

# Dr. Franziska Holz

## *Curriculum Vitae*

DIW Berlin  
Dept. Energy, Transportation, Environment  
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Born on March 4, 1979 in Halle (Germany).  
Married, two children (\*2010, 2017).

### Professional Experience

- Since 2004 **DIW Berlin (German Institute for Economic Research)**  
**Department Energy, Transportation, Environment**  
Deputy Head of Department (since 2018)  
Head of Research Area “Resource and Environmental Markets” (since 2016)
- Since July 2018 **Norwegian University of Science and Technology NTNU, Trondheim (Norway)**  
Adjunct international professor, NTNU Energy Transition Program
- Since September 2015 **Hertie School of Governance, Berlin**
- 2015/2016: Vertretungsprofessorin / Professor of Governance of Energy and Infrastructure (temporary full professorship)
  - Since June 2016: Fellow
- January to May 2004 **Delegation of the European Commission, Washington, D.C. (USA)**  
Junior Consultant

### Education

- 2010 Selected participant in the training and mentoring program “ProFiL – Professionalisierung für Frauen in Forschung und Lehre” (Professional training for women in research and teaching) of the Berlin universities
- January 2009 PhD in Economics (Dr. rer. oec.) at TU Berlin,  
Thesis “Modeling the European Natural Gas Market – Static and Dynamic Perspectives of an Oligopolistic Market”, grade: *summa cum laude*
- 1998-2003 Undergraduate and Master Studies in Economics / International Economics at Paris 1 University Panthéon-Sorbonne

### Teaching

#### **TU Berlin (Workplace for Infrastructure Policy) (since winter term 2009):**

- “Methods for Network Engineering / Operations Research 2”: lecture with tutorials
- “Energy Economics”: lecture (winter term 2009/2010)
- Project course “Modeling of the global energy system” (summer term 2016)

#### **Hertie School of Governance Berlin (academic years 2015/16 and 2016/17):**

- “Policy Process: Energy Policy”: introduction to public policy analysis

- “Governance of Energy Resource Markets”: economics and political economy of energy resource markets (coal, oil, gas) under climate constraints
- “Economics 2: Economics of Trade & Growth”: lecture
- “Project course: Governance of Energy & Infrastructure”: student project on energy and infrastructure in Central Asia and the Caspian region

#### **Teaching assistance in PhD courses:**

- The World Gas Model (October 2009, TU Berlin)
- Market, spatial and traffic equilibrium models (2006, TU Berlin)
- European electricity market modeling 1 and 2 (2005, 2006, TU Berlin and CORE Université Catholique de Louvain-la-Neuve)
- Advanced European gas pipeline modeling 1 and 2 (2004, 2005, TU Berlin and DIW Berlin)

#### **Doctoral students** (only main supervisor)

Mariza Montes de Oca (since 2018) “Fossil resources and climate policy instruments” (DIW Graduate Center)

Dawud Ansari (since 2016) “Energy system modeling for the global markets and developing countries” (DIW Graduate Center)

Dr. Roman Mendelevitch (2013-2016) “Coal Markets and Carbon Capture – Model Development and Climate Policy Applications” (DIW Graduate Center)

Prof. Dr. Philipp M. Richter (2012-2015) “Trade and Climate Policies – Carbon Leakage in Energy and Goods’ Markets” (DIW Graduate Center)

Dr. Daniel Huppmann (2011-2014) “Strategic Behavior in Energy Markets – Advances in Complementarity and Multi-Stage Equilibrium Modeling” (DIW Graduate Center)

Dr. Clemens Haftendorn (2009-2012) “Economics of the Global Steam Coal Market – Modeling Trade, Competition and Climate Policies” (DIW Graduate Center)

#### **Selected research projects**

Open ENTRANCE – Open Energy Transition Analyses for a Low-Carbon Economy (2019-2023):  
Horizon 2020 project, lead: SINTEF Energi  
Lead of case studies “Gas storage in a low-carbon energy system” and “Reconciling models and regulation”

FoReSee - Fossil Resource markets and climate policy: Stranded assets, Expectations and the political Economy of climate change (2018-2021),  
Joint project with ifo Institut Munich and Humboldt University’s Chair for Resource Economics, Funded by the German Ministry of Education and Research (BMBF) in the research program “Economics of Climate Change”

SET-Nav – Navigating the Roadmap for Clean, Secure and Efficient Energy Innovation (2016-2019)  
Horizon 2020 project, lead: TU Vienna, <http://www.set-nav.eu/>  
Lead of work packages “Scenarios for the global fossil fuel markets” and “Method workshops”, participation in several other work packages, e.g. on CCS in the future EU energy system.

Coal Transitions: Research and Dialogue on the Future of Coal (2016-2018):  
Funded by the KR Foundation, lead: IDDRI and Climate Strategies, <https://coaltransitions.org/>  
Modeling of the global impact of regional coal phase-out policies.

RESOURCES: International Energy Resource Markets under Climate Constraints – Strategic Behavior and Carbon Leakage in Coal, Oil, and Natural Gas Markets (2012-2015),  
Joint project with the Potsdam University’s Chair of Economic Policy,

Funded by the German Ministry of Education and Research (BMBF) in the research program “Economics of Climate Change”, <http://www.uni-potsdam.de/wipo/research/resources>

European Natural Gas Infrastructure: The Role of Gazprom in European Natural Gas Supplies. Study commissioned by the The Greens / European Free Alliance in the European Parliament (2014).

EMF 28 – Stanford Energy Modeling Forum, Working Group 28 on the Effects of Technology Choices on EU Climate Policy (2011-2013), Co-leader of subgroup “Infrastructure models”  
[http://emf.stanford.edu/research/emf\\_28\\_the\\_effects\\_of\\_technology\\_choices\\_on\\_eu\\_climate\\_policy/](http://emf.stanford.edu/research/emf_28_the_effects_of_technology_choices_on_eu_climate_policy/)

NAMAs / Green Growth in Kazakhstan (2011-2014) – Work Package “Perspectives of the Kazakh Energy Resource Exports and Consumption until 2050”  
Joint project of DIW Berlin and DIW econ, funded by the German Ministry of Environment, Nature Conservation and Nuclear Safety (BMU) International Climate Initiative (IKI)  
<http://diw-econ.de/downloads/ausgewaehlte-projekte-im-bereich-klimaschutz-2/>

Global Coal Markets (2008-2010)  
Research project with the Stanford University’s Program on Energy and Sustainable Development, <http://pesd.fsi.stanford.edu/research/organization/6074/67103>

CESSA – Coordinating Energy Security in Supply Activities, 6<sup>th</sup> EU-FP (2007-2008),  
Work Package Natural Gas

EMF 23 – Stanford Energy Modeling Forum, Working Group 23 on World Natural Gas Markets and Trade (2004-2007), <http://www.stanford.edu/group/EMF/projects/projectemf23.htm>

### **Conference and seminar organization**

Research Seminar on Environment, Resource and Climate Economics (RSERC)  
Since 2012 co-organizer with TU Berlin, <https://www.finance.tu-berlin.de/menue/rserc/>

Organizer of the European PhD Seminar Natural Gas 2006-2011  
Bi-annual meetings in European research institutions (Moscow, Oxford, Florence, etc.)

### **Selected conference presentations**

Annual Meeting of the Verein für Socialpolitik 2010, 2009, 2006

Annual Conference of the European Association of Environmental and Resource Economists EAERE 2012

Annual Conference of the European Association for Research in Industrial Economics EARIE 2009

European Operations Research Conference EURO 2009, 2007, 2006

INFORMS Annual Meeting 2007

International Association of Energy Economics (IAEE) Europe Conferences 2013, 2009, 2007, 2005,  
International Conference 2006

International Energy Workshop 2010, 2009

Conference on Fossil Fuel Supply & Climate Policy 2018

### **Reviewing**

*Applied Economics, Climate Policy, Energy, Energy Economics, Energy Policy, Fuel, IEEE Transactions on Power Systems, International Journal of Global Energy Issues, Journal of Environmental Economics and Management, Networks and Spatial Economics, Review of Industrial Organization, The Energy Journal.*

## **Publications**

(number of citations listed on Scopus in parentheses)

### **Publications in peer-reviewed journals**

- Franziska Holz, Hanna Brauers, Philipp M. Richter, and Thorsten Roobeek (2017): Shaking Dutch Grounds Won't Shatter the European Gas Market. *Energy Economics*, Vol. 64, pp. 520-529. (2 citations)
- Franziska Holz, Philipp M. Richter, and Ruud Egging (2016): The Role of Natural Gas in a Low-Carbon Europe: Infrastructure and Supply Security. *The Energy Journal*, Vol. 37, Special Issue 3, pp. 33-59. (5 citations)
- Ruud Egging and Franziska Holz (2016): Risks in Global Natural Gas Markets: Investment, Hedging and Trade. *Energy Policy*, Vol. 94, pp. 468-479. (19 citations)
- Lissy Langer, Daniel Huppmann, and Franziska Holz (2016): Lifting the US Crude Oil Export Ban: A Numerical Partial Equilibrium Analysis. *Energy Policy*, Vol. 97, pp. 258-266. (1 citation)
- Philipp M. Richter and Franziska Holz (2015): All Quiet on the Eastern Front? Disruption Scenarios of Russian Natural Gas Supply to Europe. *Energy Policy*, Vol. 80, pp. 177-189. (41 citations)
- Franziska Holz, Philipp M. Richter, and Ruud Egging (2015): A Global Perspective on the Future of Natural Gas: Resources, Trade, and Climate Constraints. *Review of Environmental Economics and Policy*, Vol. 9 (1), pp. 85-106. (22 citations)
- Daniel Huppmann and Franziska Holz (2012): Crude Oil Market Power—A Shift in Recent Years? *The Energy Journal*, Vol. 33 (4), pp. 1-22. (29 citations)
- Clemens Haftendorn, Franziska Holz, and Christian von Hirschhausen (2012): “The End of Cheap Coal? A Techno-economic Analysis Until 2030 using the COALMOD-World Model.” *FUEL*, Vol. 102, pp. 305-325. (10 citations)
- Clemens Haftendorn, Claudia Kemfert, and Franziska Holz (2012): What about Coal? Interactions between Climate Policies and the Global Steam Coal Market until 2030. *Energy Policy*, Vol. 48, pp. 274–283. (10 citations)
- Daniel Huppmann, Ruud Egging, Franziska Holz, Sophia Ruester, and Christian von Hirschhausen (2011): The World Gas Market in 2030 - Development Scenarios using the World Gas Model. *International Journal of Global Energy Issues*, Vol. 35 (1), pp. 64-84. (6 citations)
- Ruud Egging, Franziska Holz, and Steven A. Gabriel (2010): The World Gas Model: A Multi-Period Mixed Complementarity Model for the Global Natural Gas Market. *Energy*, Vol. 35 (10), pp. 4016-4029. (59 citations)
- Clemens Haftendorn and Franziska Holz (2010): Modeling and Analysis of the International Steam Coal Trade. *The Energy Journal*, Vol. 31 (4), pp. 201-225. (23 citations)
- Franziska Holz, Christian von Hirschhausen, and Claudia Kemfert (2009): Perspectives of the European Natural Gas Market until 2025. *The Energy Journal*, Vol. 30, Special Issue „World Natural Gas Markets and Trade: A Multi-Modeling Perspective“, pp. 137-150. (11 citations)
- Ruud Egging, Franziska Holz, Christian von Hirschhausen, and Steven A. Gabriel (2009): Representing Gaspec with the World Gas Model. *The Energy Journal*, Vol. 30, Special Issue „World Natural Gas Markets and Trade: A Multi-Modeling Perspective“, pp. 97-117. (17 citations)
- Ruud Egging, Steven A. Gabriel, Franziska Holz, and Jifang Zhuang (2008): A Complementarity Model for the European Natural Gas Market. *Energy Policy*, Vol. 36 (7), pp. 2385-2414. (68 citations)
- Franziska Holz, Christian von Hirschhausen, and Claudia Kemfert (2008): A Strategic Model of European Gas Supply (GASMOD). *Energy Economics*, Vol. 30 (3), pp. 766-788. (83 citations)

## **Book chapters**

- Franziska Holz, Jonas Egerer, Clemens Gerbaulet, Pao-Yu Oei, Roman Mendelevitch, Anne Neumann, Christian von Hirschhausen: Energy Infrastructures for the Low-Carbon Transformation in Europe, in: *“Energiewende “Made in Germany” : Low Carbon Electricity Sector Reform in the European Context”*, pp. 283-317, Cham: Springer, 2018.
- Franziska Holz, Clemens Haftendorn, Roman Mendelevitch, and Christian von Hirschhausen: The COALMOD-World Model: Coal Markets Through 2030, in: M. C. Thurber and R. K. Morse (Eds.) *“The Global Coal Market: Supplying the Major Fuel for Emerging Economies”*, pp. 411-472, Cambridge University Press, 2015. (2 citations)
- Clemens Haftendorn, Franziska Holz, Claudia Kemfert, and Christian von Hirschhausen: Global Steam Coal Markets until 2030 – Perspectives on Production, Trade, and Consumption under Increasing Carbon Constraints. In: R. Fouquet (Ed.) *“Handbook on Energy and Climate Change”*, pp. 103-122, Edward Elgar Publ., 2013. (1 citation)
- Christian von Hirschhausen, Franziska Holz, Anne Neumann and Sophia Rüster: Supply Security and Natural Gas. In: F. Lévêque et al. (Eds.) *“Security of Energy Supply in Europe: Natural Gas, Nuclear, and Hydrogen”*, pp. 3-20, Edward Elgar Publ., 2010. (1 citation)

## **Edited volume**

- “Security of Energy Supply in Europe: Natural Gas, Nuclear, and Hydrogen”, Eds.: F. Lévêque, J.-M. Glachant, J. Barquín, C. von Hirschhausen, F. Holz, and W. J. Nuttall. Edward Elgar Publ., August 2010. (10 citations)

## **Selected other publications**

- Roman Mendelevitch, Christian Hauenstein, Franziska Holz (2019): The Death Spiral of Coal in the USA: Will New U.S. Energy Policy Change the Tide? *DIW Discussion Paper 1790*. DIW Berlin, Berlin.
- Dawud Ansari, Franziska Holz, Hasan Basri Tosun (2019): Global Futures of Energy, Climate, and Policy: Qualitative and Quantitative Foresight towards 2055. *DIW Discussion Paper 1782*. DIW Berlin, Berlin.
- Franziska Holz, Ivo Valentin Kafemann, Oliver Sartor, Tim Scherwath, Thomas Spencer (2018): What does “peak coal” mean for international coal exporters? A global modelling analysis on the future of the international steam coal market. IDDRI and Climate Strategies ([www.coaltransitions.org](http://www.coaltransitions.org))
- Anne Neumann, Leonard Göke, Franziska Holz, Claudia Kemfert, Christian von Hirschhausen: Erdgasversorgung: Weitere Ostsee-Pipeline ist überflüssig. *DIW Wochenbericht 27* (2018) and *Weekly Report 27* (2018) “Natural Gas Supply: No Need for Another Baltic Sea Pipeline”. DIW Berlin, Berlin.
- Franziska Holz, Tim Scherwath, Ivo Valentin Kafemann, Christian Skar, Hector Maranon-Ledesma, Pedro Crespo del Granado, Andres Ramos, Luis Olmos, Quentin Ploussard, Sara Lumberras, Andrea Herbst, Tobias Fleiter (2018): Case Study Report on The Role for Carbon Capture, Transport and Storage in Electricity and Industry in the Future. SET-Nav Project ([www.set-nav.eu](http://www.set-nav.eu))
- Dawud Ansari, Franziska Holz (2018): Issue Paper on Scenarios of the global fossil fuel markets. SET-Nav Project ([www.set-nav.eu](http://www.set-nav.eu))
- Franziska Holz, Clemens Haftendorn, Roman Mendelevitch, Christian von Hirschhausen (2016): A Model of the International Steam Coal Market (COALMOD-World). *DIW Data Documentation 85*. DIW Berlin, Berlin.
- Daniel Huppmann and Franziska Holz: What about the OPEC cartel? *DIW Roundup 58* (2015). DIW Berlin, Berlin.
- Daniel Huppmann and Franziska Holz: Modelling the Impact of Energy and Climate Policies. *DIW Roundup 44* (2014). DIW Berlin, Berlin.

- Christian von Hirschhausen, Franziska Holz, Clemens Gerbaulet, Casimir Lorenz: Europäische Energiewirtschaft: hoher Investitionsbedarf für Nachhaltigkeit und Versorgungssicherheit. *DIW Wochenbericht* 27 (2014) and *DIW Economic Bulletin* 7 (2014) "European Energy Sector: Large Investments Required for Sustainability and Supply Security". DIW Berlin, Berlin.
- Franziska Holz, Hella Engerer, Claudia Kemfert, Philipp M. Richter, and Christian von Hirschhausen: European Natural Gas Infrastructure: The Role of Gazprom in European Natural Gas Supplies. *DIW Berlin Politikberatung kompakt* 83 (2014). DIW Berlin, Berlin.
- Hella Engerer, Franziska Holz, Philipp M. Richter, Christian von Hirschhausen, and Claudia Kemfert: Europäische Erdgasversorgung trotz politischer Krisen sicher. *DIW Wochenbericht* 22 (2014) and *DIW Economic Bulletin* 8 (2014) "European Natural Gas Supply Secure Despite Political Crises". DIW Berlin, Berlin.
- Jan Abrell, Clemens Gerbaulet, Franziska Holz, Casimir Lorenz, and Hannes Weigt (2013): Combining Energy Networks: The Impact of Europe's Natural Gas Network on Electricity Markets until 2050. *DIW Discussion Paper* 1317. DIW Berlin, Berlin.
- Clemens Haftendorn, Franziska Holz, Tim Winke, and Christian von Hirschhausen (2011): Entwicklungen des internationalen Handels mit Kesselkohle - Lehren aus dem COALMOD-World Modell. *Glückauf*, Vol. 147 (12), pp. 566-571. Also in *Energiewirtschaftliche Tagesfragen* (2012), Vol. 62 (3), pp. 38-43.
- Christian von Hirschhausen, Clemens Haftendorn, Johannes Herold, Franziska Holz, Anne Neumann, and Sophia Rüter: Europe's Coal Supply Security: Obstacles to Carbon Capture, Transport and Storage. *CEPS Policy Brief* 223 (2010). CEPS, Brussels.
- Christian von Hirschhausen, Franziska Holz, Daniel Huppmann, and Claudia Kemfert: Weltölmärkte: Angebotsmacht der OPEC ungebrochen. *DIW Wochenbericht* 23 (2009) and *Weekly Report* 22 (2009) "World Crude Oil Markets: OPEC's Supplier Power Remains Unchallenged". DIW Berlin, Berlin.
- Clemens Haftendorn, Karen Freund, Christian von Hirschhausen, and Franziska Holz: Indien: Entwicklung auf Kosten des Klimas. *DIW Wochenbericht* 51/52 (2008). DIW Berlin, Berlin.
- Clemens Haftendorn, Christian von Hirschhausen, and Franziska Holz: Auf dem Weg zu einer "COAL-PEC"? *DIW Wochenbericht* 40 (2008) and *Weekly Report* 10 (2008) "Moving towards a "COAL-PEC"?" DIW Berlin, Berlin.
- Franziska Holz: How Dominant is Russia on the European Natural Gas Market? Results from Modeling Exercises. *Applied Economics Quarterly, Supplement* 2007, Vol. 53 (58), pp.85-101.
- Franziska Holz and Christian von Hirschhausen: Höhere Sicherheit der europäischen Erdgasversorgung durch Öffnung und Integration der Märkte. *DIW Wochenbericht* 24 (2007). DIW Berlin, Berlin.
- Christian von Hirschhausen, Claudia Kemfert, and Franziska Holz: Russische Energie- und Klimapolitik bleibt widersprüchlich – Herausforderungen für die EU. *DIW Wochenbericht* 10 (2005) and *Weekly Report* 11 (2005) "Russian Energy and Climate Policy Remains Inconsistent: Challenges for the EU" DIW Berlin, Berlin.
- Franziska Holz: Der Aufholprozess der EU-Kohäsionsländer. *IWH Discussion Paper* 152 (2001). Institut für Wirtschaftsforschung Halle, Halle/Saale.