



How the coronavirus is changing the energy sector in Germany



How the energy industry is coping with the effects of the coronavirus pandemic, what assistance and rescue measures are being provided, and why the energy supply remains

What exactly is the 'Green Deal'?

What the European Green Deal has to do with playing cards, and why it's 'cards on the table' from 2020.



The Green Deal is a set of policy initiatives through which Europe is seeking to become the first climate-neutral continent by 2050. In 2020 and 2021, the European Commission will present around 50 measures that are to be used en route towards this goal. The Green Deal is one of the most important policies to be launched by the new European Commission.

Whenever a pack of playing cards is reshuffled and the cards dealt, you might hear the phrase 'new deal'. The term 'new deal' has, in fact, already been used in the context of the economy. Back in the 1930s, it was adopted by U.S. President Franklin D. Roosevelt to describe a series of measures to usher in a new start following the onset of the Great Depression. Europe wants to use the [European Green Deal](#) to make a new start in climate policy and become the first continent to be greenhouse-gas-neutral by 2050. In the years up to then, a large proportion of the emissions from burning coal, oil and gas, for example, will have to be prevented from arising, and a smaller proportion stored. But this has little to do with gambling. In a bid to reshuffle the cards, the European Commission wants to define comprehensive measures and targets and to implement these as part of its Green Deal.

'Cards on the table' in 2020 and 2021

In 2020 and 2021, it's time for the EU to put its 'cards on the table'. During this period, the European Commission wants to present around [50 measures in the areas of climate and environmental policy, energy policy, industry, transport policy and agriculture](#). The new President of the European Commission, Ursula von der Leyen, even wants the EU's 2050 objective for achieving climate neutrality to be enshrined in EU law. In actual fact, negotiations towards a [European Climate Law](#) have already begun under the Croatian Presidency of the Council of the EU. In the second half of 2020, the Presidency will be taken over by Germany as part of the rotation that takes place every six months.

When it comes to reducing greenhouse gas emissions, the European Commission also wants to look at whether the intermediate target for 2030 can actually be raised. As it stands, the target for 2030 is to reduce greenhouse gas emissions by 40 percent compared to 1990 levels. By autumn 2020, the Commission wants to complete an assessment on whether Member States can and ought to strive towards achieving a higher level of reduction than that which has been set.

Green Deal to become driver of economic growth for Europe

For the European Union, the energy transition and the Green Deal are not only a strategy for modernisation, but also a driver of economic growth for the entire continent. In the comments he made recently on the Green Deal, Federal Minister Altmaier said the following: 'The German Government supports the European Commission in its ambitious project to make Europe the first climate-neutral continent through the European Green Deal. We will play an active role in this process, especially during the German Presidency of the Council of the EU in the second half of 2020. I regard the Green Deal as a growth strategy for our economy that will enable us to safeguard jobs with the help of innovations and new clean technologies.'

When it comes to implementing the Green Deal, the energy sector will play an important role, especially in view of the ongoing shift away from fossil fuels towards renewable energy sources. The use of renewables is also to be increased in other sectors such as transport and heat. In addition,

energy-intensive industry is due to become more climate-friendly, with the European Commission having already announced that various strategies are to be presented to achieve this goal.

Strategies to achieve climate neutrality in the energy sector

At the end of June, the EU expects to announce a climate neutrality strategy that is based on the use of sector integration and digital technology. The strategy focuses on using renewable energy, energy efficiency and other solutions to decarbonise all sectors in an affordable manner. In the future, the plan is for all of the sectors concerned to be able to function without the use of carbon-based energy sources.

There is also an initiative planned in the buildings sector called the 'renovation wave', which is expected to be published in the third quarter of 2020. The initiative will include measures to increase the rate of modernisation of the European building stock and to help achieve the energy efficiency and climate objectives.

The European Commission is additionally planning to release a strategy for offshore renewable energy in the fourth quarter of 2020. The strategy is to help more wind turbines be built in European seas.

How the Green Deal will be financed

In order to finance the Green Deal, the European Commission proposed establishing a Sustainable Europe Investment Plan (SEIP) in mid January. The EU wants to use this investment plan to mobilise public and particularly private investments of one trillion euros up to 2030 for combating climate change and protecting the environment. This will be in addition to national co-financing worth €114 billion. The investment plan includes direct funding from the EU budget as well as support from the InvestEU Fund, the Innovation and Modernisation Funds, and the specially established Just Transition Mechanism. It is intended to support regions that have up to now been particularly dependent on fossil fuels and for which efforts to achieve climate neutrality will be particularly difficult. The EU is planning to spend up to 100 billion euros on this task.

FURTHER INFORMATION

- [\[→ European Commission webpage on the European Green Deal](#)
- [\[→ European Commission Communication on the European Green Deal](#)
- [\[→ Overview of the measures within the European Green Deal \(Roadmap\)](#)
- [\[→ European Commission Communication on the investment plan for a sustainable Europe](#)
- [\[→ Proposal for a European Climate Law](#)

How the energy transition can be implemented successfully in industry

Germany's manufacturing industry employs seven million people, but it also generates a fifth of the country's greenhouse-gas emissions. In the time up to

2050, the sector is to be made entirely greenhouse-gas-neutral. A research project is pointing up ways to achieve this.



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Under the Paris Climate Agreement, Germany has committed itself to doing its part to help keep global warming to 1.5 degrees if possible. The Federal Republic wants to become climate-neutral by 2050, which it has laid out in its Climate Action Programme adopted in autumn 2019. This is an ambitious goal and a powerful call for change, not only for industry. After all, the steps we take towards reaching climate neutrality will fundamentally change the way we live. We will increasingly use electric cars instead of petrol and diesel-based engines. We will be more concerned with thermal insulation for our homes and about climate-neutral heating and the electricity we buy, and how industry in Germany can produce in a more climate-friendly manner in the future. Some of the industrial production processes, which have been established and optimised over decades, will have to be fundamentally changed. Although German industry has reduced its greenhouse gas emissions by over a third between 1990 and 2018 without losing its strength on the world market, the industry will need brand new solutions and approaches once again in order to achieve climate neutrality.

Research project investigates energy system transformation in industry

In order to open up new pathways to reaching climate neutrality, the Federal Ministry for Economic Affairs and Energy has launched a [research project entitled *Energiewende in der Industrie: Potentiale, Kosten und Wechselwirkungen mit dem Energiesektor* \[Energy system transformation in industry: potential, costs and reciprocal effects in the energy sector, available in German only\]](#). The project, which started in 2018 and runs until the beginning of 2021, is investigating how industry can contribute to establishing a largely greenhouse-neutral economy whilst also safeguarding Germany's position in international competition. The most important conclusion made to date is that achieving a zero-emissions industry by 2050 would be technologically possible. The biggest challenge along the way is to find the right framework for pushing forward a technological transformation that does not create competitive disadvantages. Linked to this, Federal Minister for Economic Affairs Peter Altmaier

said the following: 'Business models will only be successful in the future if they take energy and climate concerns into account.'

Focus on eight particularly energy-intensive industries

The research project on the energy system transformation in industry covers the industrial sector as a whole and is therefore looking at eight particularly energy-intensive industries in particular. These industries, in which a large volume of carbon emissions are generated, are metal production and processing (e.g. steel), the production of non-ferrous metals (e.g. aluminium, copper, zinc), basic chemicals, the glass, cement, lime and ceramics industries as well as the paper and food industries. The research project is additionally focusing on the impact of horizontal technologies, such as those used in the automotive industry. A number of dossiers on the project have now been published showing what greenhouse gas emissions are emitted by each of the different sectors, and how well prepared they are for the transition to climate neutrality.

Technologies that make production greenhouse-gas-neutral

For each of the eight sectors focused on in the project, the aim is to develop new technologies or production processes that preclude the use of fossil fuels and reduce emissions or prevent them from arising in the first place. An initial overview of possible technologies that could help industry become greenhouse gas-neutral is provided in the final report entitled [Dekarbonisierungsmaßnahmen in den Fokus-Branchen \[Decarbonisation measures in the sectors studied, available in German only\]](#), which was also published recently. One of these technologies, for example, is the use of electric melting tanks in the glass industry. The melting tanks used to date have been powered using natural gas. If they are run on carbon-free electricity, however, the volume of emissions produced is significantly reduced. Another example is the use of hydrogen in direct reduction processes for steel production. Here, the use of carbon is replaced by that of hydrogen. It is now hydrogen that reacts with the oxygen from iron ore instead. When carbon is used, however, a compound of carbon and oxygen is formed, resulting in the production of harmful carbon dioxide. If the utilised hydrogen is produced in a carbon-neutral way, a huge volume of greenhouse gases is prevented from arising.

In order to make the transition to an almost greenhouse-gas-neutral economy, the volume of emissions produced in the industrial sector must be significantly reduced. The [final report of 'work package 1' of the research project](#) has already set out a whole range of possible developments for the industrial sector. Each of these is based on various external studies.

How greenhouse-gas emissions are generated in industry

Greenhouse-gas emissions are generated in industry in one of two ways. The first is the use of typically high levels of energy in production. If this energy is based on fossil fuels (oil, coal and gas), greenhouse-gas emissions are generated. The second way is the use of fossil fuels in production processes. This generates harmful 'process emissions'. In the cement and lime industry, for example, raw materials such as limestone are burned at high temperatures and broken down into individual components in a process known as 'dissociation'. Here, the limestone releases the carbon-dioxide molecules that are bound to it. This means that greenhouse gas emissions are 'automatically' generated during the production process, even if the heat required is generated in a climate-neutral manner. So eliminating process emissions is the altogether bigger challenge since, to achieve this, tried-and-tested production processes will need to be completely overhauled.

Quote of the week



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'The EU renewables target of 18% in 2020 is within reach. Now we must work towards permanent attainment of the targets and continue to expand the share of renewables. The European Green Deal opens up new opportunities in terms of economic policy. We must make good use of these opportunities.'

Peter Altmaier, Federal Minister for Economic Affairs and Energy, speaking at the start of April about current figures from the Federal Environment Agency on the EU renewable energy target.

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