

Renewable Energy in Germany at a Glance

08 th of June 2015 in Bangkok, Thailand

Paul Rydzek, Consultant on behalf of the Renewable Energy Export Initiative by the German Federal Ministry for Economic Affairs and Energy

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Agenda:

- Renewable Energies Exportinitiative
- Transformation of the German Energy System
- Challenges and Opportunities through the use of RES
- The German Delegation

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Renewable Energies Exportinitiative

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Instruments offered by the Initiative



✓ Foreign Trade Fairs



✓ Information Events



✓ Know-how Transfer
✓ Qualification



✓ Trade Missions



✓ Fact Finding Missions

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Goals of the Renewable Energies Export Initiative

Main objectives:

- to contribute to climate protection
- to stimulate the acceptance of renewable energy in other countries
- to showcase Germany's technical and business expertise in the field of renewable energy
- to provide comprehensive support to SMEs as they tap into foreign markets
- Platform for bilateral exchange

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Transformation of the German Energy System

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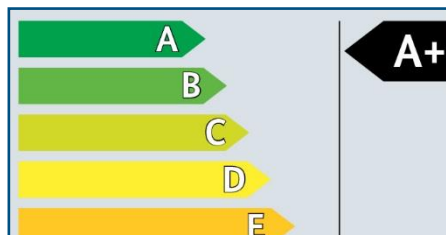


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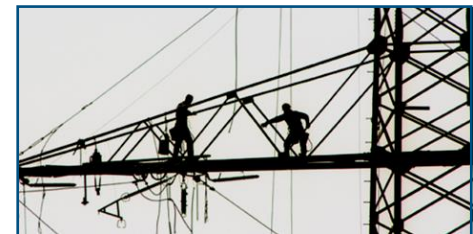
Three pillars of the *Energiewende*



Renewable energy



Energy efficiency



Future grid

Renewable
Energy
Sources Act

National Climate Initiative

Market Incentive Programme

Energy
Saving
Ordinance

Grid Expansion Acceleration
Act

Federal Requirement Plan

- Steady growth
- Cost-efficient
- Environmentally friendly

- Reduce energy consumption
- Improve efficiency

- Increase flexibility
- Enlarge capacities
- Integrate renewables

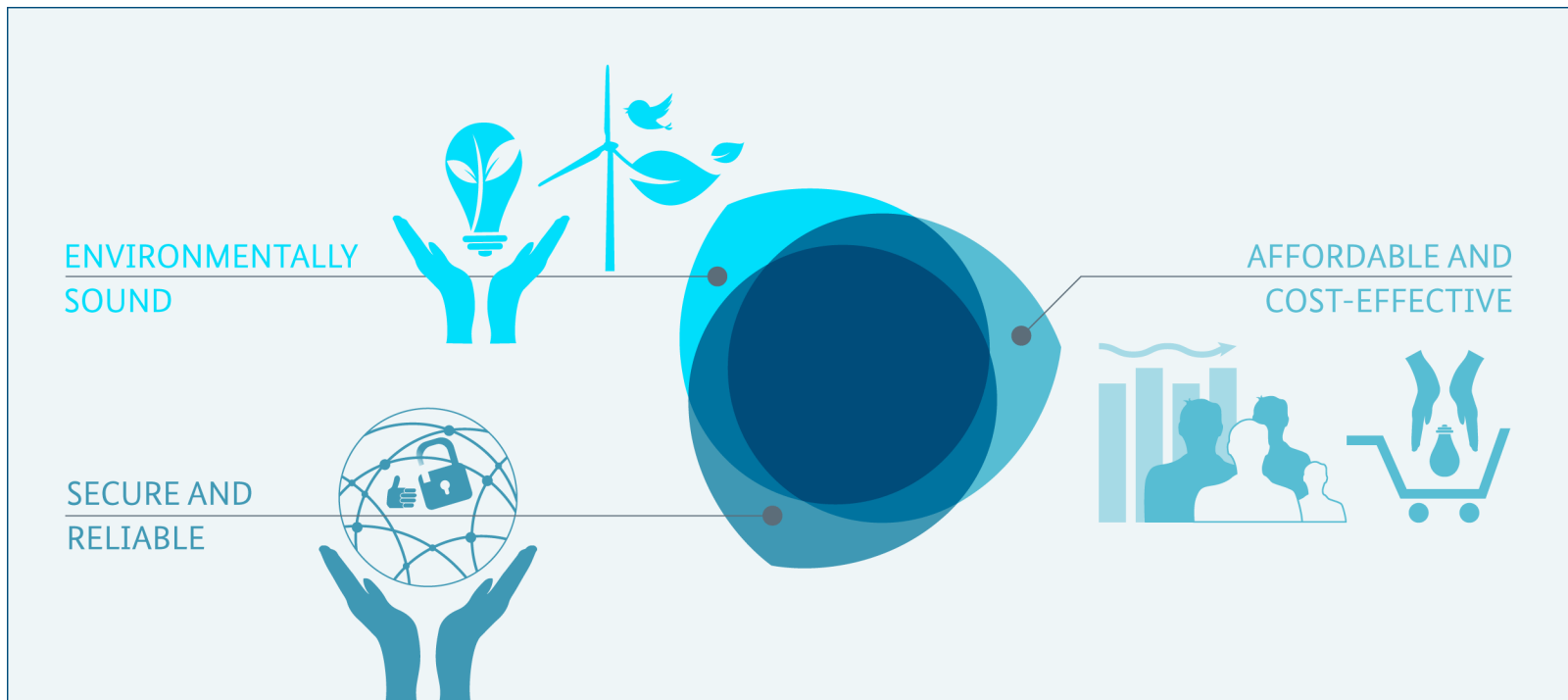
Switch to renewables, halve energy consumption and upgrade grids.

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Three target areas of the *Energiewende*



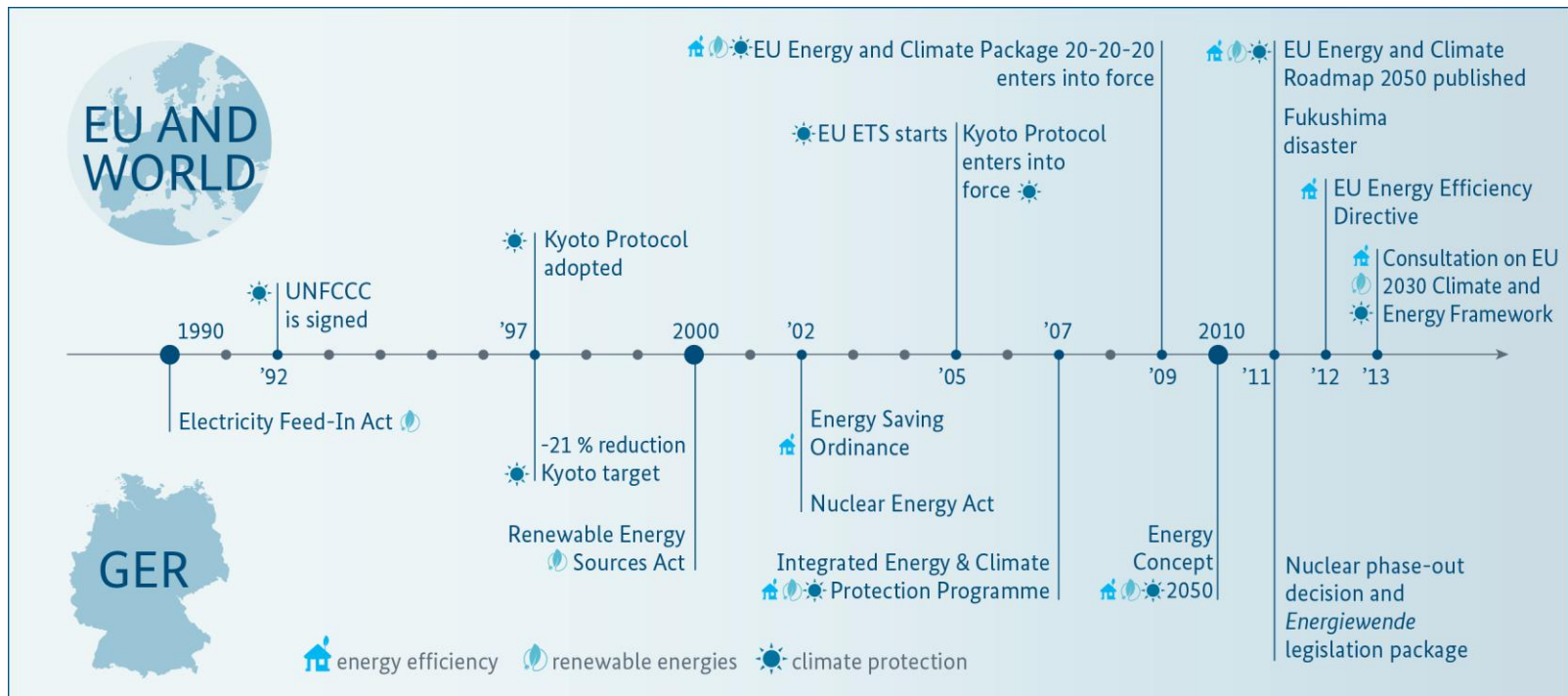
Affordability, reliability and environmental protection are interlinked.

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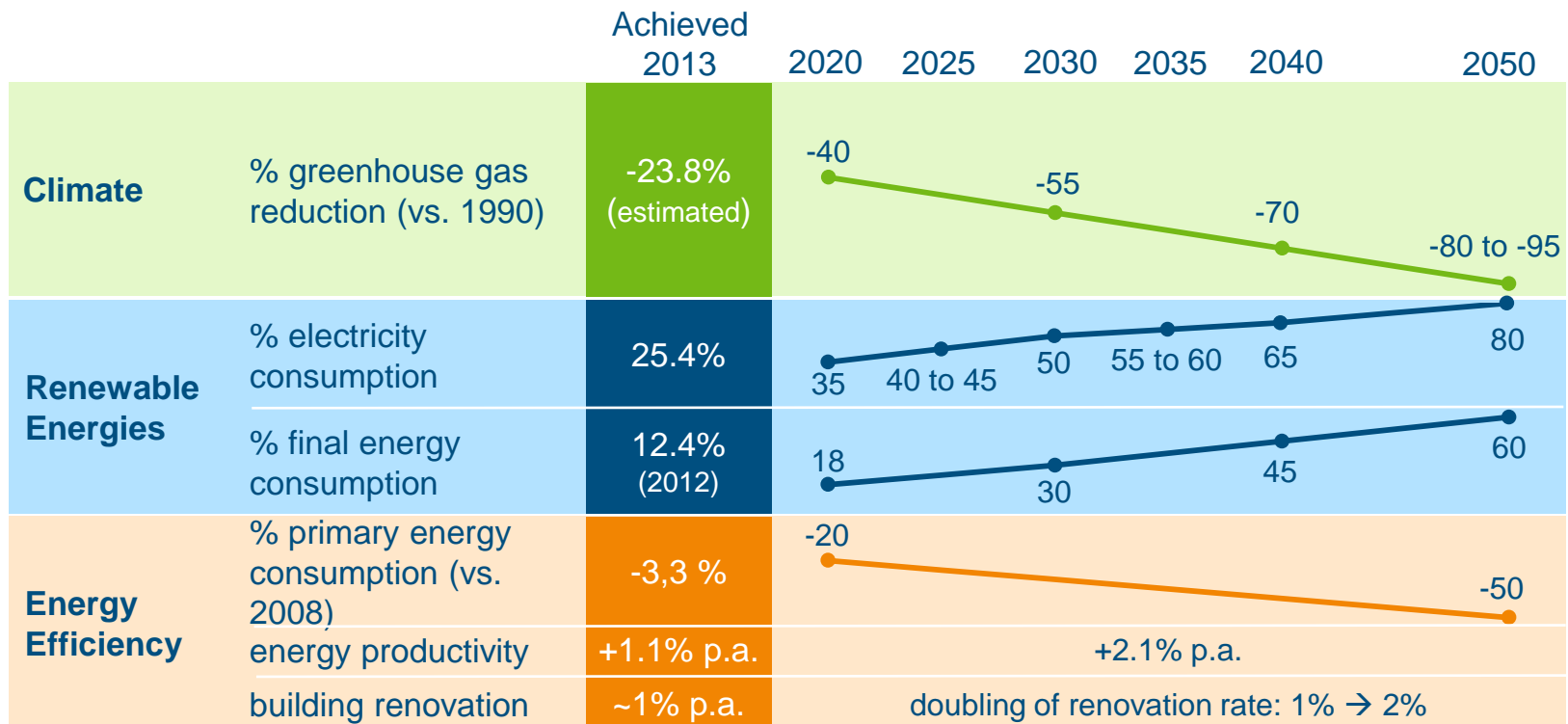
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Energiewende



Germany is part of an integrated European energy and climate strategy.

Energiewende targets until 2050



Germany has set ambitious targets in all sectors and is on track.

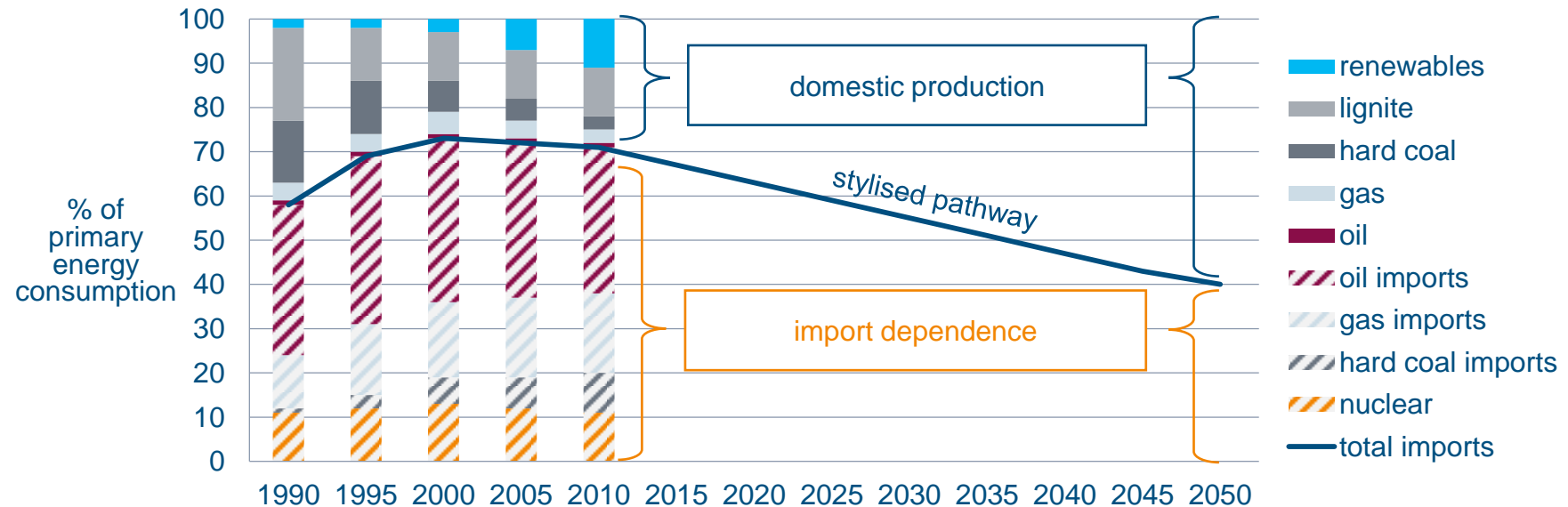
Source: Federal Government 2010, BMU/BMWi 2014, AGEE-Stat 2014

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Energy imports and domestic production in Germany



Source: BMWi 2013

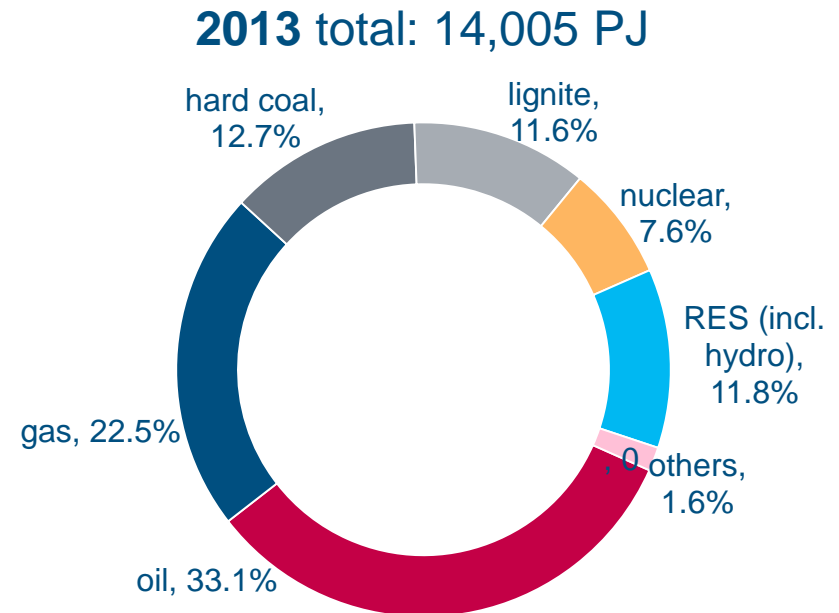
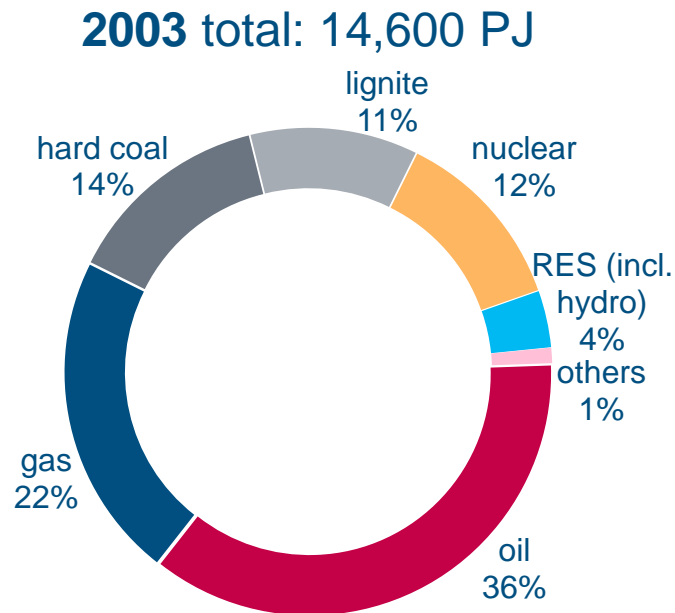
Renewables reduce Germany's energy dependence.

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German primary energy consumption



Source: AGEB 2013

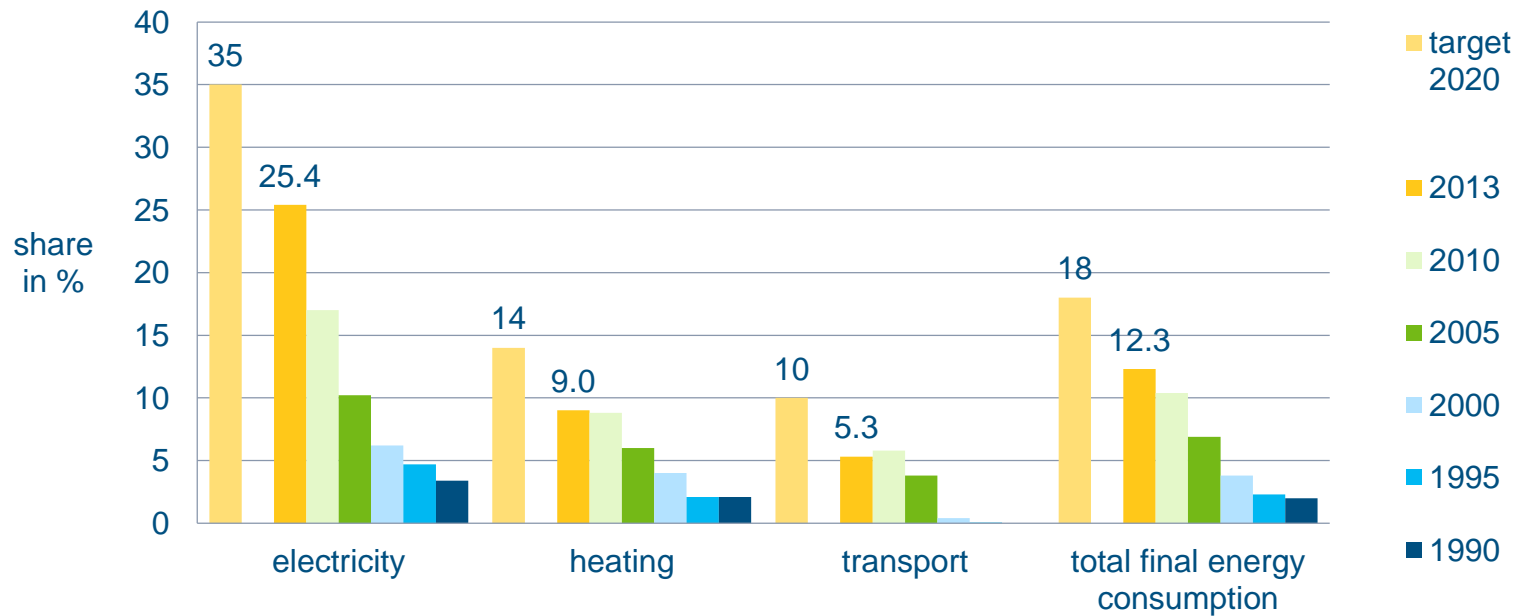
Renewables have overtaken nuclear and lignite in just ten years.

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Renewable energy development in Germany



Source: AGEE-Stat 2014

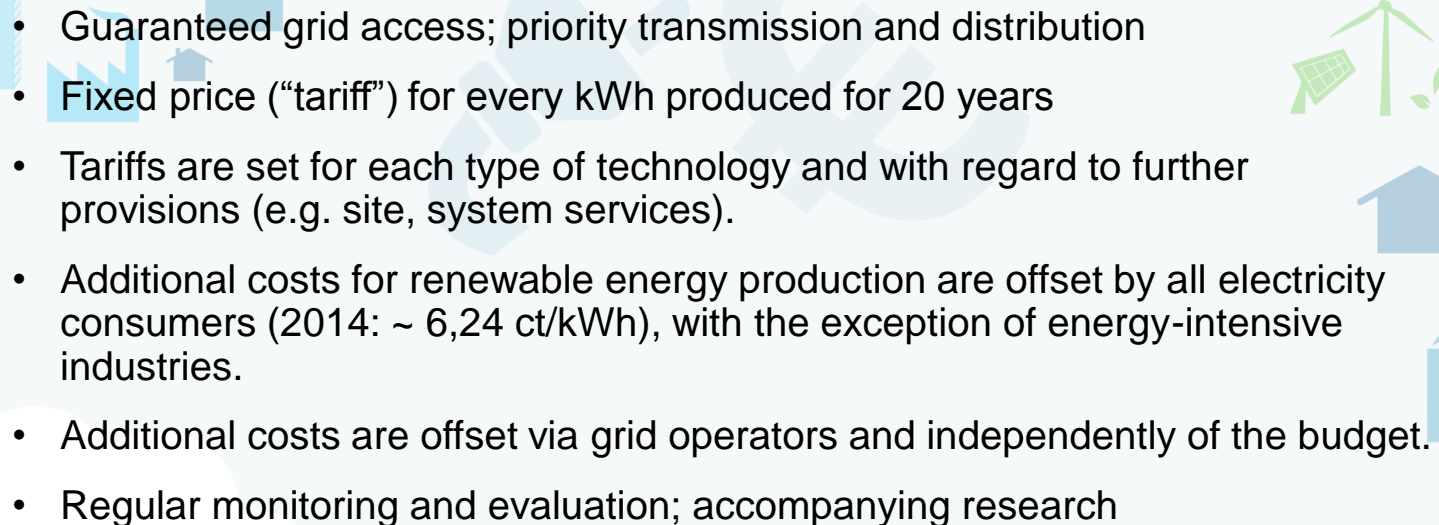
Share of renewables is growing in all sectors, but fastest in electricity.

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Cornerstones of the Renewable Energy Sources Act

- 
- Guaranteed grid access; priority transmission and distribution
 - Fixed price (“tariff”) for every kWh produced for 20 years
 - Tariffs are set for each type of technology and with regard to further provisions (e.g. site, system services).
 - Additional costs for renewable energy production are offset by all electricity consumers (2014: ~ 6,24 ct/kWh), with the exception of energy-intensive industries.
 - Additional costs are offset via grid operators and independently of the budget.
 - Regular monitoring and evaluation; accompanying research

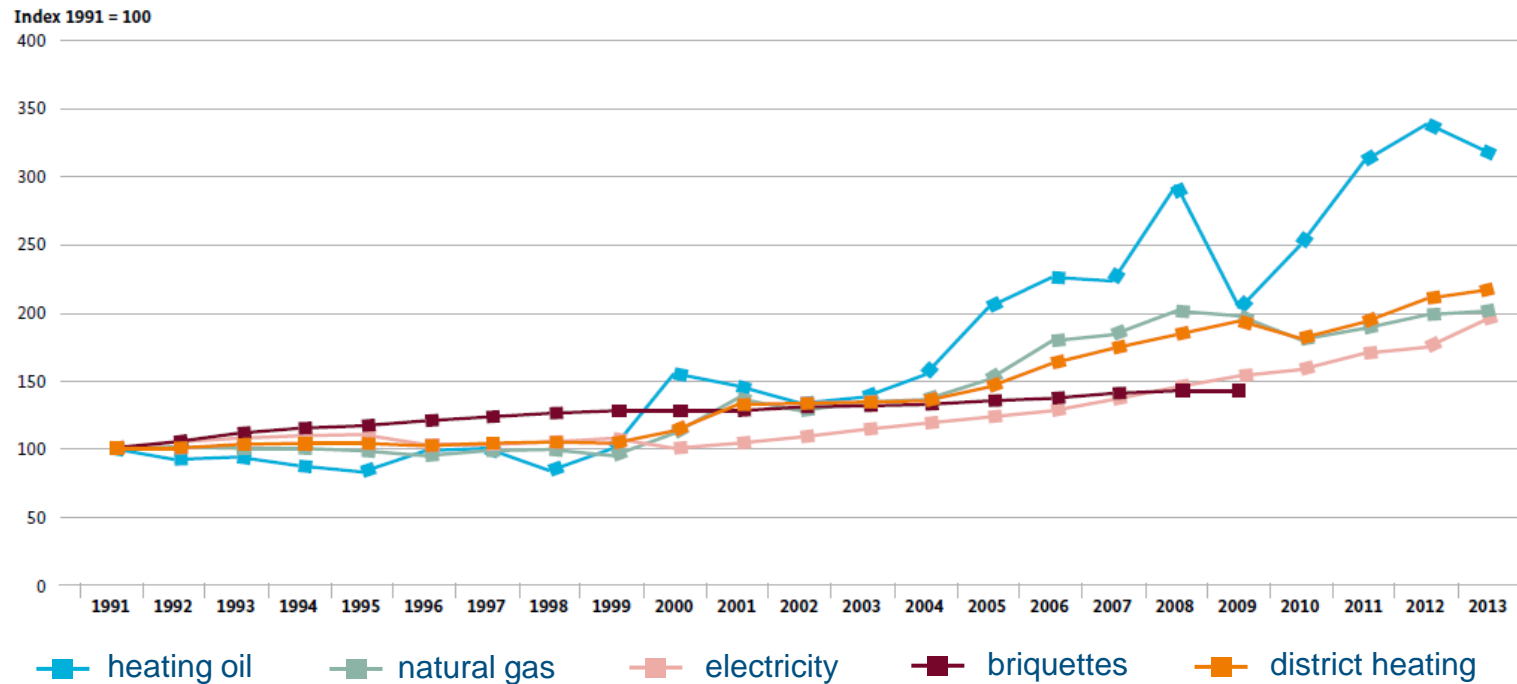
Challenges and Opportunities through the use of RES

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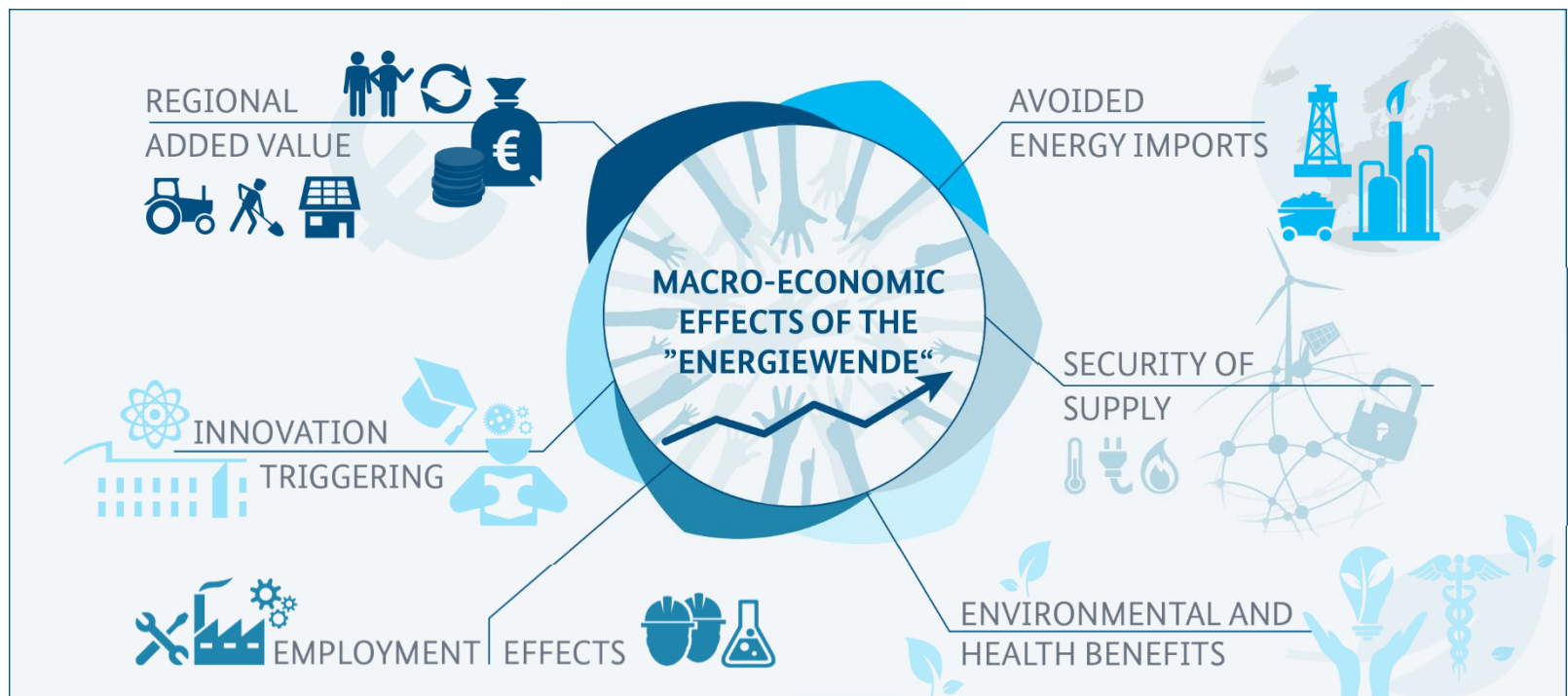
Development of energy prices for private households



The household spending for electricity has increased much less than heating cost.

Source: BMWi 2014

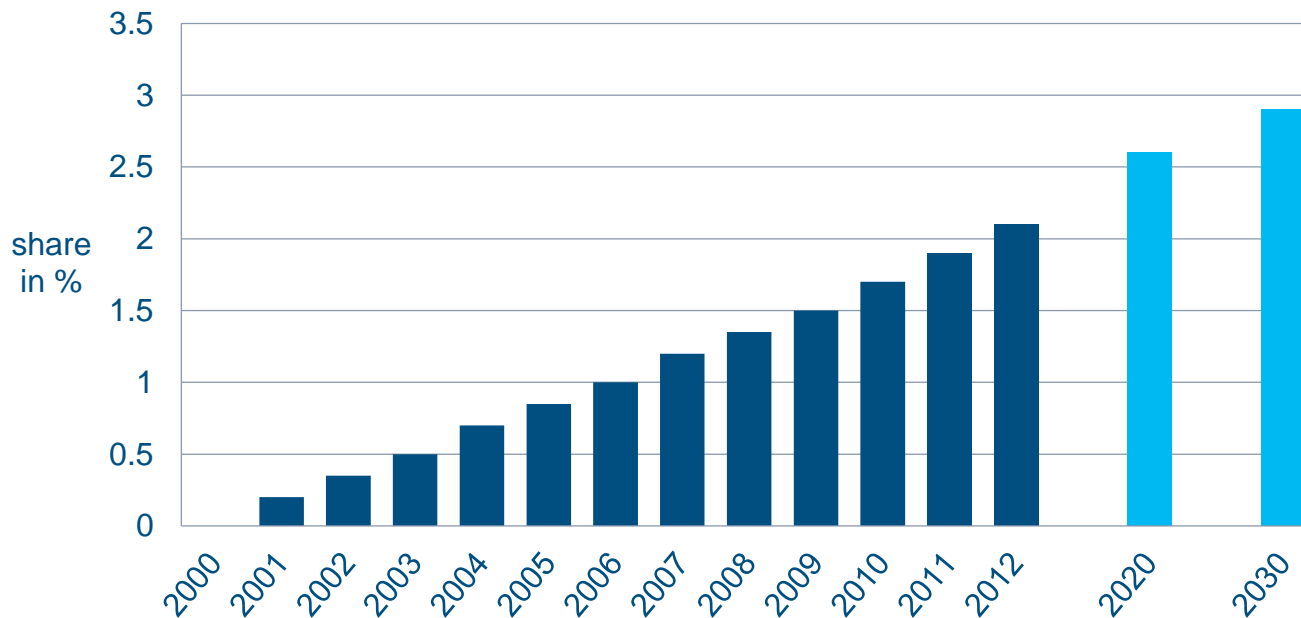
Benefits of fostering energy efficiency and renewables



The energy transition has positive effects on various levels.

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Contribution of renewables to German GDP



The German economy is increasingly benefiting from both domestic and international renewables investments.

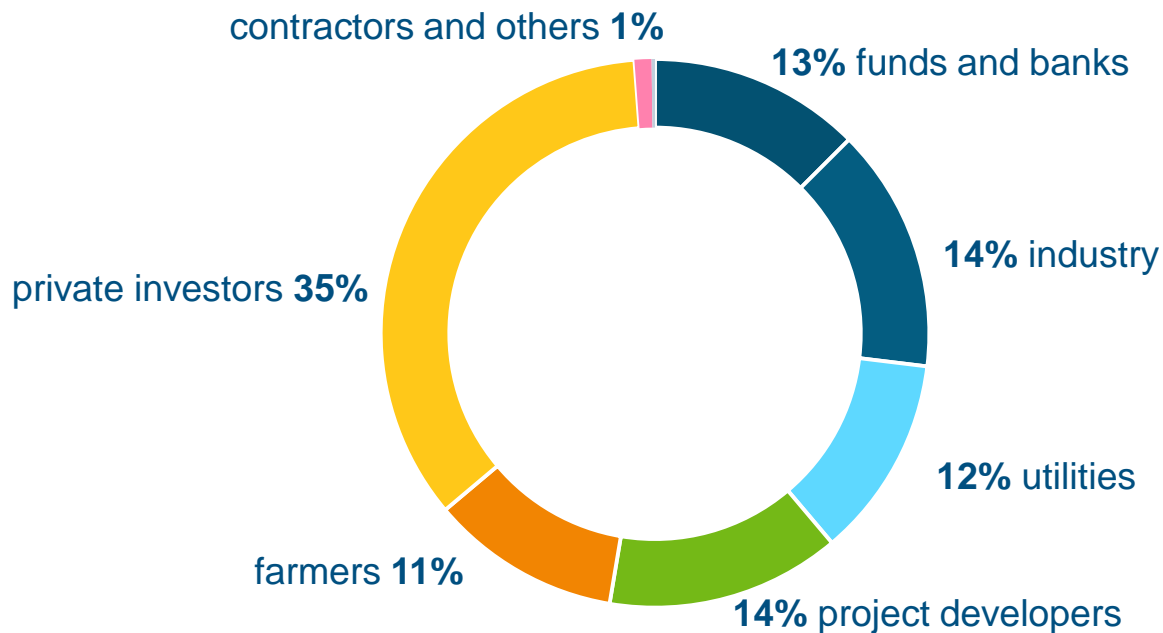
Source: DIW 2010, AEE 2014

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Ownership structure of German RES facilities in 2012



Renewable installations create multiple opportunities for new entrepreneurship.

Source: trend:research 2013

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The German Delegation

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Representative	Company
Rudi Paflitschek	Armaterc FTS GmbH & Co KG
Peter Starz	Streisal GmbH
Ralf Thiemann	Suma Rührtechnik GmbH
Nils Rottmann	NORTH-TEC Maschinenbau GmbH
Gerald Vollmer-Heuer	Planungsbüro Rossow
Marcello Barbato	EnviTec Biogas AG
Helmut Muche	Farmatic Anlagenbau GmbH

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Thank you for your kind attention!

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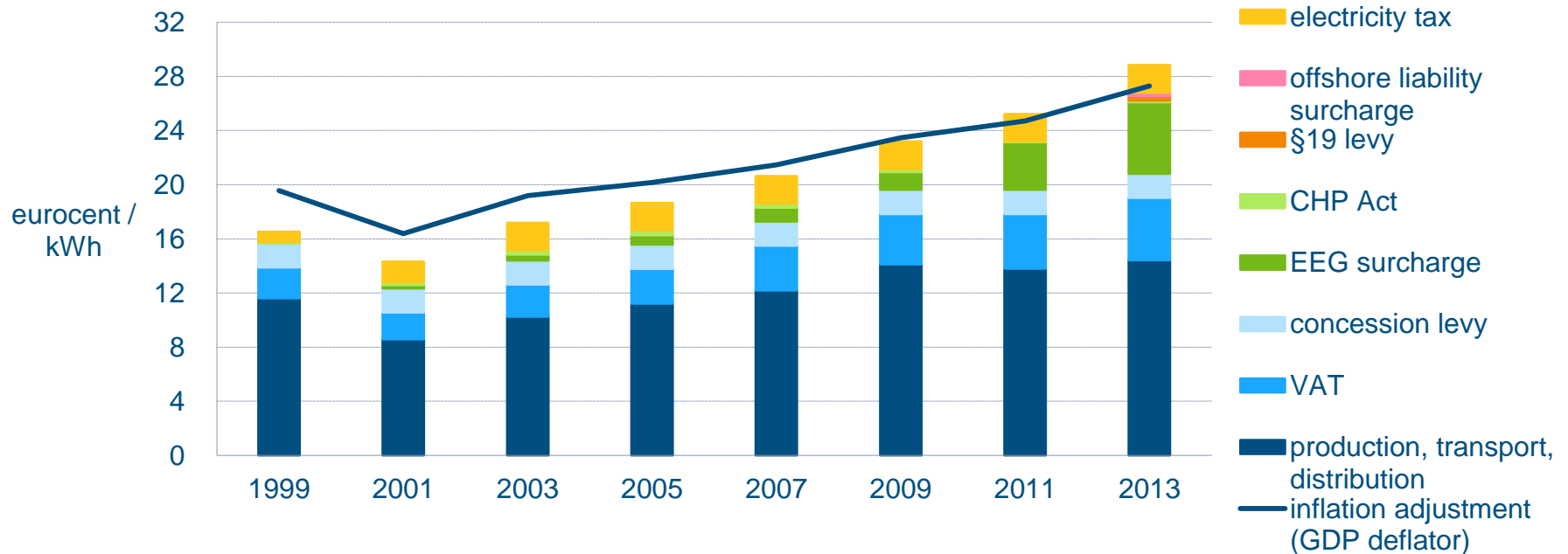
WEB www.renewables-made-in-germany.com

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German household electricity prices



Source: BMWi 2014

The EEG surcharge is only one reason for electricity price increases.

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