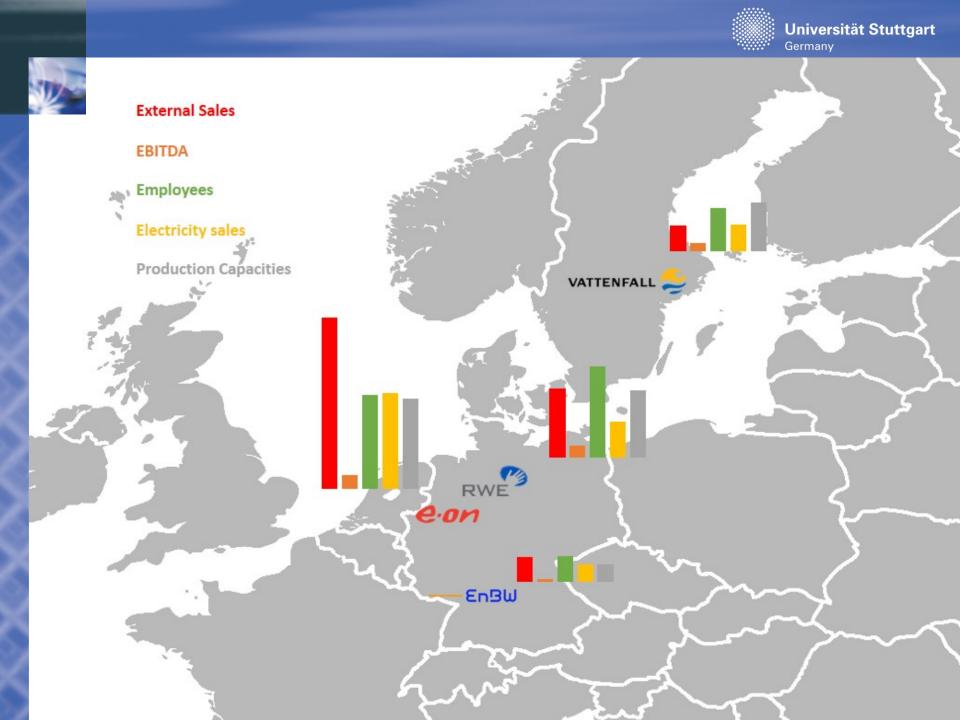




Gregor Kungl
University of Stuttgart
Department of Organizational Sociology and Innovation Studies









- Empirical introduction German utilities and renewables
- 2. Analysis
- 3. Implications for practice







EEG 2000

Electricity from renewable sources is given feed-inpriority as well as guaranteed technology-specific remuneration





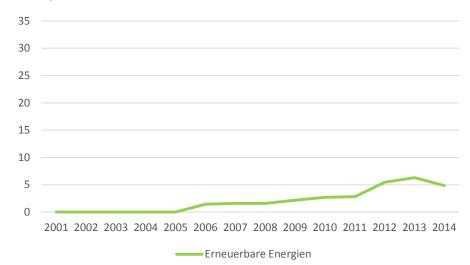


Electricity from renewable sources is given feed-inpriority as well as guaranteed technology-specific remuneration

Renewables are "Models for dollhouses" (Gerhard Goll, CEO EnBW)

Share of renewables in the energy mix of RWE

Source: Annual reports



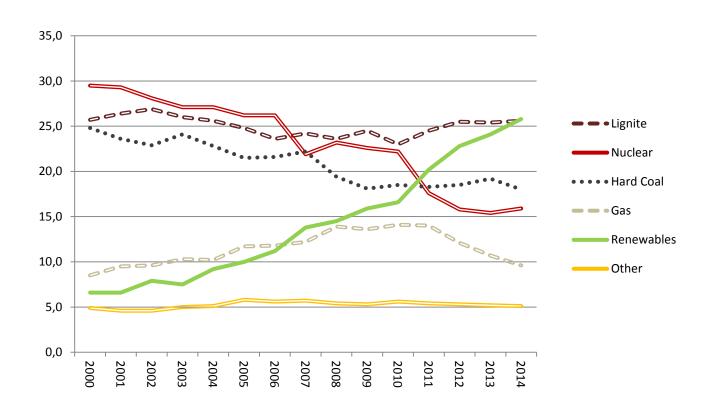


Allianz ENERGY-TRANS





Expansion of renewable energies

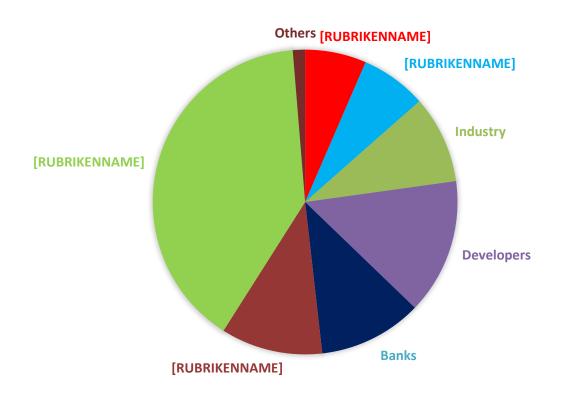


Gross electricity production in Germany by source (in percent). Source: AG Energiebilanzen





Expansion of renewable energies



Ownership structure of renewables 2010. Source: trend:research 2011





Market effects of renewable energies

Expansion of renewables contributed to:

- Sinking wholesale prices for electricity
- Reduced working hours of medium- and peak-load power plants





Market effects of renewable energies

Expansion of renewables contributed to:

- Sinking wholesale prices for electricity
- Reduced working hours of medium- and peak-load power plants

Additionally companies were exposed to:

- Aftereffects of the economic crisis
- Past misinvestments
- Nuclear phase-out decision by Federal Government





Market effects of renewable energies

Expansion of renewables contributed to:

- Sinking wholesale prices for electricity
- Reduced working hours of medium- and peak-load power plants

Additionally companies were exposed to:

- Aftereffects of the economic crisis
- Past misinvestments
- Nuclear phase-out decision by Federal Government

Incumbents announce reorientation

Future growth areas:

- Decentralized services
- Renewable energies





		2007 until 2015: Incremental re-evaluation of renewables





		2007 until 2015: Incremental re-evaluation of renewables
	Веасс	use of
Economic Factors		
Opportunity Costs		
Historic Factors		
Competence		
Path Dependence		
Sunk Costs		
(Micro-)political Factors		
Internal to Organization		
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





		2007 until 2015: Incremental re-evaluation of renewables
	Веас	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence		
Path Dependence		
Sunk Costs		
(Micro-)political Factors		
Internal to Organization		
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Веа	icuse of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence		
Sunk Costs		
(Micro-)political Factors		
Internal to Organization		
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Веас	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence	Strong path dependency in the power plant complex	Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs		
(Micro-)political Factors		
Internal to Organization		
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





		2007 until 2015: Incremental re-evaluation of renewables
	Beaco	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence		Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs		Many past investments (fossil power plants) had sunk in value (billons of depreciations e.g.)
(Micro-)political Factors		
Internal to Organization		
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Веас	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence	Strong path dependency in the power plant complex	Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs	Hazard towards past investment (fossil power plants)	Many past investments (fossil power plants) had sunk in value (billons of depreciations e.g.)
(Micro-)political Factors		
Internal to Organization	Distributive conflicts within the companies divisions	Better positions of renewable entrepreneurs within the companies
External to Organization		
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Веас	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence	Strong path dependency in the power plant complex	Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs	Hazard towards past investment (fossil power plants)	Many past investments (fossil power plants) had sunk in value (billons of depreciations e.g.)
(Micro-)political Factors		
Internal to Organization	Distributive conflicts within the companies divisions	Better positions of renewable entrepreneurs within the companies
External to Organization	Renewables are irrelevant for the interests of the companies shareholders	Shareholders interests become more heterogeneous
Cultural-/Cognitive Factors		
Corporate Identity		
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Beac	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence	Strong path dependency in the power plant complex	Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs	Hazard towards past investment (fossil power plants)	Many past investments (fossil power plants) had sunk in value (billons of depreciations e.g.)
(Micro-)political Factors		
Internal to Organization	Distributive conflicts within the companies divisions	Better positions of renewable entrepreneurs within the companies
External to Organization	Renewables are irrelevant for the interests of the companies shareholders	Shareholders interests become more heterogeneous
Cultural-/Cognitive Factors		
Corporate Identity	Mismatch with organizational culture	Slight cultural change (via institutional entrepreneurs)
Power Factors		
Position		





	Until 2007: Ignorance towards renewables	2007 until 2015: Incremental re-evaluation of renewables
	Beac	use of
Economic Factors		
Opportunity Costs	Comparably low return rates of renewables	Sinking return rates of former core-business
Historic Factors		
Competence	Low competence in renewables (except hydro) and decentralized small scale solutions	Rising experience with renewables. First renewable projects exceeded expectations
Path Dependence	Strong path dependency in the power plant complex	Sinking efficiency in the power plant complex due to rising shares of intermittent renewables
Sunk Costs	Hazard towards past investment (fossil power plants)	Many past investments (fossil power plants) had sunk in value (billons of depreciations e.g.)
(Micro-)political Factors		
Internal to Organization	Distributive conflicts within the companies divisions	Better positions of renewable entrepreneurs within the companies
External to Organization	Renewables are irrelevant for the interests of the companies shareholders	Shareholders interests become more heterogeneous
Cultural-/Cognitive Factors		
Corporate Identity	Mismatch with organizational culture	Slight cultural change (via institutional entrepreneurs)
Power Factors		
Position	Intense (political and market) power of the companies	Companies (political and market) power slightly shrank





Implications for practice

- 1. How to get the incumbents on board?
- 2. Do you want/need to get the incumbents on board?







Implications for practice

Assessing reactions to desired change

Assess possible regulations

- 1. Incentivize
- 2. Force
- 3. Ignore





Thank you for your attention!

Gregor Kungl
University of Stuttgart
Department of Organizational Sociology and Innovation Studies

