



**University of Stuttgart**

Institute for Social Sciences (SOWI VI)

Department of Organizational Sociology and Innovation Studies

# The incumbent energy providers and the transformation of the German electricity sector

Gregor Kungl

# Structure

1. Quick overview – incumbents and renewable energies
2. Reasons for incumbents resistance to renewable energies
  - a. Organisational inertia
  - b. Political support of established business models
3. Implications

External Sales

EBITDA

Employees

Electricity sales

Production Capacities

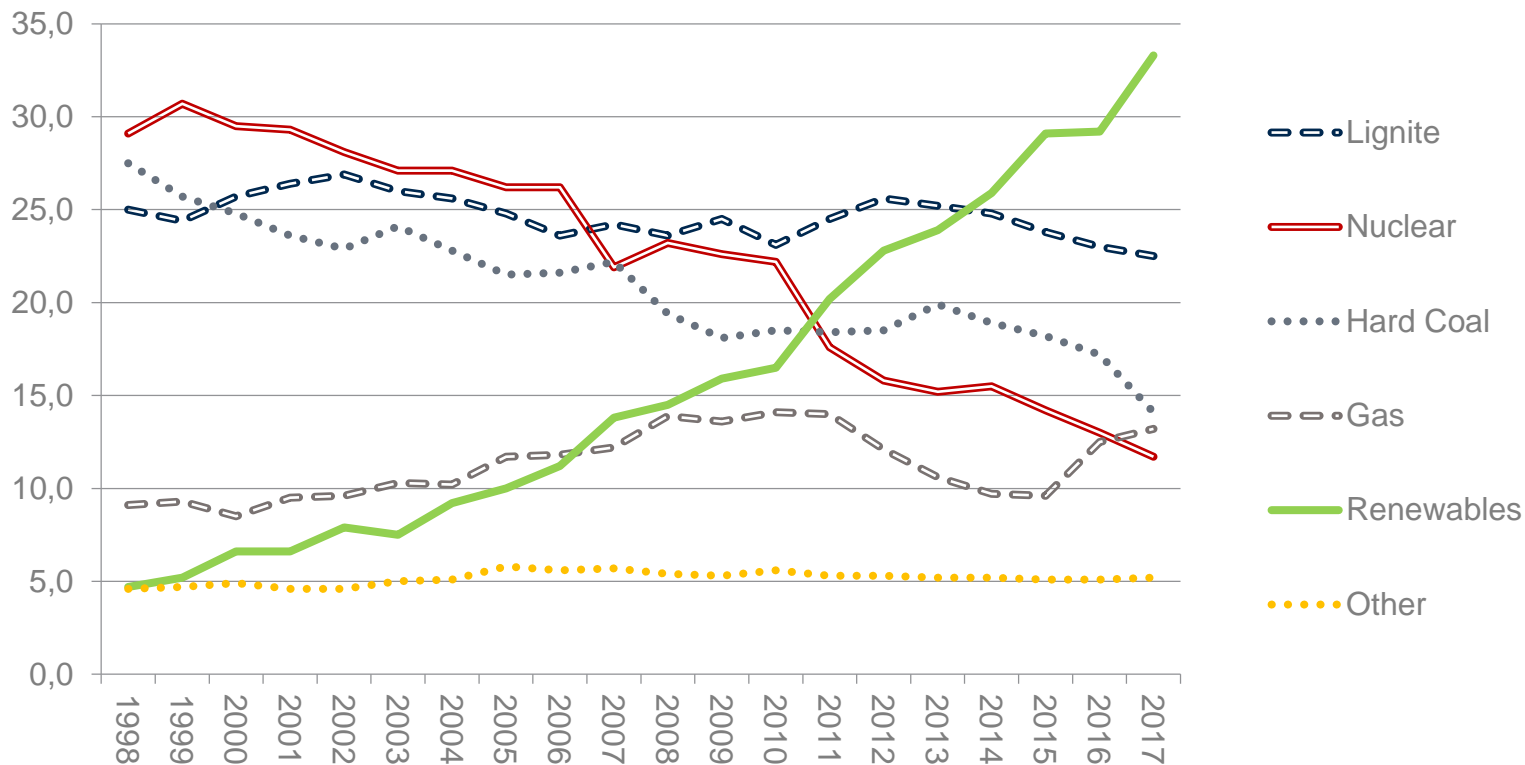


e-on

EnBW

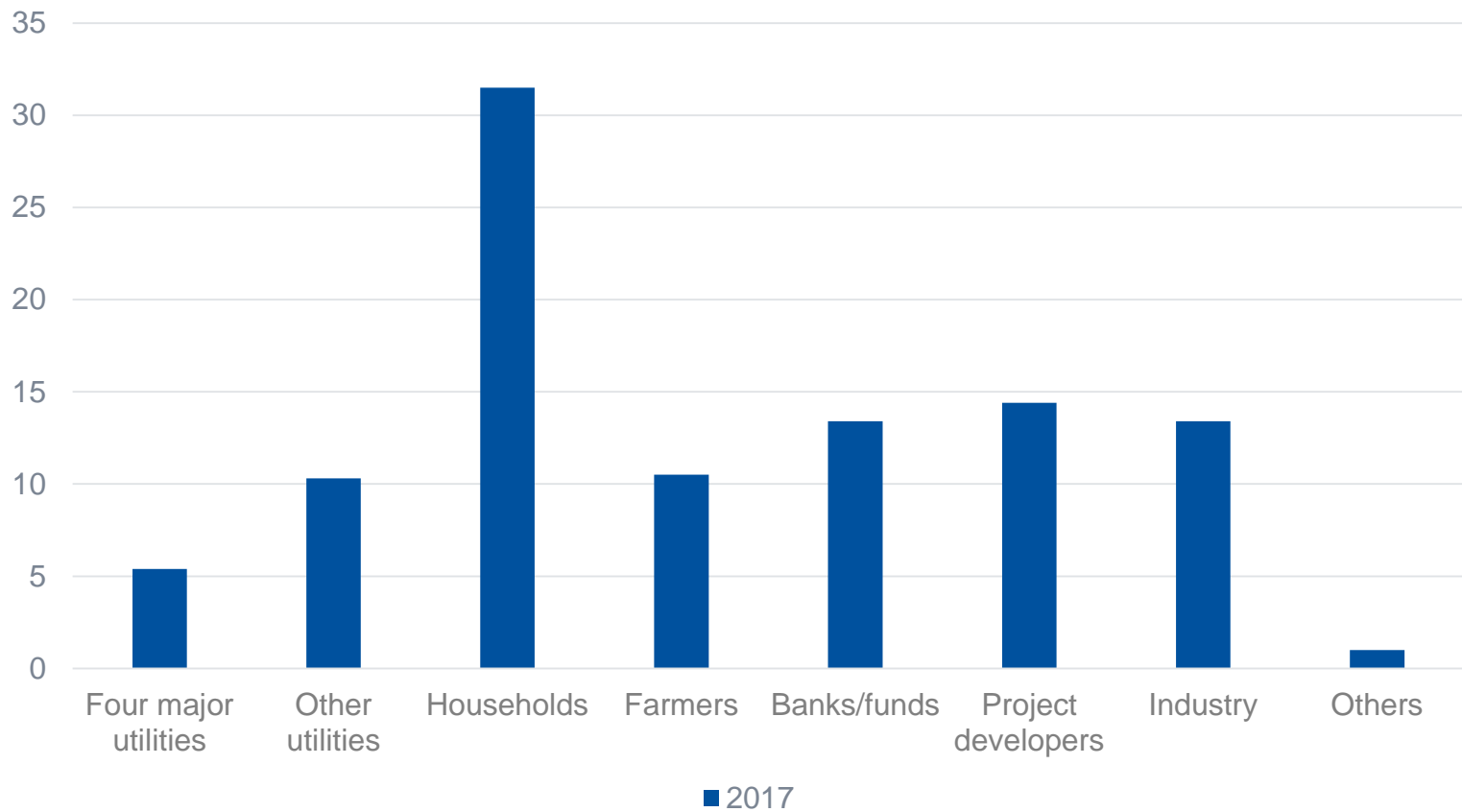


# Overview – incumbents and renewable energies



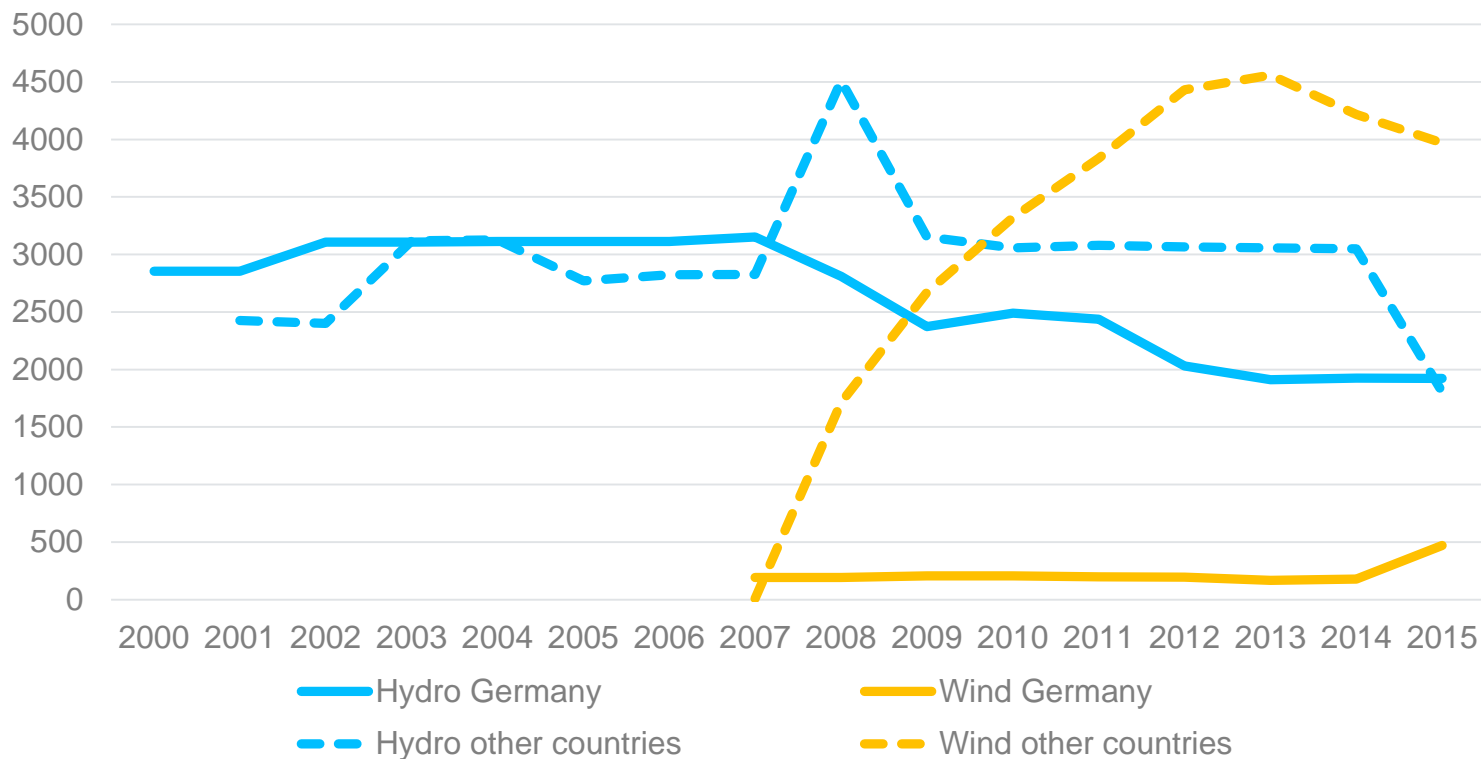
Electricity production by source in Germany. Data: AG Energiebilanzen

## Overview – incumbents and renewable energies



Ownership structure of renewable energies in Germany. Source: trend:research 2018

## Overview – incumbents and renewable energies



Installed capacity of renewables at E.ON. In MW. Data: E.ON business reports

## Reasons for the incumbents resistance to renewable energies

- Organisational inertia
- Political support of established business models

## Organisational Inertia – different approaches

- Population Ecology (Hannan und Freeman 1977, 1984, 1989): Structural inertia as a by-product of economic selection processes
- Path Dependence (Arthur 1994; Sydow et al 2009 a.o.): Inertia caused by self-reinforcing dynamics in the history of the organisation
- Miller (1994, 1993): Past success of firm leads to conservative decision preferences
- Unruh (2000): Organisational inertia as a result of the over-focussation on existing competences
- Leonard-Barton (1992): Companies get locked-into their core competences
- Levitt und March (1988): Origin of inertia in organisational learning processes
- Barr et al (1992): Inertia due to „outdated“ mental models of decision makers
- Dolata (2011): Low adaptability of organisations due to cognitive, micropolitical and structural factors
- Geels (2014): Industrial regimes are stabilised by various lock-in mechanisms



## Dimensions of organisational inertia

- Economic Dimension
- Technological Dimension
- (Micro-)political Dimension
- Cultural-/cognitive Dimension

# Dimensions of organisational inertia

	Situation around 2000	Development over time
<b>Economic Dimension</b>		
<b>Technological Dimension</b>		
<b>(Micro-)political Dimension</b>		
<b>Cultural-/cognitive Dimension</b>		

# Dimensions of organisational inertia

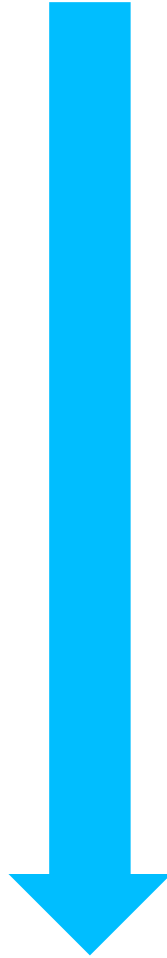
	Situation around 2000	Development over time
<b>Economic Dimension</b>	Sunk costs in conventional power plants	From 2010: Depreciations of conventional power plants; sunk costs decrease
	Dependence on debt financing. Capital market supports established business models	Since 2008: Less incentives for investments along established business models
<b>Technological Dimension</b>	Competences in management of large-scale, centralised structures not easily transferable to renewables	From 2006/2007: Growing competence in renewables – large windparks as crossover
		From 2010/2011: Growing competence in management of small, decentralised projects
	Underestimation of the potentials of renewables	From 2006/2007: Incremental re-evaluation of renewables
<b>(Micro-)political Dimension</b>	Representatives of conventional business are dominant within the companies	From 2008: Earnings of conventional business decrease; earnings of renewable business increase
	Technological preferences of leadership not in favour of renewables	Incremental generational change within leadership
	Conflicting interests of shareholders - heterogeneous	Conflicting interests of shareholders - heterogeneous
<b>Cultural-/cognitive Dimension</b>	Company culture based on traditional views of electricity supply	Over time: Incremental cultural change
		2011: Fukushima and nuclear phase-out shake taken-for-granted rules and established mindsets

## **Political support of established industries**

# Political support of established industries

Positive regulations

Negative regulations



# Political support of established industries

Positive regulations

Negative regulations

1998: Liberalisation

2000: EEG

2002: Nuclear Phase-Out 1

2005: Emission Trading

2005: Re-Regulation

2010: Extension Nuclear Power

2011: Nuclear Phase-Out 2



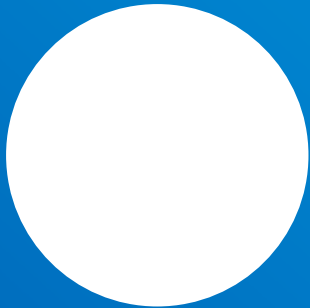


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**Thank you!**



**Gregor Kungl**

e-mail [Gregor.kungl@sowi.uni-stuttgart.de](mailto:Gregor.kungl@sowi.uni-stuttgart.de)

phone +49 (0) 711 685-81020

[www. Uni-stuttgart.de/soz/oi](http://www.Uni-stuttgart.de/soz/oi)

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Seidenstraße 36

70174 Stuttgart