning of 2021. It provides for a well-targeted, pro-active and digital competition law. Markets, including digital markets, need to continue to be contestable. Competition rules need to be effectively enforced. Amongst other things, the ARC Digitisation Act provides for stricter rules for platforms of overarching cross-market significance and improved data access for competitors. Ensuring that markets remain open and contestable and improving data access will also drive forward the development of innovations in this area, which in turn will help achieve **SDG 9**.



As our economy and society become increasingly interconnected, digital security is becoming ever more important. As part of the [GAIA-X](#) project, the Economic Affairs Ministry is working towards the establishment of an open, secure and interconnected European data and infrastructure ecosystem that meets the highest standards of data privacy and control over one's personal data (cf. Figure 4). The aim is to become more digitally sovereign while fostering innovation. The project seeks to build a reliable infrastructure, boost new business models across Europe and thus secure economic output and safeguard jobs in Germany and Europe (SDGs 8 and 9). In order to take part in GAIA-X, providers need to demonstrate that they meet a number of criteria not least in terms of compliance, information security, data privacy and energy efficiency. GAIA-X will also help the industry implement sustainability strategies more quickly. Transparency on energy standards makes it possible for GAIA-X services to be accredited in terms of the energy efficiency of computing centres. An integral part of the GAIA-X philosophy is the inclusion of sustainability and efficiency criteria in the self-descriptions that participating providers are required to submit. Via a catalogue, this enables GAIA-X users to make an informed decision on whether a GAIA-X provider meets the minimum requirements for sustainable digital services, and the users can also filter for other criteria to which they attach importance. As GAIA-X is a European initiative that will pool services and computing centres from across Europe and beyond, rules which apply to the entire system could help to bring about harmonisation. In this way, the sustainability criteria will apply across the whole of Europe and even beyond.

The industrial sector is making ever stronger use of digital technologies to enhance products and production services. Industrie 4.0 combines production methods with state-of-the-art information and communications technology. This helps adapt products to customers' individual needs. Customisation reduces overproduction and the mismatch between supply and demand, thus lowering resource consumption overall (SDG 12). Smart, digitally connected systems and production processes serve as the technical basis for this. The Economic Affairs Ministry is helping businesses harness the potential of technological development. The launch of [Plattform Industrie 4.0](#) marked the development of one of the world's largest Industrie 4.0 networks which brings together representatives from businesses, professional associations, academia, the unions and politics to develop solutions and recommendations for action on a wide range of different issues. The [input paper](#) presented by the Platform at the Digital Summit of December 2020 sets out specific use cases for the future of digital, connected and sustainable production (more than 60 examples of companies). Sustainability is one of Plattform Industrie 4.0's guiding principles for 2030 and will be increasingly focused on in 2021 in the context of specific use cases. The Economic Affairs Ministry is seeking to expand the work already undertaken on the issues of digitalisation and sustainability as part of its bilateral cooperation on Industrie 4.0 with China.

Digital technology is also becoming an ever more important factor in the economic success of the German **Mittelstand**. It helps these SMEs to develop new business models and raise their efficiency, thus allowing them to continue to compete or compete more successfully with large companies. Digitalisation can contribute to sustainable development in economic, social and ecological terms (cf. Figure 5).

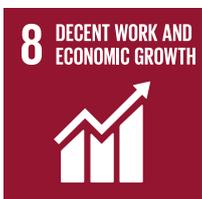
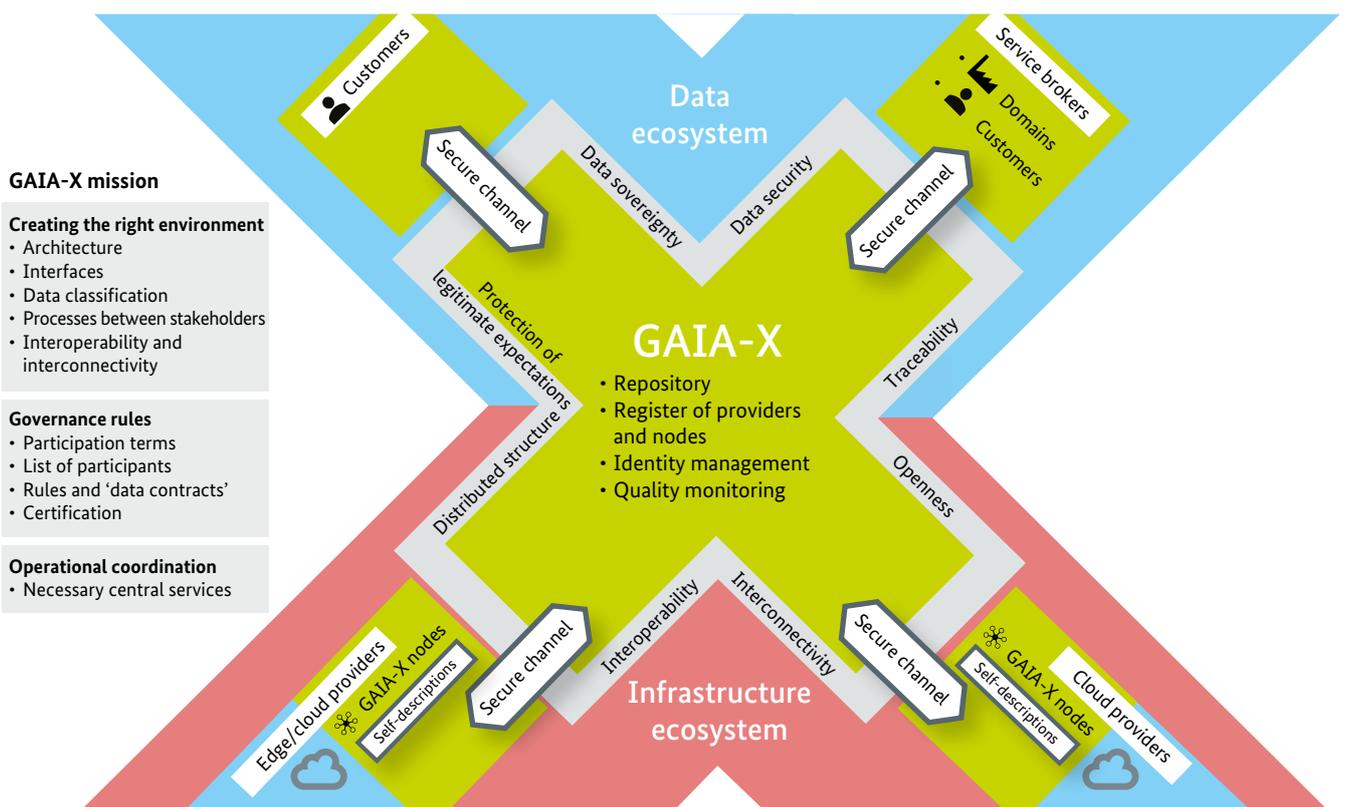


Figure 4: GAIA-X to strengthen data sovereignty, data security and data protection

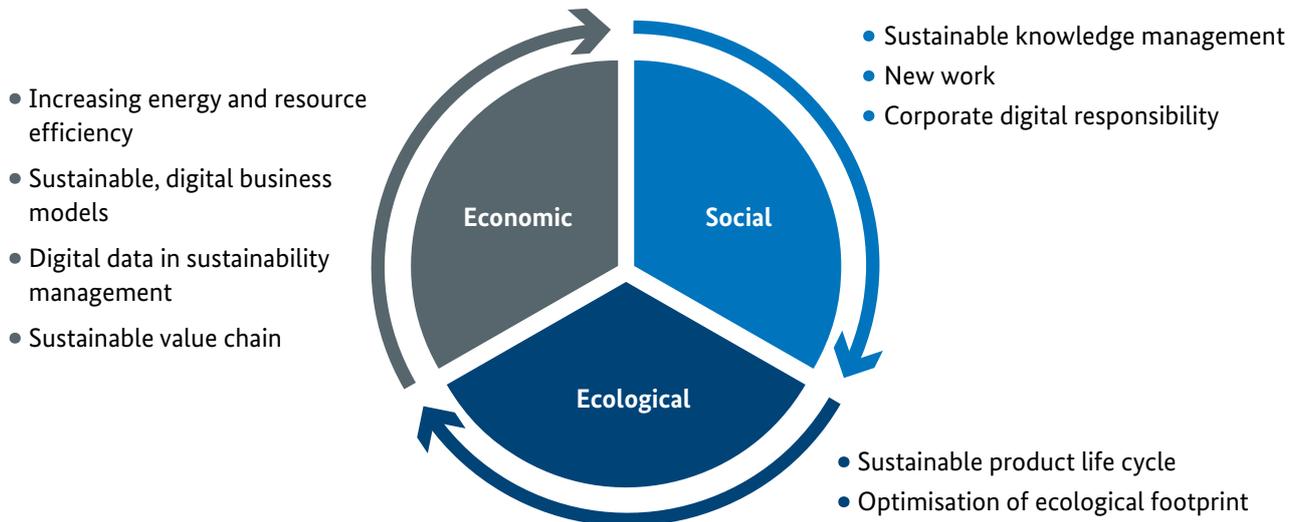


Source: Federal Ministry for Economic Affairs and Energy

The Economic Affairs Ministry has a wide range of funding and support measures for SMEs seeking to digitalise their business. It is also providing information and advisory services, not least for start-ups and young businesses. Enquiries about the ministry's funding toolbox are being answered on a case-by-case basis by the Ministry's funding and financing advisory service, taking into account the enquirer's specific needs. The grants provided under the "Digital Now – Investment Funding for SMEs" programme are to encourage SMEs to invest more in digital technology and also in the training and skills development of their employees. Under the Economic Affairs Ministry's [Mittelstand Digital](#) pro-

gramme, SMEs can receive support at one of the 26 Mittelstand 4.0 Centres of Excellence which are spread out across Germany. This support includes access to expert knowledge, demonstration centres, best practice examples, information services and training courses. One example here is the [interactive guideline helping SMEs assess their businesses' ecological and social challenges](#). This guideline is an opportunity for SMEs to systematically prioritise actions that will improve their businesses' ecological and social sustainability and to develop effective follow-up actions. In addition to this, there are also AI coaches who inform companies about artificial intelligence (AI), help them implement projects and

Figure 5: Digitalisation – a pillar of sustainability

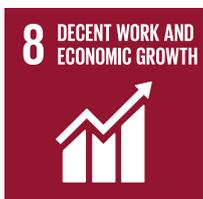


Source: Accompanying research group for Mittelstand Digital

develop support offers. The launch of the Germany-wide network of 'Mittelstand Digital' centres will further expand the range of digital support offers for small and medium-sized enterprises on issues such as resource efficiency, the circular economy, resilience, change management and skills development/life-long learning with a view to further strengthening companies' viability. The ['IT security in Commerce'](#) funding initiative is making SMEs more aware of the issue of IT security and, via a wide range of different measures, is helping them adopt an adequate and sustainable level of IT security. The mission of the IT security transfer office is to pool existing IT security support offers, adapt these

to the individual security needs of SMEs, their employees and decision-makers, and make them available at the national level.

[go-digital](#) is another funding programme by the Economic Affairs Ministry that helps SMEs digitalise their business. Its three modules, namely IT security, digital market development and digitalised business processes, are aimed specifically at small and medium-sized companies in the commercial and skilled crafts sectors. The programme promotes practical advisory services for companies wishing to keep pace with technological and social developments in the areas of online sales, digitalisation of day-to-day business and IT security. The Economic Affairs Ministry's measures in this area are a further contribution towards achieving **SDGs 8 and 9**.



Digital technologies and data-driven efficiency gains are key for meeting the sustainable development goals. The Economic Affairs Ministry's funding for excellence in the area of digital technology encourages the commercial exploitation of scientific results and findings. By launching the AI innovation competition, the ministry has taken on a leading role in the implementation of the **Federal Government's AI Strategy**. The programme targets large-scale powerful alliances between the business sector and academia which are able to influence entire industries. The envisaged solutions are to provide important impetus for building new, innovative, digital ecosystems in areas of application and industries that are relevant for the German economy. The subjects covered range from industry/manufacturing, healthcare, smart living, trade, agriculture, mobility and construction all the way to quantum computing. Some of the projects which are receiving funding (such as [Agri-Gaia](#) and [NaLamKI](#)) are being created on the basis of GAIA-X.

The Economic Affairs Ministry's measures on **quantum computing** aim at tapping the potential of this new technology for use in businesses at an early stage. This includes in particular providing easy access to expertise and algorithms and taking into account the needs of small and medium-sized enterprises (Making SMEs fit for QC). The ongoing [PlanQK – platform and ecosystem for quantum-based artificial intelligence](#) – project, which is being funded by the Economic Affairs Ministry, is currently the largest community-building project in Germany that maps the software and user sides of quantum computing in an ideal manner. There is an oppor-

tunity to further strengthen the PlanQK community with the aim of establishing a commercial QC platform. The aforementioned measures are mainly contributing to the achievement of **SDG 9**. Use of the new technologies will also promote progress towards other SDGs.

Microelectronics is a key cross-sectoral industry for digitalisation. High-performance chips and microelectronics components are an essential part of our modern lives. The Economic Affairs Ministry is therefore making available up to €1 billion for the development of new microelectronics products. Under the [Important Project of Common European Interest \(IPCEI\) on Microelectronics](#), Germany, France, Italy and the UK have been working for a long time on maintaining and enhancing European capabilities and expertise. From an economic and geopolitical (or security policy) viewpoint, it is indispensable for Germany and Europe to strengthen and enhance their microelectronics capabilities. At the end of Germany's Presidency of the Council of the European Union in December 2020, 20 EU Member States in their joint declaration entitled "A Joint Initiative on Processors and semiconductor technologies" agreed to further strengthen European value chains in this area and to set up another IPCEI as a funding mechanism for this. The activities on microelectronics are another contribution towards the achievement of **SDG 9**.

Small and medium-sized enterprises often have deep roots in the region where they are based. It is therefore important to enable **cities and regions** to make use of the opportunities of the digital transformation. Digital technology is changing interactions in many areas, including in education, energy, transport and the public sector. In order to help cities and regions to develop into 'smart' cities and regions, the Economic Affairs Ministry has developed the [Stadt.Land.Digital](#) ('Urban.Rural.Digital') initiative. The initiative provides support, information



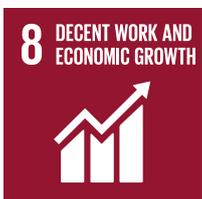
and advice on how to design and implement digital strategies. The platform is aimed at all relevant stakeholders and interest groups at federal, Länder and municipal level, as well as companies, associations and civil society. The ministry's activities in this area support achievement of **SDG 11**. Under the Stadt.Land.Digital initiative, a Smart City Navigator has been developed to help cities and municipalities implement sustainability gains. The Navigator highlights sustainable digitalisation projects that have already been implemented across German cities and municipalities. The Smart City Navigator places each project in relation to the 17 SDGs.

The Economic Affairs Ministry aims to foster Germany's innovation capacity by creating an environment that is conducive to investment and by providing funding programmes that are targeted to the needs of the market. This helps Germany meet **SDG 9**. In order to promote the implementation of this goal, the ministry is helping SMEs improve their innovation capacity via a number of cross-sectoral and technology-neutral programmes. Germany's **innovation policy** is based on the principle 'From concept to market success'. The ministry's Transfer Initiative provides support for transferring innovations from the lab to the market. To this end, the Ministry is working with innovation stakeholders to see which transfer measures already work well, and to identify areas where improvements are needed. The aim is to optimise the innovation ecosystem in Germany and thus to boost the rate of innovative activity. The key elements of the transfer initiative include a series of dialogues and a road show.

Financing new business creation and innovation

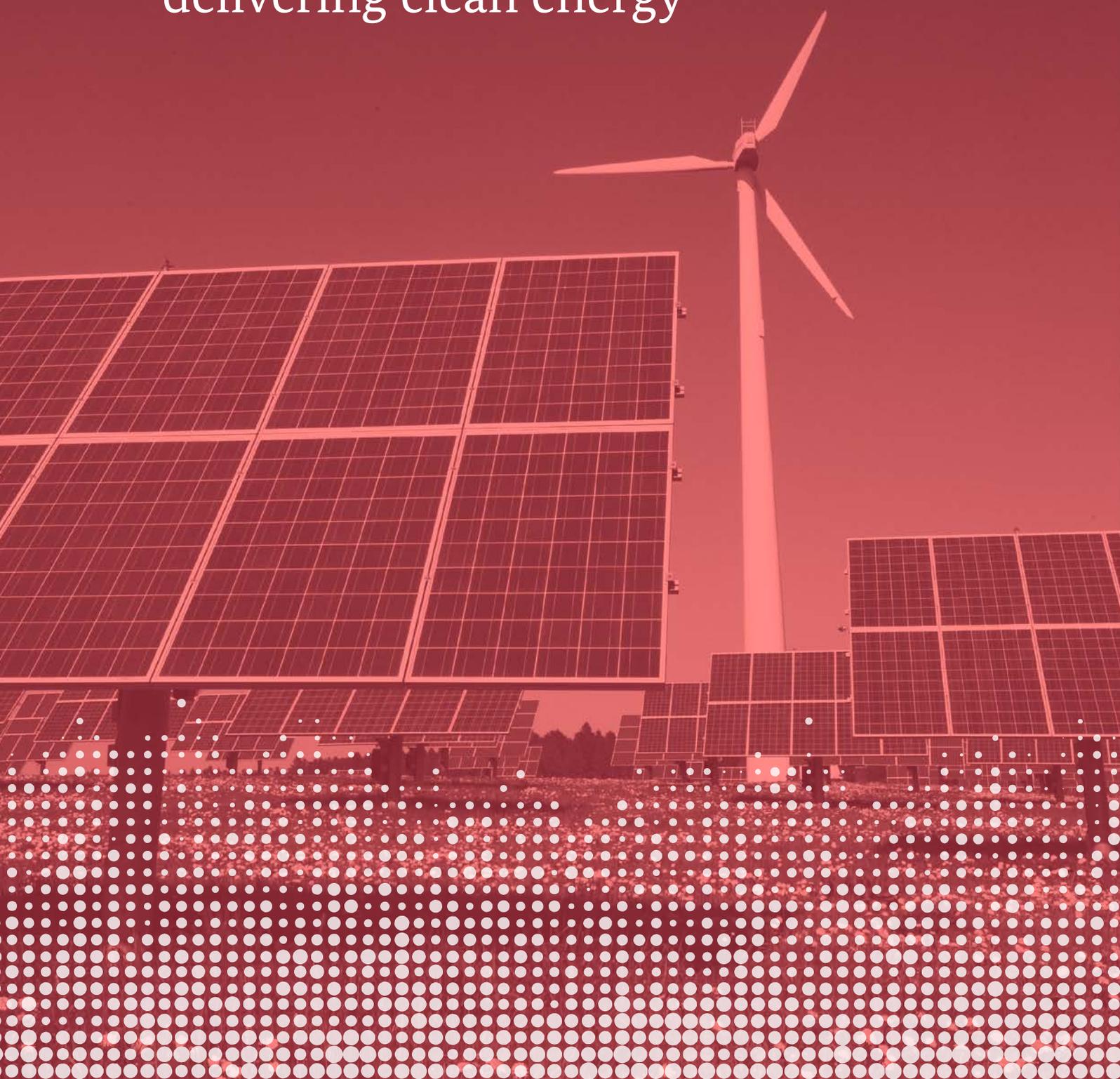
Companies need a sound financing base in order to be able to develop innovative ideas and business models. Putting economic development on a sustainable basis will require the efforts not only of the German Mittelstand and its established companies, but also of young companies that can enter new markets and create jobs by developing innovations and making investments. The Economic Affairs Ministry's wide range of funding options help small and medium-sized enterprises, freelancers, persons interested in setting up a new business and innovative start-ups realise ideas for new products, processes and services. These funding options supplement the financing mechanisms provided by financial institutions and private-sector capital providers and cover the entire spectrum of financing needs. Additionally, there are individual programmes (such as the ERP Digitisation and Innovation Loan programme and KfW's climate action scheme for the Mittelstand) that provide targeted support for companies as these implement innovative, digital and sustainable projects.

Information about the funding available for new start-ups, commercial enterprises and members of the liberal professions is being provided by the Economic Affairs Ministry's finance experts. The ministry's measures in this area contribute to the attainment of **SDGs 8 and particularly 9**.



Chapter 4

Mitigating climate change and
delivering clean energy



The need to mitigate climate change is the central global challenge for this generation and is anchored in the 2030 Agenda by [SDG 13](#). At the same time, a secure and affordable energy supply also remains an essential basis for the German economy. Our energy policy therefore continues to be guided by the three goals of energy security, affordable energy and of having an energy supply that is environmentally compatible. Germany's energy transition, for which the Economic Affairs Ministry has the lead responsibility, is an ambitious energy and climate policy which also delivers on [SDGs 7 and 13](#). The aim is to make more from energy: we want to do what we do using as little energy as possible – and to make sure that the vast majority of the energy we do use is renewable.

In autumn 2019, the Federal Government launched the **Federal Climate Change Act**, which anchors in law the goal of cutting Germany's greenhouse gas emissions by 55% between 1990 and 2030. The [Climate Action Programme 2030](#), which was also adopted in autumn 2019, is the basis to reach this climate target. Further to this, the Federal Government is pursuing the long-term goal of attaining greenhouse gas neutrality in Germany by 2050. This makes it clear that, despite the successes of recent years, the economy is still facing a massive transformational task. We will need an alliance of society, business and the state if we are to successfully combine climate neutrality, prosperity and competitiveness. Germany has already achieved a lot in terms of climate action. For example, greenhouse gas emissions dropped by around 41% between 1990 and 2020. This means that Germany is leading

the way forward in Europe (average reduction in the EU only approx. 23% between 1990 and 2018). The European Commission is also pursuing an ambitious climate policy via the European Green Deal and its proposal to raise the EU's climate target for 2030 to at least minus 55%.

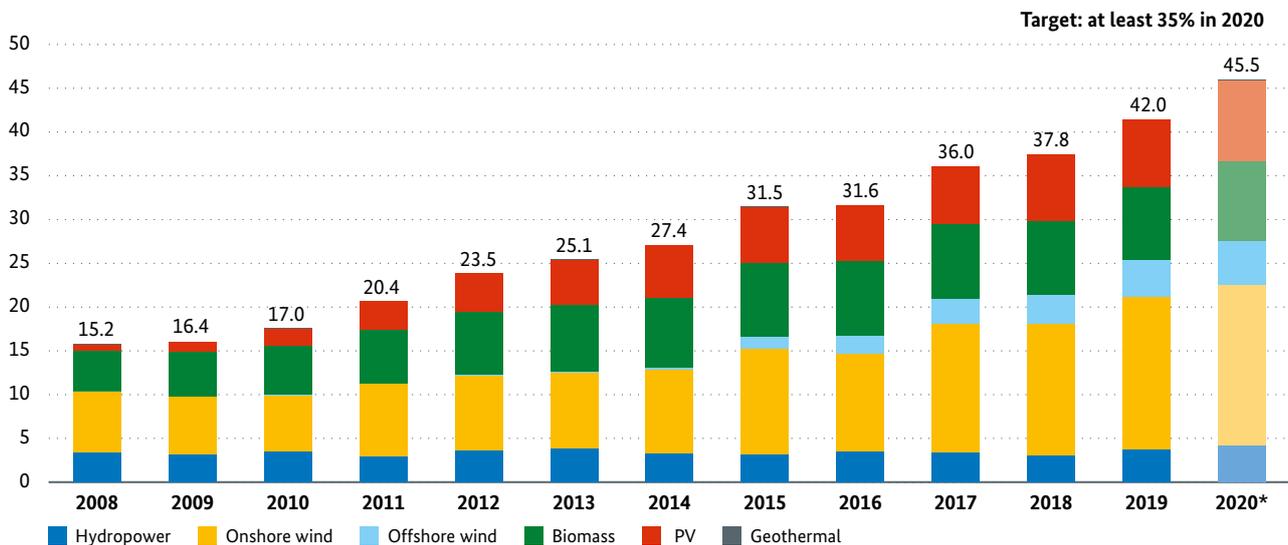
In 2020, the Federal Government puts the legal basis in place for the implementation of major parts of the Climate Action Programme 2030. At the heart of the market-based measures is the **national carbon pricing in the fields of transport and heating**, which was introduced in 2021. All of the revenue from the carbon pricing – the fuel emissions trading – is used for climate mitigation measures (e.g. purchasing premium for electric cars, funding to improve the energy performance of buildings), to reduce the burden on industry, and to ensure a social balance. This particularly involves citizens and businesses paying less for their electricity, as the bulk of the revenue from the fuel emissions trading is used to reduce the EEG surcharge. Further key measures in the Climate Action Programme 2030 are the Coal Phase-out Act, the thorough revision of the Renewable Energy Sources Act (EEG 2021), and the revision of the Offshore Wind Energy Act.

If Germany is to attain its climate targets, it will be crucial to restructure the generation of energy by making greater use of low-emission technologies (cf. Figure 6). In view of the 2030 Agenda, the lead ministry responsible for energy policy, the Economic Affairs Ministry, is making a key contribution towards the attainment of [SDG 7](#).

The Bundestag voted in favour of **phasing out coal-fired power** in order to substantially reduce greenhouse gas emissions. The Act on the Phase-out of Coal-fired Power Plants puts into practice the structural-policy recommendations made by the Commission for "Growth, Structural Change



Figure 6: Percentage share in gross electricity consumption



2020: provisional data

Source: Federal Ministry for Economic Affairs and Energy

and Employment”. The installed coal-fired generation capacity on the market is to be reduced to a total 17 gigawatts by 2030, and coal-fired power generation is to cease entirely by 2038 at the latest. The Coal Phase-out Act is making an important contribution towards the attainment of **SDGs 7 and 13**.

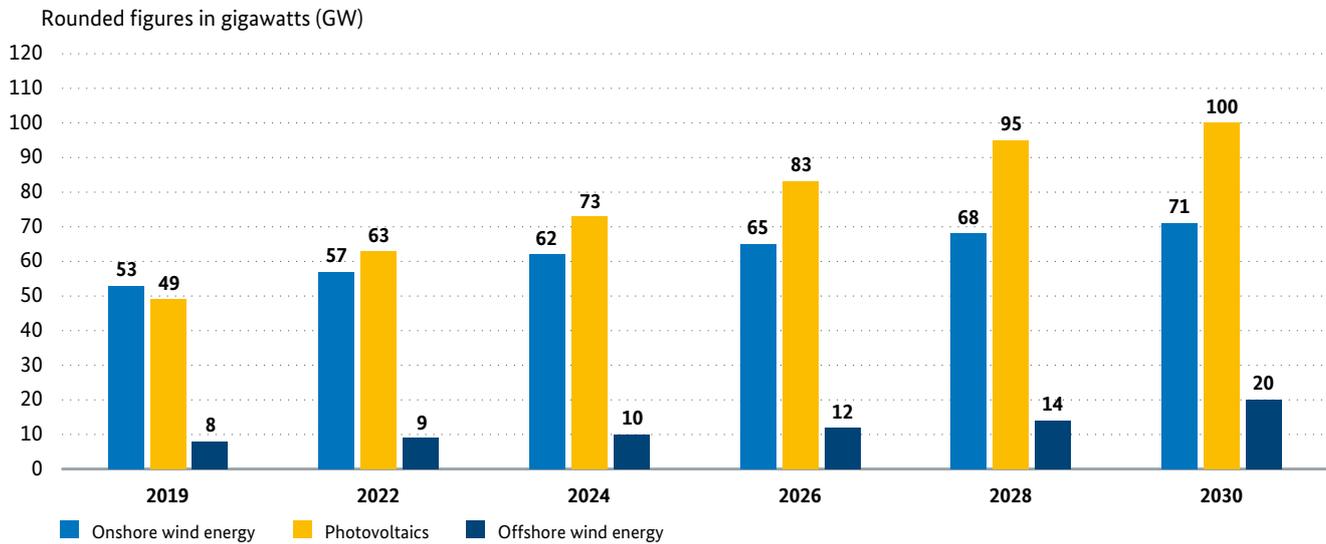
The **expansion of renewable energy** is an important field of action, and some of the targets for it indicated by the National Sustainable Development Strategy have already been attained. For example, the proportion of gross electricity consumption covered by renewable energy in 2020 stood at around 45.5%. This means that the 35% target for

2020 was overachieved ahead of schedule and by some distance. Also, the deployment corridor for the expansion of renewable energy for 2025 (40-45%) was attained in 2019, six years before the deadline (cf. Figure 6).

The Renewable Energy Sources Act (EEG) has been a central pillar in the successful roll-out of renewable energy in the electricity sector for more than 20 years. A thoroughly revised Renewable Energy Sources Act (EEG 2021) entered into force at the beginning of 2021. It sends out a clear signal for greater efforts to mitigate climate change and for more renewables. The 2021 Renewable Energy Sources Act stipulates ambitious deployment paths for renewable energy in law with a view to having 65% of gross electricity consumption covered by renewable energy by 2030. Some of the goals for the individual technologies in the 2021 Renewable Energy Sources Act are even more ambitious than those contained in the Climate Action Programme 2030,



Figure 7: EEG 2021* and Offshore Wind Act: ambitious expansion targets for 2030



Source: Federal Ministry for Economic Affairs and Energy

*EEG 2021 = Renewable Energy Sources Act 2021

in order to increase the likelihood that the 65% expansion target will be achieved. The target set for onshore wind energy is 71 gigawatts of installed capacity. This is in line with the upper margin of the 67-71 gigawatts target set out in the Climate Action Programme 2030. At 100 gigawatts, the target for solar energy is two gigawatts higher than that envisioned in the Climate Action Programme 2030. Each year, a strict monitoring process reviews whether renewable energy can actually be expanded at the envisaged rate. The 2021 Renewable Energy Sources Act also creates the instruments for quick changes to be made if obstacles crop up en route. Also, for the first time it prescribes in law a new long-term goal: greenhouse gas neutrality for the electricity produced or consumed in Germany before 2050. An overview of the ambitious expansion targets for renewable energy up to 2030 can be found in Figure 7.

In order to advance the expansion of **onshore wind energy**, the Economic Affairs Ministry presented the [Action Programme to Strengthen Onshore Wind Energy](#) in 2019. It cites 18 specific measures and outlines where responsibilities lie at federal and Länder level with a view to boosting public acceptance of the wind energy roll-out and to accelerating approval procedures. The entry into force of the 2021 Renewable Energy Sources Act means that almost all 18 measures have been implemented: rules on distances, night-lighting only as needed, financial participation of the local communities, federal/Länder agreement to reduce barriers to approvals, acceleration of approval processes under immission protection rules, synchronisation of the expansion of renewable energy with the expansion of the grid, implementation of the digitisation strategy and the regional steering of the new-build of renewable energy installations.

The measures to improve the compatibility of the expansion of onshore wind energy with the needs of species and nature conservation (SDG 15) are of particular importance. The protection of endangered species is one of the key challenges for the expansion of onshore wind energy. A lack of clarity about the relevant benchmarks and a particularly cautious approach by the approval authorities often result in lengthy delays and impede large numbers of projects. With a view to a nationwide harmonisation of the rules on protection of endangered species and wind energy installations, in December 2020 the Conference of Environment Ministers adopted a “significance framework” for the assessment of the impact of wind turbines on certain species of birds. The framework is a first step towards adopting a uniform approach to enforcing species protection law. It will be given further shape as part of a follow-up process in the period up to 2022.

Strengthening the expansion of onshore wind energy is a joint task for the Federation and the Länder. It is necessary to strike a balance between making the expansion of renewables easier and faster, and public acceptance issues, also in terms of [SDG 11.1](#) (land use). A committee for cooperation between the Federation and the Länder is being set up in 2021 at state secretary level, chaired by the Economic Affairs Ministry, with a view to improving progress on this joint task. The Länder will report by 31 August each year to the cooperation committee about the status of the expansion

of renewable energy, and particularly the amount of land allocated to onshore wind energy, site planning, and the status of approvals of wind turbines. Working from these data, the cooperation committee will present a report to the Federal Government by 31 October each year. Following this, the Federal Government will report to the Bundestag.

The revision of the Offshore Wind Energy Act has increased the expansion target for **offshore wind energy** from 15 to 20 gigawatts by 2030. By 2040, the installed capacity is to amount to 40 gigawatts. In view of the importance of the expansion of renewable energy for the attainment of the global climate targets, the Economic Affairs Ministry uses export credit guarantees (“Hermes” insurance) to back the expansion of renewable energy abroad. In May 2020, a special initiative was established which substantially improves the possibilities for insurance coverage and the terms of financing for German exports in this area.

The revision of the Energy Industry Act marks a clear signal from the Economic Affairs Ministry for the energy world of tomorrow. Overall consumer rights are being strengthened, and consumers which dispose of a smart metering system within the meaning of the Metering Point Operation Act will be entitled in future to a dynamic electricity tariff. Smart meters can help to cut energy costs. This revision contributes towards [SDGs 7 and 8](#).

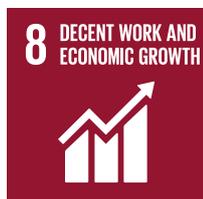
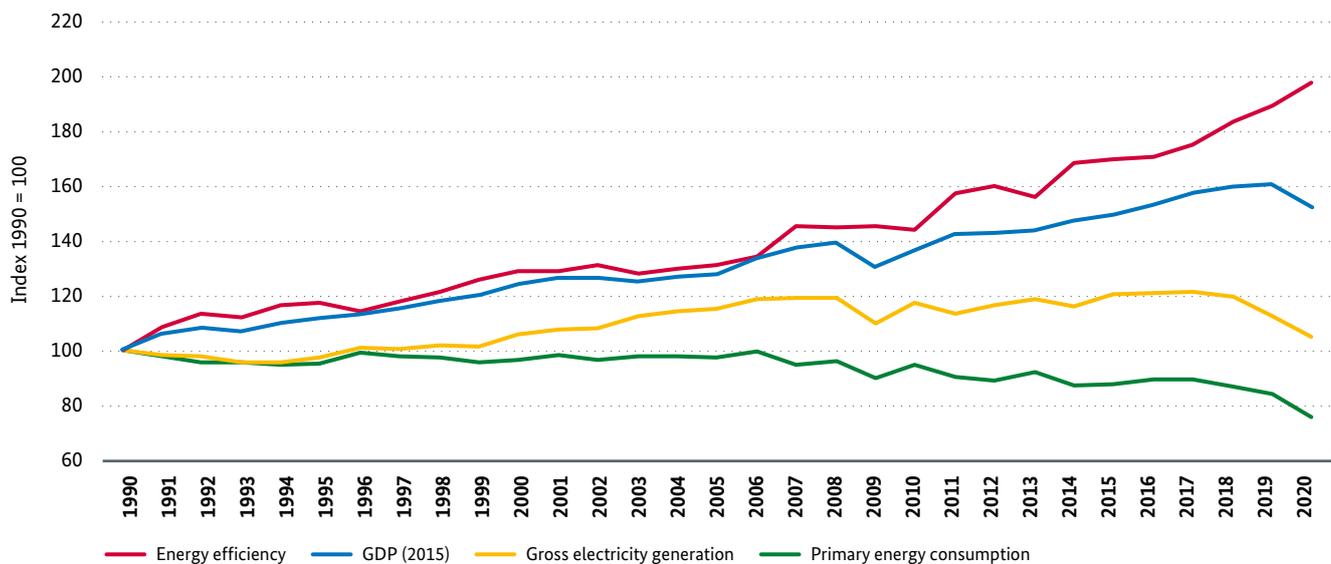


Figure 8: Development of primary energy consumption, electricity generation, energy efficiency and economic growth



Source: Federal Ministry for Economic Affairs and Energy

Setting a focus on differing regional challenges, five large-scale model regions were set up as part of the [Smart Energy Showcases – Digital Agenda for the Energy Transition](#) (SINTEG) funding programme: showcases in which model solutions for tomorrow’s energy supply are drawn up and tested. The main aim of the programme is to **digitalise the energy sector**. The programme places a clear focus on building smart networks linking up the electricity supply and demand sides, and on the use of innovative grid technology and concepts. This fosters progress on implementing **SDGs 7 and 9**.

Decoupling economic growth and energy consumption and boosting energy efficiency are crucial aspects of the energy transition. The Federal Government is seeking to make Germany the world’s most energy efficient economy and to halve primary energy consumption between 2008 and 2050. The measures taken by the Federal Government have already had an impact as Germany moves towards this target. Whilst our gross domestic product (GDP) has been increasing for years, our primary energy consumption has been falling: in the period from 1990 until 2020, GDP rose by 45.5%, whilst primary energy consumption declined by 21.6% (cf. Figure 8).

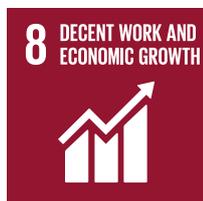


The Federal Government's [Energy Efficiency Strategy 2050](#) sets the course for a further increase in **energy efficiency**. Among other things, it states that primary energy consumption is to fall by 30% from its 2008 level. Only an interplay of renewable energy and efficiency measures can ensure that the target is met in the most cost-effective and sustainable way possible. A focus here is also placed on issues like material and resource efficiency. The 2050 Energy Efficiency Strategy, together with the new National Action Plan on Energy Efficiency (NAPE 2.0), creates a broad package consisting of 54 separate measures (from the Climate Action Programme 2030 and other measures). For the efficiency funding programmes, federal funding of €6.3 billion is available on average each year from 2021 to 2024, according to current fiscal planning. This comprehensive programme means that the Economic Affairs Ministry is helping to attain not only **SDG 7**, but also **SDG 8**.

The Economic Affairs Ministry offers a host of advisory, assistance and funding programmes to help both citizens and companies to use energy more efficiently. The Ministry's "[Energy efficiency and heat from renewables support strategy](#)" formed a comprehensive concept for a reform of the funding. The various support programmes were gradually restructured, packaged together thematically and targeted at specific audiences. Citizens, companies and municipalities should thus be able to quickly find the right funding programme for them and easily complete the application process.

The **EU Energy Label** has been an important driver behind the market development of energy-consuming products for more than 20 years. It encourages innovation, fosters competition and boosts demand for energy-efficient products. A new EU Energy Label was introduced in March 2021. The Economic Affairs Ministry is running a campaign to raise awareness of the changes on the part of manufacturers, retailers and consumers and to increase the impact of the EU Energy Label. In addition to **SDG 7**, these measures also contribute towards the attainment of **SDGs 9 and 12**.

By means of its **energy advice programmes**, the Economic Affairs Ministry is helping households, municipalities, SMEs and non-profit organisations to take decisions on improved energy efficiency and the use of renewable energy. Here, grants of up to 80% of the costs of the advice are available. At the end of the advisory process, the client is provided with a tailored retrofitting roadmap which can also embrace the aspect of sustainability. In this way, a funded advisory process tends to result in more efficiency measures being undertaken than were initially envisaged. Between 2017 and the end of 2020, some 590,000 consultations were carried out via the Federal Office for Economic Affairs and Export Control and the consumer centres. Advice on energy to private-sector owners of residential buildings can result in an average of up to 8,000 kilowatt hours being saved over a year. These measures also help to achieve **SDG 11**.



The **environmentally friendly design of products (ecodesign)** makes an important contribution towards improving the energy and resource efficiency of products and thus is an important step along the road to reducing carbon emissions, implementing the energy transition, and achieving the climate targets. In March 2021, a whole series of new and revised ecodesign regulations entered into force. Consumers benefit from ecodesign because they can save money through lower electricity bills and longer lasting products. At the same time, ecodesign helps to safeguard the competitiveness of industry. On the one hand, the efficient use of energy and resources helps companies to cut their production costs. On the other hand, ecodesign offers opportunities to become more innovative. These measures help to implement **SDGs 9** and, particularly, **12**.

The **buildings sector** is of considerable significance when it comes to efficient use of energy. Much has already been achieved via the Federal Government's funding programmes for the buildings sector ([CO₂-Building Rehabilitation Programme / KfW Energy-efficient Construction and Retrofitting programme](#); [Market Incentive Programme for Renewable Energy](#)). For example, the programmes have helped to cut carbon emissions in the buildings sector from 210 million tonnes in 1990 to 117 million tonnes in 2020: a fall of roughly 44%. Also, the programmes leverage a lot of local private-sector investment in work by skilled craftspeople: since they were launched, investment of more than €400 billion has been triggered. The CO₂ Building Renovation Programme funded the energy-efficient ret-

rofitting and new-build of around 5.49 million housing units between 2006 and December 2019. Also, the Economic Affairs Ministry has updated the market incentive programme for heat from renewable energy, and has introduced a bonus for replacing oil-fired boilers. The long-term renovation strategy contains a roadmap to attain the long-term energy and climate targets in the buildings sector. The Buildings Energy Act, which entered into force in November 2020, unifies and streamlines energy conservation law and provides further incentives for the use of renewable energy. Also, the Economic Affairs Ministry has reorganised the 'Federal Funding for Efficient Buildings' scheme and adjusted it to better suit beneficiaries' needs. This marks another contribution by the Economic Affairs Ministry towards the implementation of the Climate Action Programme 2030. It reduces the complexity of the funding landscape and provides even stronger incentives for investment in energy efficiency and the use of renewable energy. These measures also help to achieve **SDG 11**.

New, low-cost and market-driven energy and efficiency technologies will play a key part in the success of the energy transition. For this reason, the Economic Affairs Ministry has oriented its [7th Energy Research Programme](#) towards funding **energy research** for the energy transition. Under the 7th Energy Research Programme, the Federal Government is making available funds totalling around €6.4 billion in the 2018–2022 period. In order to speed up the transfer of technology and innovation from the lab to the market, the Economic Affairs Ministry has used the new Energy Research



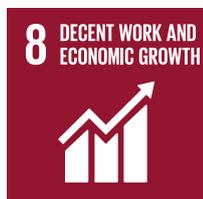
Programme to strengthen practical research by introducing the format of the [Regulatory Sandboxes for the Energy Transition](#). The aim is to test technical and non-technical innovation under real-life conditions and at industrial scale. €100 million will be made available for the Regulatory Sandboxes for the Energy Transition each year until 2022. The intention is to continue and increase this funding after that date. Also, the “Hydrogen technologies 2030” research campaign is to improve existing technologies and lead to new technologies. The Economic Affairs Ministry and the Education and Research Ministry are to pump up to a billion euros into energy research into hydrogen in the coming years. These measures support the attainment not only of **SDGs 7 and 13**, but also of **SDG 9**.

Since it is a versatile form of energy, **hydrogen** will play a special role in the decarbonisation of the German economy. Hydrogen that is produced using renewable energy in particular permits significant reductions in greenhouse gas emissions in industry and transport. The [National Hydrogen Strategy](#) aims to develop a market for hydrogen and hydrogen technologies. The goals of the strategy are also underpinned by an action plan which is subject to constant development. Here, the Economic Affairs Ministry attaches importance not only to the climate change mitigation aspect, but also to the industrial potential for German firms on this global market: the National Hydrogen Strategy establishes a framework for action for the future production, transportation, exploitation and utilisation of hydrogen and therefore for relevant innovations and investments. Also, the Strategy

sets out the steps that need to be taken in order to open up new value chains and advance international energy policy cooperation. In the context of the Important Project of Common European Interest on Hydrogen Technologies and Systems (IPCEI on hydrogen), the Federal Government is planning to provide funding for integrated projects along the entire hydrogen value chain, from the production of green hydrogen to hydrogen infrastructure, through to its use in the industrial and mobility sectors. Funding is to go to projects which make a major contribution towards the implementation of the National Hydrogen Strategy and the attainment of the goals of the EU’s environment, energy and transport strategy. This measure helps various **SDGs to be attained: SDGs 7, 8, 9 and 13**.

Resilience from adaptation to climate change

The consequences of global climate change – such as increasing global warming, rising sea levels, extreme weather events – are already visible and tangible today, and scientists believe that they will also have an increasing range of impacts in Germany. This represents a great challenge for the German economy. If companies are to safeguard their competitiveness and their economic potential, it is important for them to adapt as comprehensively as possible to these changes. Climate change can have a lasting impact on business models, factors affecting decisions on where to invest, competitive conditions and thus the future viability of companies and entire sectors.



In view of tightly meshed global supply and value chains, German industry is particularly susceptible to potential risks and damage caused by global climate change.

In its dialogue on climate policy with a wide range of representatives of businesses and associations, the Economic Affairs Ministry therefore regularly highlights the need for businesses to adapt to climate change. The intention is to raise awareness of the need for resilient structures and to help the companies grasp and analyse the challenges and risks of climate change, and to adapt themselves accordingly.

The underlying principles for this are set out in the Federal Government's [German Adaptation Strategy](#), with regular progress reports and the Adaptation Action Plan. This plan contains numerous individual measures in various policy fields to reduce the vulnerability of natural, social and economic systems to the effects of climate change. In this context, the Economic Affairs Ministry is working actively not least on the ongoing development of funding instruments in the field of climate-resilient building and the climate-appropriate design of technical standards.

Chapter 5

Sustainability in the Federal Ministry for Economic Affairs and Energy



Resource-efficient and environmentally-friendly working methods in the Federal Ministry for Economic Affairs and Energy

The Ministry lives up to its responsibilities with regard to the implementation of the 2030 Agenda for Sustainable Development, including in its own administrative work and in its building and facility management. In March 2015, the State Secretaries' Committee for Sustainable Development adopted a [package of measures on sustainability](#), which comprises eleven points. These are specific measures to be implemented and monitored as part of an annual process, followed by the publication of a report in the following year. Among the sustainability measures implemented by the Economic Affairs Ministry in this context are the following (relevant SDGs given in brackets):

EMAS environmental management system

[\(Eco Management and Audit Scheme\)](#): In 2020, the Ministry submitted a declaration to the Federal Environment Ministry stating its interest in participating in the first convoy process for the implementation of EMAS. The process began in January 2021. Apart from the Economic Affairs Ministry, there are seven other authorities involved in the convoy process. The implementation process itself will take approx. 18 months to complete. The objective is to reach certification under EMAS. Re-certification will then take place every three years and will be in addition to the annual reports about the Ministry's environmental performance. Within a cycle of three years, all of the environmental reporting has to be fully revised and audited (SDGs 13 and 15).



Solar installations

Solar installations are integrated into the rooftop of Building G on the Ministry's premises in Berlin. These installations comprise approx. 68,800 solar cells in 712 modules, which are connected into 53 strands. Their combined potential output is approx. 102 kilowatts, but in the conditions in Berlin, this figure falls to an average of approx. 75 kilowatts. The average yield expected is 75,000 kilowatt hours per year, which is the equivalent of the annual power consumption of almost 20 households.

Each kilowatt hour conserved translates into 0.86 kilograms of CO₂ emissions avoided, adding up to 64.5 tonnes of CO₂ avoided by the Ministry each year. The Bonn premises also have a PV installation.

Energy efficiency for vehicles

The Ministry has expanded its eFleet to 15 cars. This corresponds to almost 58% of the overall fleet (SDG 13). The Ministry is complying with the target values set out in the programme on sustainability measures. Average carbon emissions from the fleet are below 95 grams CO₂/km, and among its newly purchased or hired vehicles, the share of vehicles boasting an emissions value of less than 50 grams CO₂/km (or a minimum range of 40 kilometres for electric vehicles) is higher than 20%. A charging station with two charging points is available in Berlin (and can also be used by employees), with Bonn to receive an equivalent infrastructure by the end of 2021.

Alliance for sustainable procurement

The Ministry's premises in Bonn and Berlin are supplied with 100% electricity from renewables (SDGs 7 and 13).

Water conservation has its limits where it has a negative impact on the quality of drinking water and also where it poses problems for waste water management. A well-defined monitoring system is in place to ensure that admissible limit values are respected and to optimise the process (SDG 6).

In mid-2016, the Ministry began to switch over from bright white paper to recycled paper bearing the 'Blauer Engel' seal of quality. Since 2020, the share of recycled paper used has been 99.8%. In 2020, the Ministry became entitled to publicly use the "Greener procurement – recycling paper friendly Federal authority" (SDGs 13 and 15).

Biodiversity/bees

There are more than 560 species of wild bees in Germany, including all bumblebee species. However, more than half of these species are endangered, some even threatened by extinction. The Ministry is actively involved in the protection of wild bees and insects. As a start, the Ministry has purchased five small nesting aids for wild bees and 25 mason bee cocoons to start a population (SDG 15).

Organisation of events

The organisation of events in the Ministry is guided by the [Guideline 'sustainable event organisation'](#) by the Federal Government. This is to ensure that the Ministry lives up to its responsibilities in terms of the SDGs, also with regard to the events it hosts.

Promoting gender equality by supporting compatibility between a career and family life

The Ministry takes the requirements for gender equality very seriously. Its work environment is free from discrimination and focused on gender equality, thus contributing to the implementation of SDG 5. The public service must set an example where the highly relevant issue of an equitable participation of women in management positions is concerned. The Ministry has come a long way in this regard. It was able to meet its own target of reaching a 40% share of women in management positions by the end of the 19th legislative period. The Ministry is still working towards the objective set out in the Coalition Agreement for the 19th legislative period (50% female management by 2025) and on greater progress towards equal opportunities.

In the interest of further improving gender equality within the Ministry, a number of measures have been taken to make it easier to combine a career and family life. For instance, working hours are flexible and mobile work is possible to allow employees to better adjust their individual working times to fit with their family commitments. In addition to this, there is the possibility to work from home on alternating days. The Ministry also offers a wide range of part-time work models designed to meet the different needs of each family. Teleworking is granted especially for employees with underage children or relatives in need of care, and for employees with severe disabilities. There are plans to further



expand the level of flexibility with regard to working times and places of work.

The Ministry also offers its employees family-support services, including parent-child offices, parent parking, help with finding holiday child care, day mothers/fathers and other (private) forms of child care, and cooperation with child day care centres in the immediate vicinity of the Ministry's various premises. This is an area in which the Ministry has been active for a long time, becoming the first Federal Ministry to be awarded the *berufundfamilie* GmbH (then: non-profit Hertie Foundation) audit certificate for family-friendly employers in 2002.

Tailored part-time models (also offered to those in managing positions), mobile work, events to help employees transition back into work after a long absence and family parking places have been implemented over 18 years of dedicated work and commitment throughout the Ministry. In view of this continuous work in the field of compatibility between a career, family life, and care work, the Ministry was awarded the permanent audit certificate for its long-term, consistent commitment to an HR policy that takes into account the needs of employees with a family and employees in the various different stages of their lives.

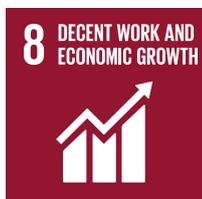
Diversity and equal opportunities

The Ministry is committed to reaching and maintaining the legally binding objectives of equal opportunities and freedom from discrimination in

the workplace. Most importantly, nobody must be placed at a disadvantage due to their ethnicity, gender, religion or world view, a disability, their age, or their sexual identity. Beyond this, the Ministry regards diversity among its employees as a strength. The Ministry already is a diverse place in terms of employees' cultural, ethnic and social backgrounds, their personal experience, and life plans. This forms an important basis for the work of the Ministry, to the benefit of a diverse society and all of its different groups. Diversity among the workforce also makes the Ministry more innovative. On top of this, the Ministry is and will remain a modern employer that is attractive to people with very different backgrounds. In this way, it can set an example for future generations. In all these ways, the Ministry is making an important contribution to the integrative purpose of the Federal public administration (SDG 10).

Participation and inclusion

The Ministry wants to improve social participation for people with disabilities. The UN Convention on the Rights of Persons with Disabilities confirms that people with disabilities have a right to full and effective participation in society and to equality of opportunity. The Ministry is constantly making adjustments with a view to reaching full accessibility in all aspects of the working environment. The Ministry's Commissioner for Inclusion and the administration are committed to close and trusted cooperation with the representative of staff with disabilities on all matters affecting individual employees with disabilities or all of them as a group (SDGs 4, 8 and 10).



In-house health management

Years ago, the Ministry began offering measures to improve its employees' health as part of its in-house health management, thus contributing to **SDG 3**. These measures have since been integrated into the in-house health management service (BGM) and institutionalised by means of an in-house agreement. The BGM is responsible for various fields of actions, including the working group on health, in-house health promotion, a re-integration scheme for employees who have been absent for health reasons for a long time, advice on social/welfare matters, the in-house medical service, preventative healthcare courses of the statutory health insurance, and courses to prevent addiction. A risk assessment on psychological strain in the workplace was also conducted as part of the Ministry's efforts to make the BGM a holistic service. As part of the health promotion measures, employees are offered a wide range of services, including back and spine exercises, influenza vaccinations, eye training, and support in ensuring an ergonomic workplace. The measures benefit both employees and the Ministry itself: good working conditions and a positive work environment can improve employees' state of health and motivation for the long term whilst also boosting the quality of their work and capacity to innovate.

In the interest of its employees' health and of the environment, the Ministry also encourages its staff to cycle. The Ministry has created the infrastructure that is necessary to encourage employees to cycle to and from work. There are enough bicycle stands for

315 bikes in front of the Berlin and Bonn premises, and also covered bicycle parking areas. Beyond this, 15 traditional bicycles and nine pedelecs are available for employees' short-distance travel for work purposes. These are easy to borrow. A tyre pump station, mostly intended for bicycles, has been installed at the premises in Berlin Scharnhorststraße. The Ministry also encourages its employees to take part in the annual 'cycle to work!' (Mit dem Rad zur Arbeit) initiative. 2019 saw the first 'Bike Day' at the Ministry. This event was supported by the occupational accident insurance agency for federal and railway authorities, which highlighted the importance of bicycle safety. The local police was present to code employees' bicycles and the ADFC cycling association offered safety checks. This Bike Day had a very positive response and is to take place again.

Sustainability criteria to be met by the canteen operator

The canteen agreement between the Ministry and the canteen operator who has leased the canteen in Berlin is based on the quality standards for canteen catering developed by the German Association for Nutrition. These standards relate to mid to long-term sustainability in four areas: health (**SDG 3**), social matters (minimum standards along the value chain, **SDGs 1, 10**), animal welfare and the environment (**SDGs 14 and 15**). Beyond this, the current canteen operator is expected to make special efforts to limit waste.



Work of the ministerial sustainability coordinator for sustainable development

In line with the National Sustainable Development Strategy, each federal ministry has its own ministerial sustainability coordinator, who acts as a contact for matters that tie in with sustainable development. In the Economic Affairs Ministry, the ministerial sustainability coordinator is supported by a division dedicated to this work. The tasks of the ministerial sustainability coordinator stretch across several different areas:

State Secretaries' Committee on Sustainable Development

During the 19th legislative period, the Ministry had the lead responsibility for preparing two meetings of the State Secretaries' Committee for Sustainable Development. In November 2019, the committee discussed "[Digitisation and sustainability / a digital policy for a sustainable economy](#)"; the meeting in October 2020 was themed "[Sustainability 'made in Germany' – opportunities and challenges for companies operating on a sustainable business model](#)".

Sustainability in regulatory impact assessment

Under the Joint Rules of Procedure of the Federal Ministries, it is necessary to elaborate on the impact on sustainable development of each legislative proposal or proposal for an ordinance, particularly over the long term. The Economic Affairs Ministry meets this requirement in full. All draft legislation prepared by the Ministry is reviewed by the ministerial sustainability coordinator as to its compatibility with the goals and indicators of the National Sustainable Development Strategy. A dedicated guidance document was developed for this purpose.

Sustainability of funding measures

As is the case for other projects of this kind, the ministerial sustainability coordinator must be

involved. Funding measures are recorded in the measures controlling system (MCS), an in-house database. Since 2018, it has also been necessary to indicate the measure's contribution to the implementation of the National Sustainable Development Strategy. The latest version of the MCS, which was implemented in August 2020, has a new data field which gathers information on contributions to the National Sustainable Development Strategy.

Green Federal Bonds

Public finances are an important lever for reaching the sustainability targets set out in the 2030 Agenda for Sustainable Development. "Green Bonds – Made by KfW" have been available since 2014; in 2020, the Federation began to issue its own Green Federal Securities. In issuing these Green Federal Securities, complete with reporting obligations, the Federal Republic of Germany is ensuring a high level of transparency regarding green federal spending and its impact. The Ministry is contributing to these efforts in a wide range of ways, including in the field of energy efficiency and by promoting electric mobility, the use of renewables, and energy research.

Dialogue with business, science and civil society

The ministerial coordinator for sustainable development is highly committed to upholding a dialogue on sustainability with various stakeholders. For this reason, he hosts regular round tables with stakeholders, focusing on different aspects of sustainability. Beyond this, he compiles and regularly distributes a newsletter providing information on the Ministry's activities to promote sustainability.

This new version of the ministerial report on the implementation of the National Sustainable Development Strategy shall replace the preceding report from October 2018.

