

Die Energiewende 2.0 für den Klimaschutz

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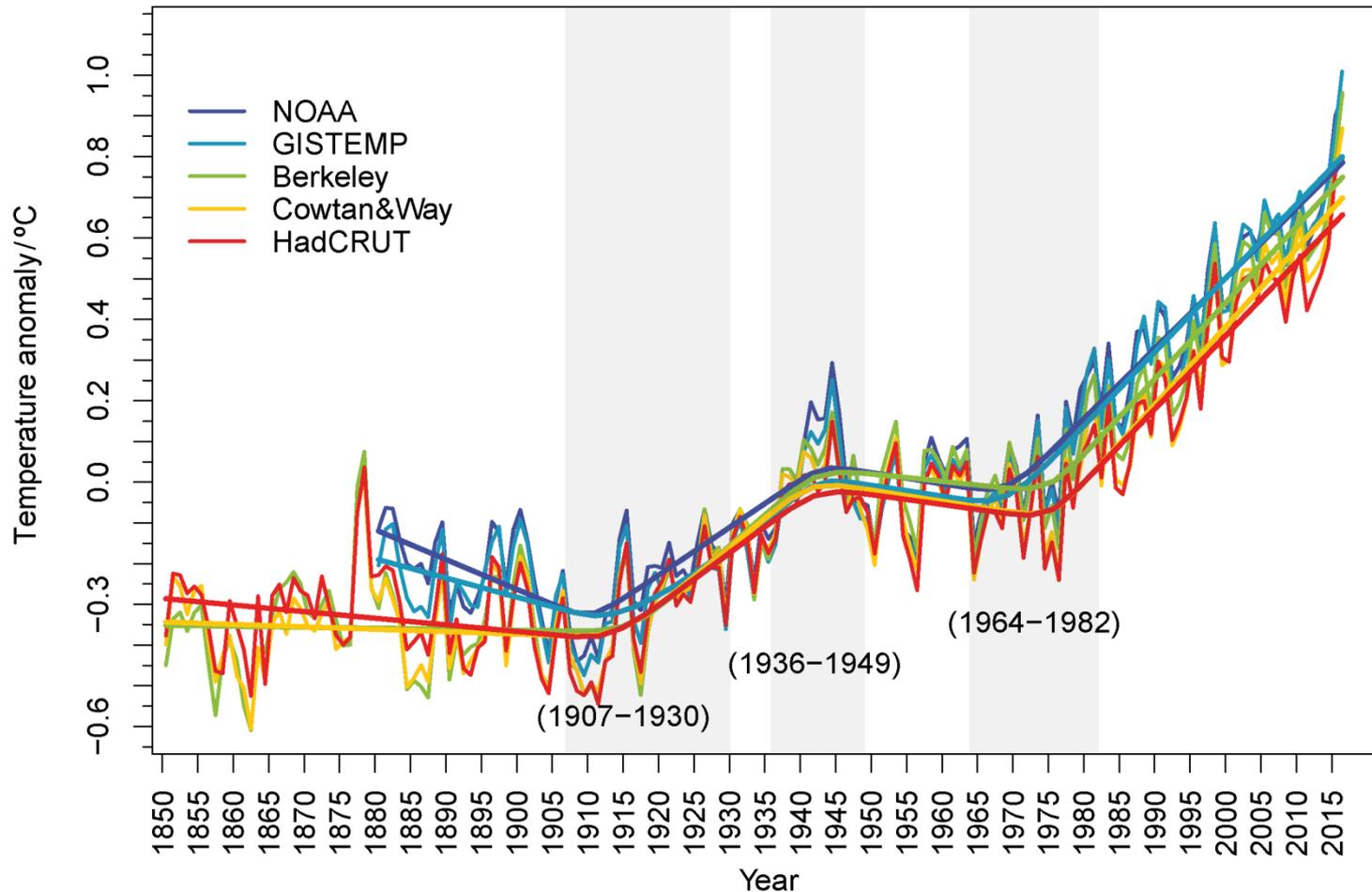


Übersicht

1. Herkulesaufgabe Klimaschutz
2. Trends, die Hoffnung geben
3. Energiewende 2.0 – drei Herausforderungen
4. Fahrplan für die Dekarbonisierung

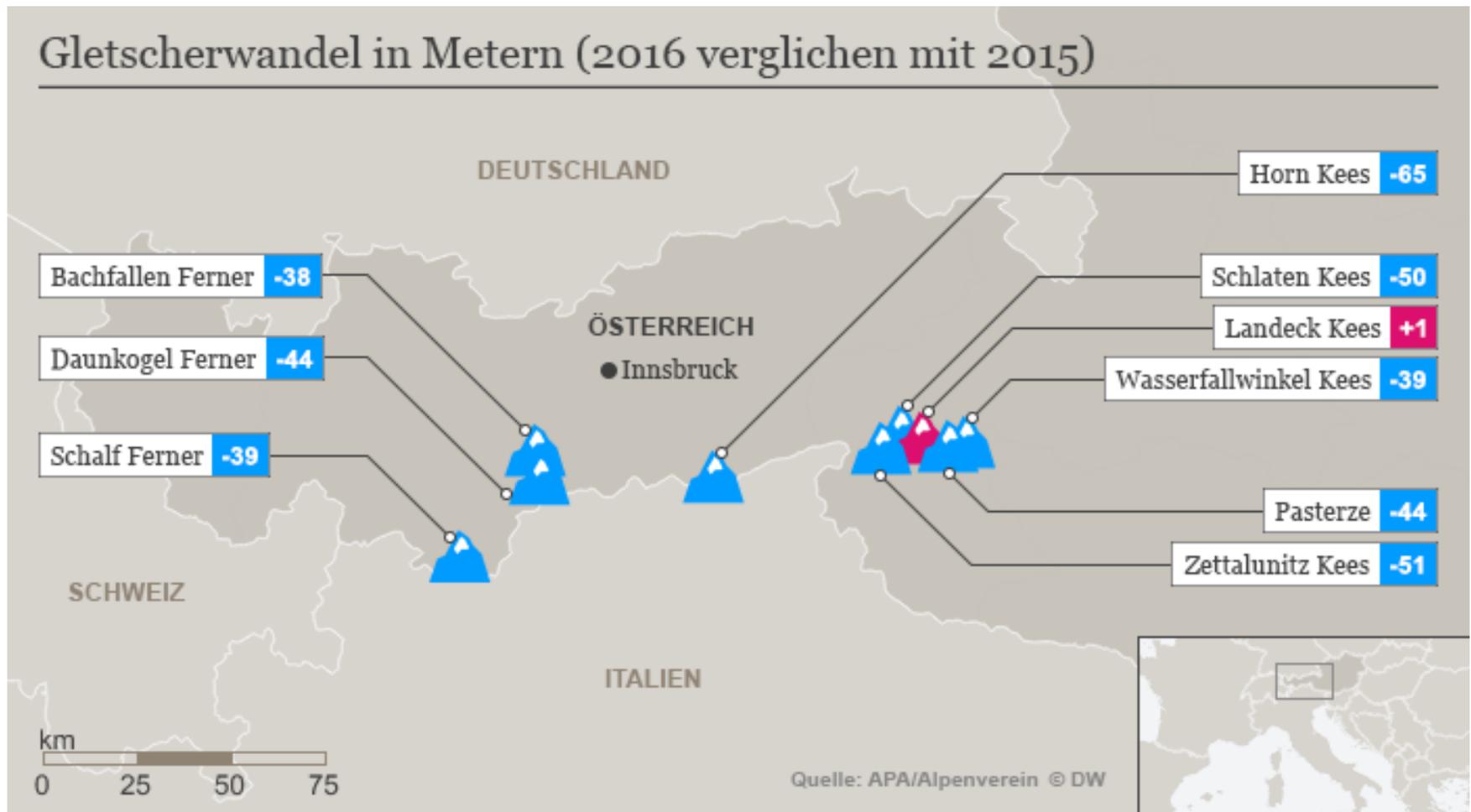
Globaler Trend: 1,1° Celsius wärmer

Change Points of Global Temperature



Quelle: Rahmstorf et al 2017

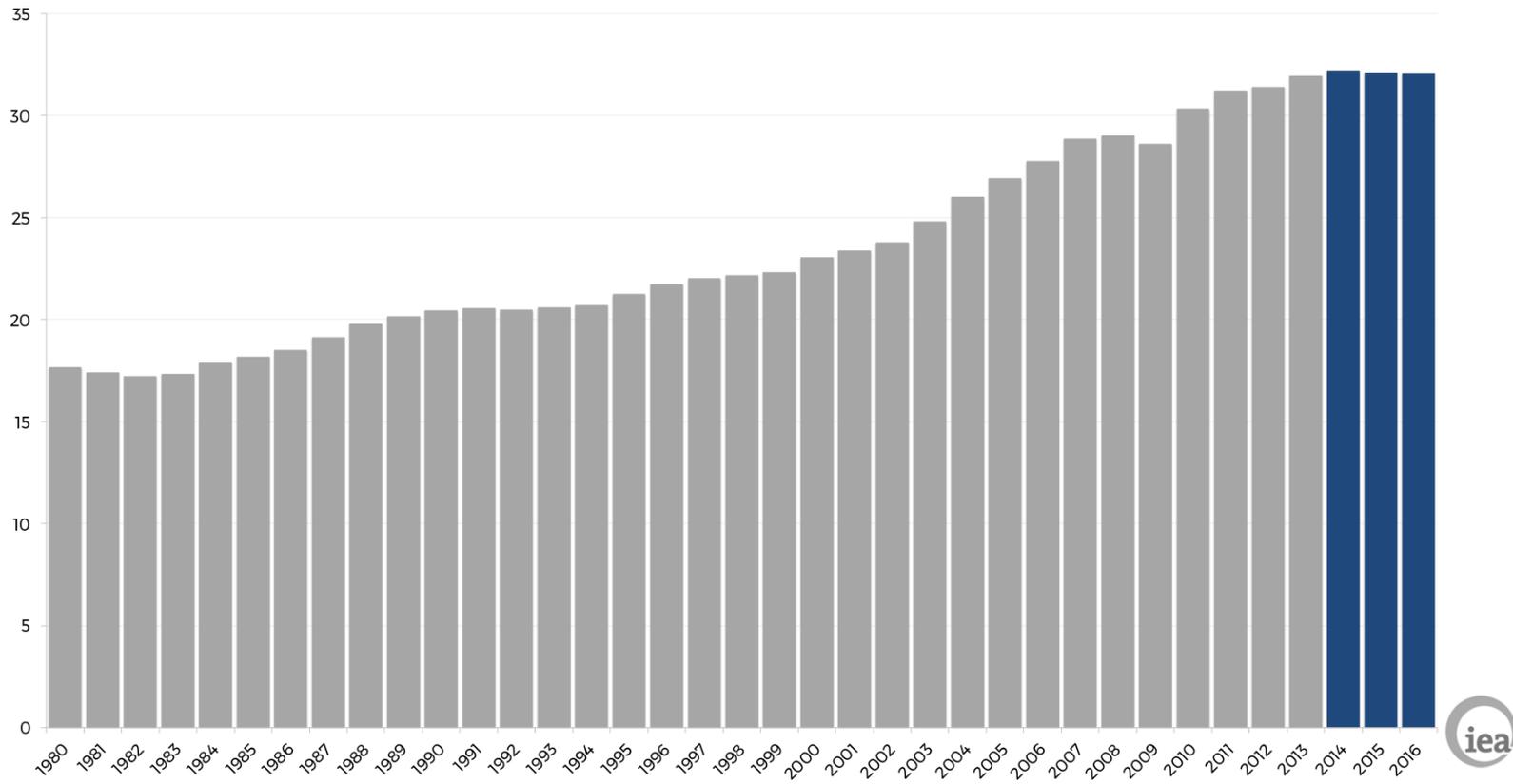
Gletscherschmelzen in den Alpen



Globale Emissionen: stabil

Global Carbon Dioxide Emissions, 1980-2016

Gigatonnes



3 Trends, die Hoffnung geben

Trend 1 – Neuer Schub für die Klimadiplomatie



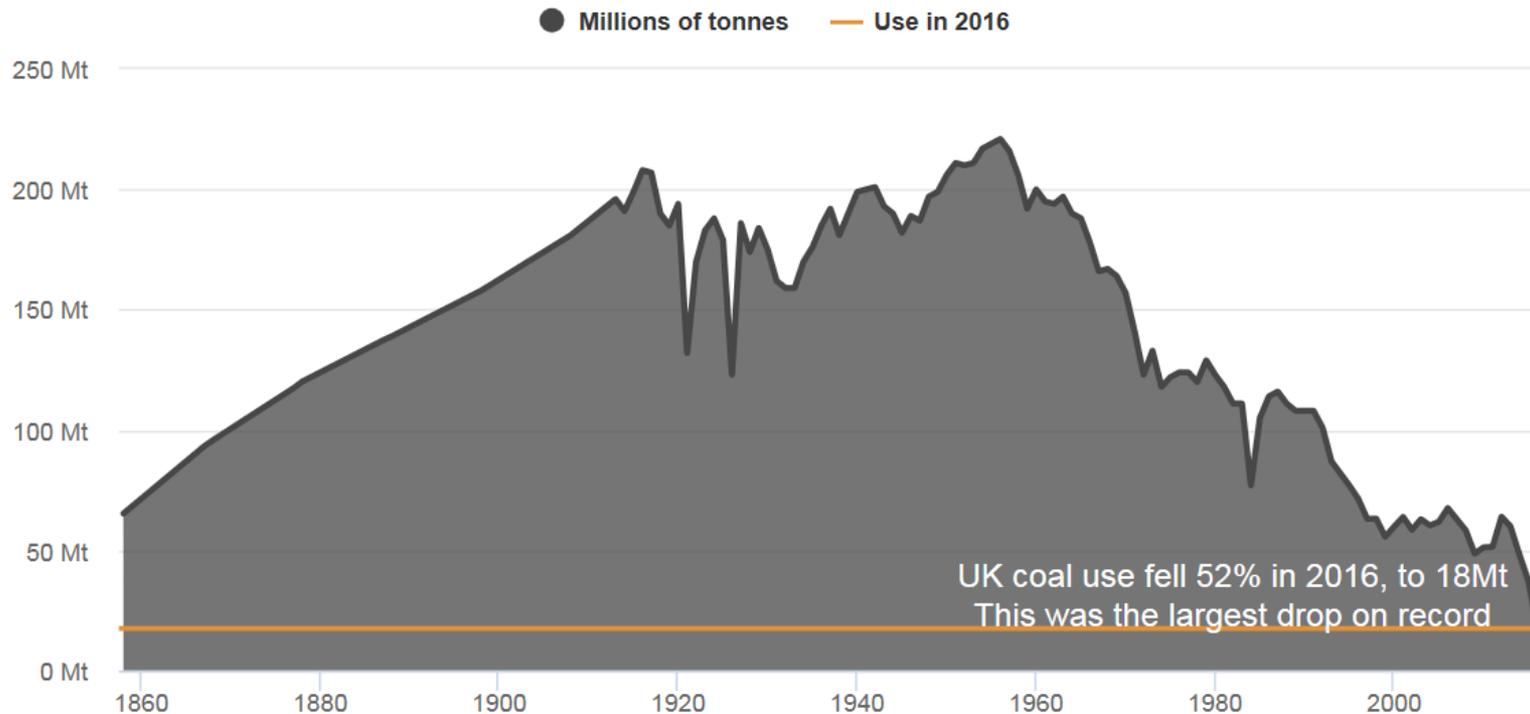
3 Trends, die Hoffnung geben

Trend 2 – Der Sinkflug der Kohle



Kohle: Großbritannien steigt aus

UK coal use 1858-2016



CB

UK coal use 1858-2016, millions of tonnes (black area) and the level in 2016 (orange line). Hover over the chart for more information, including year-on-year changes. Source: [BEIS](#) and Carbon Brief analysis. Chart by Carbon Brief using [Highcharts](#).

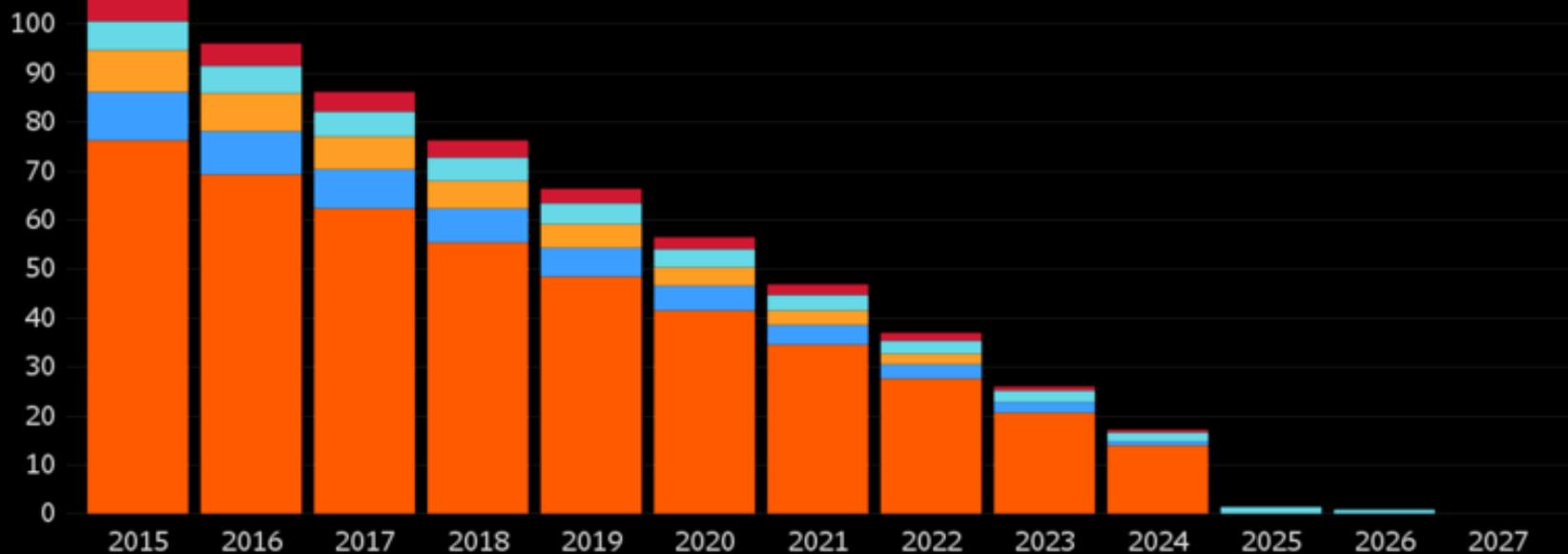
Europa: Kohleausstieg kommt

Bye-Bye Coal

European countries phasing out coal power plants

U.K. Portugal France Finland Austria

110 Terawatt Hours

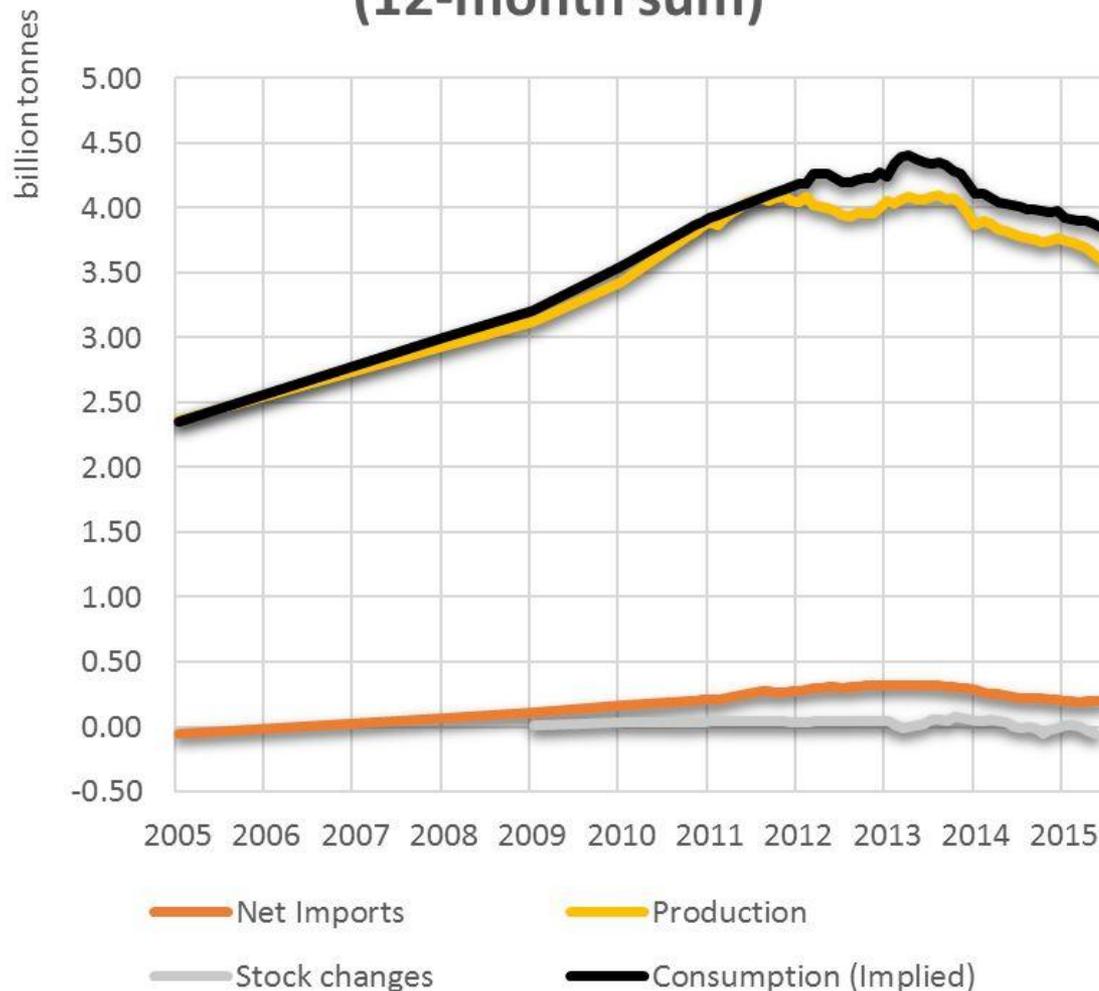


Source: Bloomberg New Energy Finance

Bloomberg

China: Kohle rückläufig

China's implied coal consumption
(12-month sum)



USA: Kohle - ein Rückzug

U.S. net electricity generation
trillion kilowatthours



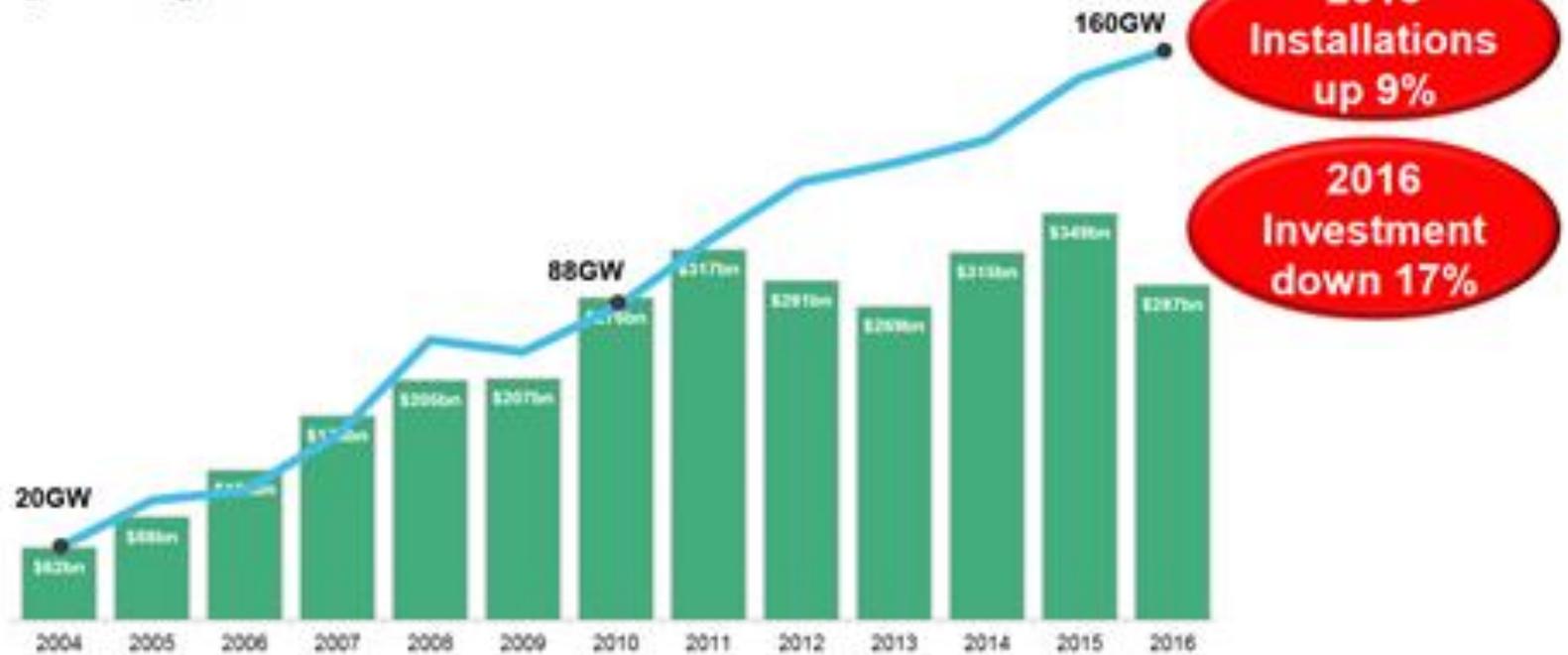
3 Trends, die Hoffnung geben

Trend 3 – Rasantes Wachstum der Erneuerbaren



Global: +9% - Rekordjahr

Global new clean energy investment and capacity installation

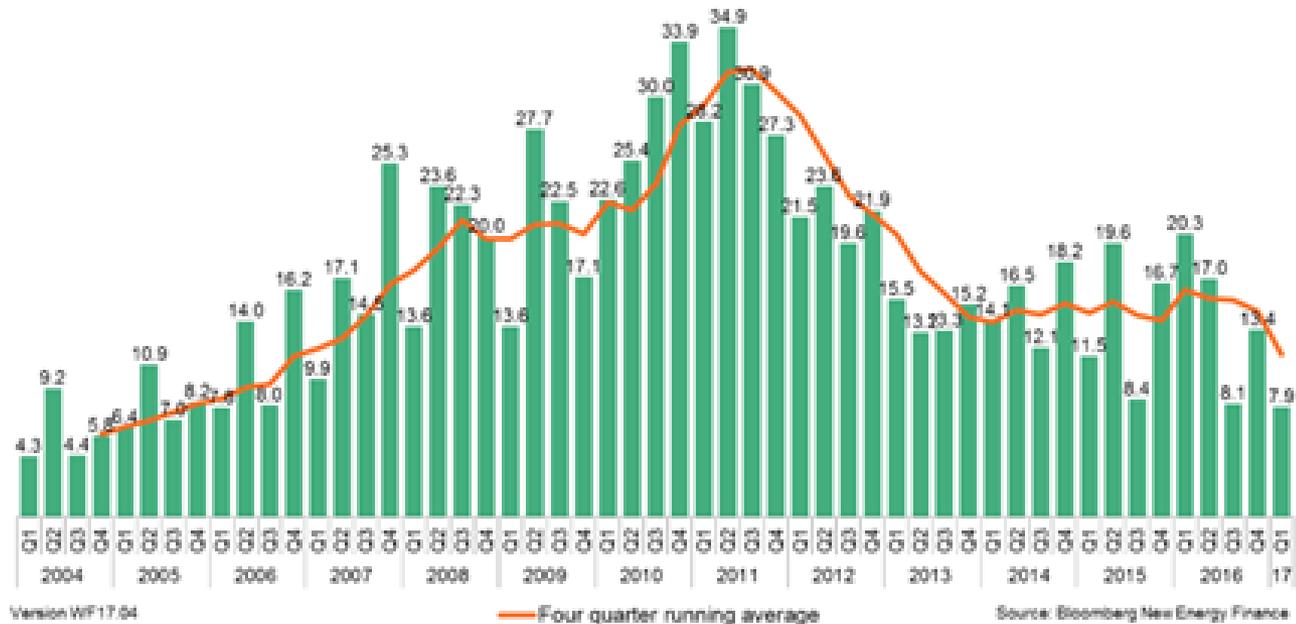


Note: Total values include estimates for undisclosed deals. Includes corporate and government R&D, and spending for digital energy and energy storage projects (not reported in quarterly statistics). Excludes large hydro.

Source: Bloomberg New Energy Finance

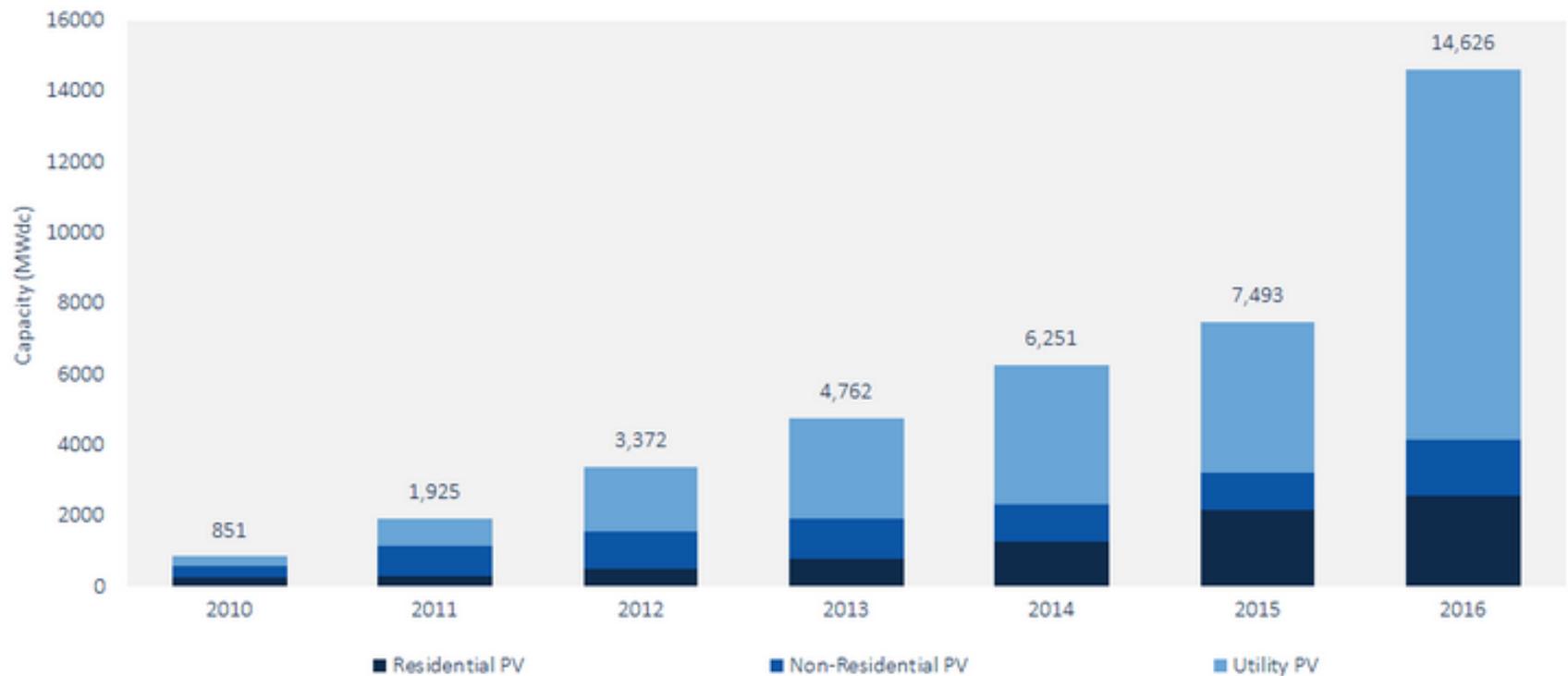
Europa: 9 von 10 erneuerbar

Europe new investment in clean energy (\$ billion)



USA: Solar +100% in 2016

FIGURE: U.S. Solar PV Installations, 2010-2016



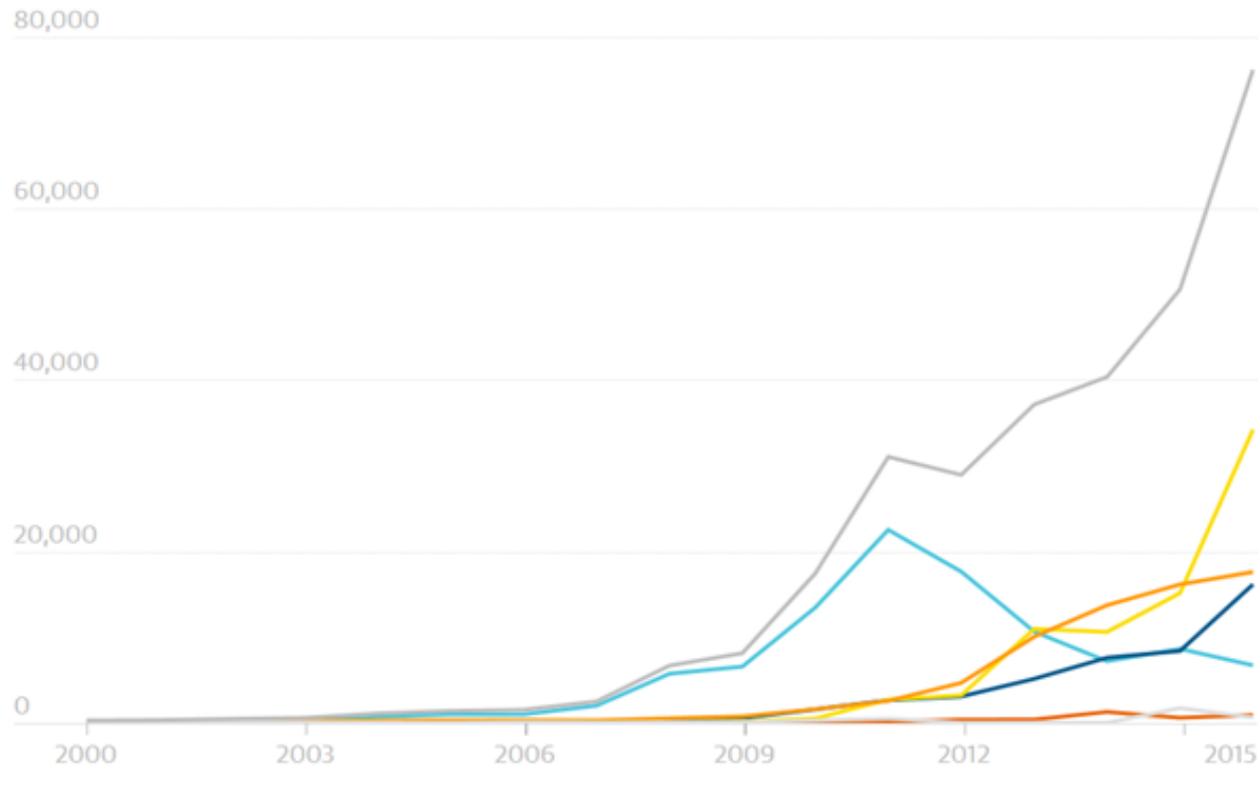
Source: *GTM Research / SEIA U.S. Solar Market Insight report*

Global: Solar +50% in 2016

New solar capacity rose 50% in 2016

China and the US led the growth in annual installed solar photovoltaic capacity (MW)

■ Europe ■ Americas ■ China ■ Asia-Pacific ■ Middle East & Africa ■ Rest of world ■ Total



Guardian graphic | Source: SolarPower Europe

Günstige Erneuerbare Energien



The image is a screenshot of a news article from the website tagesschau.de. The page features a blue header with the site's logo and navigation menu. The main content area shows a large photograph of an offshore wind farm with several wind turbines in the foreground and a small boat on the sea in the distance. Below the photo, the article title and metadata are displayed.

tagesschau.de

Startseite Videos & Audios Inland Ausland Wirtschaft Wahlen Wetter Ihre Meinung

Startseite Wirtschaft Offshore-Windenergie - ganz ohne Förderung

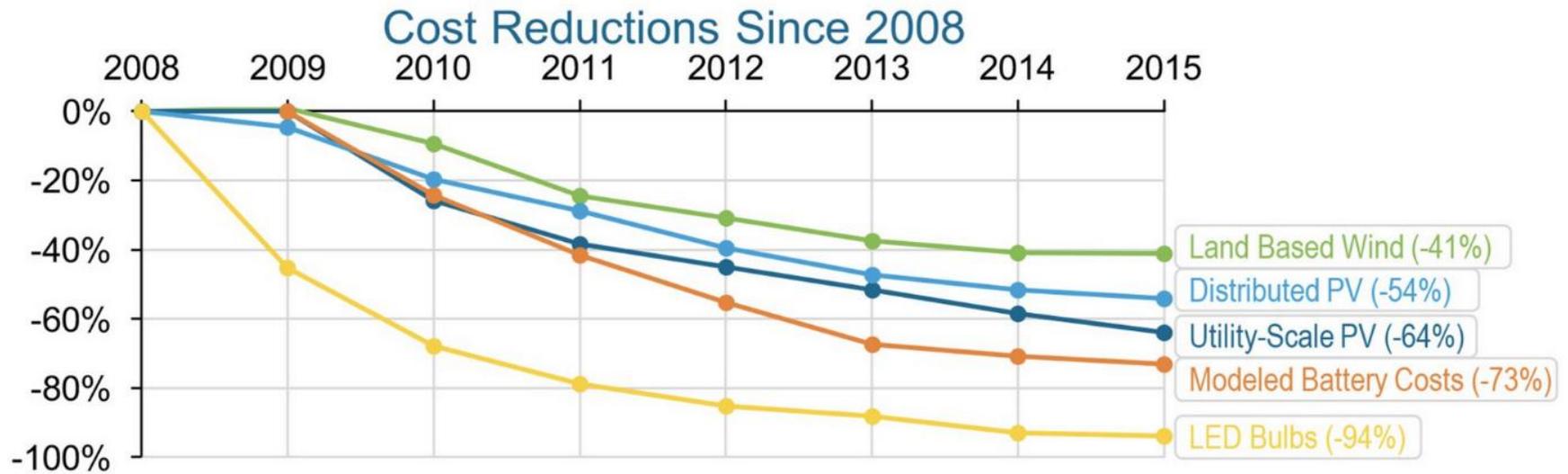
Offshore-Windpark

Windenergie - ganz ohne Förderung

Stand: 13.04.2017 16:44 Uhr

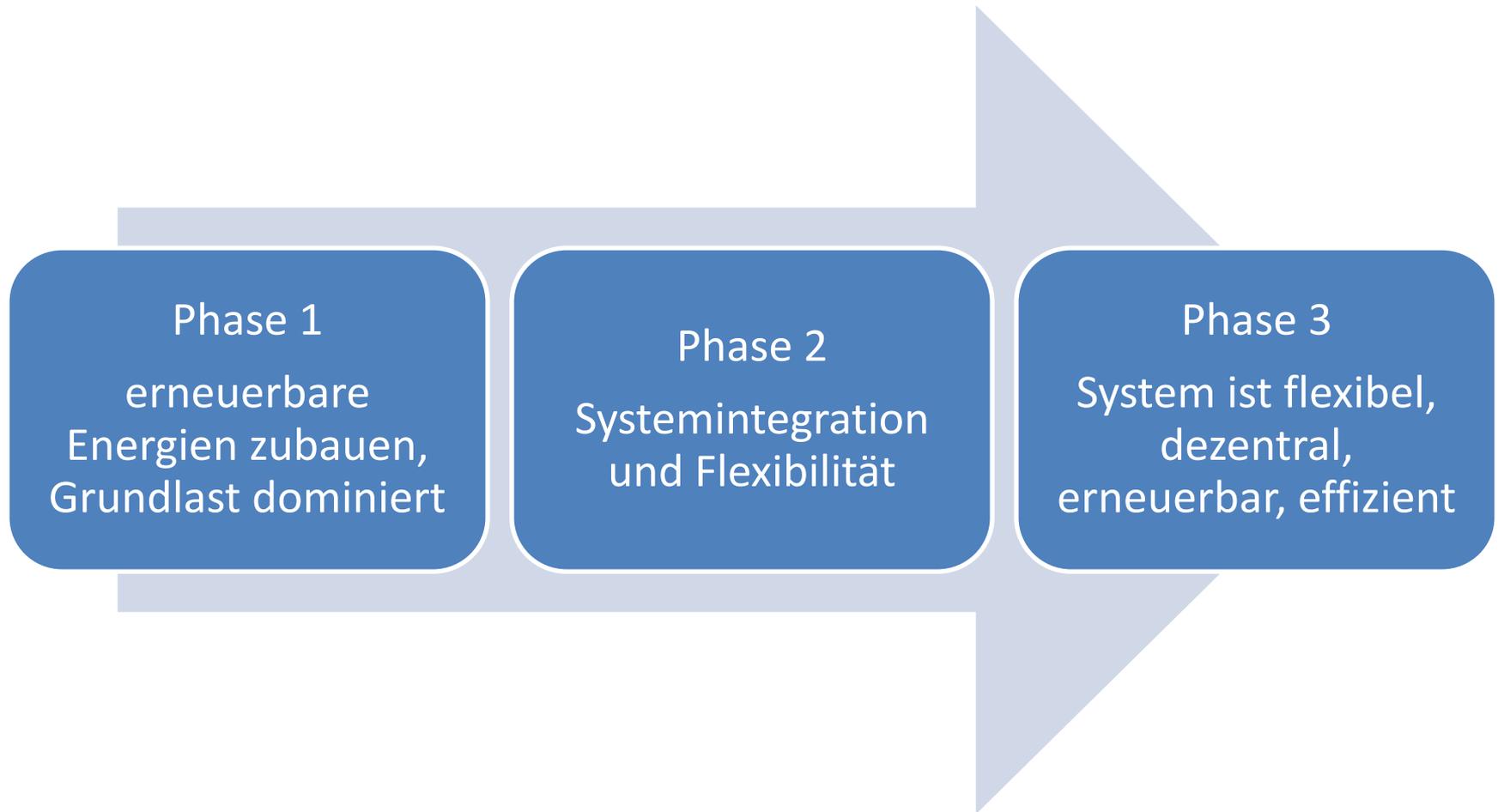
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Die Energiewende gewinnt den Kostenvergleich



Quelle: DoE 2017

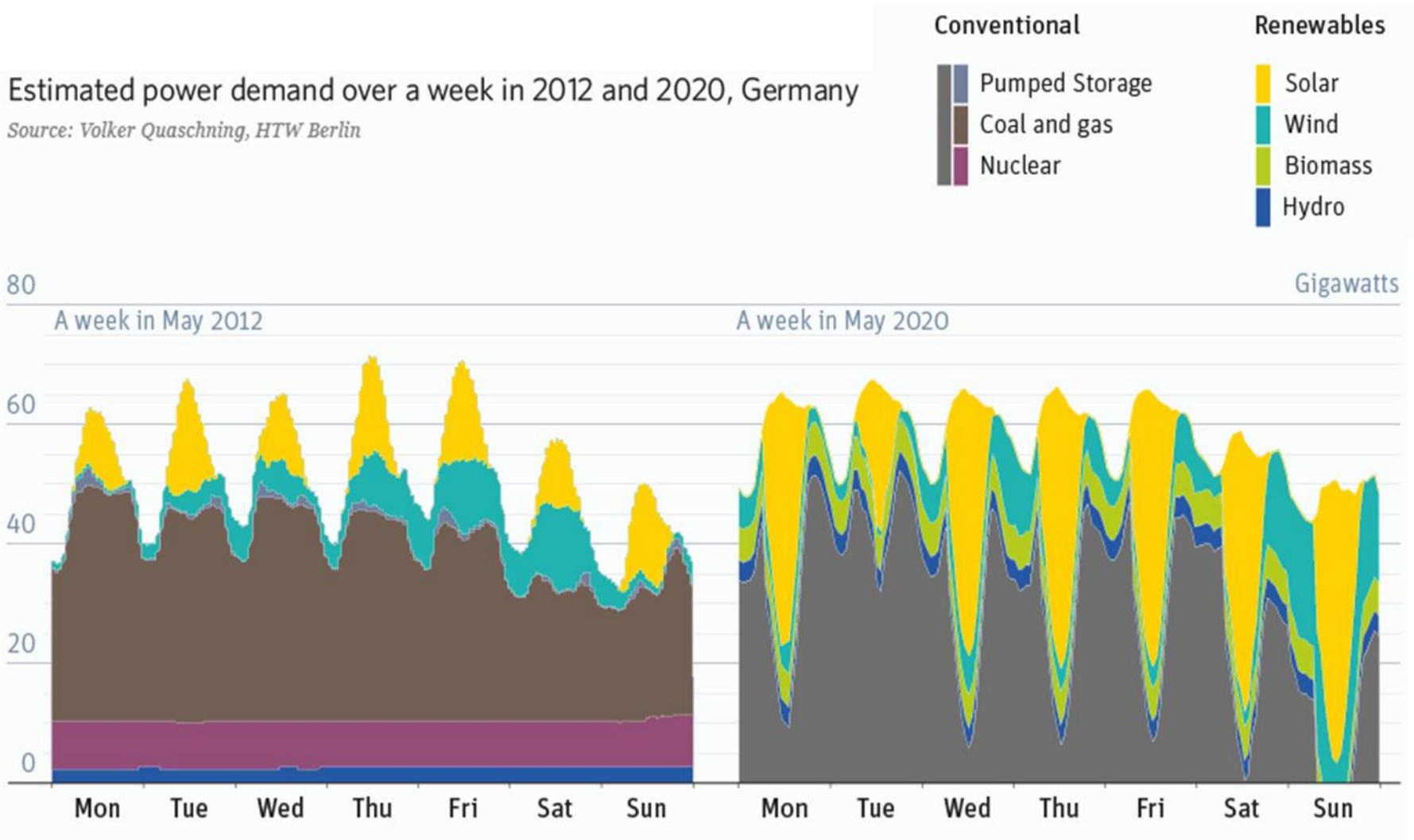
Die 3 Phasen der Energiewende



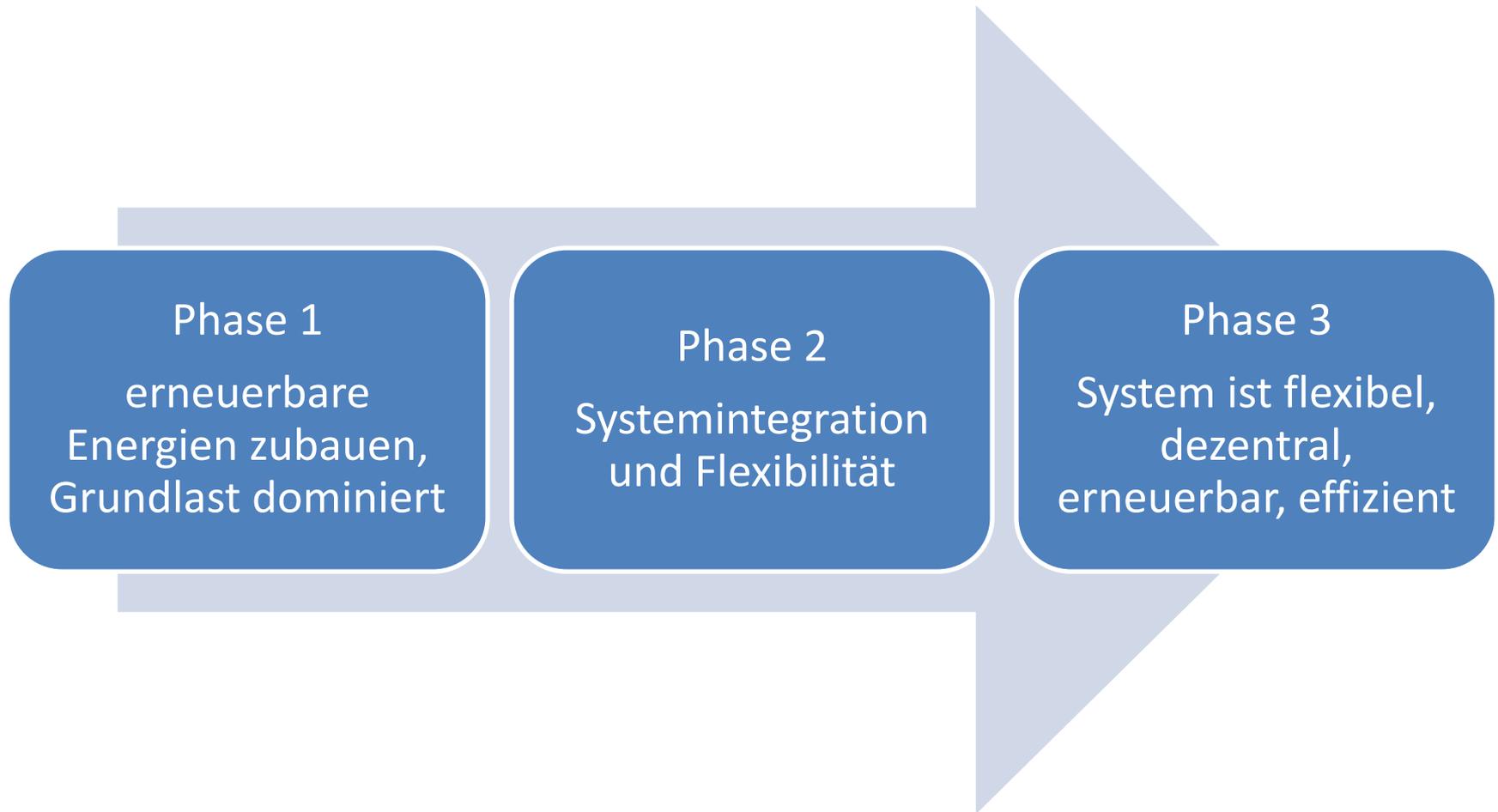
Herausforderungen der Energiewende

Estimated power demand over a week in 2012 and 2020, Germany

Source: Volker Quaschnig, HTW Berlin



Die 3 Phasen der Energiewende



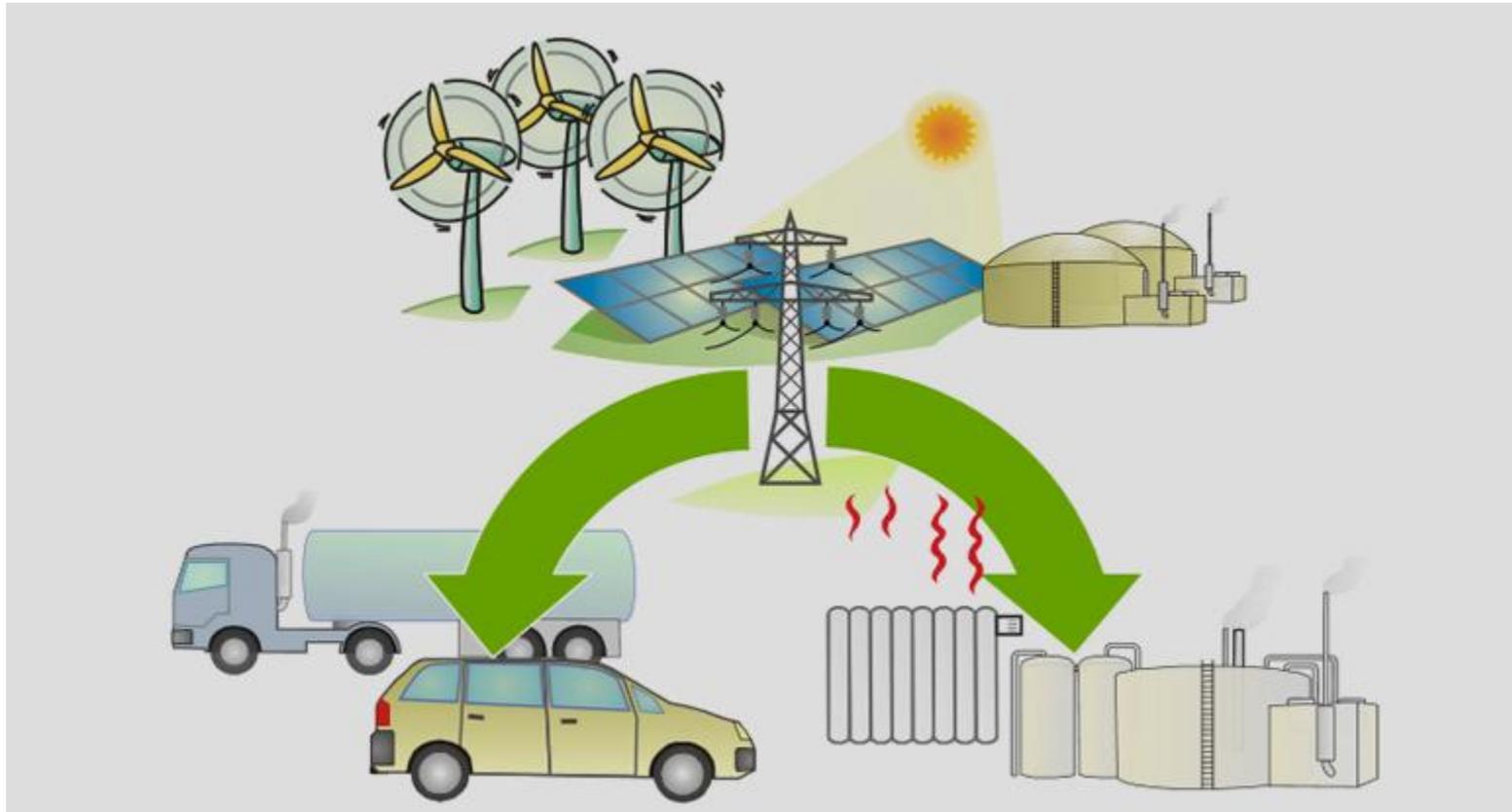
Herausforderungen der Energiewende

1. Mehr Anreize für Flexibilität.
2. Exnovation –aus alten Infrastrukturen aussteigen.
3. Die Bürgerenergie stärken.

Leitplanke 1 - Digitalisierung



Leitplanke 2 - Sektorkopplung

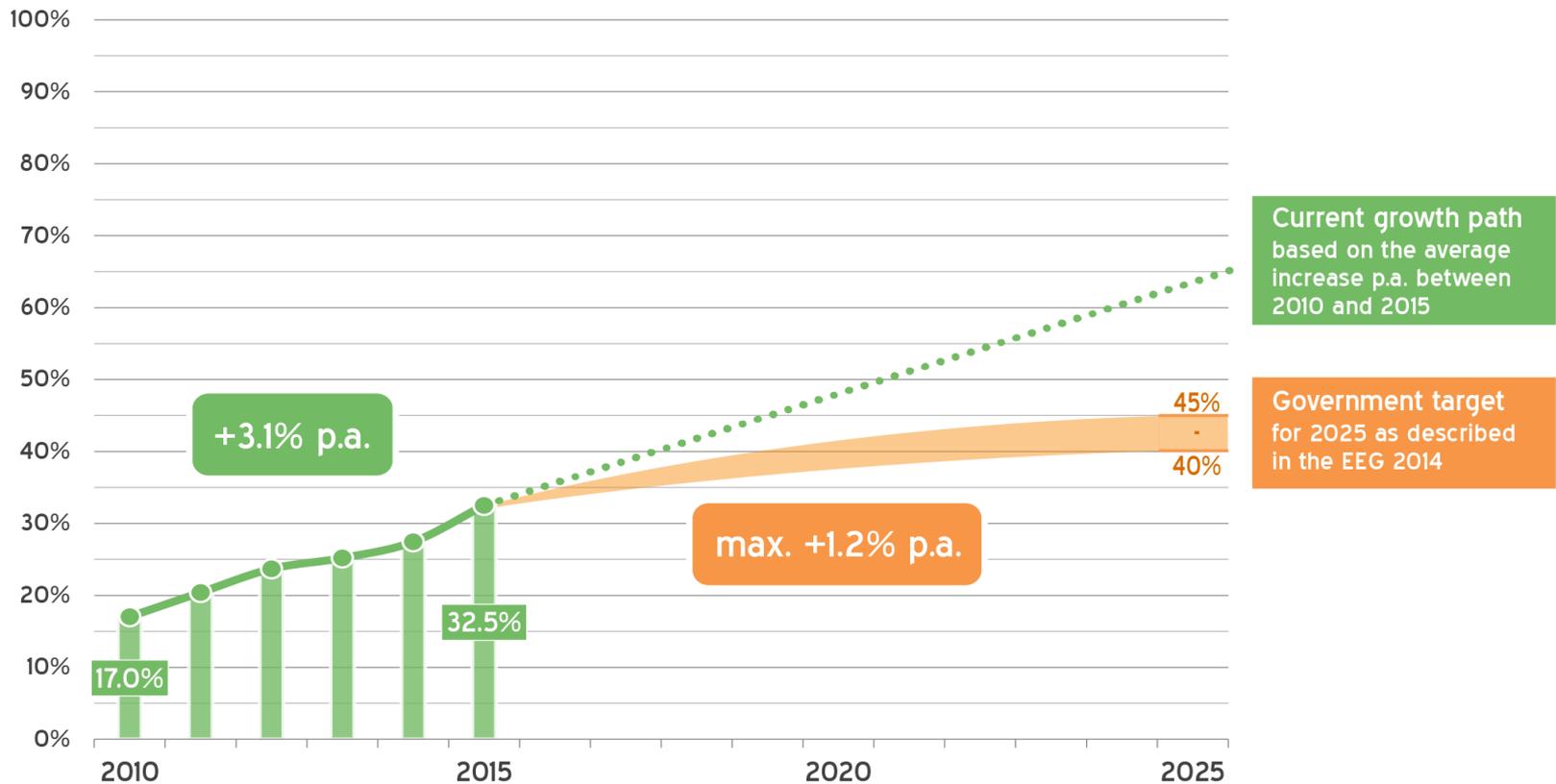


Erneuerbaren Energien Bremse

Renewable power growth faster than German government's plans

Share of renewable electricity in domestic demand and governmental targets

Source: AGEB, EEG 2014



German Energy Transition

energytransition.de

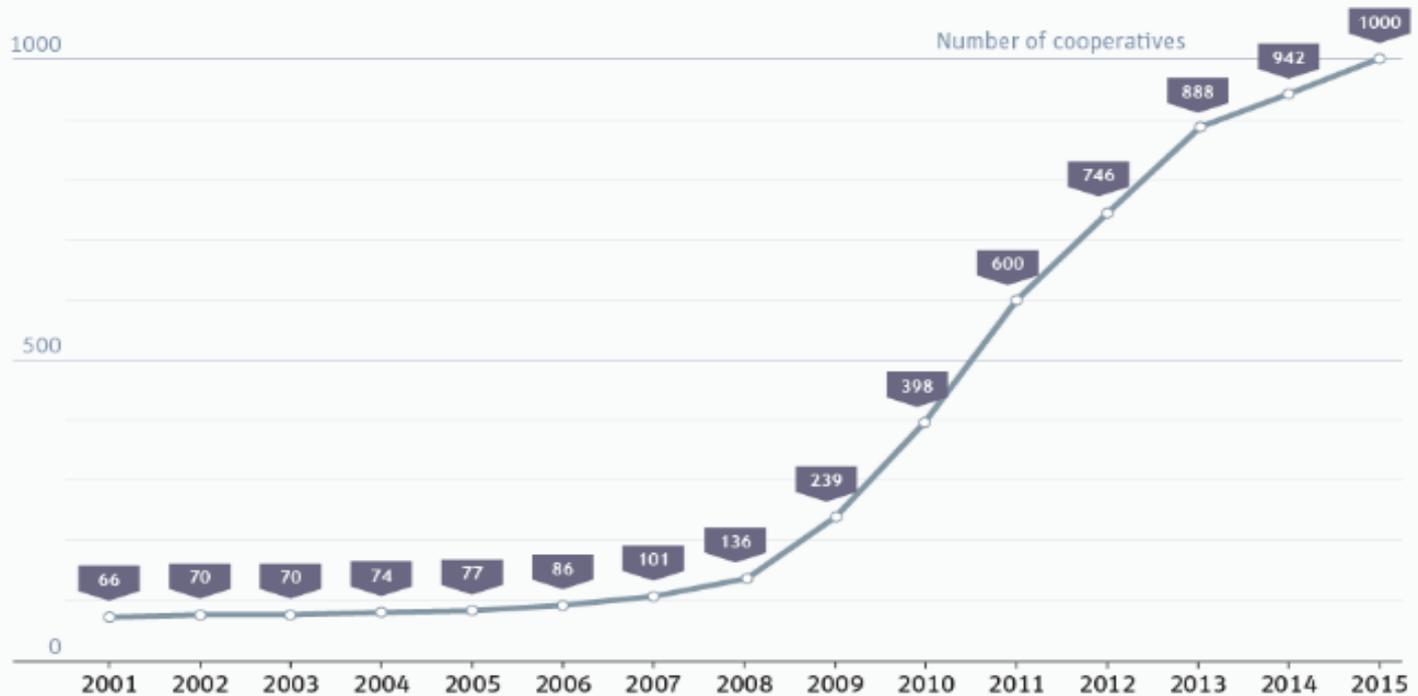
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Demokratisierung der Energieversorgung

Citizens form cooperatives to drive the energy transition

Number of energy cooperatives in Germany, 2001-2015

Source: www.unendlich-viel-energie.de



2012: 47% Bürgerenergie

German energy transition is a democratic movement

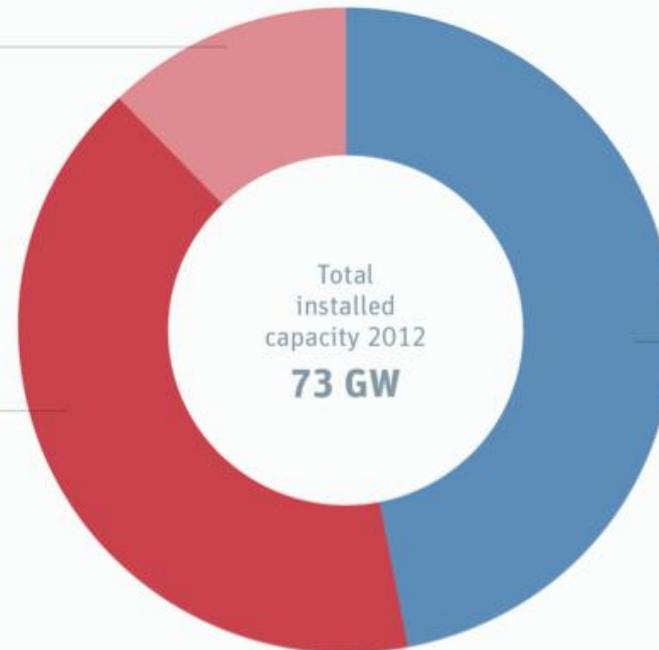
Ownership of renewables in 2012

Source: AEE, www.unendlich-viel-energie.de



Energy suppliers
12%

Institutional
and strategic investors
41%



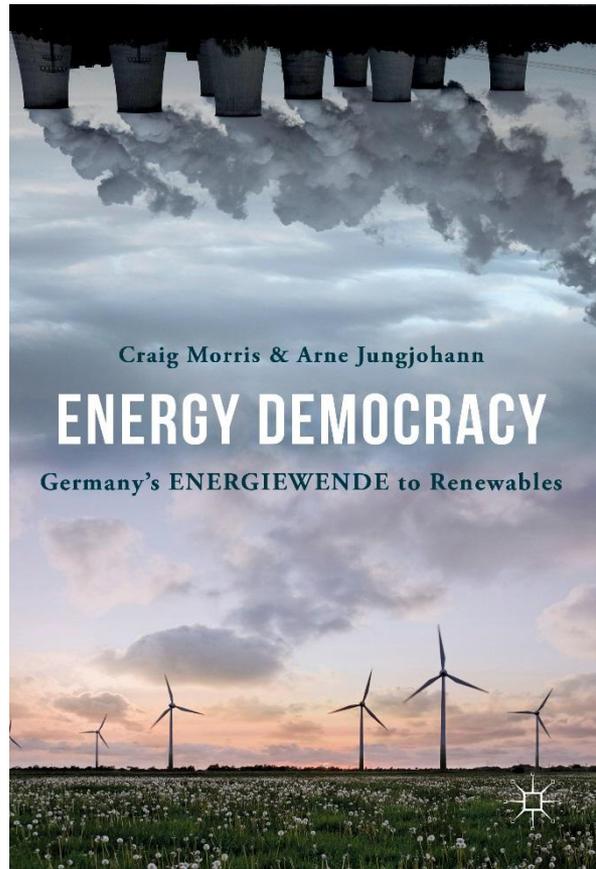
Citizens and coops
47%

Fahrplan für die Dekarbonisierung



1. Erneuerbare ungebremst ausbauen
2. Raus aus der Kohle
3. Verkaufsstop von Autos
4. CO2-freie Gebäude
5. Stop fossiler Subventionen

Vielen Dank für Ihre Aufmerksamkeit



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www.EnergiewendeBook.de

