



Input and stimulus for the global energy transition: representatives from around the globe gather in Berlin



Experts from more than 60 countries at the Berlin Energy Transition Dialogue discuss

Input and stimulus for the global energy transition: representatives from around the globe gather in Berlin

Experts from more than 90 countries at the Berlin Energy Transition Dialogue discuss necessary investments to accelerate global energy transition.



© Federal Ministry for Economic Affairs and Energy/Susanne Eriksson

“We must not allow ecological goals to run counter to economic success. Both have to go hand in hand”, said Economic Affairs Minister Brigitte Zypries at the opening event of the [Berlin Energy Transition Dialogue](#) (BETD). Since energy investments are long term and expensive, more and more countries are adopting long-term strategies to set the right course for the successful transformation of their energy supply systems. Zypries warned that wrong decisions would cost us dearly tomorrow. She welcomed the opportunity offered by the BETD to discuss how the process of transformation can be achieved in a cost-efficient manner without jeopardising security of supply or competitiveness. “If implemented correctly, the decarbonisation of the energy industry is the golden opportunity to modernise our economies,” said the Minister.

Berlin enjoys a few days as capital of the global energy transition

For the third time now, the BETD has turned Berlin into the capital of the global energy transition. At this year’s conference at the Federal Foreign Office, ministers and other high-ranking representatives from the worlds of politics, administration, business and civil society discussed how energy supply systems can be transformed to meet the objectives of the Paris Climate Agreement and the UN’s sustainability targets. More than 1,000 participants from over 90 countries followed the invitation of the Federal Government. In addition to the Federal Foreign Office and the Federal Ministry of Economic Affairs and Energy (BMWi), the Federal Association for Renewable Energies, the Federal Association of Solar Energy, eclareon (consulting firm) and the German Energy Agency (dena) organised the event.

G20 presidency: congress to deliver important input

“The energy transition is no longer a national project. It is a global task,” said Foreign Affairs Minister Sigmar Gabriel. International cooperation rather than walls and protectionism is the key to combating climate change. “We want to share our experiences and learn from others,” Gabriel explained. This is also in line with the goals of the G20 presidency. The discussions at the BETD are intended to provide important input for the German government's energy agenda in the [G20 process](#).

International study provides roadmap up to 2050

Against the background of the G20 presidency, the Federal Economic Affairs Ministry commissioned a study, the results of which were presented at the BETD. The key questions were: what do the energy systems in 2050 have to look like in order to reach goals of the Paris Climate Agreement? What investments are needed for this and how can misinvestments in energy technologies that are harmful for the climate be avoided? Answers to this question can be found in the study entitled Perspectives for the Energy Transition: Investment Needs for a Low Carbon Energy System that was conducted by the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA). The analysis shows that when it comes to transforming our energy supply, we need to think in long-term investment cycles in order to avoid misinvestments in fossil energy sources. Here are the key findings of the study:

- In order to achieve the goal of limiting average global warming to well below two degrees, as was agreed in Paris, the world needs energy reforms of extraordinary magnitude and of great depth that are implemented at a fast pace. In the next three years, carbon emissions will have to reach their peak and then fall by 70% by 2050 compared to today's levels.
- This change is feasible, both technically and economically. For this change to happen, we need to massively expand renewable energy technologies on a global scale and further enhance energy efficiency. “90 per cent of the necessary carbon emissions cuts in the energy sector can be achieved by boosting renewable energies and energy efficiency,” said IRENA Director General Adnan Amin.
- It will not be necessary to increase the overall amount of investment that is currently being put into the energy supply system. “The overall global budget can remain the same,” said IEA Chief Fatih Birol. However, it is necessary to more strongly redirect funds away from investments in fossil energies and towards investments in clean energies. (The current distribution of investments in fossil and renewable electricity generation is shown in the [infographic](#) below).
- Investments in energy efficiency in the end-use sectors of industry, transport, and buildings must, however, be raised significantly. For example, by 2050, 70 per cent of all new cars need to be electric. According to the IEA and IRENA, this will require the introduction of deep-reaching reforms, as well as investments in research and development.

Experiencing the energy transition: side programme featuring excursions

Alongside the core sessions of the BETD, there was also an extensive fringe programme on offer. After the end of the conference, further excursions took place on Wednesday and Thursday, following those run on Sunday. These also enabled conference participants to experience the energy transition directly. Not only were there visits to companies in the renewables sector, but there was also a tour of firms that are leading the way on digitisation.

Première of start-ups from the energy sector

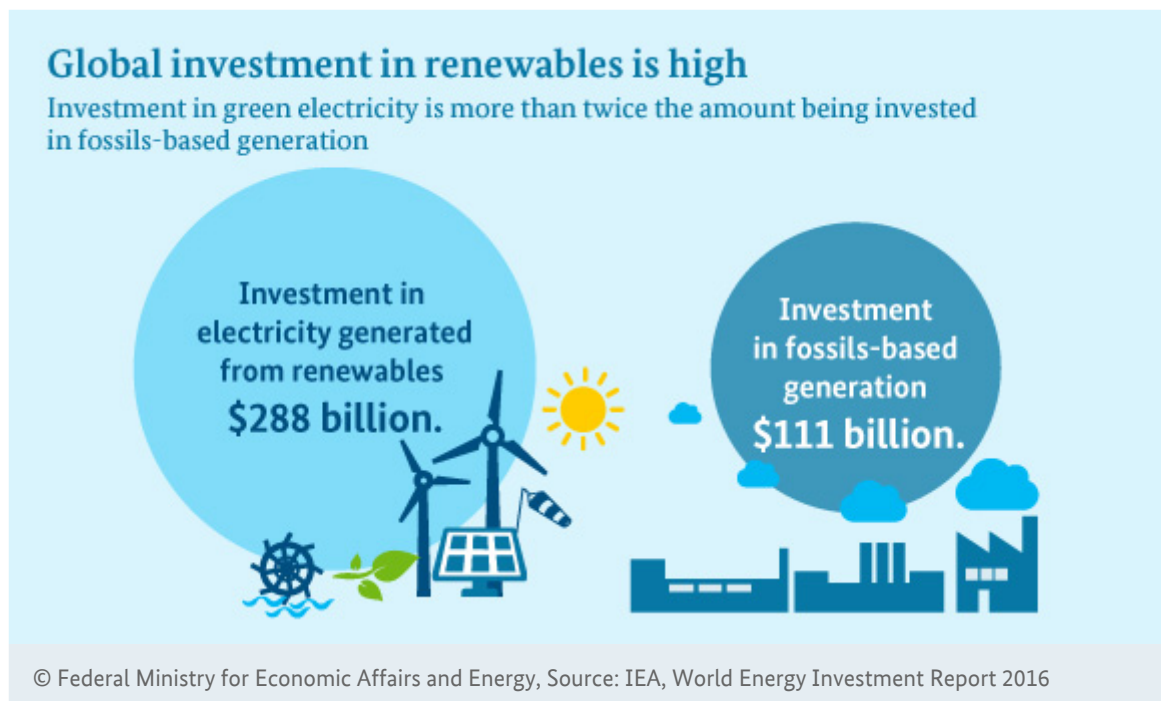
At the Start-up Energy Transition Tech Festival hosted by dena, leading start-ups took centre stage. The event sought to bring innovative start-ups from around the world together with investors, companies, and business representatives. At the BETD's formal evening reception, held at Kino International, winning start-ups were presented with the Energy Transition Start-Up Award. Six start-ups from France, Germany, India, Bangladesh and Nigeria received awards for their innovative business ideas linked to the energy transition and the global effort to mitigate climate change. These companies successfully fought off more than 500 entries from 66 different countries to win the awards (for more details on the winners, please click [here](#)).

FURTHER INFORMATION

- ➔ Federal Government press release on the BETD
- ➔ BETD website
- ➔ Recording of the speeches given by Brigitte Zypries and Sigmar Gabriel
- ➔ Study published by the IEA and IRENA
- ➔ Press release by dena on the presentation of this year's the Start Up Energy Transition Award
- ➔ International energy policy

More investment in renewables than in electricity generation from fossils

Worldwide investment in green electricity is twice as high as investments in electricity based on fossils.



Taking a glance at worldwide investment in electricity generation, it's clear that the global energy transition is in full swing. In 2015, more than double the amount of money was invested in electricity generation from renewables than from fossils. Investors spent some \$288 billion on renewables-based electricity generation, but invested just \$111 billion in electricity from fossil sources, such as coal and natural gas. These figures are taken from the 2016 World Energy Investment Report, which was presented by the International Energy Agency (IEA) last autumn.

Political decision-makers from around the world gathered in Berlin for the Berlin Energy Transition Dialogue to discuss what investments are needed in the energy sector in order to meet the targets set in the Paris climate agreement (for more on this, please see [preceding article](#)).

FURTHER INFORMATION

➔ [Summary of the 2016 World Energy Investment Report](#)

What exactly is the 'energy union'?

A common electricity and gas market that stretches from Portugal to Finland. It is designed to provide consumers with affordable and clean energy. For more information about what this EU project entails, please [click here](#).



© BMWi

The aim: to bundle energy within Europe

When there's not much wind blowing in Germany, the level of electricity that wind power plants feed into the German grid falls. However, if – at the same time – high winds are sweeping across Spain, Southern Europeans suddenly have more wind power they actually need. This will lead Spain to reduce generation capacity, while Germany has to raise production in conventional power plants,

leading to higher greenhouse gas emissions. This is like a farmer who throws away his eggs because he can't find anyone to buy them, while his neighbour – who has no hens of his own – goes to the supermarket to buy eggs there. It would clearly be in the best interests of both neighbours if they were to cooperate with each other.

Consumers benefit from clean energy at affordable prices

The Energy Union is the political framework in which energy cooperation can take place between the Member States of the EU. One of the aims is to drive forward the internal market for electricity and gas. When energy flows from one country to another unhindered, energy costs are reduced right across Europe. This is because the costs of reducing generation while there is an energy surplus or of keeping reserve power plants ready disappear. As a result, consumers then benefit from lower energy costs.

The Energy Union is, however, about much more than just developing a common market for electricity and gas. It is about ensuring that the supply of energy remains secure and affordable for all Europeans as we move into the future. This is crucial in order for us to maintain our standard of living – in order for Europe to continue to grow and create new jobs. To meet its joint climate targets, Europe needs to switch to using renewable, low-emission energy. After all, the energy transition will only be successful if we adopt a joint European approach – i.e. if all Member States get involved and start to shape this transition. This is similar to the neighbour who, by cooperating with the farmer on eggs, would stand to benefit also.

The five fields of action for the Energy Union

What are the exact aims of the Energy Union? The European Commission has developed an overall strategy for the Energy Union comprising five fields of action which are closely interlinked:

- Ensuring security of supply: Supply security for gas and electricity to the general population is to be ensured, and dependency of the EU on energy imports reduced.
- Establishing an internal energy market: Energy is to flow freely between the different countries of the EU – through the establishment of the relevant infrastructure, and without regulatory hurdles. In order to make this possible, the electricity markets need to be adjusted to make them able to integrate renewable energy, and they must also be harmonised.
- Raising energy efficiency: The basic principle of 'efficiency first', which is a key pillar of the German energy transition, also applies at European level. Put simply, this means the less energy we consume, the better (for more information, please click [here](#)).
- Decarbonising the economy: Carbon emissions are to be reduced. In order to make this possible, the energy needs of industry, the transport sector, and of all other sectors are to be covered by a growing proportion of renewables rather fossils.
- Conducting energy research: Europe is a pioneer and a role model when it comes to sustainable and forward-looking energy and climate policy. The aim now is to make the EU world number one in energy technology and energy innovation – for renewables, storage, smart grids, and clean mobility. This means fostering research and innovation and bringing the best brains in research institutes and development departments together.

These five fields of action comprise the overarching aims of EU energy policy. The 'Clean Energy for all Europeans' legislative package, for example, sets out specific measures for decarbonisation and

energy efficiency, as well as for the internal energy market, and is to help improve efforts to coordinate the energy policies of the individual Member States.

How far have we come with the Energy Union?

The European Commission presented its second report on the status of the Energy Union in February of this year. According to the report, the EU has made good progress towards realising the joint energy and climate targets. The target of raising energy efficiency by 20 per cent by 2020 has already been met. The same is true for the goal to reduce greenhouse gas emissions by 20 per cent by 2020. In 2015, emissions levels were 22 per cent lower than in 1990. However, in order to cut emissions by 40 per cent by 2030, further efforts are still needed. Lastly, the EU is also heading in the right direction in the field of renewables. According to figures for 2014, renewables accounted for 16 per cent of final energy consumption. This is to be raised to 20 per cent by 2020.

The Commission particularly sees the need for improvement in the transport sector, in the energy-efficient retrofitting of buildings, in ICT, the expansion of power infrastructure, and in the opening of the markets for gas and electricity.

FURTHER INFORMATION

- [\[→ European Commission press release on the Energy Union](#)
- [\[→ Information about the 2017 Renewable Energy Sources Act](#)
- [\[→ European Commission report on the Energy Union](#)
- [\[→ European energy policy](#)

Quote of the week



© dena

“At the meeting in Paris, the global community agreed on overarching climate targets. At our meeting in Berlin, we are pointing out ways in which we can work with one another to meet these targets. The Dialogue benefits all sides.”

Andreas Kuhlmann, Chief Executive of the German Energy Agency (dena) and co-host of the Berlin Energy Transition Dialogue

Germany and Australia set up a working group on energy and raw materials

On the margins of this year's Berlin Energy Transition Dialogue, State Secretary Rainer Baake from the Federal Economic Affairs Ministry and his Australian counterpart Gordon de Brouwer signed a declaration of intent on closer institutionalised cooperation between the governments of both countries in the fields of energy and raw materials.

You can subscribe to the Energy Transition

Order the international edition of the "Energiewende direkt" Newsletter [here](#).
