



## Curriculum Vitae

**Dr. Fabian Arnold**  
Project Lead

Alte Wagenfabrik  
Vogelsanger Straße 321a  
50827 Cologne | Germany

fabian.arnold@ewi.uni-koeln.de

## Working Experience

### Since 2024

Project Lead at the Institute of Energy Economics at the University of Cologne (EWI)

### 2021-2023

Senior Research Associate & doctoral candidate at the Institute of Energy Economics at the University of Cologne (EWI)

### 2018-2020

Research Associate and doctoral candidate at the Institute of Energy Economics at the University of Cologne (EWI)

### 2016-2017

Student Assistant in the field of sustainable distribution systems and decentralized energy systems at Institut für Hochspannungstechnik (IFHT) at RWTH Aachen

### 2016

Student Assistant at Institut für Stromrichtertechnik und Elektrische Antriebe (ISEA) at RWTH Aachen (Project Batteriegroßspeicher M5BAT)

### 2015-2015

Student Assistant in the field of Asset Engineering and Management at Institut für Hochspannungstechnik (IFHT) at RWTH Aachen

### 2013-2014

Student Assistant at FGH Zertifizierung GmbH

## Education

### 2018-2023

PhD in Economics, University of Cologne  
Focus: Energy Economic  
Thesis: Essays in Energy Economics: Incentives and Consumer Response

### 2017

Degree: Master of Science in Business Administration & Engineering: Electrical Power Engineering  
Thesis: Implementierung von Dekompositionsverfahren für die stochastische Vermarktungsoptimierung Virtueller Kraftwerke

### 2015-2017

Master's Studies of Business Administration & Engineering: Electrical Power Engineering

### 2015

Semester abroad at National Taiwan University of Science and Technology (NTUST), Taipeh, Taiwan

### 2015

Degree: Bachelor of Science in Business Administration & Engineering: Electrical Power Engineering  
Thesis: Anwendbarkeitsuntersuchung thermischer Modelle von Ortsnetztransformatoren unter hoher Belastung

### 2011-2015

Bachelor's Studies of Mechanical Engineering and Business Major at RWTH Aachen, Major: Electric Energy Technology

## Internships

EnBW Energie Baden Württemberg AG, Technical management - Wind Onshore, Photovoltaic and Biomass, 2014

## Research Interests

Economic and technical modeling of energy systems,

Electricity market

Incentives and regulation

## Selected publications

### Articles in Peer-Reviewed Journals:

- F. Arnold, S. Jeddi, A. Sitzmann (2022). How prices guide investment decisions under net purchasing - An empirical analysis on the impact of network tariffs on residential PV. *Energy Economics*, Vol. 112, August 2022, 106177. DOI: 10.1016/j.eneco.2022.106177.
- H. Scharf, F. Arnold, D. Lencz, (2021). Future natural gas consumption in the context of decarbonization - A meta-analysis of scenarios modeling the German energy system *Energy Strategy Reviews*, Vol. 33, 100591, January 2021. DOI: 10.1016/j.esr.2020.100591.

### Working Paper:

- F. Arnold (2023). On the functional form of short-term electricity demand response - insights from high-price years. *EWI Working Paper 23/06*.
- F. Arnold, A. Ashour Novirdoust, P. Theile (2023). Environmental policy instruments for investments in backstop technologies under present bias - an application to the building sector. *EWI Working Paper 23/05*.
- F. Arnold, A. Lilienkamp, N. Namockel (2023). Diffusion of electric vehicles and their flexibility potential for smoothing residual demand - A spatio-temporal analysis for Germany. *EWI Working Paper 23/04*.
- F. Arnold, S. Jeddi, A. Sitzmann (2021). How prices guide investment decisions under net purchasing - An empirical analysis on the impact of network tariffs on residential PV. *EWI Working Paper 21/07*.

### Further publications

- F. Arnold, K. Gruber, E. Çam (2022). Strompreise im Rekordjahr 2021 - Analyse der Entwicklung der Strompreise und zugrundeliegender Treiber. et - *Energiewirtschaftliche Tagesfragen*, Vol. 72 (3), pp. 19-21, March 2022.
- J. Zinke, F. Arnold, C. Fernandez Alvarez (2021). Coal 2021 - Analysis and forecast to 2024. *International Energy Agency (IEA)/OECD*.
- P. Hauser, D. Lencz, S. Schulte, F. Arnold, E. Çam, H. Scharf, D. Möst (2021). Erdgas langfristig im Spannungsfeld von Versorgungssicherheit und Dekarbonisierung. et - *Energiewirtschaftliche Tagesfragen*, Vol. 71 (3), pp. 51-54, March 2021.
- F. Arnold, S. Jeddi, C. Fernandez Alvarez (2020). Coal 2020 - Analysis and forecast to 2025. *International Energy Agency (IEA)/OECD*.
- S. Schulte, F. Arnold, D. Schlund (2020). Kohle vs. Gas - Veränderungen der Merit-Order 2018 und 2019. et - *Energiewirtschaftliche Tagesfragen*, Vol. 70 (3), pp. 62-63, March 2020.
- M. Gierking, D. Lencz, F. Arnold (2019). Auswirkungen einer Beendigung der Kohleverstromung bis 2038 auf den Strommarkt, CO<sub>2</sub>-Emissionen und ausgewählte Industrien - Eine Analyse des Abschlussberichts der WSB-Kommission. *EWI study on behalf of the Ministry of Economic Affairs, Innovation, Digitalisation and Energy of the State of North Rhine-Westphalia*.