

NATURAL RESOURCE GOVERNANCE SPEAKER SERIES

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From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform

APRIL 3, 2019 • 12:00–1:00 PM
OSTROM WORKSHOP, 513 N. PARK



Digital technologies have reduced transaction costs and led to platform business models, which are increasingly part of policy debates in electricity distribution and retail due to the proliferation of digital and distributed energy resource (DER) technologies, such as residential rooftop solar. What are the implications of falling transaction costs and platform business models in electricity distribution and retail, and in the burgeoning markets for DERs? This paper's core insight is that excess capacity is variable, and varies inversely with transaction costs. Digital platform technologies and business models enable asset owners to rent out this excess capacity. Our transaction cost model represents the effects of transaction cost-reducing innovation on the gains from trade in sharing, and the margin that divides renters from owners. As peer-to-peer transactions in energy capacity become more feasible, our results suggest that ownership of DER capacity will be driven less by one's expected intensity of use and more by relative price concerns and subjective preferences for energy self-sufficiency or environmental attributes.



[Lynne Kiesling](#) is a visiting associate professor in the Department of Economics at Purdue University and the associate director of the Purdue University Research Center in Economics. Her research uses institutional and transaction cost economics to examine regulation, market design, and technology in the electricity industry.



Presentations are open to the public. For questions, contact Allison Sturgeon (sturgeon@iu.edu; 812/855-3151).