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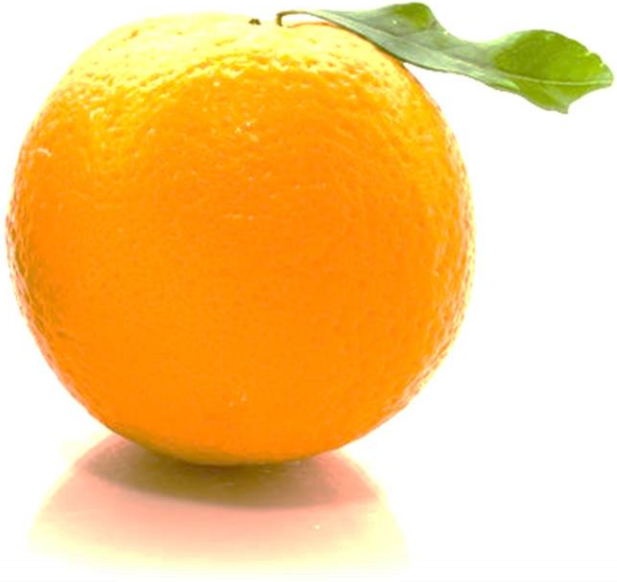
Poland and Germany:
Energy transition and climate policy

Comparing Germany and Poland in climate policy?



Poland: the climate laggard?

- 85% of electricity from coal (51% primary Energy) in 2015
- An important role of coal in household and municipal heating
- Underinvested and old infrastructure (capacity and grid)

Poland: the climate laggard?

However:

- In 2015 PL was 7th in the world in terms of new installed wind capacity
  - 1266 MW, 2% global share
- 12th overall installed wind capacity (5100 MW) in the world
- Great geography: windy, long shoreline, bioenergy resources
- Meeting the 2020 target (probably)
- Unfortunately: a lot through co-firing
- Very active in UNFCCC

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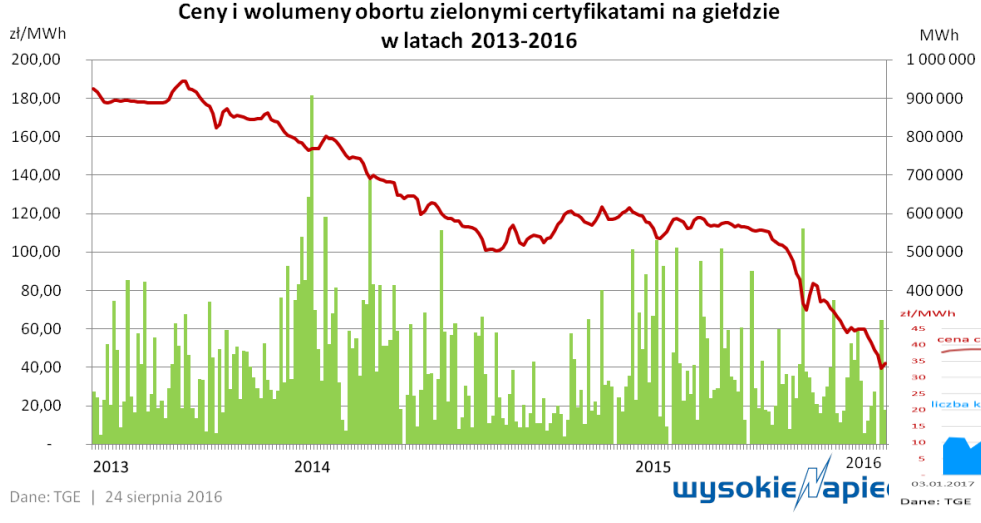
Poland: the climate laggard?

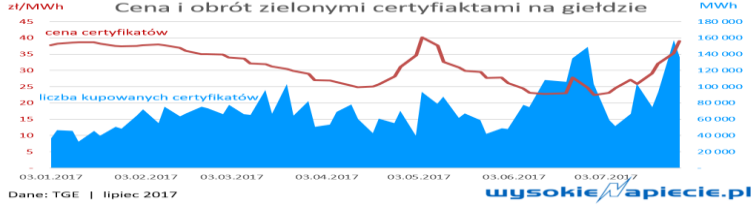
Problems:

- Smog, worst air quality in the EU, high carbon intensity
- Brownout in 2015, problems with adequacy every summer
- Energy prices on the rise: +70% prognoses in 2019

Poland: recent changes in RE policy

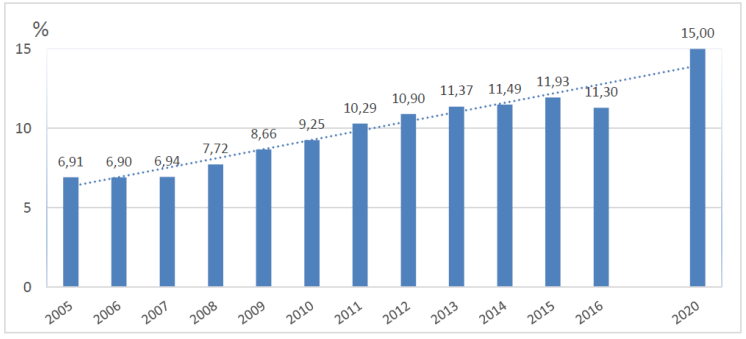
- RE Support: 2005-2015 green certificates
- Since 2016 – auctions, technology-specific, volume-restricted
- Net-metering for micro-installations





Poland: recent changes in RE policy

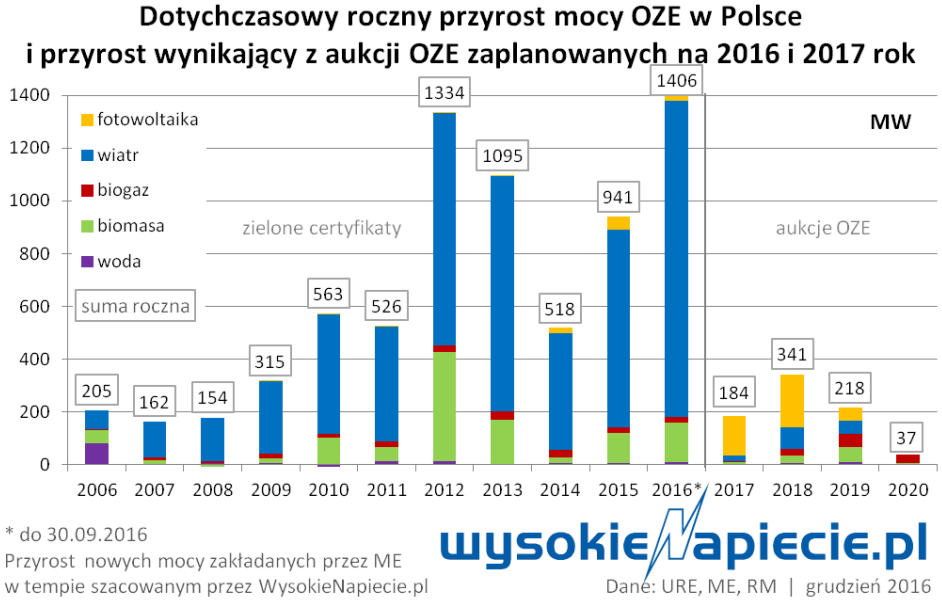
Rys. 29. Udział energii ze źródeł odnawialnych w końcowym zużyciu energii brutto w latach 2005 – 2016



2015-2018 – the dark age for renewables

- „Wind mill act" – restricted new wind turbine installing
- Driving foreign investors and private sector companies out
- Auctions for new RE: favoring biomass co-firing
- Capacity market
- Result: falling share of RES, much less new RE

Falling RE investment (new RE capacity)



Poland: energy transition outlook

2018: light at the end of the tunnel?

- A new energy strategy in the making: RES will be a large share
- A growing societal consensus against coal: air quality the trigger
- Falling RES prices see prosumerism expanding
- Government boasting ambitious plans for offshore wind
- October 2018: Energy Ministry expecting 2000 MW of new RES, mostly PV
- Problem: brown coal provides stable and affordable baseload

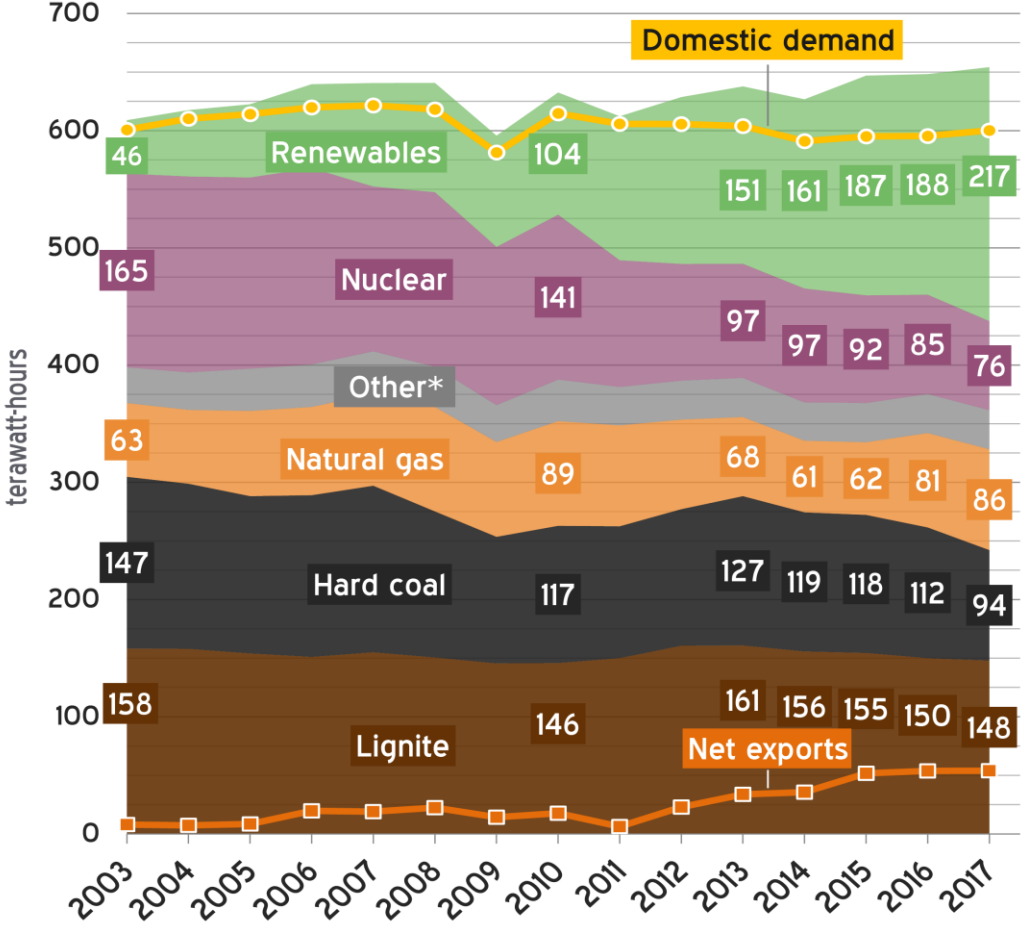
Germany: the climate champion?

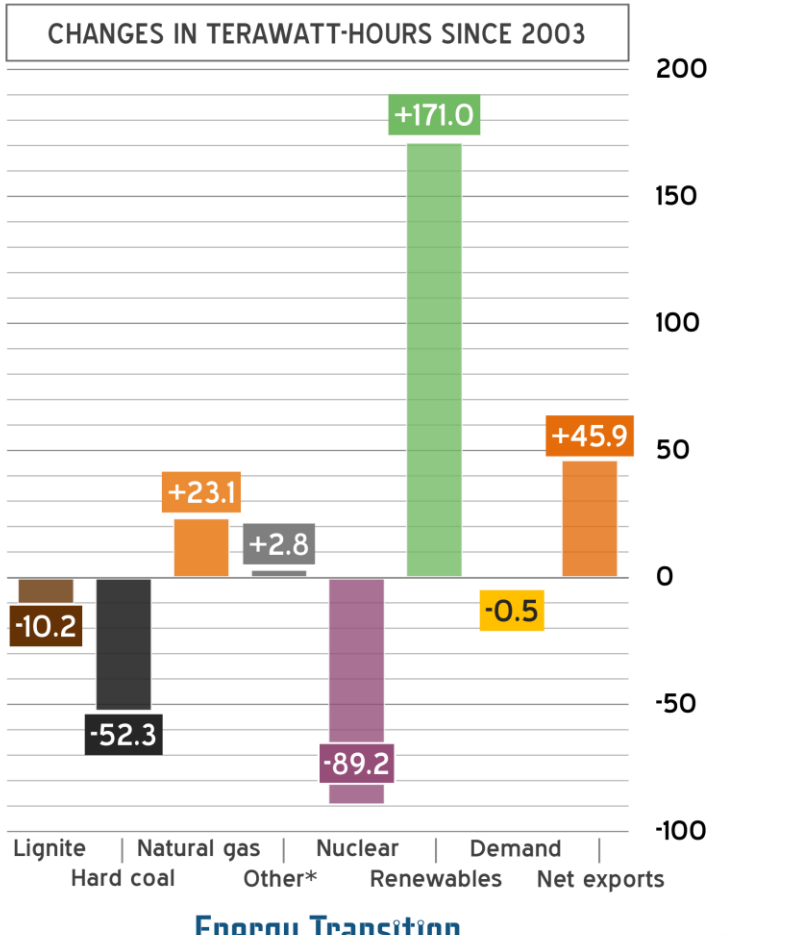
- Massive growth of RES in the 2000s, nuclear phase-out
- Involving different societal actors in the energy transition (*Energiewende*)
- A policy and technology laboratory
- Host to the UNFCCC
- But… will not meet the 2020 target

Renewables and power exports hit record high in 2017

Electricity generation, demand & exports in Germany, 2003-2017

*Source: AGEB (August 2017) | *Oil, waste, etc*





Energy Transition
The Global Energiewende

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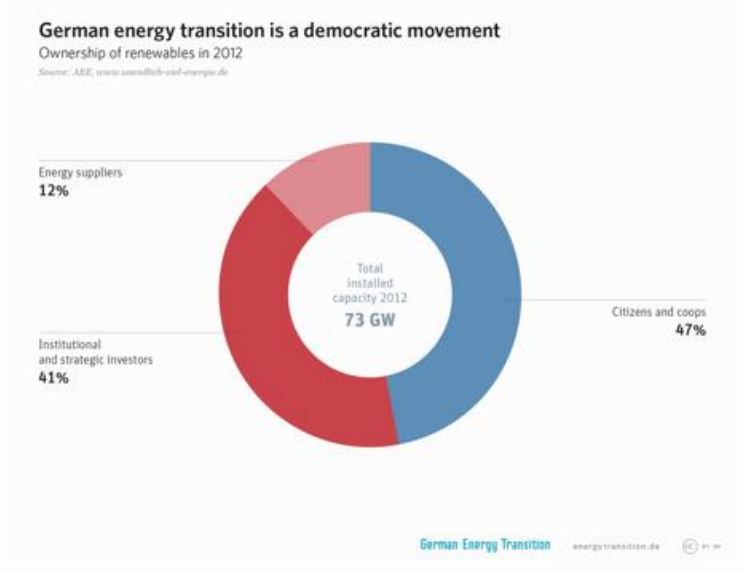
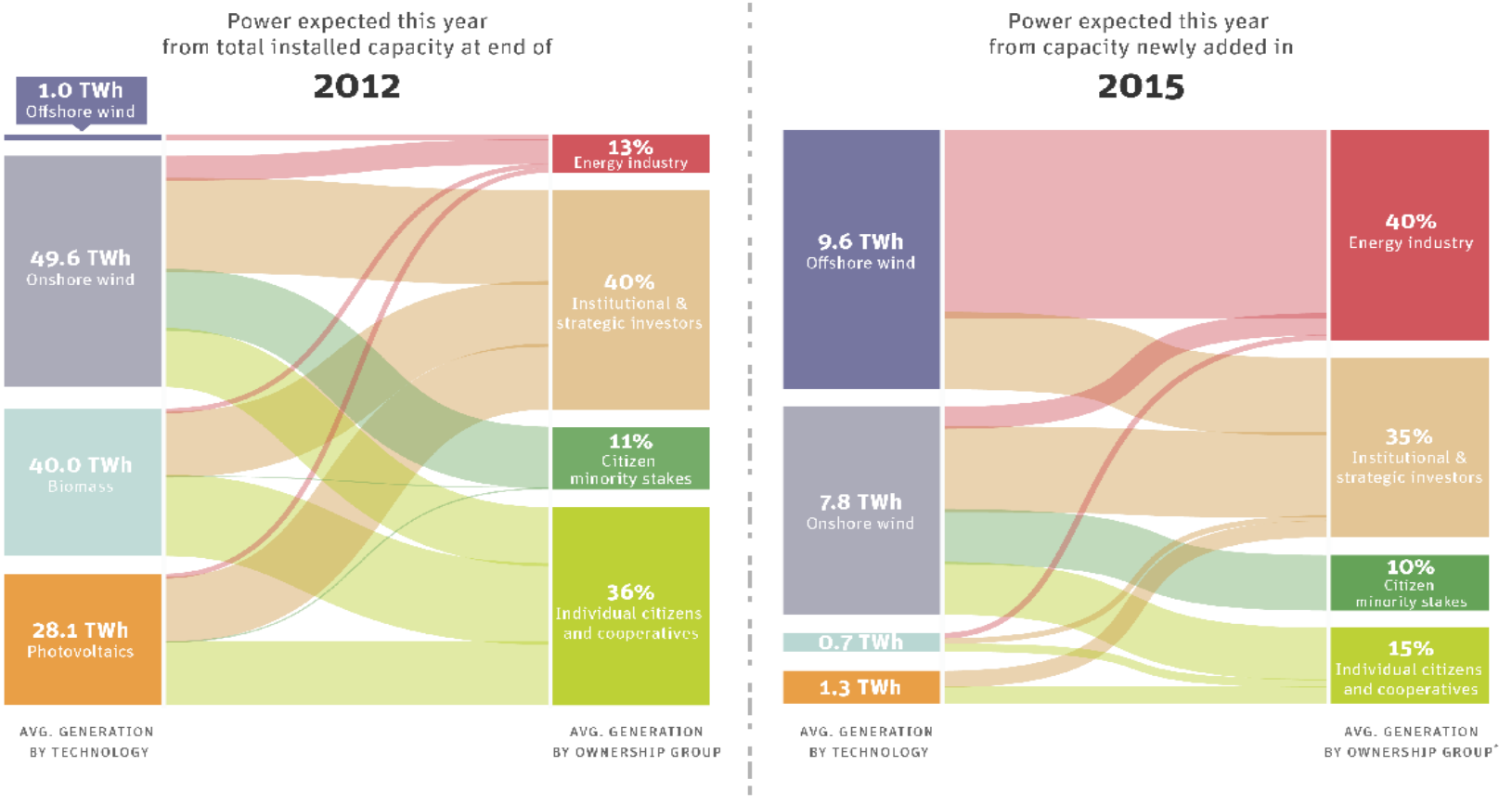
Germany: the ~~climate~~ lignite champion?

Germany: recent changes in RE policy

- Feed-in-tariffs until 2014, EEG reforms in 2014 and 2017
- Technology „corridors" and auctions
- Capacity mechanism
- What about ownership?

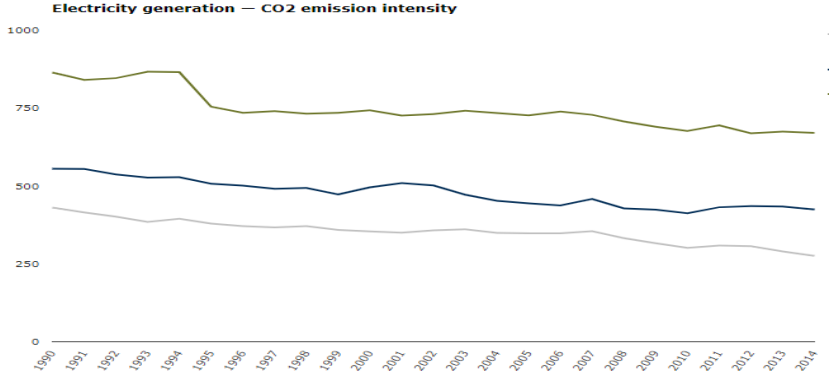




Energy Transition energytransition.org CC BY SA

Poland and Germany compared

- Surprising similarity: leaning on brown coal and offshore
- Surprising alliance: against decarbonization in the Clean Energy Package
- Energy transition „take-off" (wind + solar exceed 1% of electricity supply) *
  - Germany: 1999
  - Poland: 2010
- Facing similar problems again
- Lessons for Europe?



* A.Cherp, V. Vinichenko, J. Jewell (2018) *Episodes and causal mechanisms of Energy transitions*, paper presented at ECPR Hamburg

4 questions that will shape Europe's energy transition

- RE support: is auctioning really efficient?
  - Are contracts for difference a better choice for RE saturated energy systems?*
- Do we need capacity markets?
  - What will be the effects in 5 years?
- How will state aid guidelines be used?
  - Will allow the Commission to increase harmony, but in which direction?
- What will Energy Union's/2030 Governance mechanism do?
  - Can we append policy/market integration with physical integration
  - Regional generation adequacy?

*K. Neuhoff, N. May, J. Richstein, *Renewable Energy Policy in the Age of Falling Technology Costs* Discussion Paper 1746, DIW Berlin 2018.

Thank you!

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