

CURRICULUM VITAE

Stephen Makowka

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PROFESSIONAL EXPERIENCE

Compass Lexecon, Boston, MA
Senior Consultant, 2019 – present
Executive Vice President, 2017 – 2019
Senior Vice President, 2013 – 2017
Vice President/Managing Director, 2003 – 2013
Senior Consultant, 1998 – 2003
Consultant, 1993 – 1998

Specializes in market and competitive analysis, public policy and economic modeling. In key energy industries such as natural gas, electricity and oil, he has analyzed market structures, asset valuation, regulatory policies, and the economic factors affecting firm behavior and competitive outcomes. Projects include analysis of market price manipulation allegations in multiple energy markets, assessing the nature and economic value of services provided to foreign affiliates, analyzing competition and rate design alternatives for natural gas transportation markets, and determining fair market value for numerous domestic and international energy-related assets in the context of contract breach and governmental takings proceedings.

New England Power Service, Alternative Energy Group, Westboro, MA
Intern, June 1992 – November 1992

General Electric Company, Louisville, KY
Financial Analyst, 1989 – 1991

EDUCATION

John F. Kennedy School of Government, Harvard University, Cambridge, MA
M.P.P., June 1993

Williams College, Williamstown, MA
B.A. in Economics and History, May 1989

SELECTED CONSULTING EXPERIENCE

For a Large Services Company

Calculated damages associated with breach of contractual obligation to close on a transaction.

For an Independent Oil Producer

Managed valuation of damages associated with a breach of an oil production sharing contract in South America.

For an Electric Utility

Analyzed economic benefits arising from development of new transmission capacity.

For Occidental Petroleum

For an international arbitration, managed the valuation of damages resulting from the seizure of oil production assets in Ecuador. Based largely on this analysis, the arbitration tribunal awarded Occidental \$1.7 billion in pre-interest damages.

For Duke/Progress

Estimated the potential efficiency benefits of jointly dispatching the merging firm's combined generation fleet.

For Multiple Energy Traders

Examined allegations of manipulative trading in energy markets to benefit positions in related products.

For an Investor in International Electric Generation Assets

Directed analysis of investment expectations, competitive conditions, and fair market value of electric power in the context of an international arbitration alleging expropriatory behavior by a host country.

For a Large Industrial Company

Calculated alleged damages associated with process interruptions arising from an electrical power outage.

For a Large Natural Gas Producer

Evaluated royalty treatment and fair market valuation standards for natural gas produced from multiple newly developing unconventional shale oil and gas reserves.

For a Large Regulated Natural Gas Pipeline

Directed historical review of regulatory framework evolution across multiple jurisdictions related to evaluation of competitive conditions and appropriate costing models for cost of service regimes.

For Energy Transfer Partners

Directed analysis of market manipulation claims in related physical and financial natural gas trading markets. Work included detailed examination of daily and

monthly trading activities asserted to have depressed prices relative to competitive market conditions.

Exxon Mobil Corporation

Directed valuation of oil and gas services in the context of a transfer pricing dispute. Issues included determining sources of economic value and attribution across corporate functions and affiliates.

For Numerous Natural Gas Marketers

Directed analysis of alleged conspiracy to manipulate prices in natural gas markets. Issues included evidence of conspiratorial actions, evaluation of alternative causation, and critique of proposed damage models.

For a Large Integrated Oil Company

Led team analyzing likely impacts of proposed changes to state-level severance tax regime.

BP, Exxon Mobil, Shell, Conoco Phillips

Directed analysis supports expert testimony countering claims of antitrust conspiracy to evaluate natural gas prices in North America through withholding of supply.

For a Large Natural Gas LDC

Led team analyzing allegations of conspiracy to raise prices in the U.S. Gulf Coast. Work included examination of the firm's acquisition of natural gas supplies to serve retail customers.

For a Large Integrated Oil Company

Directed valuation of shipping services and downstream commodity sales for Alaskan North Slope crude oil for purposes of royalty calculation. Issues included determining cost of capital, evaluation of markets for shipping services and analysis of crude oil price trends.

For a Large Integrated Oil Company

Directed analysis of public policy issues stemming from application of public nuisance laws to public health issues.

For an Electric LDC

Analyzed impacts of pending environmental emissions legislation on natural gas markets and nationwide economic performance.

El Paso Merchant Energy

Provided independent analysis and assisted in the preparation of expert reports and regulatory hearing testimony regarding alleged withholding of capacity by a marketing company holding firm contracts on interstate natural gas pipelines to California during the California energy crisis. This project required extensive analysis of the marketer's conduct, including nominations, contracting efforts,

capacity management, and financial and physical transactions, as well as the impacts of underlying market factors on natural gas and electric prices.

For an Interstate Petroleum Products Pipeline

Supported testimony concerning reasonableness of pipeline rates under the grandfathering provisions of 1992 Energy Policy Act.

For a Petroleum Products Company

Evaluation of the downstream (refinery to pump) market for petroleum products in one of the States. Investigation of alleged collusion between downstream products companies and harm to consumers from asserted artificially high products prices. (1999 – 2002)

For Two Major Integrated Oil Companies

Provided economic and public policy analysis in support of a proposed merger. Specific analysis included a review of potential impacts of proposed merger for exploration and production on state and federal leases, as well as estimating cost efficiency aspects of the merger.

For a Natural Gas Pipeline in the Gulf of Mexico

Evaluated the policy implications of providing regulatory certainty regarding treatment of cost deductions for royalty calculations under federal leases.

Exxon Corporation

Provided independent analysis and assisted in the preparation of expert reports and trial testimony in a contractual dispute concerning wholesale motor gasoline pricing to lessee dealers across the United States. This project required an extensive evaluation of Exxon's pricing methodology, examination of documentary and data evidence on actual pricing, and an evaluation of competitive conditions, including the number and type of competitors, product costs, retailing and wholesaling margins, product and marketing strategies, and other relevant factors.

For a Natural Gas Marketer

Performing market evaluation and margin assessment studies for a natural gas marketing company interested in the provision of marketing services to customers of an unbundled utility.

TransCanada Gas Services Ltd.

Directed examination of anti-trust allegations pertaining to natural gas marketing and transportation. Specific elements of this analysis included access to transportation capacity, affiliate self-dealing, market definition, evaluation of competitive options, and review of pricing practices.

For a Natural Gas Pipeline Company

Assisted in the development of testimony in support of dismissal of antitrust claims in a natural gas pipeline and electric generation development matter.

For a Natural Gas Pipeline Company

Assessed damages resulting from alleged antitrust violations and tortious interference on the part of a competitor attempting to leverage control of key regulated assets into higher profits.

Northern Natural Gas Pipeline

Evaluated company plans and conducted extensive marketplace research to document the competitive impacts of seasonal rates and market-based pricing in support of a proposal to enhance service flexibility for natural gas transportation and storage.

For a Major Oil Company

Constructed an estimate of asset value based on future net cash flows from Alaska North Slope reserves under a variety of contractual and operational scenarios. This project required integration of engineering estimates, product price forecasts, and the impacts of changing operating costs and tax and regulatory treatments over time.

Massachusetts Division of Energy Resources—Renewables

Represented State Energy Office in multi-stakeholder collaboration to develop implementation plans and policies for a renewable energy trust fund mandated as part of Massachusetts' electricity restructuring. Evaluated alternatives for adding renewable energy standards to the State agency procurement process. Also, developed implementation strategies for statewide renewable portfolio standards.

Massachusetts Division of Energy Resources—Natural Gas

Represented State Energy Office in ongoing collaborative effort to establish market restructuring rules for natural gas distribution in Massachusetts. Specific issues included evaluation of natural gas markets at the state level in support of product unbundling and the creation of workably competitive markets, and development of recommendations regarding LDC performance-based ratemaking proposals.

British Petroleum

For a case involving a tax dispute with the State of Alaska over the proper valuation of oil, provided an economic critique of the State of Alaska's arguments, analysis of contracting choices made by market participants, and evaluation of impacts of Federal regulatory policy. The case involved conducting a detailed analysis of crude oil markets both in the U.S. and internationally.

For a Major Electrical Generator Equipment Manufacturer

Directed analysis of potential impacts of industry restructuring and other marketplace changes on the development of new and/or retrofitted generation capacity in New England.

For a Cable Company

Developed forecasting model for a local cable company interested in estimating future cash flows under a variety of investment and partnership opportunities. These assessments included the impacts of changing regulatory environments and

the likely level of profitability in a more competitive marketplace.

U.S. Generating Company

Directed analysis of need for additional generation resources in the New England region based on economic and reliability factors. This project involved assessing growth trends for electric generation, evaluating the impacts of industry restructuring on both demand and pricing, and comparing the going-forward costs of various supply options.

Exxon, British Petroleum, Arco

Researched unitization, reviewed and summarized extensive documentation, and critiqued economic arguments. Responsible for evaluating evidence of, and drafting a response to, the potential distortive effects on economic incentives. The case involved litigation over the Alaskan tax obligations related to the natural gas production of a number of ANS leaseholders.

El Paso Natural Gas

Assessed the reasonableness of various natural gas price forecasts used to estimate value of natural gas reserves.

For an Investor-Owned Electric Utility

Analyzed ability of a merged electric utility to exercise market power over wholesale electricity transactions.

Mojave Pipeline Company

Assimilated and interpreted past and present California and federal regulation of the natural gas industry for this case involving an analysis of the competitive effects of major interstate pipeline expansion into territory presently served by a regulated monopolist.

PUBLICATIONS AND RESEARCH

“US Outlook: Boom or Bust for US LNG?” (with Kenneth Grant), *Energy Risk*, December 2008, Vol. VI.

“The Emerging Coexistence of Competition and Regulation in Natural Gas Transportation” (with A. Jaffe), *Hume Papers on Public Policy*, 1995.

OTHER REPORTS AND SPEECHES

“The Links Between Air Quality Policies, Electric Power and Natural Gas Markets, and Macroeconomic Impacts: Clear Skies Versus The Clean Air Planning Act,” A Policy Analysis Study by Compass Lexecon. March 2004.

“The Emergence of Competition,” speech presented to New England Gas Association conference on “The Changing Role of the LDC,” December 1997.

Indexing Natural Gas Pipeline Rates (with Amy B. Candell, Joseph P. Kalt, Sheila M. Lyons, and Steven R. Peterson), The Economics Resource Group, Inc., April 1995. Explored indexing as a form of incentive regulation for natural gas pipelines and created the Pipeline Producer Price Index that could be used to implement indexing proposals.

HONORS AND AWARDS

Class of 1960 Scholar in Economics, Williams College