ECON-E0900 Reading list 29 Mar 2026

**) Expected reading. ‡) Additional reading for doctoral students. Further instructions in class.*

Global energy challenge

Arkolakis, Costas and Conor Walsh (2024). "The Economic Impacts of Clean Power". National Bureau of Economic Research.

Burlig, Fiona and Louis Preonas (2024). "Out of the darkness and into the light? Development effects of rural electrification". *Journal of Political Economy*.

* Greenstone, Michael (2024). "The Economics of the Global Energy Challenge". *AEA Papers and Proceedings*.

Heal, Geoffrey (2022). "Economic aspects of the energy transition". *Environmental and Resource Economics*.

Lee, Kenneth, Edward Miguel, and Catherine Wolfram (2020). "Does household electrification supercharge economic development?" *Journal of Economic Perspectives*.

Rapson, David and James Bushnell (2024). "The Limits and Costs of Full Electrification". *Review of Environmental Economics and Policy*.

Electricity market primer

Borenstein, Severin and James Bushnell (Apr. 2015). "The US Electricity Industry After 20 Years of Restructuring". *Annual Review of Economics*.

Cicala, Steve (2022). "Imperfect markets versus imperfect regulation in US electricity generation". *American Economic Review*.

Cramton, Peter (2017). "Electricity market design". *Oxford Review of Economic Policy*.

Pollitt, Michael G (2019). "The European single market in electricity: an economic assessment". *Review of Industrial Organization*.

‡ Wilson, Robert (2002). "Architecture of power markets". *Econometrica*.

* Wolak, Frank A. (2021). "Wholesale electricity market design". *Handbook on Electricity Markets*. Ed. by Jean-Michel Glachant, Paul L. Joskow, and Michael G. Pollitt. Chap. 4.

Empirical analysis of energy market transition

Abrell, Jan, Mirjam Kosch, and Sebastian Rausch (2019). "Carbon abatement with renewables: Evaluating wind and solar subsidies in Germany and Spain". *Journal of Public Economics*.

Ambec, Stefan, Claude Crampes, and Stefan Lamp (2025). "Pricing intermittent renewable energy". *Working paper*.

Astier, Nicolas and Frank A Wolak (2026). *Nuclear operations with a high penetration of renewables: the case of France*. Tech. rep. National Bureau of Economic Research.

Callaway, Duncan S., Meredith Fowlie, and Gavin McCormick (2018). "Location, location, location: The variable value of renewable energy and demand-side efficiency resources". *Journal of the Association of Environmental and Resource Economists*.

Cullen, Joseph (2013). "Measuring the Environmental Benefits of Wind-Generated Electricity". *American Economic Journal: Economic Policy*.

Davis, Lucas and Catherine Hausman (2016). "Market impacts of a nuclear power plant closure". *American Economic Journal: Applied Economics*.

Deschenes, Olivier, Christopher Malloy, and Gavin McDonald (2023). "Causal effects of Renewable Portfolio Standards on renewable investments and generation: The role of heterogeneity and dynamics". *Resource and Energy Economics*.

‡ Jarvis, Stephen, Olivier Deschenes, and Akshaya Jha (2022). "The private and external costs of Germany's nuclear phase-out". *Journal of the European Economic Association*.

Kaffine, Daniel T., Brannin J. McBee, and Jozef Lieskovsky (2013). "Emissions Savings from Wind Power Generation in Texas". *The Energy Journal*.

Lamp, Stefan and Mario Samano (2023). "(Mis) allocation of renewable energy sources". *Journal of the Association of Environmental and Resource Economists*.

‡ Liski, Matti and Iivo Vehviläinen (2020). "Gone with the wind? An empirical analysis of the equilibrium impact of renewable energy". *Journal of the Association of Environmental and Resource Economists*.

* Novan, K. (2015). "Valuing the Wind: Renewable Energy Policies and Air Pollution Avoided". *American Economic Journal: Economic Policy*.

Market failures: Environment

Cullen, Joseph A and Erin T Mansur (2017). "Inferring carbon abatement costs in electricity markets: A revealed preference approach using the shale revolution". *American Economic Journal: Economic Policy*.

‡ Fabra, Natalia and Mar Reguant (2014). "Pass-Through of Emissions Costs in Electricity Markets". *American Economic Review*.

* Hintermann, Beat (2016). "Pass-through of CO2 emission costs to hourly electricity prices in Germany". *Journal of the Association of Environmental and Resource Economists*.

Vehviläinen, Iivo (2023). "Greed is good? Of equilibrium impacts in environmental regulation". *Journal of Environmental Economics and Management*.

Market failures: Market power

Andrés-Cerezo, David and Natalia Fabra (2023). "Storing power: Market structure matters". *The RAND Journal of Economics*.

Borenstein, Severin, James Bushnell, and Frank A. Wolak (2002). "Measuring Market Inefficiencies in California's Restructured Wholesale Electricity Market". *American Economic Review*.

* Bushnell, James, Erin Mansur, and Celeste Saravia (2008). "Vertical Arrangements, Market Structure and Competition: An analysis of Restructured U.S. Electricity Markets". *American Economic Review*.

Fabra, Natalia (2021). "The energy transition: An industrial economics perspective". *International Journal of Industrial Organization*.

Graf, Christoph and Frank A Wolak (2025). "Measuring Market Power in Network-Constrained Markets". National Bureau of Economic Research.

‡ Ito, Koichiro and Mar Reguant (July 2016). "Sequential Markets, Market Power, and Arbitrage". *American Economic Review*.

Kellogg, Ryan and Mar Reguant (2021). "Energy and environmental markets, industrial organization, and regulation". *Handbook of industrial organization*.

Kim, Harim (2022). "Heterogeneous impacts of cost shocks, strategic bidding, and pass-through: evidence from the New England electricity market". *American Economic Journal: Microeconomics*.

Liski, M. and I. Vehviläinen (2018). "Ownership and Collusive Exit: Theory and a Case of Nuclear Phase-out". MIT CEEPR Working Paper 2018-010.

Lundin, Erik and Thomas P. Tangerås (2020). "Cournot competition in wholesale electricity markets: The Nordic power exchange, Nord Pool". *International Journal of Industrial Organization*.

‡ Puller, S. (2007). "Pricing and Firm Conduct in California's Deregulated Electricity Market". *Review of Economics and Statistics*.

Disruptive technologies and dynamics

Brown, David P and Lucija Muehlenbachs (2024). "The value of electricity reliability: Evidence from battery adoption". *Journal of Public Economics*.

* Bushnell, James and Kevin Novan (2021). "Setting with the Sun: The impacts of renewable energy on conventional generation". *Journal of the Association of Environmental and Resource Economists*.

Heal, G. (Oct. 2016). "Notes on the economics of electricity storage". NBER Working Paper 22752.

Joskow, Paul L (2019). "Challenges for wholesale electricity markets with intermittent renewable generation at scale: the US experience". *Oxford Review of Economic Policy*.

Knittel, Christopher R, Juan Ramon L Senga, and Shen Wang (2025). "Flexible data centers and the grid: Lower costs, higher emissions?" National Bureau of Economic Research.

‡ Liski, Matti and Iivo Vehviläinen (2026). "Redistribution through Efficiency: Theory and Evidence from Three Electricity Markets". *RAND Journal of Economics*.

Sioshansi, Ramteen, Paul Denholm, Thomas Jenkin, and Jurgen Weiss (2009). "Estimating the value of electricity storage in PJM: Arbitrage and some welfare effects". *Energy Economics*.

Consumers and retail markets

* Ahlvik, Lassi, Tuomas Kaariaho, Matti Liski, and Iivo Vehviläinen (2026, *forthcoming*). "Household-Level Responses to the European Energy Crisis". *American Economic Review: Insights*.

Bailey, Megan R, David P Brown, Blake C Shaffer, and Frank A Wolak (2025). "Take the Load Off: Time and Technology as Determinants of Electricity Demand Response". National Bureau of Economic Research.

‡ Borenstein, Severin and Stephen P. Holland (2005). "On the Efficiency of Competitive Electricity Markets With Time-Invariant Retail Prices". *RAND Journal of Economics*.

Cahana, Michael, Natalia Fabra, Mar Reguant, and Jingyuan Wang (2022). "The distributional impacts of real-time pricing".

Deryugina, Tatyana, Alexander MacKay, and Julian Reif (2020). "The long-run dynamics of electricity demand: Evidence from municipal aggregation". *American Economic Journal: Applied Economics*.

Fabra, Natalia, Clément Leblanc, and Mateus Souza (2025). "Unpacking the Distributional Implications of the Energy Crisis: Lessons from the Iberian Electricity Market". CESifo Working Paper.

Fowlie, Meredith, Michael Greenstone, and Catherine Wolfram (2018). "Do energy efficiency investments deliver? Evidence from the weatherization assistance program". *The Quarterly Journal of Economics*.

Garnache, Cloé, Øystein Hernæs, and Anders Gravir Imenes (2025). "Demand-side management in fully electrified homes". *Journal of the Association of Environmental and Resource Economists*.

Imelda, Matthias Fripp, and Michael J Roberts (2024). "Real-time pricing and the cost of clean power". *American Economic Journal: Economic Policy*.

Ito, Koichiro, Takanori Ida, and Makoto Tanaka (2023). "Selection on welfare gains: Experimental evidence from electricity plan choice". *American Economic Review*.

Joskow, Paul and Jean Tirole (2006). "Retail electricity competition". *The RAND Journal of Economics*.

Mamkhezri, Jamal, Xiaochen Sun, and Yuting Yang (2025). "The Hidden Cost of the Cloud: Data Centers and Electricity Market Inefficiency".

Ovaere, Marten and Mark Vergouwen (2025). "Mind the Peak: The Role of Peak Demand Charges and Real-Time Pricing in Residential Electricity Flexibility". Ghent University, Faculty of Economics and Business Administration.

Reguant, Mar (2019). "The efficiency and sectoral distributional impacts of large-scale renewable energy policies". *Journal of the Association of Environmental and Resource Economists*.

Sahari, Anna (2019). "Electricity prices and consumers' long-term technology choices: Evidence from heating investments". *European Economic Review*.

Wolak, Frank A. (July 2018). "Efficient Pricing: The Key to Unlocking Radical Innovation in the Electricity Sector". Working paper.

Electricity market design

Borenstein, Severin, James Bushnell, and Erin Mansur (2023). "The economics of electricity reliability". *Journal of Economic Perspectives*.

Buchsbaum, Jesse, Catherine Hausman, Johanna L Mathieu, and Jing Peng (2024). "Spillovers from ancillary services to wholesale energy markets". *The RAND Journal of Economics*.

Fabra, Natalia (2018). "A primer on capacity mechanisms". *Energy Economics*.

‡ Gerlagh, Reyer, Matti Liski, and Iivo Vehviläinen (2025). "Pricing in Crisis".

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Joskow, Paul L. and Jean Tirole (2007). "Reliability and competitive electricity markets". *The RAND Journal of Economics*.

Reguant, Mar and Mayra Wagner (2025). *Smart Power Limits: Designing Shortage Mechanisms for Extreme Events*. Tech. rep. National Bureau of Economic Research.

Networks

Astier, Nicolas, Ram Rajagopal, and Frank A. Wolak (2023). "Can Distributed Intermittent Renewable Generation Reduce Future Grid Investments? Evidence from France". *Journal of the European Economic Association*.

Bjorndal, Endre, Mette Helene Bjorndal, Isabel Hovdahl, and Kyriaki Tselika (2025). "European market integration and price convergence: A panel quantile regression analysis of NordLink". *NHH Dept. of Business and Management Science Discussion Paper*.

* Borenstein, Severin and James B Bushnell (2022). "Do two electricity pricing wrongs make a right? Cost recovery, externalities, and efficiency". *American Economic Journal: Economic Policy*.

De Canniere, C (2025). "Market integration and market efficiency: Evidence from transmission constraints in the Belgian electricity sector". Department of Economics, KU Leuwen.

Fell, Harrison, Daniel T Kaffine, and Kevin Novan (2021). "Emissions, transmission, and the environmental value of renewable energy". *American Economic Journal: Economic Policy*.

* Gonzales, Luis E., Koichiro Ito, and Mar Reguant (2023). "The investment effects of market integration: Evidence from renewable energy expansion in Chile". *Econometrica*.

Hausman, Catherine (2025). "Power flows: Transmission lines, allocative efficiency, and corporate profits". *American Economic Review*.

Joskow, Paul L. and Jean Tirole (2005). "Merchant Transmission Investment". *The Journal of Industrial Economics*.

Lamp, Stefan and Mario Samano (2023). "(Mis) allocation of renewable energy sources". *Journal of the Association of Environmental and Resource Economists*.

‡ Ryan, Nicholas (2021). "The competitive effects of transmission infrastructure in the Indian electricity market". *American Economic Journal: Microeconomics*.

Additional topics

Contract markets

Bessembinder, Hendrik and Michael L Lemmon (2002). "Equilibrium pricing and optimal hedging in electricity forward markets". *the Journal of Finance*.

Fabra, Natalia and Gerard Llobet (2025). "Designing Contracts for the Energy Transition". *International Journal of Industrial Organization*.

Jha, Akshaya and Frank A Wolak (2023). "Can forward commodity markets improve spot market performance? Evidence from wholesale electricity". *American Economic Journal: Economic Policy*.

Dynamic models

Butters, R Andrew, Jackson Dorsey, and Gautam Gowrisankaran (2025). "Soaking up the sun: Battery investment, renewable energy, and market equilibrium". *Econometrica*.

Gowrisankaran, Gautam, Stanley S. Reynolds, and Mario Samano (2016). "Intermittency and the value of renewable energy". *Journal of Political Economy*.

Jha, Akshaya and Gordon Leslie (2025). "Start-up costs and market power: Lessons from the renewable energy transition". *American Economic Review*.

Karaduman, Ömer (2022). *Economics of Grid-Scale Energy Storage in Wholesale Electricity Markets*. Tech. rep. MIT CEEPR Working Paper 2022-014.

Liski, M. and I. Vehviläinen (2018). "Ownership and Collusive Exit: Theory and a Case of Nuclear Phase-out". MIT CEEPR Working Paper 2018-010.

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Behavioral

Allcott, Hunt (2011). "Social norms and energy conservation". *Journal of Public Economics*.

Dressler, Luisa and Stefan Weiergraeber (2023). "Alert the inert? Switching costs and limited awareness in retail electricity markets". *American Economic Journal: Microeconomics*.

Gravert, Christina (2024). *From intent to inertia: Experimental evidence from the retail electricity market*. Tech. rep. CEBI Working Paper Series.

Hortaçsu, Ali, Fernando Luco, Steven L Puller, and Dongni Zhu (2019). "Does strategic ability affect efficiency? Evidence from electricity markets". *American Economic Review*.

Hortaçsu, Ali and Steven Puller (2008). "Understanding Strategic Models of Bidding in Deregulated Electricity Markets: A Case Study of ERCOT". *RAND Journal of Economics*.

Jessoe, Katrina and David Rapson (Apr. 2014). "Knowledge Is (Less) Power: Experimental Evidence from Residential Energy Use". *American Economic Review*.