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ENERGY

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# A Reporter's Guide to the Energiewende\*

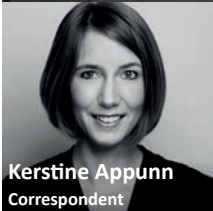
*Context.  
Contacts.  
Access.*  
2015

*\*German energy transition*

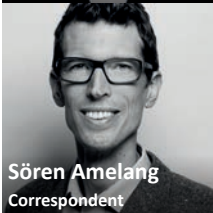
# A note from CLEW



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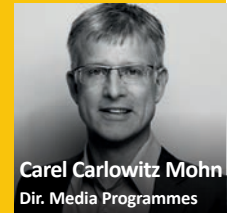
The Energiewende is turning many parts of German society upside down. Watched closely from abroad, this generational project provides a wealth of exciting and important stories. Yet researching an effort of such scale in a foreign country and language is a difficult job even for the most seasoned reporter. This is compounded by the complexity of the technology and economics behind energy policy in general.

A strong fact-based and critical journalism is essential to inform the international political debate about how to best decarbonise the global economy. The Clean Energy Wire CLEW wants to support journalists in their work. Fully funded by two non-profit foundations – Stiftung Mercator and the European Climate Foundation – we enjoy full independence from any business or political interests. We share our funders’

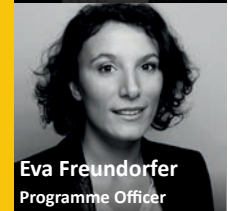
commitment to working towards reducing CO<sub>2</sub> emissions in order to limit man-made climate change.

The CLEW “Reporter’s Guide to the Energiewende” gives journalists a starting point for their work. It highlights the main storylines of the energy transition and provides lists of experts and links to key readings. Our website cleanenergywire.org offers more in-depth information and contacts, and our daily news digest keeps readers in the loop about the debates and events surrounding the Energiewende. We also organise journalist workshops to give a first-hand view of the transformation. But most importantly, we offer support with any questions you might have - so please don't hesitate to get in touch.

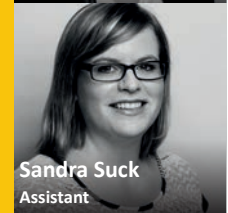
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# #Energiewende – Dates 2015/2016

2015

**1 – 2 October**

**International Conference on Climate Action ICCA 2015** in HANOVER.

**7 October**

**Webinar "Understanding the Energiewende"**, Agora Energiewende.

**15 October**

Announcement of next year's renewable energy surcharge paid by consumers with their power bills.

**27 October**

**Vattenfall** reports quarterly results.

**27 – 29 October**

**IEA – International Energy Agency's Bioenergy Conference 2015** in BERLIN.

**28 October**

**German-French Dialogue about Energy transition** in BERLIN.

**November**

The economy ministry plans **adoption of the new power market law in cabinet**.

**Report on effects of new auction process for solar parks**.

**3 November**

**Congress "Decentralised Generation"** in COLOGNE.

**11 -13 November**

**E.ON, RWE and ENBW** report quarterly results.

**16 – 17 November**

**German Energy Agency (dena) Energy Efficiency Congress** in BERLIN.

**17 – 18 November**

**ETG-Congress, Power Engineering Society, Die Energiewende –**

Blueprint for the new energy age, in BONN.

**30 November – 11 December**

UN Climate Summit in PARIS.

**3-4 December**

Utility Forum "**Decommissioning and Demolition of Fossil-Fuel Power Plants for Utilities 2015**", BERLIN.

2016

**Early 2016**

Energy ministry expects combined heat and power law to take effect.

**19 – 21 January**

**Handelsblatt Annual Conference Energy Industry 2016** in BERLIN.

**3 February**

**Vattenfall** presents full-year report.

**23 – 24 February**

**BDEW – Smart Renewables 2016** conference in BERLIN.

**March**

Cabinet to decide on reform of renewable energy act, including contentious tendering.

**8 March**

**RWE** presents full-year report.

**9 March**

**E.ON** presents full-year report.

**13 March**

**Elections** in the federal states of Baden-Württemberg, Rhineland Palatinate, and Saxony-Anhalt.

**21 March**

**EnBW** presents full-year report.

**Spring 2016**

**Energy ministry expects** legislative process for new power market law to be completed.

International "Energy Transition Dialogue 2016", in BERLIN.

**20 April**

**RWE** annual shareholder's meeting.

**25 – 29 April**

"**Energy - Solutions for a market in transition**" – Hanover Messe.

**Summer 2016**

German parliament and federal assembly vote on reform of **Renewable Energy Act**.

**7 – 9 June**

**BDEW Congress 2016** – Conference on energy markets and energy policy in BERLIN.

# #Energiewende – Contacts

## ... for official statements

**Federal Ministry for Economic Affairs and Energy (Bundesministerium für Wirtschaft und Energie – BMWi)**

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## ... for latest data and research

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Energy market research group.

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Sustainable development consultancy and research institute.

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**Agora Energiewende**

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**German Institute for Economic Research (Deutsches Institut für Wirtschaftsforschung – DIW)**

DIW's energy, transportation and environment, and climate policy departments study the economics and politics of climate change and energy.

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**Fraunhofer ISE**

Solar energy research institute and publisher of electricity production data. Also see their data and graphs on [www.energy-charts.de](http://www.energy-charts.de).

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... for a list of over 120 experts and institutions with insights into the Energiewende, see [www.cleanenergywire.org/experts](http://www.cleanenergywire.org/experts)

# #Energiewende – Reading in English

- Federal Ministry for Economic Affairs and Energy - BMWi (2014) **The energy of the future: First “energy transition” progress report - summary** The government’s monitoring report provides an overview of the current status of reforms. It is published every three years and assesses what measures have already been implemented and what effect they are having.
- Expert commission on the “Energy of the future” monitoring process (2014) **Statement on the first progress report** by the German government for 2013 - summary. [Andreas Löschel et al. analyse the effects of measures taken so far to achieve the government’s greenhouse gas reduction targets.](#)
- BMWi (2014) **Second monitoring report “Energy of the future”** Overview of the progress and challenges of reforms in the fields of energy efficiency, renewable energies, power plants, electricity grids, greenhouse gas emissions and energy prices.
- BMWi (2014) **Overview of legislation governing Germany's energy supply system** [Key strategies, acts, directives, and regulations/ordinances.](#)
- Federal Ministry for the Environment - BMUB (2014) **Climate protection in figures** [Facts, trends and incentives for German climate policy.](#)
- Agora Energiewende (2013) **12 Insights on Germany’s Energiewende**
- Agora Energiewende (2015) **The Energiewende in the power sector: State of affairs 2014** [A review of significant developments and an outlook for 2015.](#)
- AGEB (2014) **Evaluation tables on the energy balance 1990 to 2013**
- Foreign Office (2015) **Who is Who of the Energiewende in Germany** [Brochure of contacts in politics, industry and society.](#)
- DIW (2015) **Deep Decarbonisation in Germany** [A Macro-Analysis of Economic and Political Challenges of the Energiewende.](#)
- UBA (2015) **National Trend Tables for the German Atmospheric Emission Reporting**
- UBA (2014) **Submission under the United Nations Framework Convention on Climate Change and the Kyoto Protocol 2013**
- [energytransition.de](#) - [A website/blog, funded by the Heinrich Böll Stiftung, explaining what the energy transition is, how it works, and what challenges lay ahead.](#)

# #Energiewende - Targets

*The Energiewende is Germany's transition to a low-carbon and nuclear-free economy. The government has set specific **targets** for the growth of renewables and cutting carbon emissions, some of which reach decades into the future. It has also decided to take all nuclear power plants offline by 2022.*

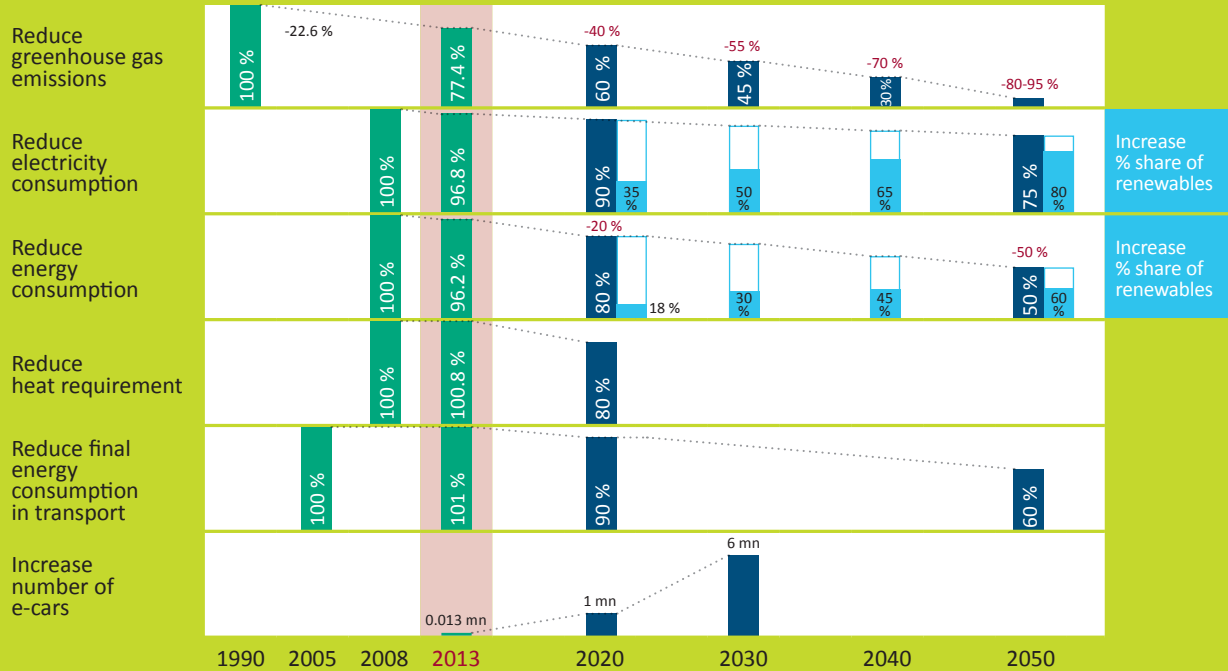
Feed-in-tariffs have been key for the rapid growth of renewables in Germany, which made investments in green electricity production profitable. This instrument, which has been introduced in many other countries around the world, spurred the construction of large-scale wind and solar parks, but also allowed ordinary citizens to participate by putting solar panels on their roofs, or by forming energy cooperatives.

The result is a radical reshaping of the energy system. The traditional model of centralised power generation that responds to consumer demand is being replaced by diverse sources of energy that fluctuate with the weather. This presents huge challenges – not least for grid infrastructure and the power market design. While so far mainly focused on electricity, the Energiewende will also have to transform other sectors like transport and construction if targets are to be met.

The energy transition is a gigantic project with countless players that will leave few aspects of Germany's economy and society untouched. Already, there are winners and losers: Big utilities' traditional business models have been hit hard while consumers and some businesses are concerned about higher electricity costs. The coal industry first benefitted from the nuclear phase-out, but its future is now uncertain as the government steps up its efforts to cut CO<sub>2</sub> emissions. At the same time, entirely new industries have sprung up.

Renewables already cover more than a quarter of Germany's power consumption and their rise is set to continue apace. With the world watching, it remains to be seen if and how one of the world's largest industrialised economies can lead the way to a greener future.

## Quantitative targets of the energy transition



# #Energiewende – Key Figures

**44.4 mn**

Passenger cars registered in Germany (01/2015)

**18,948**

Electric cars registered = 0.04% (01/2015)

**46 %**

Share of renewable power capacity owned by citizens (2012)

**- 67 %**

Share price development of the biggest utilities E.ON and RWE over past 7 years

**3.6 %** → **26.2 %**

Renewables share in German power generation 1990 and 2014

**15 minutes**

Average power outage in 2013 (Compare – France: 60 min; UK: 55 min; Poland: 254 min; Denmark: 14 min; Canada: 280 min)

**912 mn tonnes**

Greenhouse gas emissions in 2014

**- 27 %**

Fall in greenhouse gas emissions 1990-2014

**11.1 %**

Share of renewables in primary energy consumption (2014)

**27.8 %**

Share of renewables in gross power consumption (2014)

**20.6** ↗ **28.8 ct/kWh**

Average household power price 2007 and 2015 – thereof 6.17 ct/kWh renewable surcharge in 2015.

**56** ↘ **35 €/MWh**

Average wholesale power price (base-load) in 2007 and 2014.

**371,400**

Number of people employed in the renewables sector (2013)

**21,089**

Number of people employed in the brown coal industry (2015)

**€39.5 bn**

Spending on energy saving measures in residential buildings in 2013

**- 11 %**

Decrease in final energy consumption for heating in private households 2008-2013

**92 %**

of Germans believe embarking on the Energiewende was the right decision in principle (2015)

**81 %**

of Germans approve of the nuclear phase-out (2015)

**~€20 bn**  
Support paid to renewables from EEG surcharge on power bills in 2014 alone

**38.6 %**

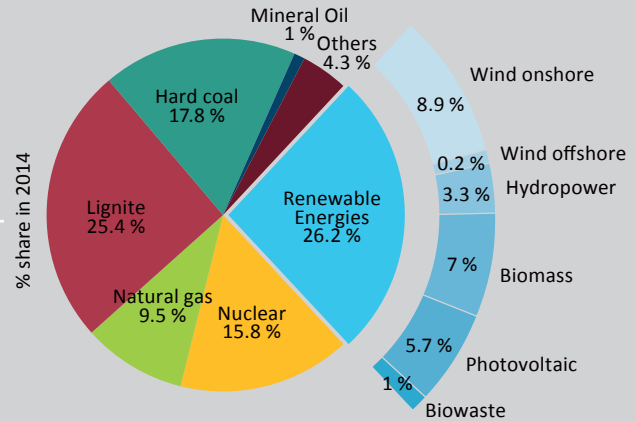
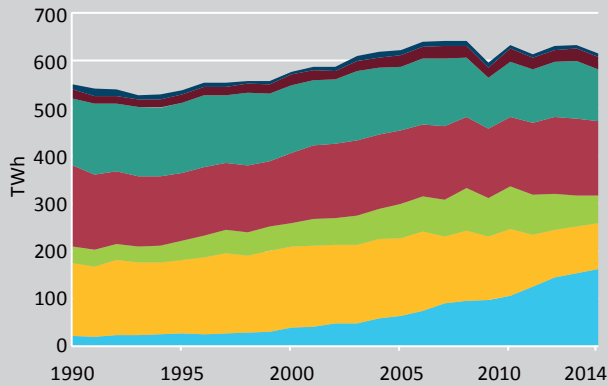
of all natural gas imports to Germany came from Russia (2014)

**57 %**

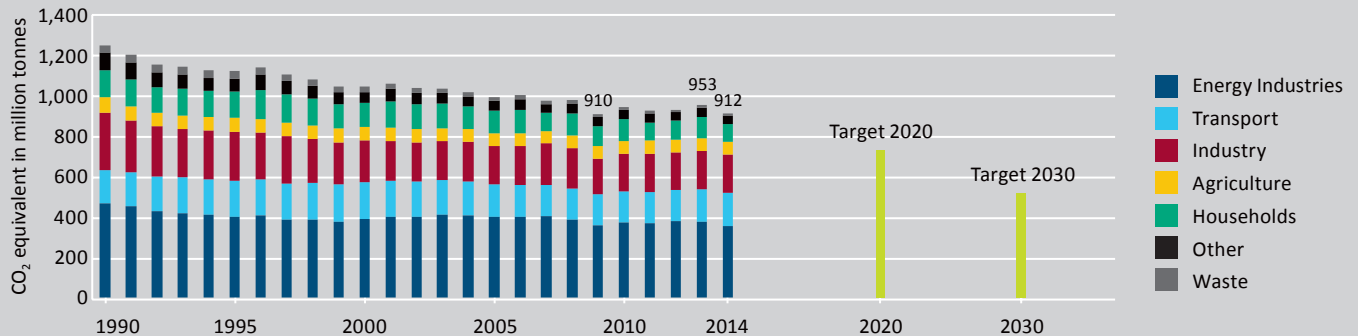
of natural gas imports to Germany came from Norway (33%) and the Netherlands (24%) (2014)



Development of gross power production 1990–2014 in TWh



Emission trends for Germany since 1990



Sources: AG Energiebilanzen 2015; UBA 2015.

#Climate and CO<sub>2</sub> #Fossil fuels

# Climate targets force Germany to tackle coal



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Renewable energy sources have expanded rapidly since the introduction of the Renewable Energy Act in 2000, but German carbon emissions have not always fallen in step. After 2009, emissions even rose slightly as power generation from coal-fired power stations soared to levels above 1990. To keep from missing its own greenhouse gas reduction targets, the government presented its “Climate Action Programme” at the end of last year, a package of additional measures aimed at cutting emissions. Shortly after, new data showed power usage and

CO<sub>2</sub> emissions easing in 2014, leading some analysts to predict better years ahead and others to point out that much of the reduction was due to the warm weather. Environmentalists warn that conventional power plants, especially those fired with coal, still pose threats to Germany’s emissions targets. This year, the Ministry for Economic Affairs and Energy wants to pass legislation that could oblige the oldest brown coal plants to reduce operating times or even to shut down, as they would have to pay a “climate levy” if emitting CO<sub>2</sub> above a certain limit.

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**Reading**

**Agora Energiewende** (2015) Turnaround for the Energiewende

**Agora Energiewende** (2014) The German Energiewende and its climate paradox

**Fraunhofer ISE** (2015) Energy charts

**DIW** (2014) Coal power endangers climate targets: Calls for urgent action

**AGEB** (2015) Energy consumption in Germany, 2014 – sharp decline due to mild weather (in German)

**Wuppertal Institute for Climate, Environment and Energy** (2007)

Comparison among different decommissioning funds: Methodologies for nuclear installations

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**Germany's greenhouse gas emissions and climate targets**

**Details of new Climate Action Programme**

**The history behind Germany's nuclear phase-out**

**Coal in Germany**

**Understanding the European Union's Emissions Trading System**

#Electricity market

# Designing the power market for a future dominated by renewables



© mhp/fotolia

**T**he Energiewende has always involved tough choices. Germany is now facing the next big decision in this ambitious project: How to overhaul its power market to accommodate a predominantly renewable energy supply. With renewables contributing to falling wholesale power prices, conventional power plants are struggling to turn a profit. But there are fears that

without their readily-available power, fluctuating supply from renewables might endanger the reliability of the power supply. As with so many of the steps along the road of the energy transition, the issue is highly complex, the debates heated and the political consequences potentially huge.

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**Reading**

**BMWi (2014)** An electricity market for Germany's energy transition – Discussion paper of the Federal Ministry for Economic Affairs and Energy (Green Paper)

**BDEW (2013)** Position paper: Design of a decentralised capacity market

**Öko-Institut/WWF (2012)** Focused capacity markets

**Agora Energiewende (2014)** How does Germany's electricity market work?

**CLEW Article / Factsheets on cleanenergywire.org**

**New power market design without capacity mechanism in ministry plans**

**Germany's power market reform: the options on the table**

**Capacity markets around the world**

*Notes*

#Grid

# Connecting up the Energiewende



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**G**ermany has to update its network to cope with decentralised, fluctuating supply as the country shifts to renewables. Rapidly growing wind power capacity in the north means a bountiful supply of low-cost electricity. But too much power can be as big a problem for the stability of the grid as too

little. And not everyone is in favour of building new power lines to carry electricity to the country's industrial south. The current debate raises key challenges, not only of public acceptance but of how central government works with regional states to make the Energiewende a success.

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**Reading**

**Bundesnetzagentur** (2014) Grid expansion in Germany.  
What you need to know

**BMWi** (2015) Grids and Grid Expansion –  
Ministry website in English

**DIW** (2015) Electricity grids and climate targets:  
New approaches to grid planning

**DIW** (2014) Beyond the "Grid-Lock" in electricity interconnectors:  
The case of Germany and Poland

**Pentalateral Energy Forum** (2015) Generation adequacy  
assessment

**Website:** Grid development plans of the four German transmission  
grid operators (TSOs)

**Bundesnetzagentur** (2014) Monitoring report (in German)

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**Set-up and challenges of Germany's power grid**

**Setting the power price: The merit order effect**



#Citizens' Energy #Society

# Germany between citizens' energy & nimbyism



© anweber/fotolia

Germany's energy revolution is having a far-reaching impact on everything from the landscape to education. Many farmers earn more from their "energy harvest" than from traditional crops and citizens are rethinking lifestyle choices to go green. Since the energy transition took off in 2000, millions of Germans have become energy producers, investing in solar panels on their houses and buying shares

in wind parks. Citizens' engagement was key for maintaining high public support for the energy transition despite rising power prices. The introduction of new regulations has stoked concerns that more complex rules will put citizens off. At the same time, important Energiewende projects – such as grid extension and wind parks – have run into resistance, requiring new ways to keep the public on board.



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**Reading**

**Leuphana University, Lüneburg (2015)** On the state of energy cooperatives in Germany (in German)

**Association of German Engineers (2014)** Location-related problems of acceptance of industrial and technology policy (in German)

**Jeremy Rifkin (2011)** The third industrial revolution: How lateral power is transforming energy, the economy, and the world

An example for an energy-friendly suburb in Freiburg:  
[www.vauban.de](http://www.vauban.de)

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**Citizens' participation in the Energiewende**

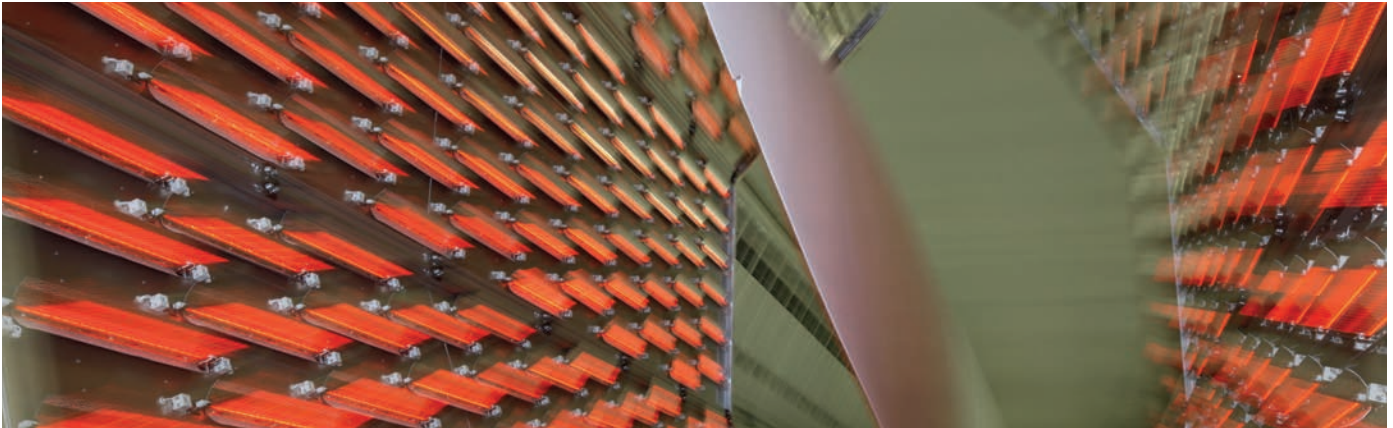
**Polls reveal citizens' support for Energiewende**

**Facts and figures on the social impact of the Energiewende**

*Notes*

#Business&Jobs #Cost&Prices

# The Energiewende – Boon or bane for the German labour market and economy?



© VDMA/Nordex SE

Germany's energy transition is dramatically transforming the economy. From solar-panel cleaners to housing-insulation specialists and wind-turbine climbers, the move to a low-carbon economy powered by renewables is creating many business opportunities, while the conventional energy sector is bleeding jobs. Many business leaders warn the costs of the nuclear phase-out and the move into renewables could

drive some manufacturing abroad. They say this could take a toll on the car industry and other pillars of the economy. But energy-intensive industry can also benefit from the dramatic fall in wholesale electricity prices caused by green power. The government says it can uphold competitiveness without compromising green energy goals. It also hopes Energiewende technologies will secure future export success.

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**Reading**

**Frankfurt School-UNEP (2015)** Global trends in renewable energy investment 2015

**GWS - Institute of Economic Structures Research (2012)** Employment effects of renewable energy expansion on a regional level

**BMW i (2014)** Employment from renewable energy in Germany

**DLR, DIW et al. (2014)** Gross employment from renewable energy sources in Germany in 2013 (in German)

**Fraunhofer ISE / Ecofys (2014)** Comparison of industrial electricity prices (Summary in English)

**VaasaETT Global Energy Think Tank (2013)** European residential energy price report 2013 and monthly updates on the website [www.energypriceindex.com](http://www.energypriceindex.com)

**IHS (2014)** Securing Germany's global competitiveness in a new energy world

**Agora Energiewende (2014)** Comparing electricity prices for industry

**FAU University of Erlangen-Nürnberg (2014)** Germany without renewables? (in German)

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**What German households pay for power**

**Where the Energiewende creates jobs**

## #Utilities

# Fighting for survival: Germany's big utilities look for a future in the new energy world



© Bengt Lange/Vattenfall

Germany's ambitious transition to renewable energy has left the major utilities that have dominated the market for decades out in the cold. They have started to adjust their business models, yet despite some drastic steps, their future role in Germany's greener, fast-changing energy markets is far from clear. All companies in the sector must adapt. But coping

with a new energy landscape is perhaps toughest for the four biggest German utilities, E.ON, RWE, Vattenfall and EnBW. Epitomising the "old" energy world of centralised generation and large-scale investment, they have the most to lose from political decisions taken over recent years.

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**Reading**

**Thomson Reuters Practical Law** (2014) Electricity regulation in Germany: Overview

**RWE** (2015) Paving the way for growth with continued focus on financial discipline

**RWE** (2014) Transition of the German utilities: increasing the emphasis on the service component of supply

**E.ON** (2015) Empowering customers. Shaping markets. Capital market story

**Bundeskartellamt** (2014) Energy monitoring report 2014 (in German)

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**Small, but powerful – Germany's municipal utilities**

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**The history behind Germany's nuclear phase-out**

#EEG/Law

# Germany revamps renewables law as it adapts to future with green power



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Germany's renewable energy market is coping with the most far-reaching legislative changes since green power incentives were introduced a quarter of a century ago. The controversial revamp of the renewable energy law (EEG) in 2014 aimed to cut costs related to the Energiewende, exert greater control over the expansion of renewables and maintain exemptions that help large energy users deal with the transition. Some of the measures have a short track record and strike at the very

heart of the 1990 law. Guaranteed prices for renewable energy producers (feed-in tariffs) have been partially substituted by tenders for renewables projects, and a stricter target corridor for added capacity was introduced. Energy experts stress that this was necessary to adjust the evolving sector to EU rules and subject it to more market forces. But renewables developers, particularly in the solar sector, have expressed reservations, saying the reforms make investments in renewables less secure.



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**Reading**

**BMWi** (Unofficial English translation 2015) Renewable Energy Sources Act - RES Act 2014

**BMWi** (2015) Development of renewable energy sources in Germany 2014 (in German)

**Agora Energiewende** (2014) Q+A on the 2014 Reform of the German Renewable Energy Act

**Arrhenius Institute** (2014) Growth trajectory of renewable power (in German)

**BEE** (2015) Factsheet: Renewables from Germany

**Deutsche Windguard** – Statistics for wind energy development

**CLEW Factsheets - on cleanenergywire.org**

**Defining features of the Renewable Energy Act (EEG)**

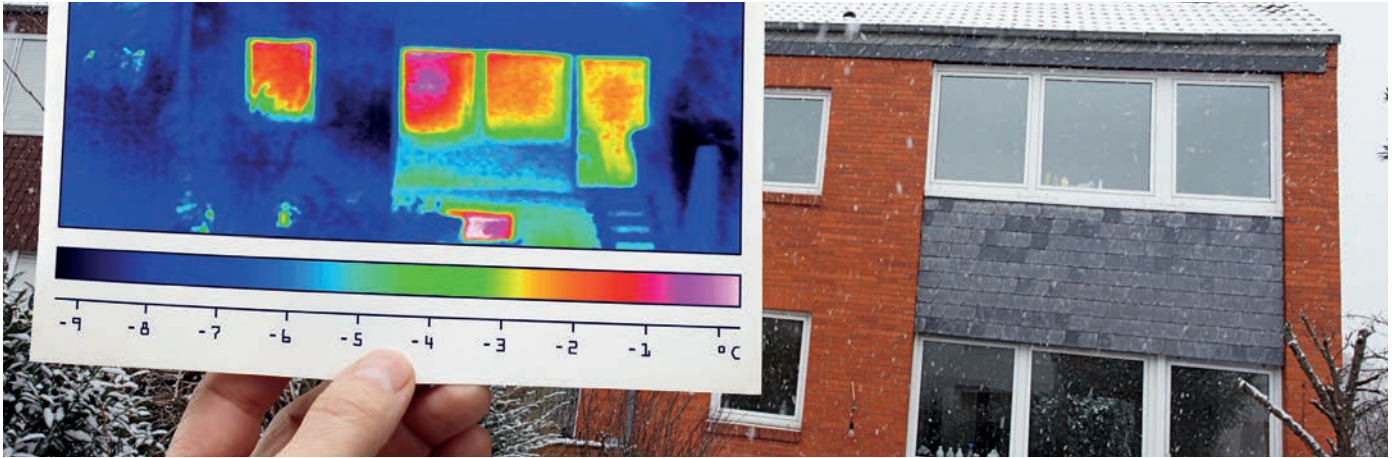
**Comparing old and new: Changes to Germany's Renewable Energy Act**

**Position of key stakeholders on the EEG 2.0**

*Notes*

#Efficiency

# Taming the appetite for energy



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Reaching climate targets requires more than just greening the power supply. Germany must also tackle demand and consume less energy. In the past, energy use only fell significantly when the economy took a hit. Now the country wants to prove it's possible to decouple growth and emissions by dramatically increasing efficiency. The potential is huge and so far largely untapped, which is why the issue has been dubbed the “sleeping giant” of the Energiewende. The

government's Climate Action Programme, meant to get Germany back on track for its 2020 climate goals, suggests that increasing energy efficiency will reduce emissions more than any other measure – by 25 to 30 million tonnes. But saving energy on a large scale – by insulating buildings, changing behaviours and the introduction of many new and often expensive technologies – requires everyone's participation and has proven a hard sell so far.



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**Reading****BMWi (2014) National Action Plan on Energy Efficiency (NAPE):**

All the changes at a glance

**DENEFF (2014) Sector monitor energy efficiency 2014**  
(English summary)

**DIW (2014) Improved energy efficiency: Vital for energy transition and stimulus for economic growth**

**Agora Energiewende (2014) Energy efficiency as a business model** (in German)

**CLEW Factsheets - on [cleanenergywire.org](http://cleanenergywire.org)**

**Details of new Climate Action Programme**

**Homes for the Energiewende**

**Germany's greenhouse gas emissions and climate targets**

**Combined heat and power - an Energiewende cornerstone?**

*Notes*

#International #Energy Union

# From isolation to integration: The Energiewende and Germany's neighbours



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While many European countries are also investing in a greener infrastructure, few have initiated such radical reforms. Germany has started the Energiewende on its own terms. But not everyone welcomes this. Germany's energy markets are at the geographic heart of Europe. What happens here significantly affects markets in neighbouring countries. Renewable energy subsidies have in the past also been an issue with the EU, due to competition rules. Germany is adjusting its policies as it learns that energy policy can't be implemented in

isolation. Cooperation within Europe has intensified in many areas such as grid extensions, trade and research. The EU's plan for an "Energy Union" could deepen the German energy market's ties to its neighbours even more. But a new rift is emerging: While the government is keen to limit subsidies for fossil-fueled power plants, many EU countries are introducing so-called capacity markets, which can be supportive of these. The Energiewende still poses major challenges in Europe, both for Germany and its neighbours.

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**Reading**

**EU-Commission** (2015) Energy Union Website

**European Parliament** (2015) General principles of the EU's energy policy

**Booz&Co et al.** (2013) Benefits of an integrated European energy market

**Böckers et al.** (2013) Benefits of an integrated European electricity market: The role of competition

**ACER** (2012) Unintended cross-border electricity flows in central Europe

**Agora Energiewende** (2015) Overview of French and German power markets

**Agora Energiewende** (2015) Potential interactions between capacity mechanisms in France and Germany

**DIW** (2012) What are loop flows?

**DIW** (2014) Beyond the “Grid Lock” in electricity interconnectors – The case of Germany and Poland

**Öko-Institut** (2013) Impacts of Germany's nuclear phase-out on electricity imports and exports

**CLEW Factsheet - on [cleanenergywire.org](http://cleanenergywire.org)**

**Understanding the European Union's Emissions Trading System**

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#Transport

# Driving change in German mobility



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The Energiewende is paving the way for a future energy system in which power, heating and transport are closely integrated. Batteries will draw electricity from the grid in order to power vehicles. But the transformation of the transport sector still lags far behind the power system, and the German affection for powerful automobiles isn't just a cliché. Car makers have lobbied hard – and with some success – against stricter

emissions limits, and they risk falling behind the global competition on battery technologies. Consumers are slow on the uptake of electric vehicles, which are still expensive and need frequent recharging. The government aims to put 1 million electric vehicles on German roads by 2020, but so far there are just around 19,000. Transport emissions have not decreased and in 2014 they again exceeded 1990 levels.

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**Reading****Federal Ministry of Transport and Digital Infrastructure (BMVI)**

Website on transport and mobility

**BMVI** (2013) The mobility and fuels strategy of the German government (MFS)

**BMVI** (2014) Electric mobility

**DIW** (2015) Power system impacts of electric vehicles in Germany: Charging with coal or renewables?

**Öko-Institut** (2014) Development of an evaluation framework for the introduction of electromobility

**National Platform for Electric Mobility (NPE)** (2014) Progress report 2014 to the federal government (in German)

**AEE** (2014) Energy transition in the transport sector (in German)

*Notes*

#Security

## International relations could turn on windmills



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The question of energy supply is vital to all modern economies. This is particularly true for Germany, which must import most of its fossil fuels. The Ukraine crisis has highlighted the risks of Germany's dependence on Russia, especially for imports of natural gas. But Germany's transition to a low-carbon future might shake up these relationships in the longer term,

with profound implications for foreign and security policy. If more countries sign up to cutting greenhouse gas emissions by reducing the use of fossil fuels to stop climate change, the consequences will reverberate around the world. Meanwhile, leadership in renewables technologies could become an important driver of future economic success and influence.

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**Reading**

**SWP (2012)** Globalising the German energy transition

**The Economist (2014)** European energy security - Conscious uncoupling

**Munich Security Conference (2014)** Energy Security Summit 2014 - U.S. shale revolution and the crisis in Ukraine: A turning point for Europe's energy policy?

**Fraunhofer IWES (2014)** Erdgassubstitution durch eine forcierte Energiewende (in German)

**Heinrich Böll Stiftung (2014)** Germany's energy transition: A blueprint for European energy security?

**Earth Security Group (2015)** The earth security index 2015: Managing global resource risks and resilience in the 21st century

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