

Energy Transition Made in Germany – An Introduction

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Facilitator

Aims of the initiative “energy solutions made in Germany”

- **Promotion** of renewable energy and energy efficient technologies
- **Showcase** sustainable energy solutions
- **Implementation** of projects
- **Know-how transfer**
- Contribution to international **climate protection**



Ways of participation



✓ Foreign trade fairs



✓ Project development
& flagship projects



✓ Know-how transfer
✓ Information
✓ Capacity building



✓ Networking opportunities



✓ Trade missions

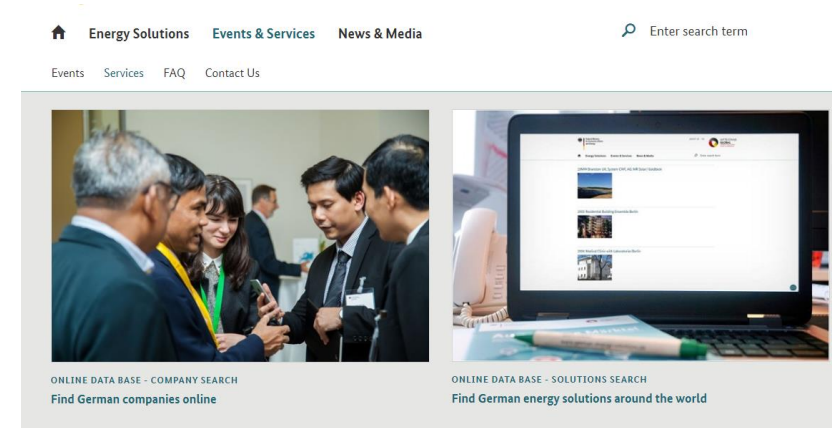


✓ Fact finding missions

Information about events and German companies

www.german-energy-solutions.de

- ✓ Information about technologies made in Germany
- ✓ News & event calendar
- ✓ Company directory
- ✓ New: Solutions directory
- ✓ **Newsletter!**





Federal Ministry
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German Energy Transition („Energiewende“) and Recent Developments



Facilitator

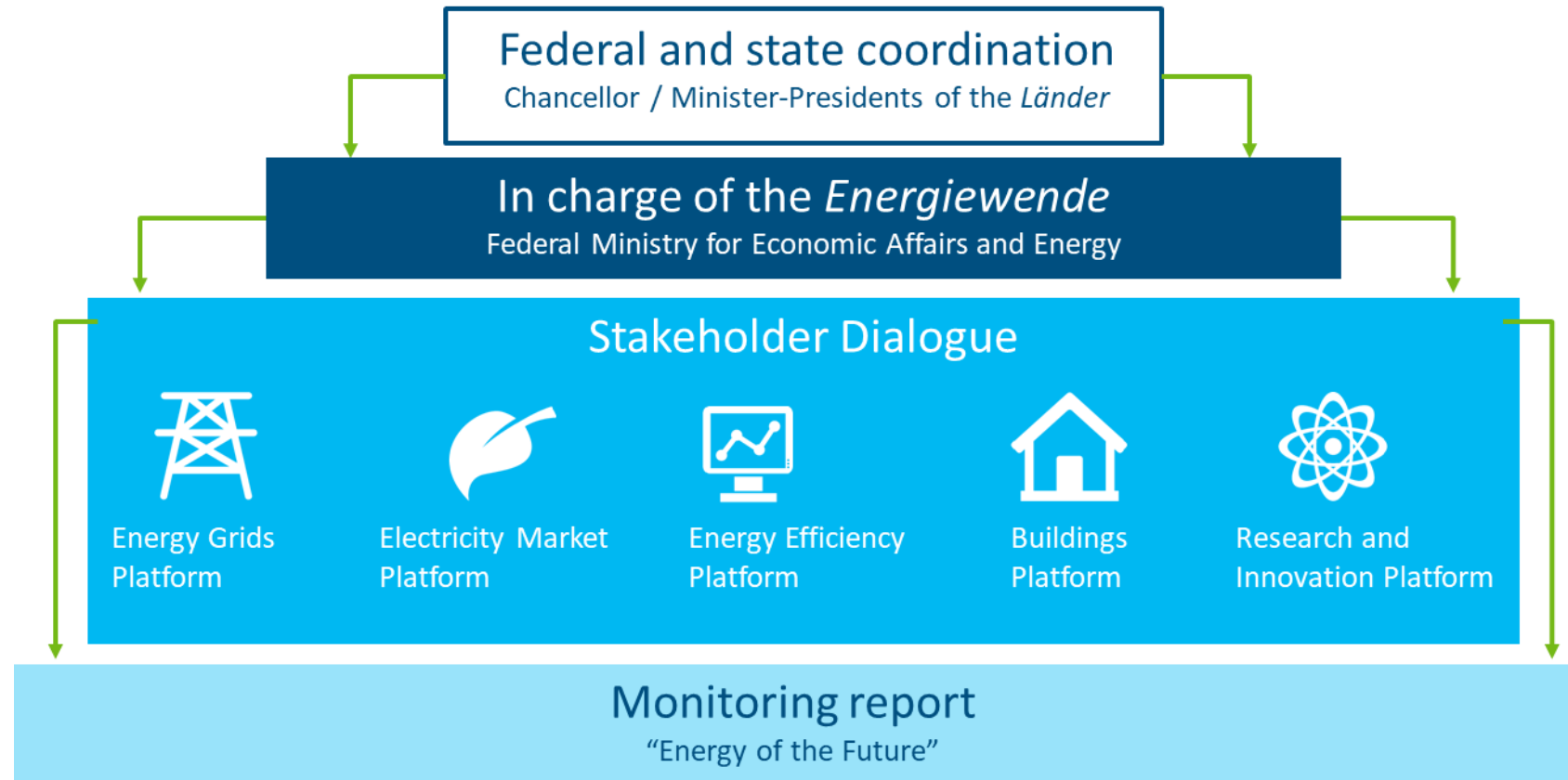


The *Energiewende* combines security of supply, cost-effectiveness and environmental protection



Source: BMWi

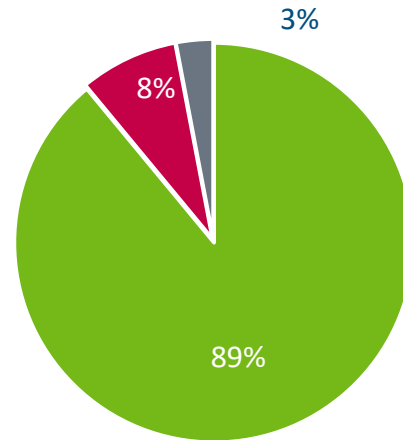
The energy transition involves all levels of government, the business community and society



Source: BMWi 2017

The *Energiewende* enjoys wide support within the German population

Do you support the Energiewende?



Yes

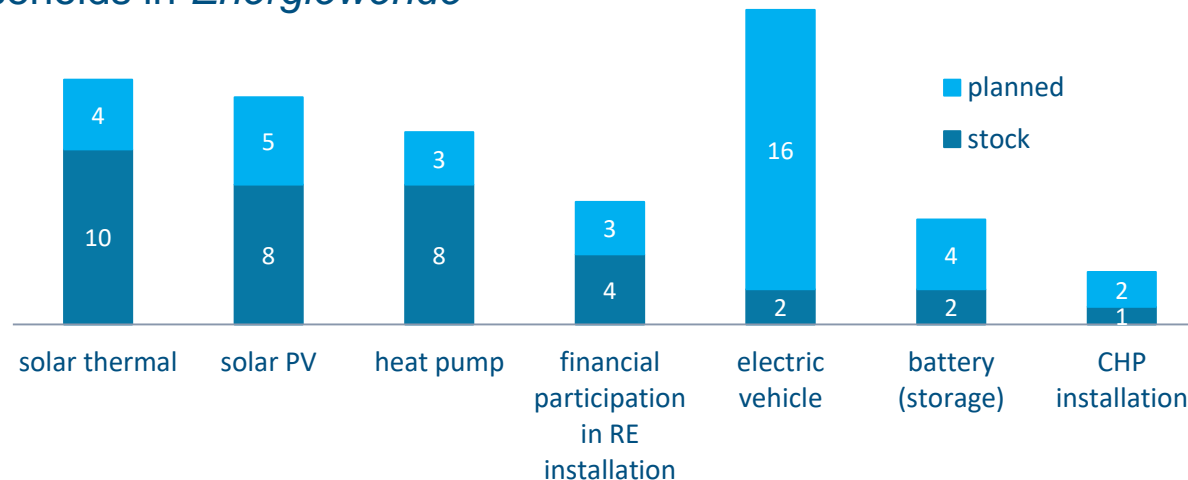
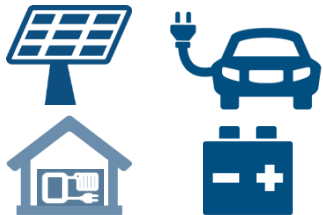
75% - The Energiewende is a joint task to which everyone in society must contribute

14% - I think that the Energiewende is a good thing, but I cannot or do not want to contribute much to it

No

I don't know

Participation of German households in *Energiewende* technologies (in %)

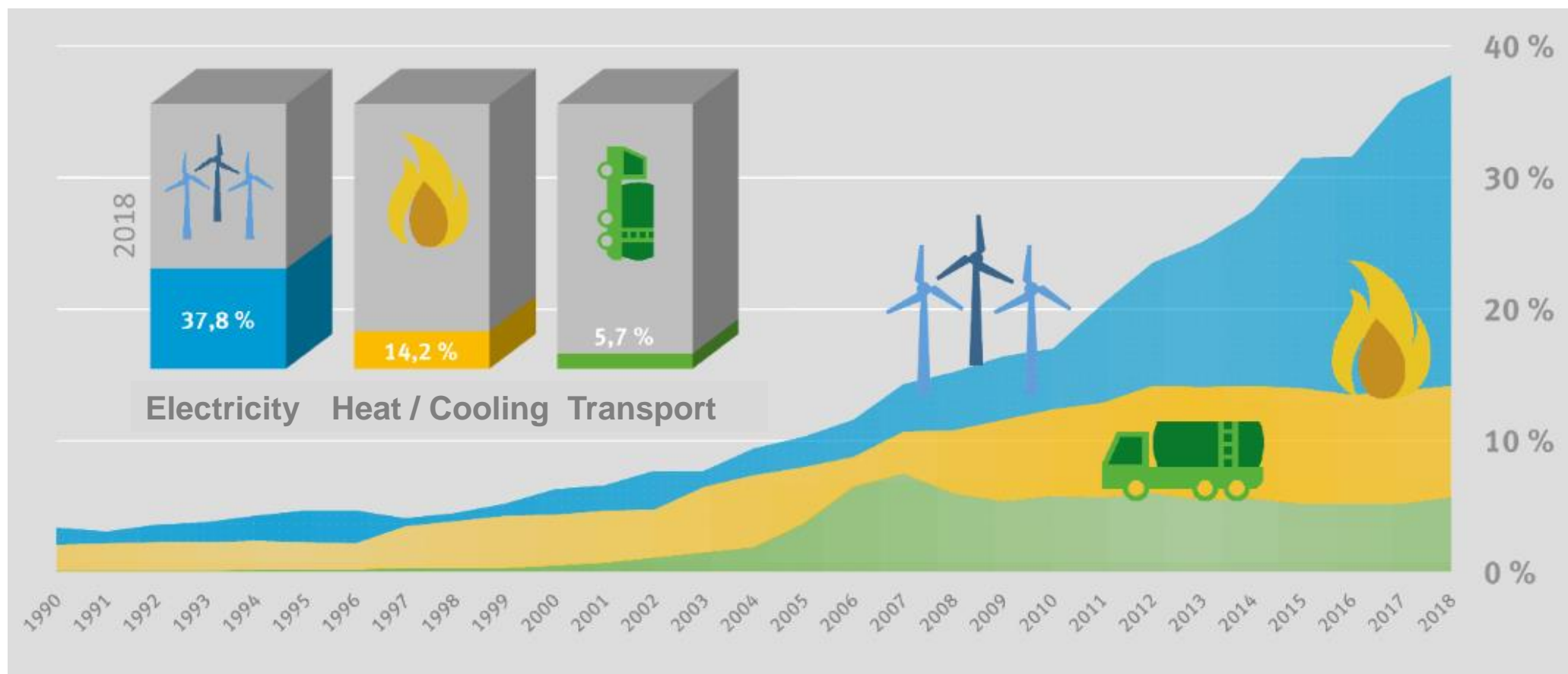


Quantitative targets of the energy transition

Targets	Germany						
	2020	2030	2050		2020	2030	2050
Energy Efficiency							
Greenhouse gas emissions compared to 1990 levels (in all sectors)	-40%	-55%	-80 to -95%	Energy demand in buildings			-80% (vs. 2008)
Primary energy consumption	-20% (vs. 2008)		-50% (vs. 2008)	Heat demand in buildings	-20% (vs. 2008)		
Electricity consumption	-10% (vs. 2008)		-25% (vs. 2008)	Energy consumption in transport	-10% (vs. 2005)		-40% (vs. 2005)
Renewable Energy							
RE share in final energy consumption	18%	30%	60%	RE share in final energy consumption	35%	65%	>80%
Re share in heating	14%			RE share in transport	10%		

Source: BMUB, European Commission

Share of renewable energy in Germany's final energy consumption 1990-2018



Source: Quelle: AGEE-Stat / Umweltbundesamt

A comprehensive package of measures supports the market launch of electric mobility in Germany

Economic incentives



Purchase grant for new vehicles:

- €4000 for purely electric vehicles
- €3000 for plug-in hybrids

Expansion of charging infrastructure



€200 million for rapid charging infrastructure

€100 million for standard charging infrastructure

Electric vehicles in public vehicle fleet



€100 million to increase the share of electric vehicles in public fleet to at least 20% by 2019.

Source: BMWi 2017

Funding programme SINTEG: initiating the next steps of *Energiewende* in real-life smart energy cases

Model region “enera”

The next big step in the energy transition

Model region “Designnetz”

- Showcases optimised use of flexibility options
- Aims to develop solutions for linking decentralised generation with large centres of demand

Model region “New 4.0”

The energy transition in the north of Germany

Model region “WindNODE”

- Focus on the efficient integration of large shares of wind and flex options at all levels
- Aims to develop innovative products and services, etc.

Model region “C/sells”

Large-scale showcase in the ‘solar arch’ in southern Germany

Five model regions to develop and demonstrate solutions for the energy system of tomorrow.



Source: BMWi 2017

SINTEG: “Real laboratory” for the digitalisation of the energy sector

Need	Objectives	Programme components
<p>Increasing demand for flexibility:</p> <ul style="list-style-type: none">• Already days with hourly intervals with 100% renewables. <p>Generation, grids, consumption and storage need to be combined in a smart way.</p>	<p>Development of solutions for the intelligent supply of energy in a future with at times up to 100% renewables.</p> <p>Gathering of practical experience for further development of the legal framework.</p>	<p>Implementation of solutions in five large-scale model regions (“showcases”) in Germany.</p> <p>Project duration 2017-2020 / 21.</p> <p>+300 companies and other actors involved</p> <p>Over €500 million in investment</p> <ul style="list-style-type: none">• Funding volume: over €200 million.• Company (own) funds: over €300 million.

Source: Ecofys based on BMWi 2018



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The participating German Companies



Participating German companies

Company	Representative	Business segment
GeoClimaDesign AG	Antje Vargas Marius Vargas	Producer of capillary tube systems for heating and cooling
Adkor GmbH	Hartmut Kordus	Facility and service operator for advanced fuel cell systems
STEINEL Vertrieb GmbH	Harald Giffels	Developer and producer of intelligent lighting controls, sensor technology and heat tools

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