



Scharf, H., Lencz, D., Arnold, F.:

Drivers and barriers of future gas demand - A meta analysis

Erdgas – Bedeutung und zukünftige Rolle in der deutschen (German) Energiewende
(Natural Gas – Importance and Future Role in the Context of Energy Transition in Germany)

Enerday, 12th of April, 2019
Messe Dresden

Project Partners:



Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages

Agenda

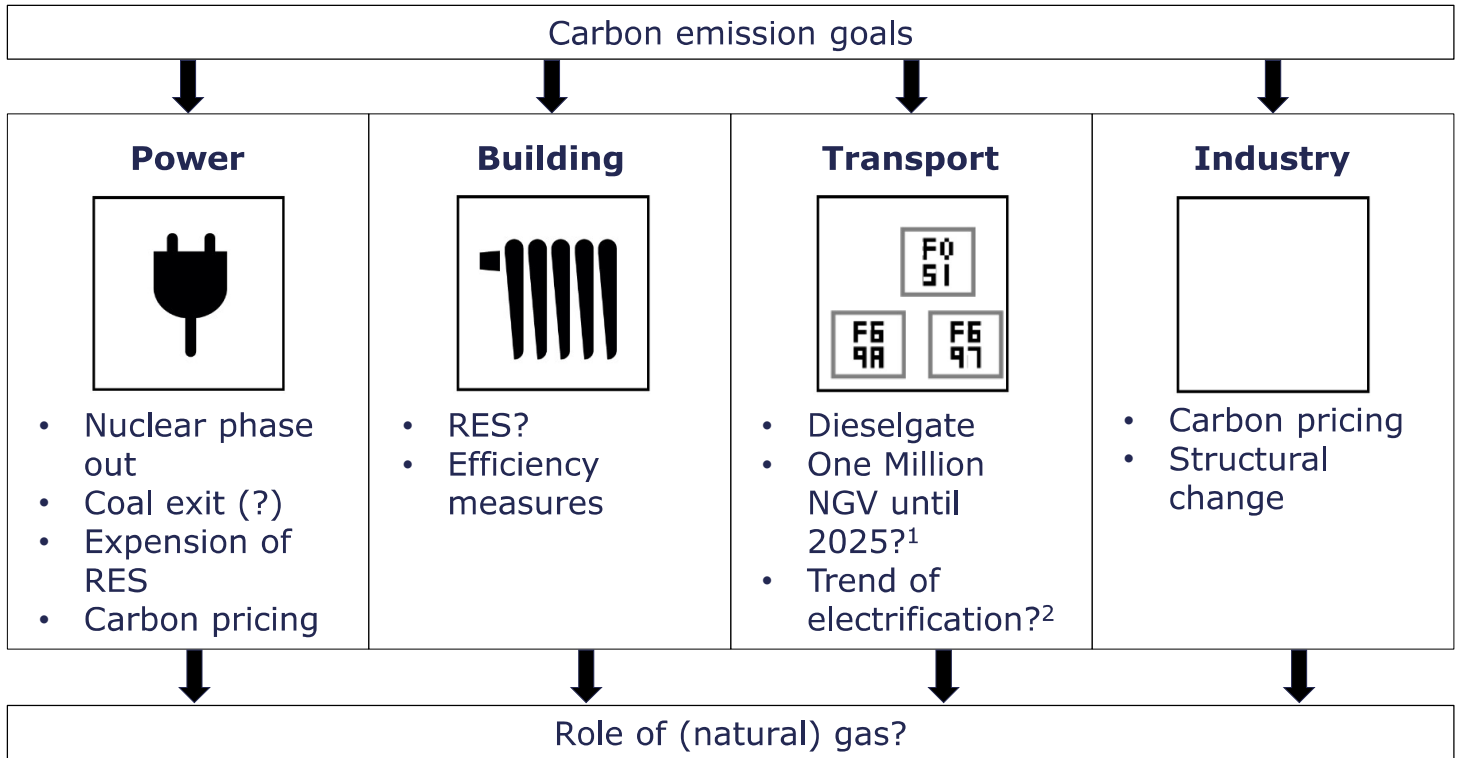
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- 4** Conclusion

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- **Fossil fuel with lowest GHG emission factor**
 - What is its role when it comes to decarbonization?
- **Versatility and flexibility of gas applications**
 - Flexibility of gas-fired plants (balancing requirements of RES)
 - Limited suitability of some applications to be electrified
- **Future requirement and alignment of gas infrastructure**
 - Electrification vs. green gases

Current developments in Germany

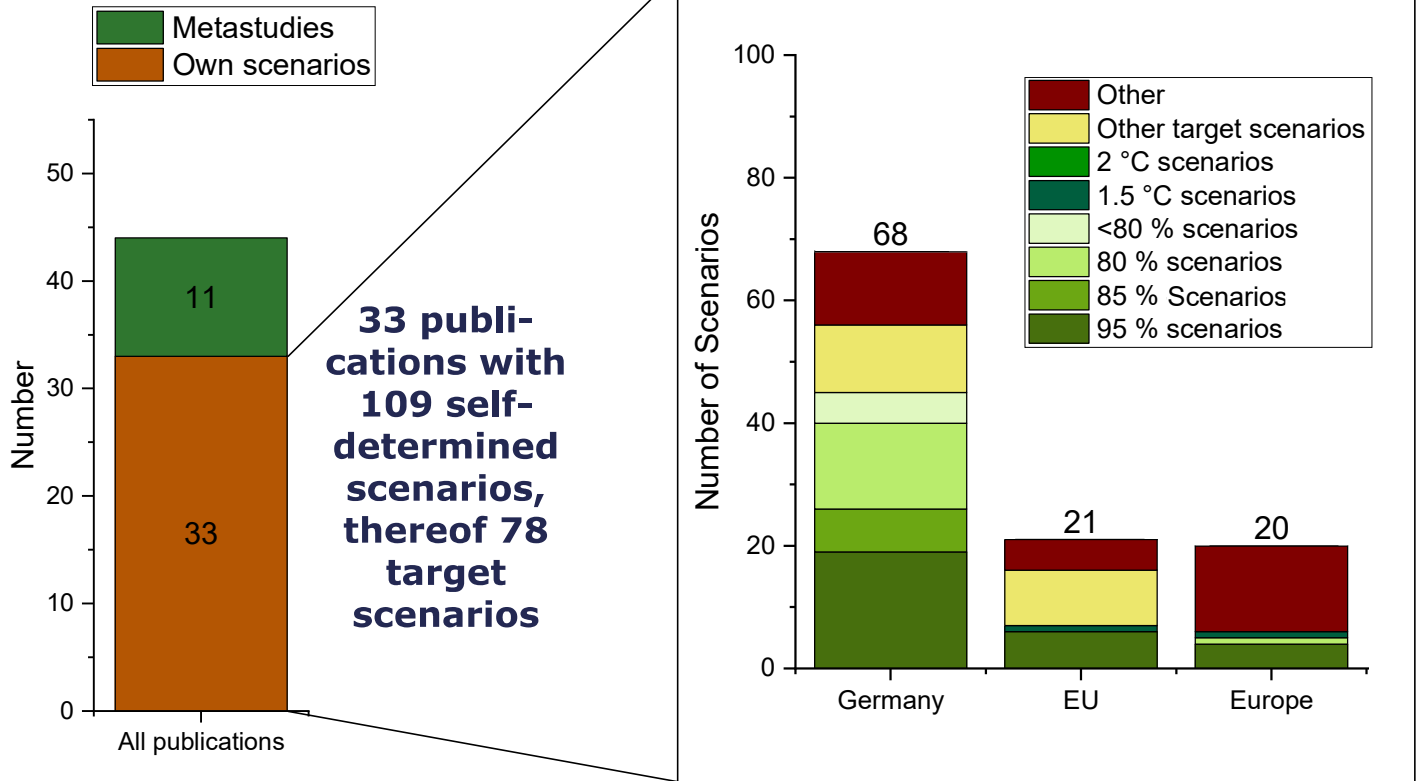


¹Volkswagen AG 2018
²Reimann, A., Reuters 2019

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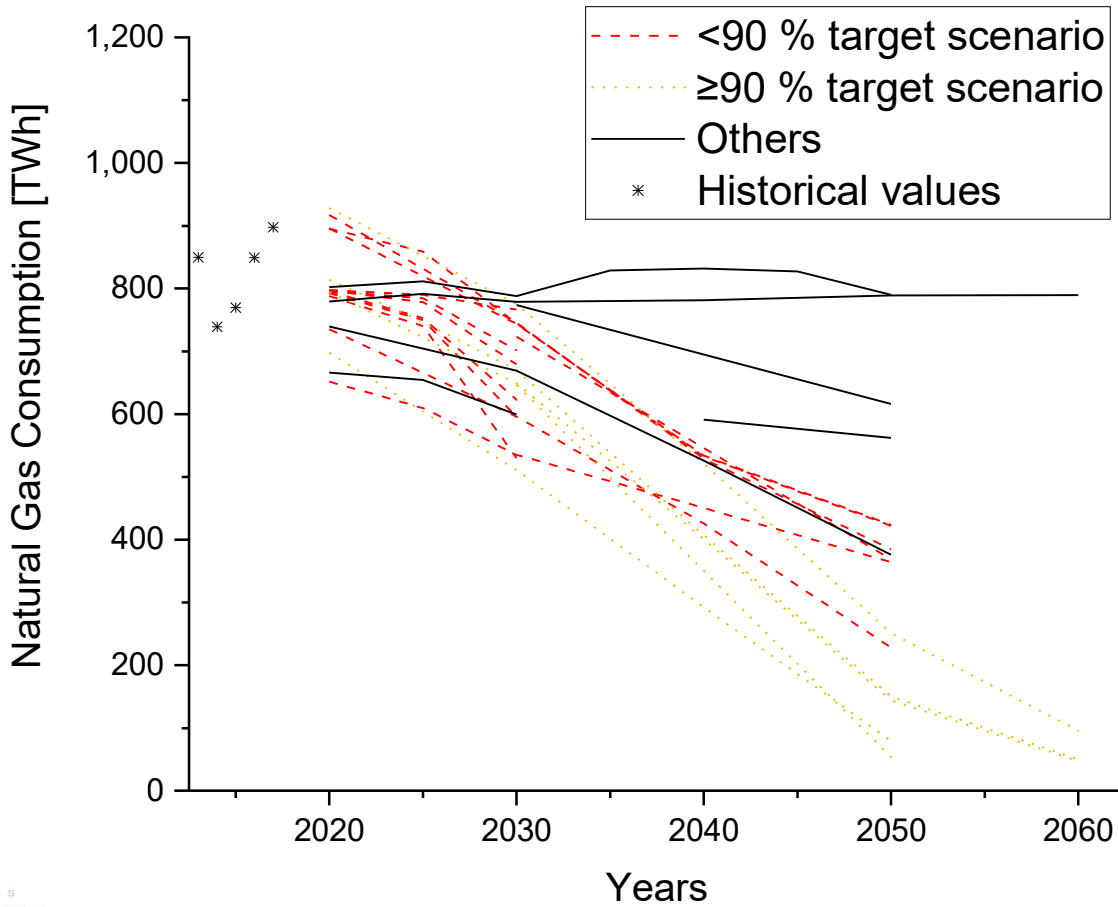
2. Overview on publications

In total 44 publications



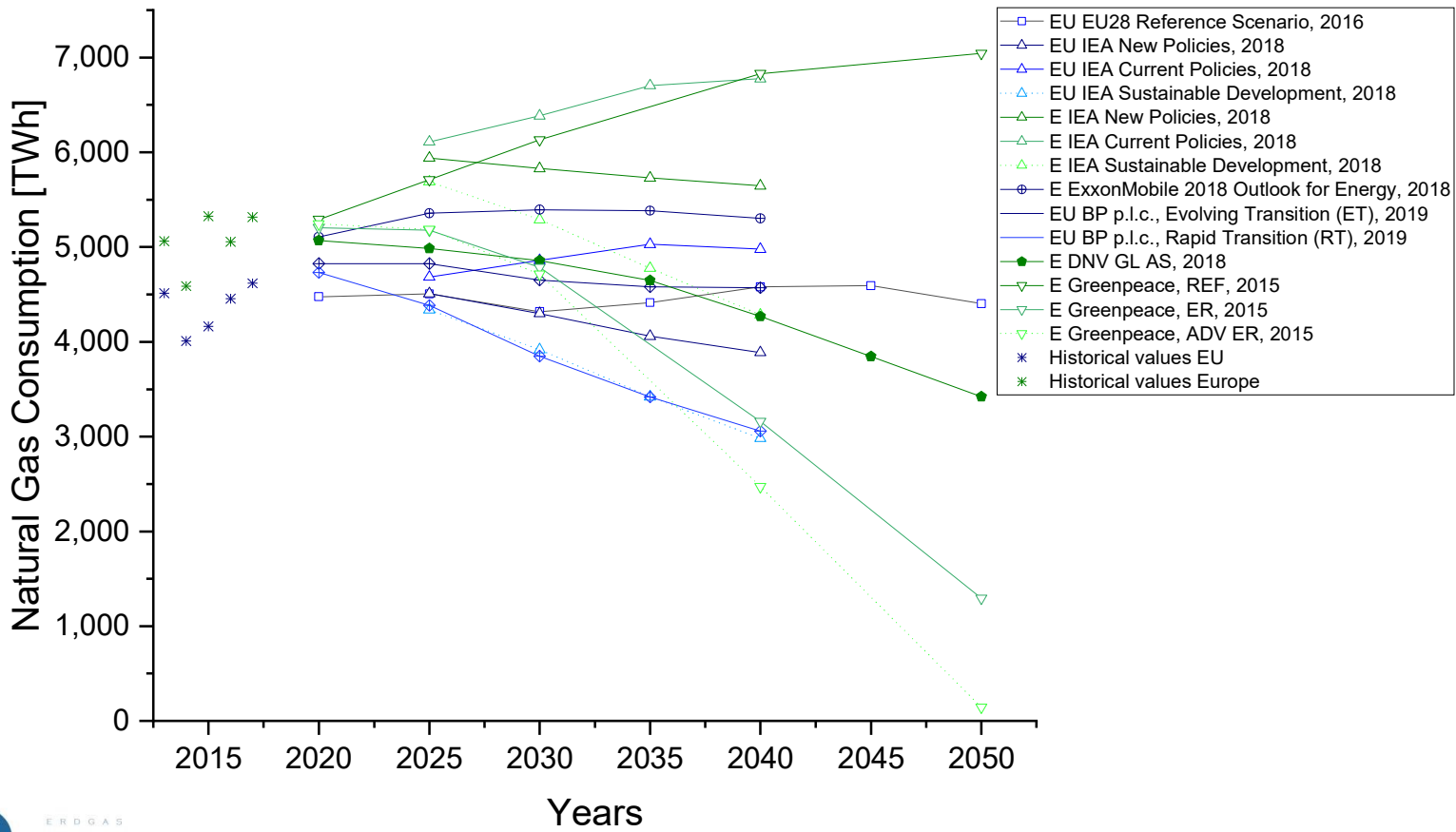
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Scenario Results: Natural Gas Consumption in Germany



















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Scenario Results: Natural Gas Consumption in EU/Europe



Overview on Drivers and Barriers

16 gas consumption influencing factors split into 5 groups

Conventional Technologies	New Technologies	Prices	Energy demand	Regulatory conditions
<ul style="list-style-type: none">  Nuclear phase out  Coal phase out 	<ul style="list-style-type: none">  RES deployment  Flexibility requirements of RES  CCS  Other low-carbon technologies 	<ul style="list-style-type: none">  Carbon pricing  Gas prices  Tax rates  Other commodity prices 	<ul style="list-style-type: none">  Energy efficiency  Energy consumption  Consumption targets 	<ul style="list-style-type: none">  Ambient air regulation  Climate change  Emission targets

Factor	Effects:		Spatial reference	Sector(s)	Type of gas	Description	Scenarios	Meta studies	Type(s) of scenario(s)
	Mid-term	Long-term							

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Key findings

- Uncertain future role of natural gas
- Gas consumption in Germany is supposed to fall
- The mid-term role of natural gas is an important issue in the context of energy transition
- Further research with own models



»Wissen schafft Brücken.«