



Federal Ministry
for Economic Affairs
and Energy



Renewable Energy in Germany at a Glance

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by the German Federal Ministry for Economic Affairs and Energy



Agenda:

- The Energy Solutions – made in Germany Initiative
- Transformation of the German Energy System
- Challenges and Opportunities through the use of RES
- The German Delegation

<http://www.export-erneuerbare.de>



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The Energy Solutions – made in Germany Initiative

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Instruments offered by the initiative



✓ Foreign trade fairs



✓ Information and networking events



✓ Know-how transfer
✓ Information



✓ Trade missions



✓ Fact finding missions



✓ Project Development & Flagship projects

The goals of the The Energy Solutions – made in Germany 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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Five reasons for the Energiewende

- Development of new technologies as new sources of growth and employment
- Energy policy can be both sustainable and economically successful
- Reduce dependency on energy imports
- Reduce carbon emissions and reach climate protection targets
- Phase-out nuclear power generation



Two pillars of the Energiewende



Renewable Energy

Key legislation:
Renewable Energy Sources Act
Renewable Energy Heat Act

- Steady growth
- Environmentally friendly

Supporting fields of action



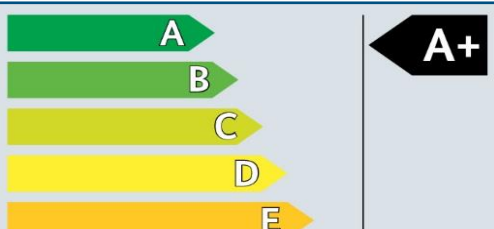
Market and system integration



Energy research and development



European energy and climate policy

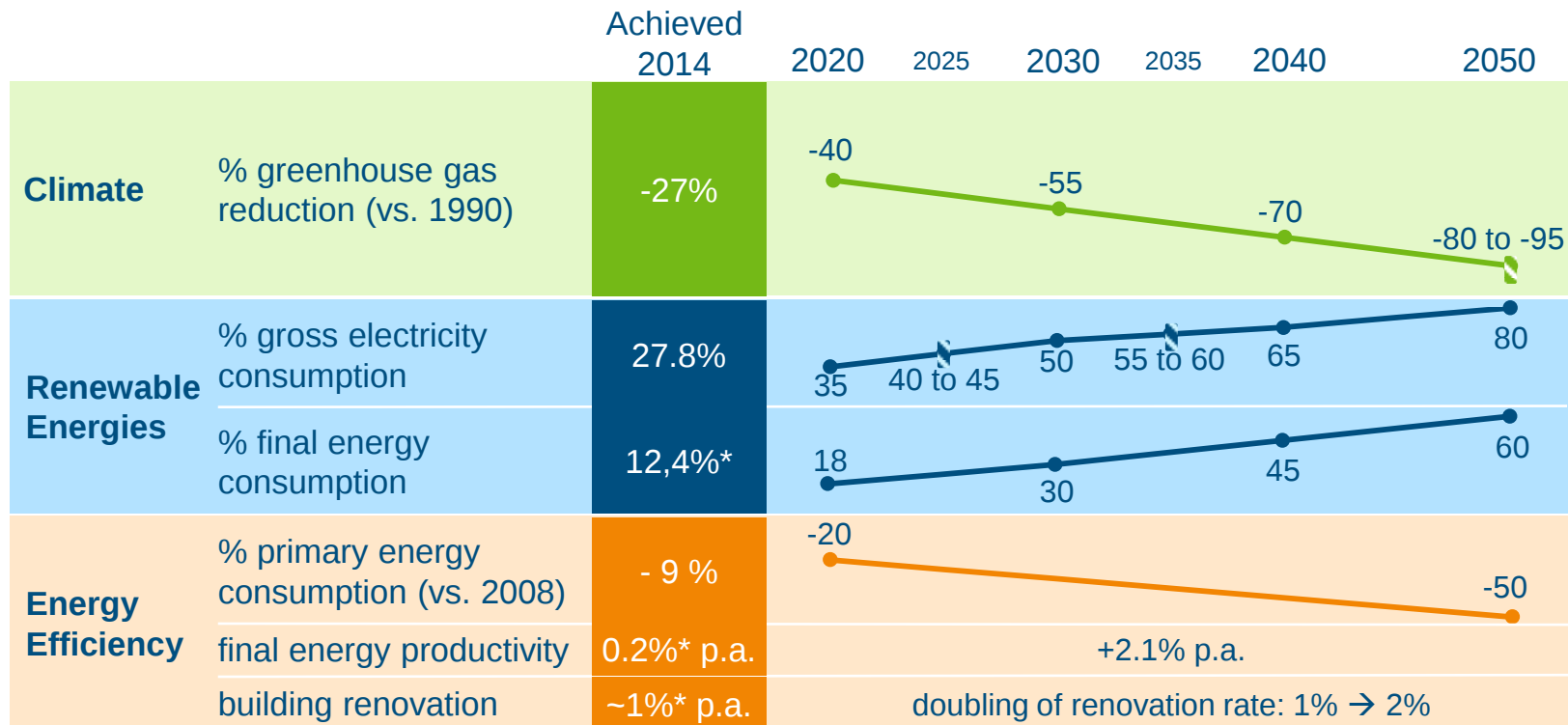


Energy Efficiency

Key legislation:
Energy Saving Ordinance
Heating Cost Ordinance

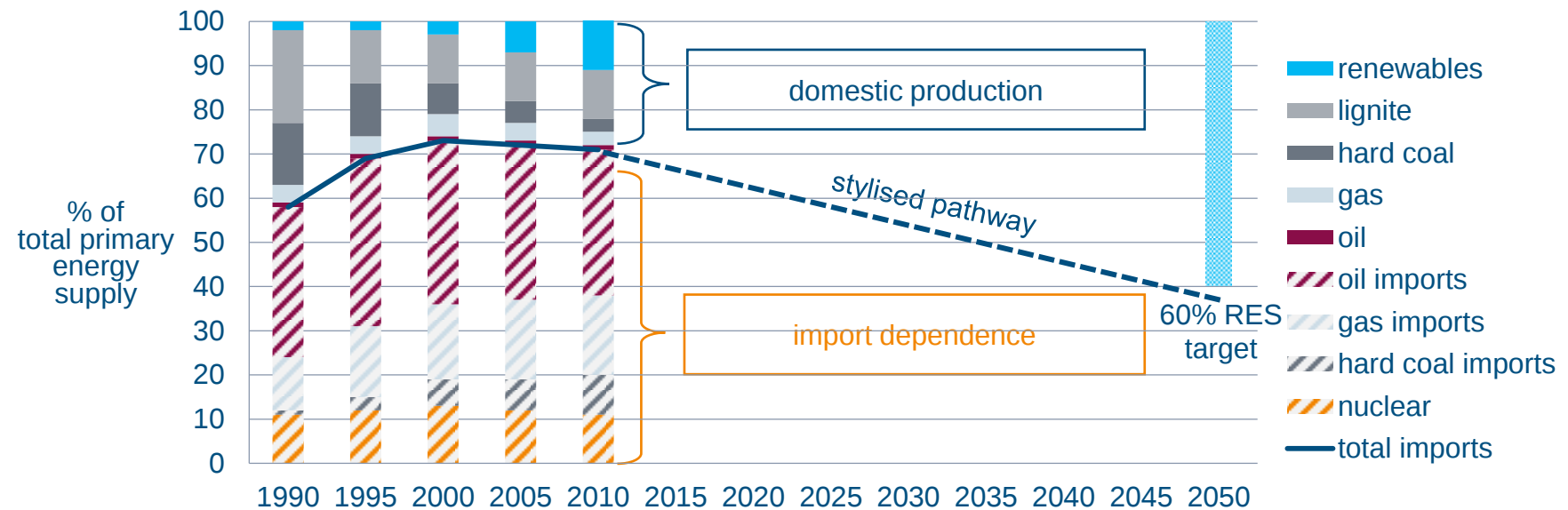
- Reduce energy consumption
- Cost-efficient

The energy transition follows a transparent, long-term strategy with specific targets.



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

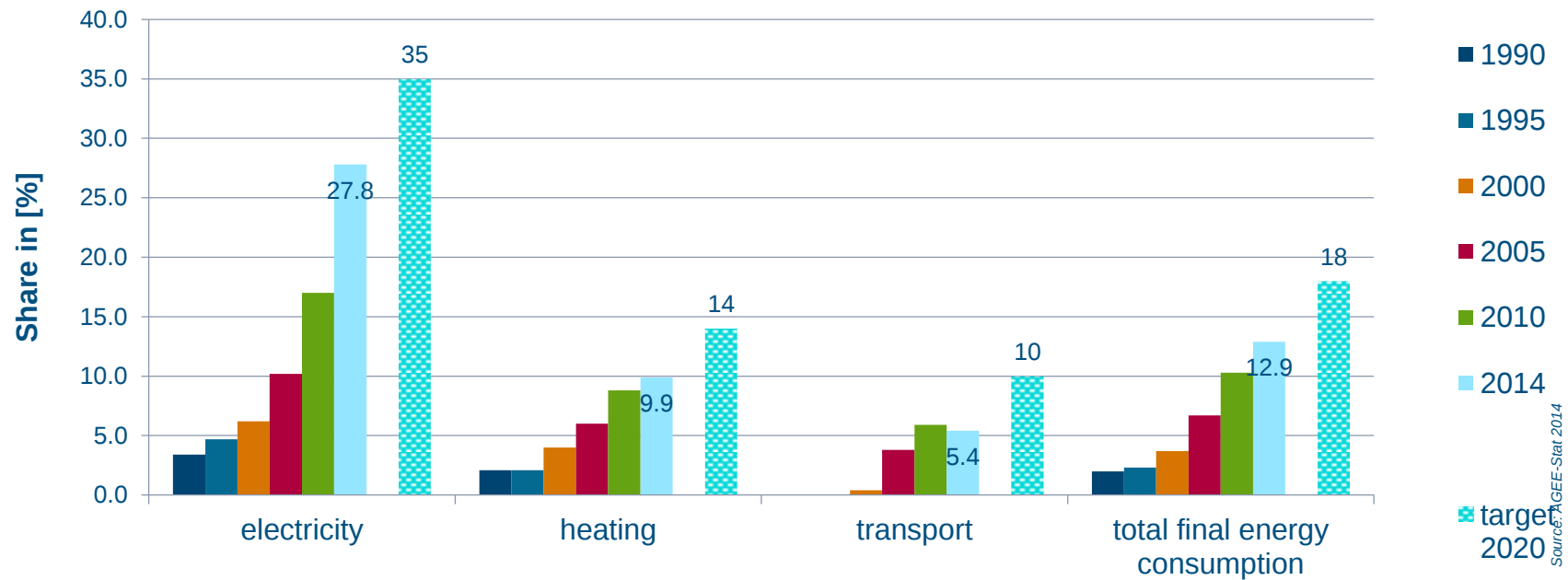
Energy imports and domestic production in Germany



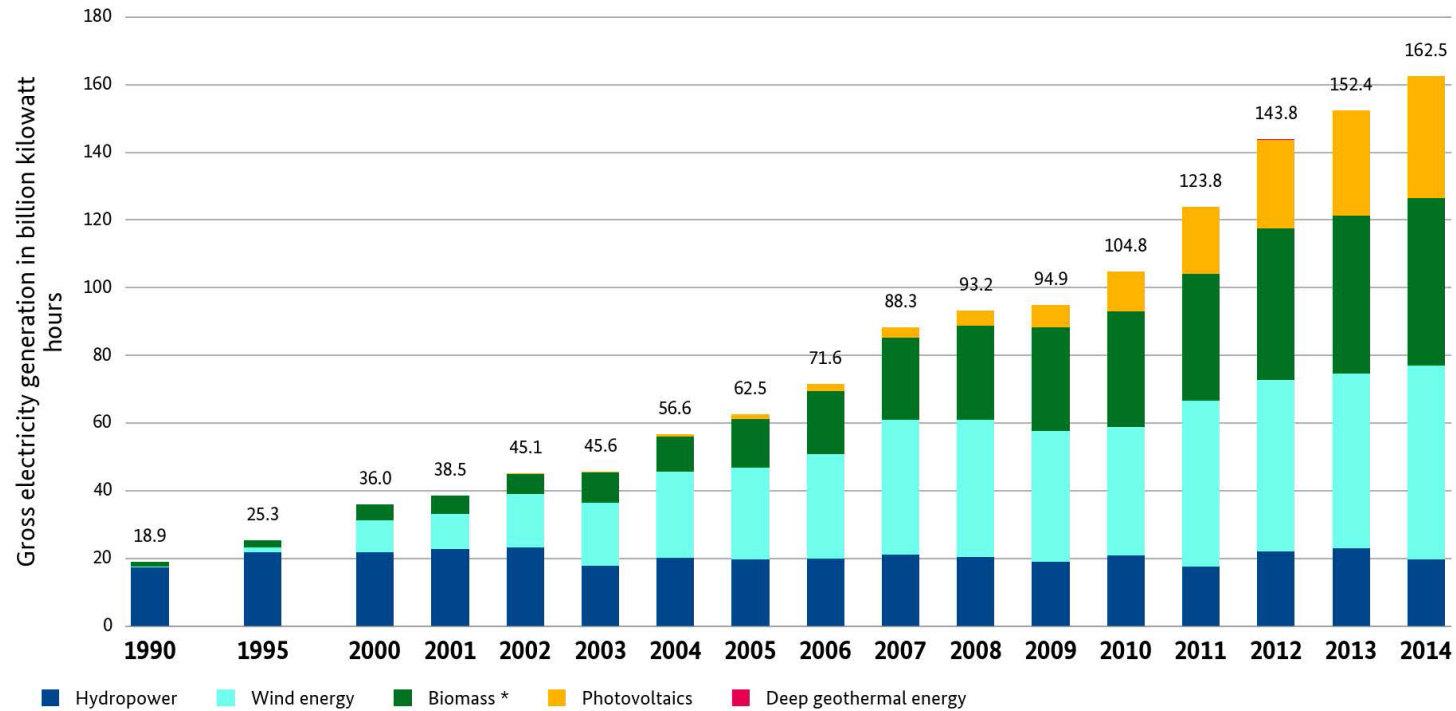
The Energiewende hits many birds with one stone as renewables and efficiency reduce Germany's energy dependence.

Source: BMWi 2013

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



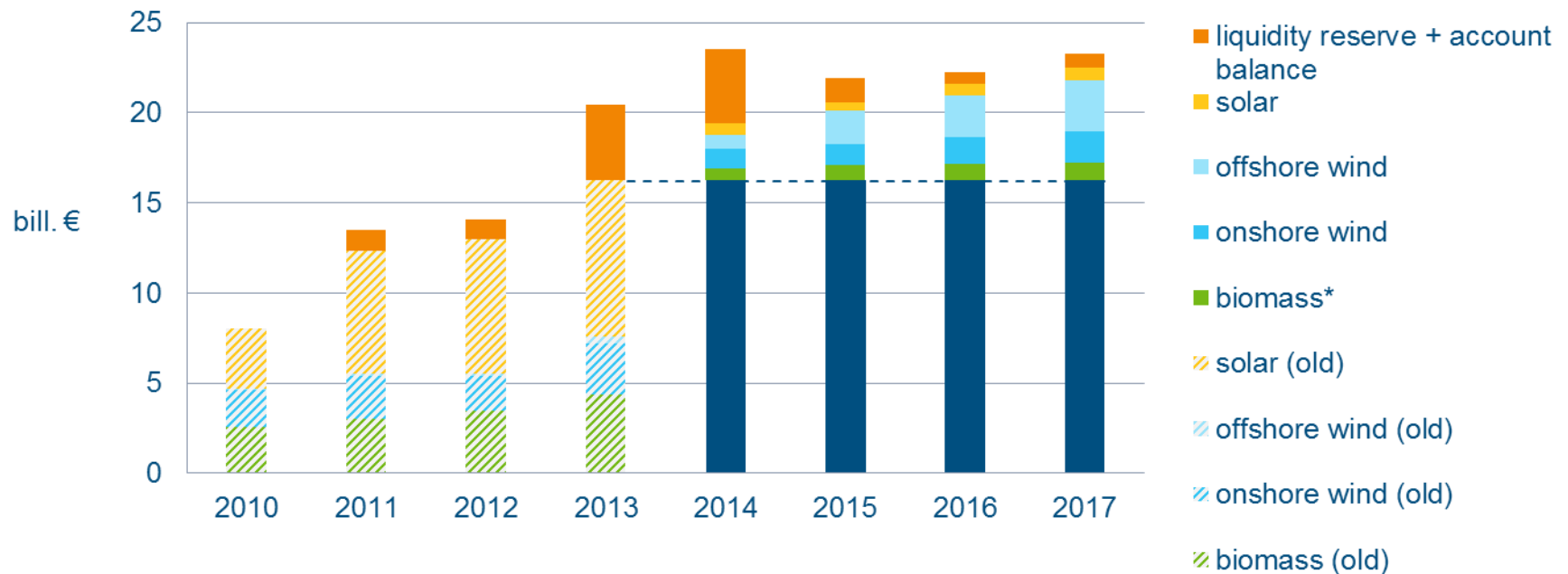
Development of renewables-based electricity generation in Germany



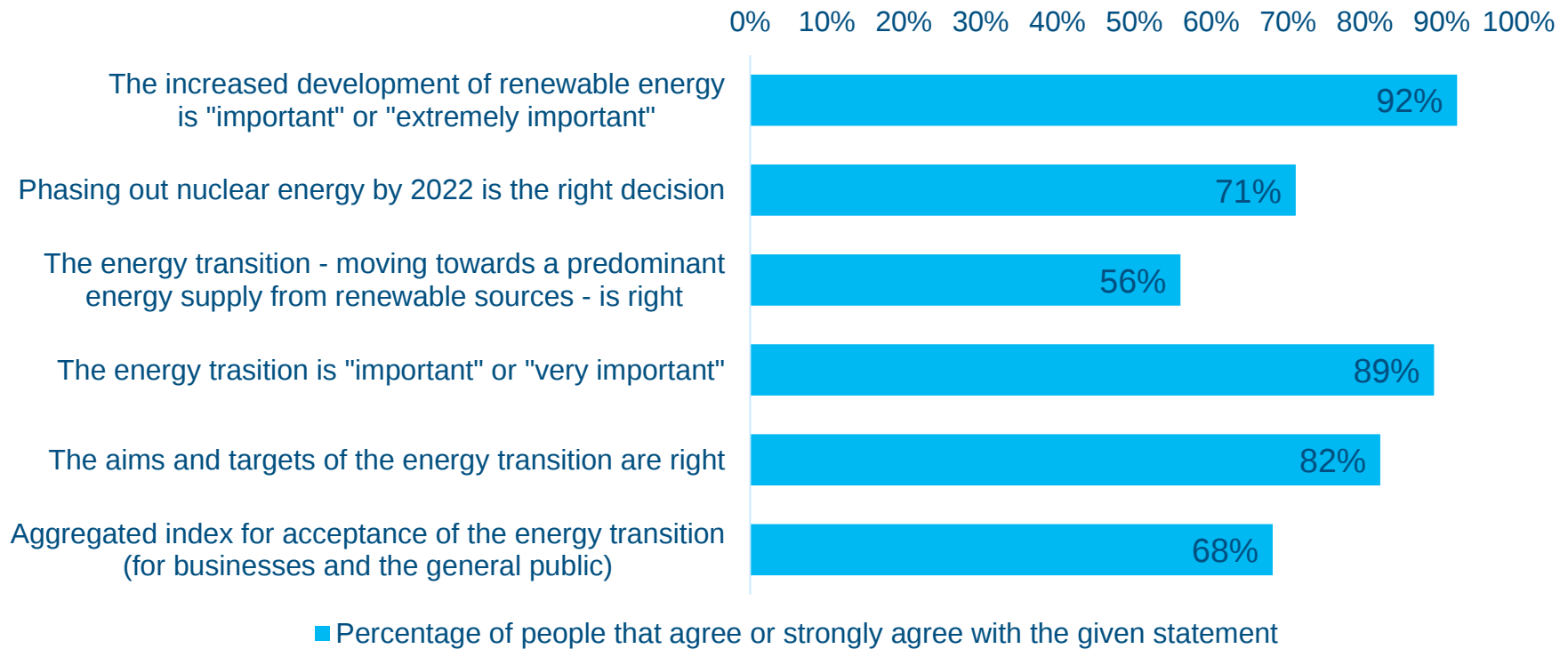
* incl. solid and liquid biomass, biogas incl. biomethane, sewage gas and landfill gas as well as the biogenic fraction of waste, from 2013 incl. sewage sludge; BMWi based on Working Group on Renewable Energy-Statistics (AGEE-Stat); as at December 2015; all figures provisional

Challenges and Opportunities through the use of RES

- The main share of payments for renewable electricity goes to existing plants. New installations account for a much smaller share.



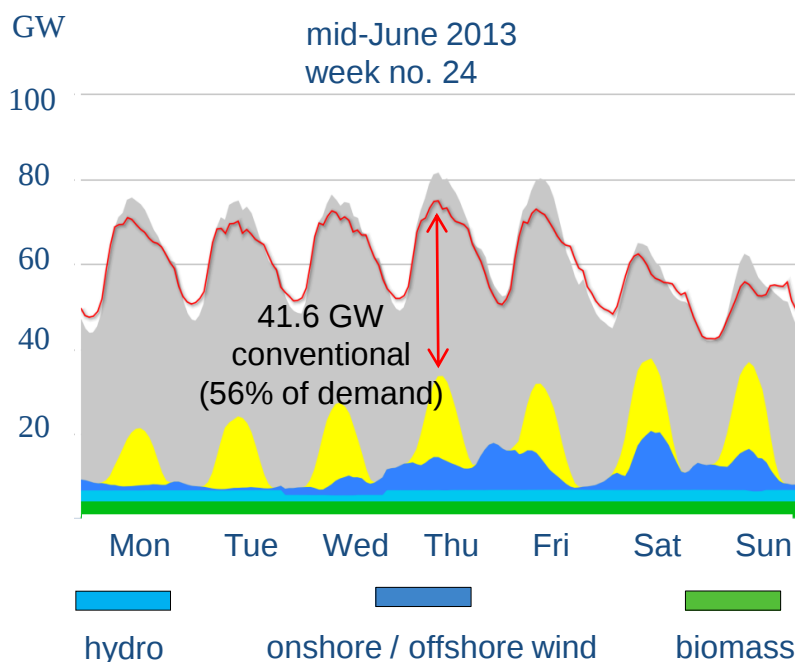
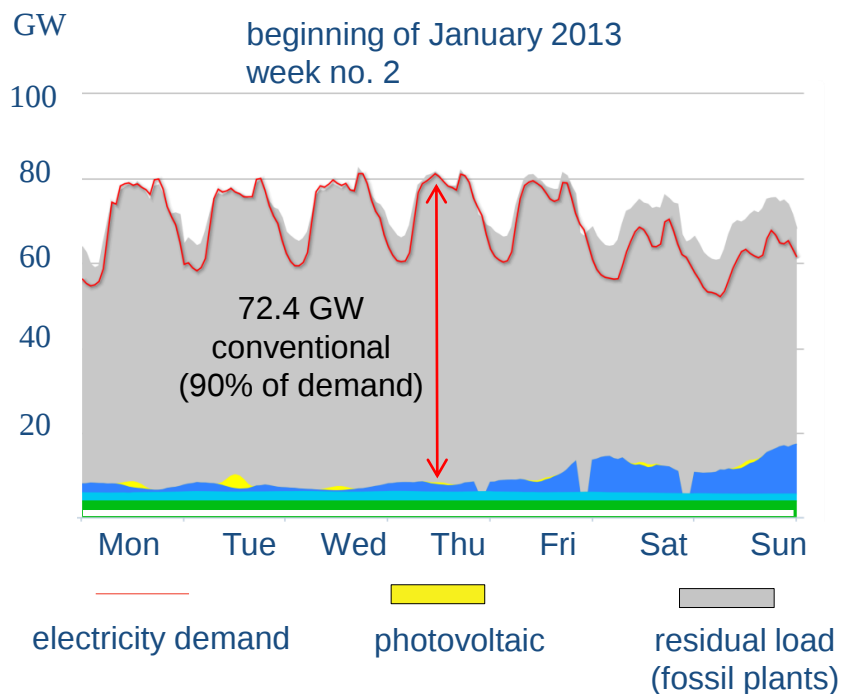
Public acceptance of the *Energiewende*



Sources: BMWi 2014, TNS Emnid 2014, Institut für Demoskopie 2014, BMUB 2014, BDEW 2014, Forsa 2013, BDI 2013

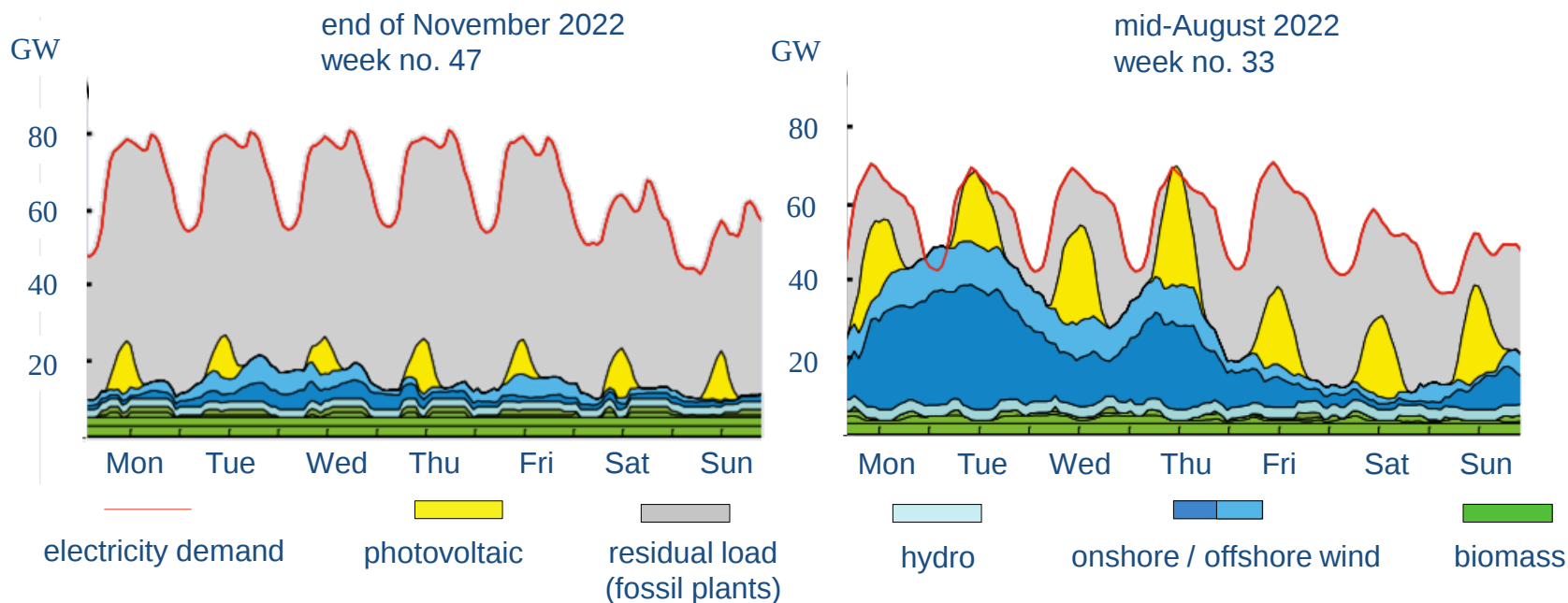
The energy transition enjoys a high degree of public approval.

Conventional power plants need to adapt to higher flexibility needs.



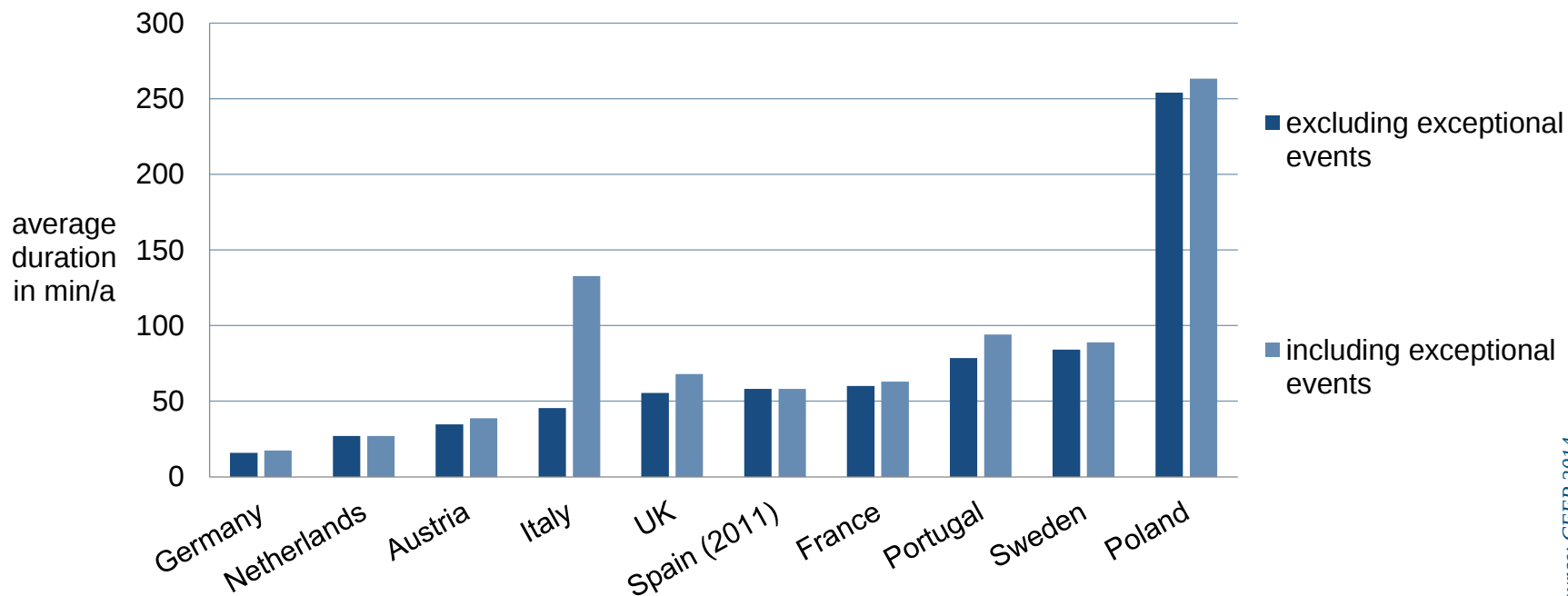
Source: Agora Energiewende 2012

Renewables will partially cover 100% of demand by as early as 2022.



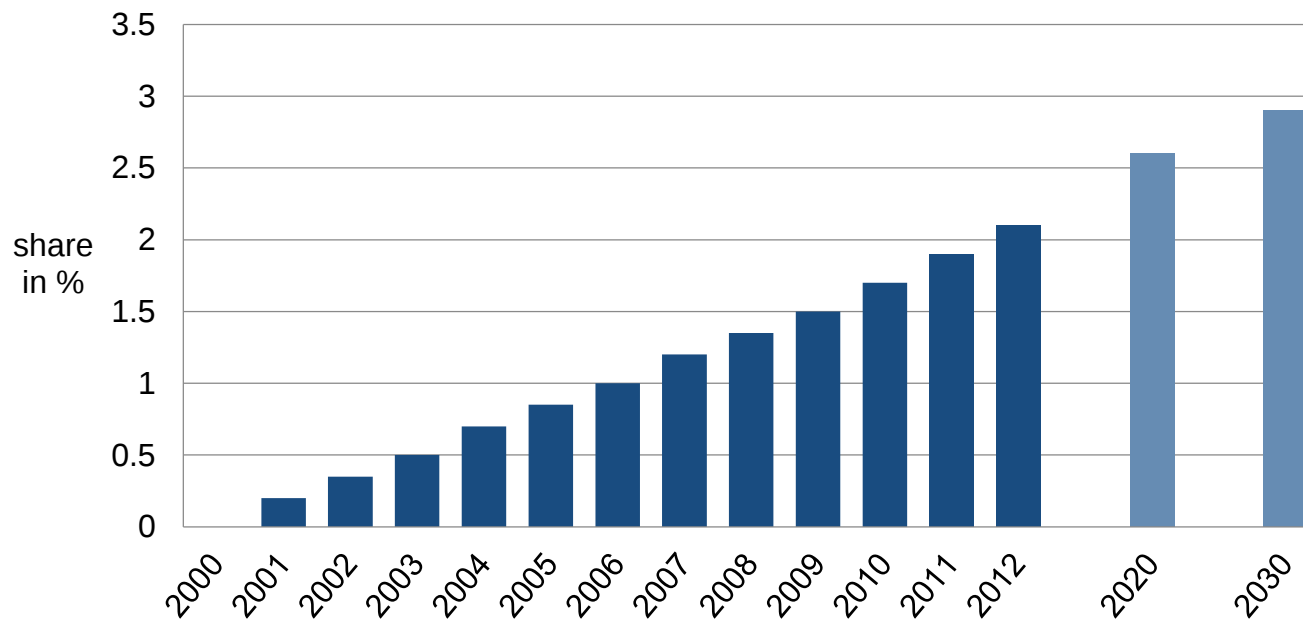
Source: Agora Energiewende 2012

Germany will maintain top security levels despite the energy transition.



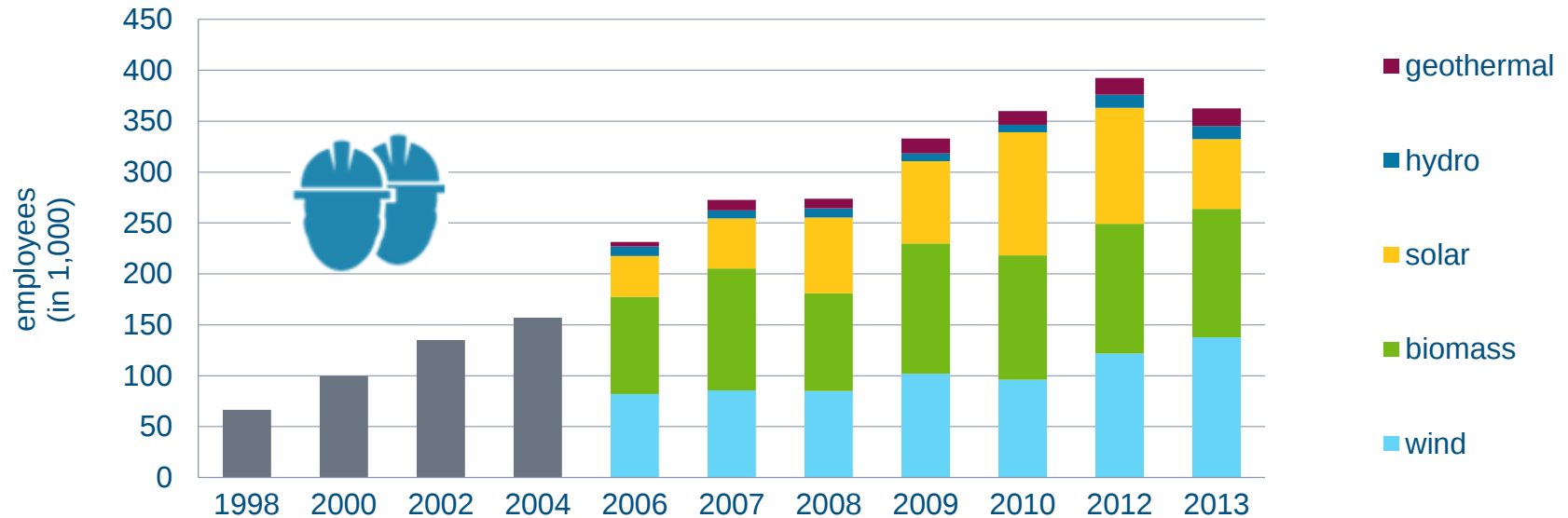
Source: CEER 2014

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



Source: DIW 2010, AEE 2014

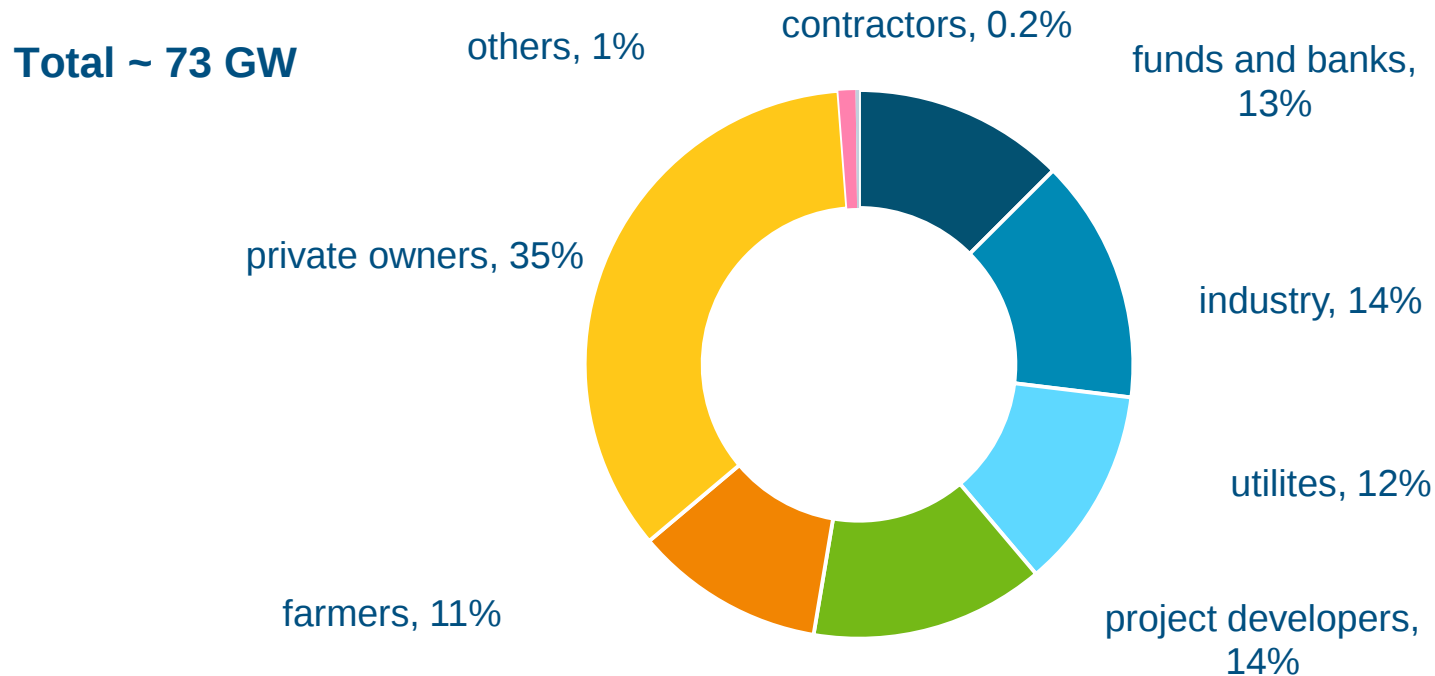
Gross job creation in the German renewables sector



Source: adelphi 2013, DLR/DIW/ZSW/GWS 2013, BMU 2012

The energy transition has positive effects on various levels of the economy.

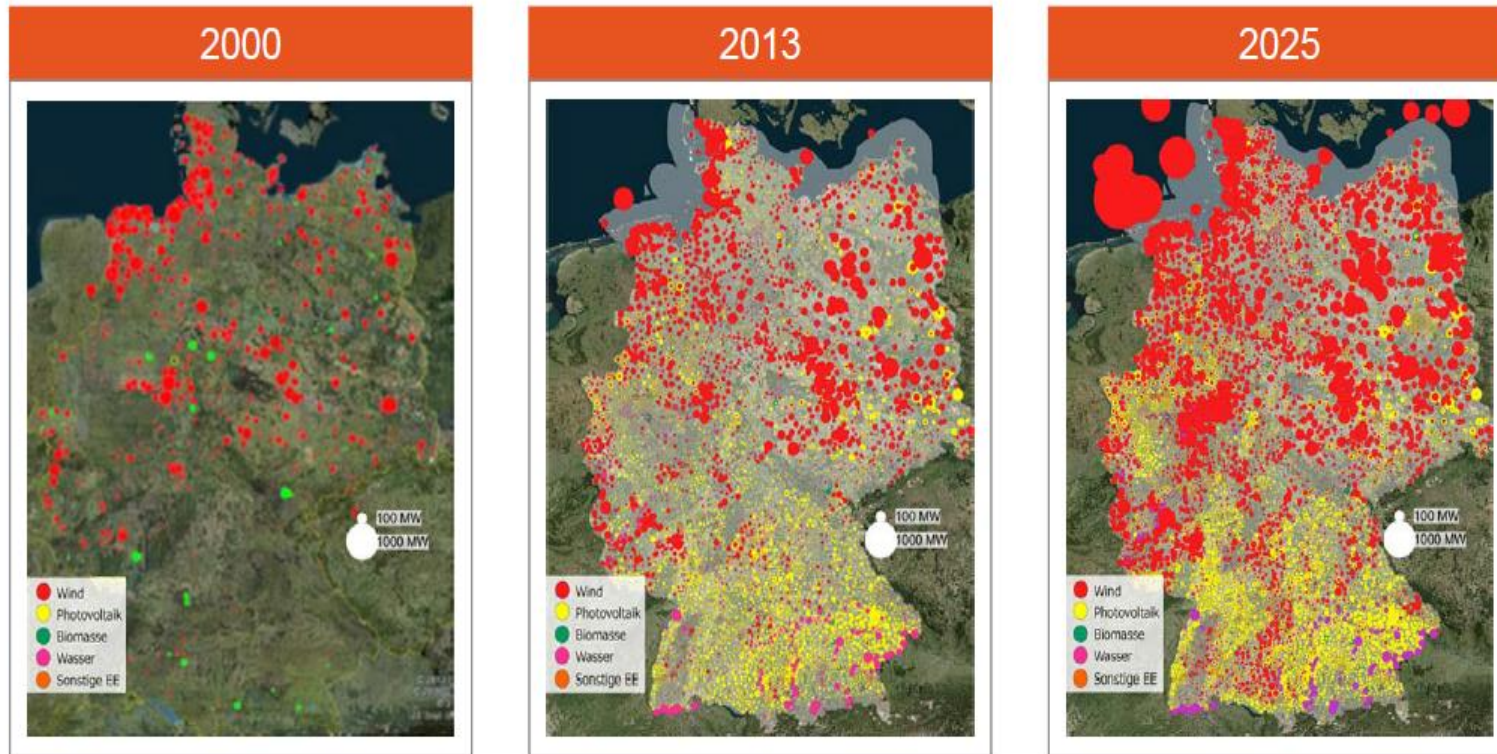
Ownership structure of German RES facilities in 2012



Source: trend:research 2013

Renewable installations create multiple opportunities for entrepreneurship – the ownership structure is versatile

Expansion of renewable energy sources in Germany



Source: 50 Hertz

Business opportunities: the number of renewable power plants has grown exponentially over the past 14 years.

The German Delegation

Companies of the German Delegation

inutec solarcenter international GmbH

ILF Beratende Ingenieure GmbH

greateyes GmbH

leXsolar GmbH

rds energies GmbH

SMA Solar Technology AG

sun to world GmbH



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Thank you for your kind attention!

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