Nicholas Powers PRINCIPAL

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Dr. Powers specializes in conducting econometric and economic analysis and applying concepts from industrial organization and regulatory economics in competition, regulatory, and other litigation matters.

His broad experience includes estimating cartel impacts in large-scale price-fixing cases, assessing potential anticompetitive effects resulting from a proposed merger, and price effects of competitor entry and exit in proposed joint ventures. Dr. Powers regularly provides economic analysis of cartel behavior and also has experience analyzing exclusionary practices. Additionally, he conducts similar econometric work in antitrust and regulatory matters in the electric, postal, transportation, rail, and other industries.

Dr. Powers has extensive experience conducting analysis and submitting expert reports in regulatory proceedings. This includes the extensive analysis of regression-based costing models in the postal industry, econometric analysis of innovative pricing programs in the electric industry, rate of return analysis in the telecommunications industry, and econometric analysis of the renewable fuels market. He has also acted as both an independent evaluator and an advisor to several procurement processes in the electricity sector.

In other energy-related matters, Dr. Powers has conducted several key analyses of price effects, market power, and anticompetitive behavior. He supported expert testimony in three separate litigation proceedings arising from the California electricity crisis of 2000–2001. He has also overseen the statistical analyses in several New Source Review cases and performed damages and other analyses in energy-related litigation proceedings.

For the Department of Energy, Dr. Powers coauthored two reports on electric grid infrastructure and approaches to valuation of various grid assets, and for multiple clients he has analyzed retail electric market conditions and regulatory developments. He has also estimated the cost and feasibility of renewables-only energy portfolios.



Nicholas Powers

AREAS OF EXPERTISE

- Antitrust & Competition
- Collaborations & Cartels
- Electricity Litigation & Regulatory Disputes
- Regulatory Economics, Finance & Rates
- Transportation

EDUCATION

University of Michigan, Ross School of Business

PhD in Business Economics

Cornell University

BS in Applied Economics and Management

PROFESSIONAL EXPERIENCE

The Brattle Group (2010–Present)

Principal (2021–Present)
Senior Associate (2013–2020)
Associate (2010–2013)

TESTIMONY

- Turo Inc. v. City of Los Angeles | The United States District Court, Central District of California Western Division | Case 2:18-cv06055-CAS-GJS, Document 1 (January 2022)
- Before the Pennsylvania Public Utility Commission | Docket Nos. R-2021-3030012, R-2021-3030013, R-2021-3030014, R-2021-3030021. | Direct and Rebuttal Testimony of James D. Reitzes and Nicholas E. Powers (December 2021 March 2022)



SELECTED CONSULTING EXPERIENCE

ANTITRUST

- In a large civil case concerning alleged collusion in the corrugated packaging industry, executed the econometric analysis forming the basis of a report critiquing plaintiff's damages estimates. Supported the expert testimony of Nobel laureate Daniel McFadden.
- On behalf of purchasers of air cargo (plaintiffs) in a class action civil suit, conducted
 econometric and other statistical analyses in order to estimate economic damages from
 alleged price-fixing. Supported the expert testimony of Nobel laureate Daniel McFadden.
- Advise counsel representing a large multinational industrial firm by estimating overcharges stemming from a series of price-fixing conspiracies covering several input commodities.
- Advise plaintiff's counsel and external funders on damages in a cartel class action. Coauthored expert report on volume of commerce issues related to incompleteness of client data. Presented results of volume of commerce analysis to Court. Support damages analysis of Nobel laureate Daniel McFadden.
- Analyzed the anti-competitive impacts resulting from a proposed merger in the television broadcast industry.
- Performed econometric estimates of the price effects resulting from competitor entry and exit in geographic product markets to support expert testimony that assessed anticompetitive effects from a proposed joint venture in the airline industry.
- Conducted econometric analysis in evaluation of expert testimony that sought to quantify network effects in the payment card industry.
- Identified flaws in the econometric analysis of opposing experts in the context of settlement negotiations arising from price-fixing allegations in the plastics manufacturing industry.
- Oversaw preparation of expert report and quantification of damages, on behalf of plaintiffs, stemming from exclusionary conduct in the cotton industry.
- Supported testifying expert, on behalf of plaintiffs, in a competition matter related to vertical restraints in the carpet industry.

REGULATORY

 On behalf of United Parcel Service, manage analysis provide expert services in several regulatory dockets before the Postal Regulatory Commission. Apply regulatory economic principles and econometric expertise to detailed knowledge of USPS costing models;



provide input on economic arguments and regulatory strategy. Conducted econometric analyses and assisted in the preparation of reports and filings in a number of Dockets before the Postal Regulatory Commission, including Dockets No. ACR2014, RM2015-7, RM2016-2, RM2017-1, and RM2020-9. Co-authored expert report critiquing a proposed change to costing principles in the Purchased Highway Transportation cost segment, in Docket No. RM2016-12.

- On behalf of a coalition of mailer associations, submitted expert declaration critiquing aspects of changes to the system for regulating Postal Service rates for market dominant products as proposed by the Postal Regulatory Commission in Docket No. RM2017-3.
- Managed the analysis in support of multiple verified statements filed in a railroad trackage rights proceeding before the Surface Transportation Board, leveraging the Brattle Rail Network Model.
- For FirstEnergy's Pennsylvania utilities, sponsored witness testimony before the Pennsylvania Public Utility Commission, analyzing the cost and risk associated with the Companies' proposed default service supply plans. Analysis included estimates of the implied price premium for covering volumetric and pricing risk that was associated with past procurements of full-requirements power supplies, showing that this premium was relatively modest in size.
- For multiple regulated utilities in Pennsylvania, on multiple occasions, designed and managed the procurement of solar photovoltaic alternative energy credits (SPAECs). Responsibilities included: (i) designing the auction rules and bid forms; (ii) building a financial model to determine the likely value of the solar energy credits; (iii) providing a benchmarking study to determine if the bids were reflective of market fundamentals; and (iv) drafting a report to the Pennsylvania Public Utility Commission to secure approval of the procurements.
- In conjunction with a Commission-mandated time-of-use ("TOU") pricing pilot, analyze the impacts of TOU prices on peak load and conservation in three Maryland electric utilities.
 Designed and implemented a matching-based regression methodology.
- For an express package delivery carrier, managed the construction of an integrated Excelbased cost and demand financial forecasting model of the United States Postal Service (USPS), based on public USPS data and filings in previous Postal Regulatory Commission dockets.



- For an expert report submitted as part of a revenue requirements proceeding,
 benchmarked BC Hydro's non-fuel operations and maintenance costs against those of US investor-owned utilities.
- Submitted an expert report analyzing the rate of return of a land-based telecommunications network in Alaska for a proceeding before the Federal Communications Commission.
- On behalf of Growth Energy, coauthored a report analyzing the role that higher ethanol blends of gasoline (E85) could play in meeting the proposed 2017 renewable volume obligations (RVOs) under the Renewable Fuel Standards (RFS) program. The report was filed with Growth Energy's comments in the Environmental Protection Agency's rulemaking docket regarding proposed renewable fuel standards for 2017.
- Researched alternative rate plans and presented results to senior management of a midsized electric utility as part of a regulatory strategy consulting engagement.
- For a mid-Atlantic utility, estimated economic benefits to ratepayers from natural gas service, as portion of eventual PUC filing justifying investments related to storm resilience of distribution system.

OTHER ENERGY AND ENVIRONMENTAL

- For the California parties, conducted several key pieces of analysis evaluating effects of tariff violations in the summer of 2000 on CAISO market prices and drafted portions of expert testimony, in a litigation matter before the FERC arising from the California electricity crisis.
- For the California parties, conducted econometric analyses detecting the exercise of market power and price discrimination in the 2001 "CERS" period of the California electricity crisis.
 This analysis formed the basis of key parts of the testimony of two expert witnesses.
- Supervised the analysis for four cases in support of testimony relating to alleged New Source Review (NSR) violations at coal-fired power plants. For a Southeastern power cooperative, analysis of government's claims included examination of alternative baseline emission calculations, analysis of changes in fuel quality, and evaluation of long-run patterns in utilization, generation, and emissions, as well as econometric analysis of the determinants of emissions. For a Midwestern utility, analysis consisted of identifying long-term trends in pricing strategy, market dispatch outcomes, and emissions prices to inform PROMOD runs in order to generate emissions projections that are consistent with NSR regulations. For a Mid-Atlantic utility, the analysis focused on long-run variation in coal plant operations, including analysis of changing market conditions that influenced that variation.



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- For a valuation matter concerning a back-office IT services provider to retail energy suppliers, supervised the analysis for and supported industry witness in a report assessing the status and prospects of the retail energy service business in restructured states.
- For the Department of Energy and Pacific Northwest National Laboratory, coauthored a
 baseline report on electric transmission, distribution, and storage infrastructure in the
 United States as part of the inaugural Quadrennial Energy Review process.
- For the Department of Energy and Pacific Northwest National Laboratory, coauthored a report on the valuation of electric power systems and technologies as part of the Quadrennial Energy Review process.
- Coauthored a report analyzing the economics and reliability of alternative energy portfolios (approaching 100% renewable power) for the City of Memphis.
- For a Southeastern generation and transmission electric cooperative, oversaw preparation
 of expert damages report and advised counsel on same in the context of an arbitration
 proceeding stemming from an alleged breach of contract.
- Advised a large nonprofit energy buying consortium in a procurement of retail electric service for their members, assessing offers over a variety of products, services, and geographic areas, and assisting in negotiations with several large retail electric suppliers.
- For a utility in the Southeastern United States, conducted a review of NERC region load forecasts. This consisted of econometric analysis to weather-normalize actual loads and evaluate the portion of the forecast error that could be attributed to variations in weather.

OTHER LITIGATION AND TRANSPORTATION EXPERIENCE

- For the City of Los Angeles, submitted expert testimony analyzing the economic arguments for airport rental car regulations, and assessing potential economic harms from uneven application of those regulations.
- In a lawsuit brought by the City of Ontario, CA against Los Angeles World Airports, evaluated the reliability of plaintiff's claim for damages in excess of \$3 billion for alleged mismanagement of the Ontario airport.
- For a class of Australian owners of Volkswagen vehicles, analyzed the impact of the diesel emissions issue on resale prices for VW vehicles affected by non-compliant emissions "defeat devices."
- Managed analysis for life cycle assessment of greenhouse gas emissions associated with a proposed railroad.



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- Co-authored white paper analyzing the effectiveness of the current rail car hire system, and identifying alternative default rate-setting rules that would incentivize and support investment in the nation's car hire fleet.
- Manage the development and maintenance of the Brattle Rail Network Model, a geocoded database of all rail lines in the United States. Information contained in the database identifies for each rail segment in the database which railroad or railroads own the facility, and which railroads, if any, possess trackage rights allowing them to operate over that facility.

EXPERT REPORTS AND REGULATORY FILINGS

- "PC44 Time of Use Pilots: End-of-Pilot Evaluation," with Sanem Sergici, Ahmad Faruqui, Sai Shetty, and Ziyi Tang, prepared for Maryland Joint Utilities and Filed with the Maryland Public Utility Commission (October 4, 2021)
- "PC44 Time of Use Pilots: Year 1 Evaluation," with Sanem Sergici, Ahmad Faruqui, Sai Shetty, and Jingcheng Jiang, prepared for Maryland Joint Utilities and filed with the Maryland Public Utility Commission (September 15, 2020)
- "Expert Declaration of Kevin Neels and Nicholas Powers," before the Postal Regulatory Commission and related to the Statutory Review of the System for Regulating Rates and Classes for Market Dominant Products, in Docket No. RM2017-3 (February 2020)
- "Evaluation, Measurement and Verification Plan for the PC44 Time-of-Use Rate Pilots," with Sanem Sergici and Ahmad Faruqui, prepared for Maryland Public Service Commission PC44 Rate Design Work Group (June 2018)
- "Rate of Return Analysis of GCI's TERRA Network," with William P. Zarakas and Agustin J.
 Ros, prepared for GCI Communication Corp. (March 2018)
- "Report of Dr. Kevin Neels and Dr. Nicholas Powers to Accompany UPS Comments in Docket No. RM2016-12," before the Postal Regulatory Commission, related to costing principles in the highway transportation segment; reply report also submitted (October 2016)
- "Peeking Over the Blendwall: An Analysis of the Proposed 2017 Renewable Volume Obligations," with Marc Chupka, J. Michael Hagerty, and Sarah Germain, prepared for Growth Energy; filed with comments in Docket EPA-HQ-OAR-2016-0004 (July 2016)



ACADEMIC PUBLICATIONS

- "Competitive Effects of Exchanges or Sales of Airport Landing Slots," with James D. Reitzes, Brendan McVeigh, and Samuel Moy, *Review of Industrial Organization* (August 2014)
- "Measuring the Impact of the Toxics Release Inventory: Evidence from Manufacturing Plant Births," US Census Bureau Center for Economic Studies Working Paper Series (March 2013)
- "Does Disclosure Reduce Pollution? Evidence from India's Green Rating Project," with Allen Blackman, Thomas P. Lyon, and Urvashi Narain, Environmental and Resource Economics (March 2011)
- "Do State Renewable Portfolio Standards Promote In-state Renewable Generation?" with Haitao Yin, *Energy Policy* (February 2010)

OTHER REPORTS

- "Power to Memphis: Options for a Reliable, Affordable, and Greener Future," with Jürgen Weiss, Judy Chang, and Kai Van Horn, prepared for Friends of the Earth (January 2019)
- "Valuation of Electric Power System Services and Technologies," with Ira H. Shavel, Michael Hagerty, Yingxia Yang, and Roger Lueken, prepared for the US Department of Energy, Office of Electricity Delivery and Energy Reliability (August 2016)
- "Electricity Baseline Report for the US Power System," with Ira Shavel, J. Michael Hagerty, and Yingxia Yang, prepared for Pacific Northwest National Laboratory and the Department of Energy (April 2015)
- "Developing a Market Vision for MISO Supporting a Reliable and Efficient Electricity
 System in the Midcontinent," with Samuel A. Newell and Kathleen Spees, prepared for the
 Midcontinent Independent System Operator, Inc. (MISO) (January 2014_

SELECTED PRESENTATIONS

- "The Incremental Cost Test When Technology Choice is Endogenous," Center for Research in Regulated Industries Eastern Conference (2018)
- "Analyzing the Competitive Effects of Exchanges or Sales of Airport Landing Slots,"
 International Industrial Organization Conference (2012)



- "The Toxics Release Inventory and Manufacturing Plant Births," Penn State University (2010), University of Maryland (2010), and the US Census Center for Economic Studies (2009)
- "Does Disclosure Reduce Pollution? Evidence from India's Green Rating Project,"
 Association for Public Policy Analysis and Management Fall Conference (2009), Allied Social
 Sciences Association Annual Meetings (2008), and Southern Economics Association Annual
 Meetings (2007)

SELECTED HONORS & AWARDS

Thomas W. Leabo Memorial Award, University of Michigan
 Fred and Barbara Erb Fellowship, University of Michigan

PROFESSIONAL ASSOCIATIONS & MEMBERSHIPS

American Economic Association

Energy Bar Association

