

Julie F. Lieberman

MANAGING CONSULTANT

Ms. Lieberman is a financial and economic consultant with over 40 years of experience in the energy industry. Her broad base of experience as a financial and economic consultant in the energy sector includes: utility ratemaking and cost of capital, regulatory policy and compliance, due diligence and litigation support and analysis, risk management, asset valuation and modeling, transmission planning and cost allocation, wholesale and retail energy trading and operations, energy procurement and scheduling, and utility hedging strategies.

Ms. Lieberman is a testifying expert and has authored research reports in both regulatory and non-regulatory proceedings on issues pertaining to cost of capital, utility ratemaking, transmission planning, and gas utility decarbonization. She has most recently focused her efforts on evaluations of weather normalization and decoupling mechanisms and issues pertaining to cost of capital and capital structure. Ms. Lieberman has performed extensive economic analyses, financial modeling, regulatory research, and is proficient in Microsoft Office applications. Prior to her consulting career, Ms. Lieberman served in the financial and risk related fields in the unregulated energy trading and marketing sector. She holds a M.S. in Finance from Boston College, a B.S. in Accounting from Indiana University, is a licensed CPA (Texas), and is a FINRA licensed securities professional (Series 7, 63, and 79). Ms. Lieberman has served as the Treasurer of New England Women in Energy and the Environment (NEWIEE) since 2008.

REPRESENTATIVE PROJECT EXPERIENCE

POLICY AND EMERGING ISSUES

Ms. Lieberman has conducted extensive research and analysis and developed written reports on future regulatory business models, decarbonization, transmission planning policy, and energy conservation.

EDUCATION

M.S., Finance, Boston College
| Graduated with Honors

B.S., Accounting, Indiana University

YEARS EXPERIENCE

40+

RELEVANT EXPERTISE

Utility Ratemaking and Accounting, Transmission Planning and Cost Allocation, Cost of Capital, Utility Sector Decarbonization, Alternative Utility Regulatory Models, Transaction Facilitation, Valuation, Risk Management, and Expert Witness Testimony



Representative engagements have included:

- Leading author on a Study for the American Gas Foundation, titled “Regulatory Pathways for Advancing Low-Carbon Gas Resources (LCR) for Gas Distribution Companies.” The Study found that natural gas infrastructure and low-carbon gaseous fuels have an important and enduring role to play in addressing the challenges of climate change. The Study was the culmination of extensive research and interviews with regulatory Commissioners on the impediments to low-carbon gas resources achieving commercial scale in utility distribution systems. (2021-2022)
- Authored a technical report for the American Council on Renewable Energy (ACORE) that explained the existing transmission planning and cost allocation processes in MISO, PJM, and SPP and identified current issues that present obstacles to renewable energy development, based on independent research and interviews with key industry experts. (2021)
- Provided extensive research on alternative regulatory models that address capital bias for Enbridge Gas Inc. to assist in developing a regulatory framework for its next generation Incentive Regulation Plan. The research included regulatory models adopted for gas utilities in North America and internationally, leading to a regulatory proposal adapted to Enbridge's unique circumstances. (2021)
- Performed a detailed Inclining Block Rate study which included a detailed estimation of the conservation impact of inclining block rates versus existing seasonal rates for SPS New Mexico. (2012)
- Assisted Climate Change Central of Alberta with extensive research regarding pertinent Alberta legislation and DSM funding mechanisms in other jurisdictions that may support rate-base funding for DSM and renewable programs in the province, and documented findings in a Report. (2010)

RATEMAKING AND UTILITY REGULATION

Ms. Lieberman is a testifying expert in utility regulatory proceedings before state and provincial regulatory commissions, and the FERC in the areas of: cost of capital, transmission cost allocation, asset capitalization, and regulatory assets and deferral accounts. Ms. Lieberman has conducted extensive research and analysis and has assisted in the drafting of testimonies on the topics of utility asset dispositions, consolidated tax savings, alternative regulation, prudence, and regulatory policy. Ms. Lieberman has researched and analyzed the evolution of the FERC's cost of capital approach and the associated incentives granted for critical electric transmission investment in the U.S. Ms. Lieberman has conducted extensive research on utility regulatory models employed in the U.S. and abroad and has consulted clients on alternative forms of regulation that may better align with societal and utility objectives.



Representative engagements have included:

- Lead managing consultant in conducting a benchmarking survey of industry peers on behalf of Hydro One Networks to understand best practices for the assessment and quantification of customer risk related to capital contribution requirements for new transmission connections. This survey was used to inform the Company's proposal to modify its Transmission Connection Procedures as it related to the determination and calculation of customer risk and how it was reflected in the economic evaluation period for purposes of calculating the required customer contribution in aid of construction. (2024)
- Lead managing consultant on an audit, contracted by the DC Public Service Commission, of Pepco DC's Bill Stabilization Adjustment (BSA), a full decoupling mechanism with a capped limit on monthly recoveries. The Commission had concerns over the growing unrecovered deferral balance attributed to the mechanism, and whether the mechanism contained design flaws that caused the growth of the balance. Atrium's report provided recommended enhancements to the BSA design and conclusions as to the cause of the growing deferral balance. The report is accessible to the public on the Commission's website and is subject to comment by stakeholders. (2023)
- Lead managing consultant on an investigation, performed for Philadelphia Gas Works (PGW), on abnormally high charges produced by the Company's Weather Normalization Adjustment (WNA) mechanism in May 2022. Atrium's report examined the structure of the WNA mechanism, the circumstances leading to the abnormally high charges, and proposed recommendations for improvements to the mechanism design as well as billing controls that could alleviate the risk of reoccurrence of the excessive WNA charges. (2022-2023)
- Subject matter expert on behalf of the PJM transmission owners' ("PJM TOs") to consider the cost allocation methodology for transmission reliability upgrades and proposed enhancements to the legacy Solution Based DFAX ("SB DFAX") methodology in the PJM TOs' Section 205 filing. Ms. Lieberman's declaration discussed the PJM TOs' Proposal in terms of fundamental cost allocation principles and also identified the impacts of the proposed amendment (to remove the applicability of the de minimis threshold for the host zone) on zonal cost allocation. Ms. Lieberman also provided a declaration on the economic benefits derived by the host zone for new transmission upgrades residing within the zone. (2022)
- Provided expert direct and rebuttal testimony for Green Mountain Power before the Vermont Public Utility Commission on ROE and capital structure. The testimony considered post-COVID19 economic conditions, federal stimulus, expectations for higher interest rates and the risk environment of the Company. The analyses performed included: Constant Growth DCF, Multi-Stage DCF, CAPM, and Bond Yield plus Risk Premium. The testimony also considered the size of the utility, flotation costs and an automatic ROE adjustment mechanism. (2022)



- Provided expert direct testimony on behalf of Startrans IO, LLC for a transmission ROE and capital structure before FERC. The testimony applied FERC's proposed two-stage DCF analysis, CAPM (including adjustment for size), Expected Earnings, and a Risk Premium Analysis. The testimony considered ROE incentives for belonging to an RTO, the benefits of the Startrans' assets, and the risks associated with its status as an independent transmission company. The proceeding was settled prior to hearings. (2020)
- Assisted in developing a report for EEI and the NETOs on the implications of the proposed cost of capital methodology put forth in FERC Order 569. The report made suggested improvements to address issues with FERCs proposed methodology and advanced the dialogue between the Commission, intervening parties, and EEI's members. (2020)
- Provided in-depth research and drafted testimony on FERC policy towards rate of return for a newly formed transmission company and its planned expansion. The testimony focused its response on the just and reasonable cost of capital and the impact of FERC Order 531 on transmission owners' ability to realize incentives previously granted by FERC (2015, 2012)
- Assisted in the development of testimony to address stakeholders' request for rate relief for recovery of perceived overearnings by the utility. Testimony focused on fundamental regulatory principles such as: the prohibition against retroactive ratemaking, the requirement to set rates prospectively, single issue ratemaking and the implied incentives in cost-of-service ratemaking. (2014)
- Assisted the Alberta Utilities in developing testimony on regulatory policy and financial matters relating to the Alberta Utilities Commission's Asset Disposition Proceeding, which considered the used-and-useful principle as it applies to utility rates. (2013-2014)
- Provided in-depth research and drafted testimony on FERC policy towards rate of return for new transmission investment for the owners of a newly constructed regulated transmission line. (2011, 2007)
- Performed research and analyses and assisted in development of testimony on jurisdictional treatment of consolidated tax savings in Texas for CenterPoint Houston. (2010)
- Provided written comments and analyses on behalf of Enbridge and participated in an expert panel before the OEB in the Board's consultative process to determine whether its cost of capital formula was generating reasonable returns in the context of the prevalent economic downturn. (2009)
- Assisted in the development of written testimony and analyses for Oncor regarding the return of and on capital, consolidated tax savings adjustments, merger effects, and changing business environments. (2008)
- Assisted with the preparation of comments on behalf of a consortium of Massachusetts electric and gas utilities in response to MA DPU inquiry on a generic decoupling measure. (2008)



- Performed regulatory policy research for Southwestern Public Service Co. on the precedent for consolidated tax savings adjustments in the U.S. and its implications on regulatory principles for determining fairness and utility cost of service. (2007)
- Assisted in the development of an automatic adjustment formula for Green Mountain Power's return on equity to be used in its Alternative Regulation Rate Plan. (2006)
- Performed extensive research and assisted in the development of testimony related to the prudence of OG&E's acquisition of the McClain generating facility and developed an accompanying white paper on competitive bidding practices in the U.S. (2005)

RISK MANAGEMENT

Ms. Lieberman has performed extensive research and analysis on utility risk management practices relative to best practices. Ms. Lieberman has been engaged to assess the adequacy of system processes and controls from an enterprise risk perspective and has conducted a variety of analyses that include an assessment and quantification of risk. Prior to her consulting career, Ms. Lieberman served in the risk management and commodity procurement areas in the unregulated natural gas energy trading and marketing sector. In addition, while with Ernst & Young in Houston, Ms. Lieberman specialized in the audit of wholesale energy trading entities, marking trading books to market, and performing detailed internal control assessments for a number of large energy exploration, production, trading, and marketing concerns.

Representative engagements have included:

- Assisted Avista Corporation in an evaluation of its interest rate hedging program relative to best practices and assisted in developing recommendations for enhancements to the program. (2020)
- Assisted the Vermont Department of Public Service in evaluating the financial risk of a proposed transfer of the Vermont Yankee nuclear station from a subsidiary of Entergy Corporation to NorthStar Decommissioning Company, LLC, including the financial assurances proposed by NorthStar if the transfer were approved and the financial capabilities of NorthStar to complete the decommissioning, site restoration, and spent nuclear fuel management at Vermont Yankee. (2018)
- Assisted in an evaluation of a utility hedging program relative to best practices for a Canadian distribution utility and assisted in developing recommendations for enhancements to the program. (2013)
- Assisted in an assessment of enterprise risk for a New England electric cooperative. (2013)
- Assisted a confidential utility client in supporting a regulatory challenge to their hedging activity by commission staff (DOC, Minnesota). The staff asked the Company to explain how they approached hedging with particular focus on the role of implied volatility in making hedging determinations. (2011)



- Assessed the likely dispatch and overall spark spread opportunity of a proposed generation facility in Connecticut; developed a solicitation for a power off-take agreement for a 10–15-year term and performed a quantitative evaluation of bid responses. (2008)
- Developed a model and rigorous analyses to assess the value of the optional take provisions of certain power purchase agreements and their associated swap contract hedges in support of expert testimony on the issues of damages in connection with a failed transaction for the sale of a portfolio of power contracts. (2005)
- Assisted in the modeling and valuation of a portfolio of power purchase agreements held by National Grid, using independent Monte Carlo simulation models and forecast assumptions for a range of variables and scenarios. (2004)
- Assisted in the development of a model to estimate gas market price effects and damages attributable to the trading activity of a market participant suspected of gas market manipulation in the Western energy markets in the period from 2000-2001. (2004)

LITIGATION SUPPORT

Supported development of expert testimony in various energy related arbitrations. Issues addressed include, standards of conduct, and energy economics. Services provided also included, economic modeling, collaborating with counsel, business and technical staff to develop litigation strategies, preparing and reviewing discovery and briefing materials, and assisting in the preparation of written testimony.

- Performed analysis and assisted in the development of an expert report concerning the calculation and assessment of damages in a civil litigation between Washington Gas Light Company and Mountaineer Gas Company involving an in-depth review of nominations, gas balancing, and lost-and-unaccounted-for gas between the two gas systems. (2015)
- Performed research and analyses around the valuation impact of "Round Trip Trades" on a trading entity's IPO price in connection with a shareholder-initiated litigation. Research involved extensive fact discovery in the proceeding, prevalence of wash trading in the industry, and exploration of prevailing valuation methodologies used by investment banks connected with the IPO. (2005)
- Performed extensive fact discovery, research and analyses in support of Shearman & Sterling/Merrill Lynch in a litigation against Allegheny Energy Supply, which led to the development of expert testimony on behalf of Merrill Lynch, relating to liability and damages for due diligence disclosures. (2004-2005)



MANAGEMENT AND OPERATIONS CONSULTING

Ms. Lieberman possesses direct financial and operational experience in the natural gas and energy trading industries enabling the delivery of significant value to clients. Ms. Lieberman has conducted detailed internal control reviews for a variety of clients primarily in the energy production, marketing, distribution and mining sectors, focusing on understanding business processes and value drivers to help clients obtain objectives.

Representative engagements have included:

- Performed an assessment of a large gas LDC's gas operating system to identify where control deficiencies were present and provided recommendations to address deficiencies. (2010-2011)
- Directed a review of the accounting, risk, and reporting processes associated with a gas distribution utility's unregulated natural gas transaction; identified weaknesses and proposed solutions. (2008)

TRANSACTION RELATED FINANCIAL ADVISORY SERVICES

Ms. Lieberman has assisted several clients across North America with analytically based strategic planning, due diligence and financial advisory services.

Representative engagements have included:

- Assisted in regulatory due diligence for the potential acquisition of a FERC-regulated transmission asset, focused primarily on ROE and incentives, capital structure, accumulated deferred income taxes and excess accumulated deferred income taxes. (2018)
- Performed regulatory due diligence for the potential acquisition of a Louisiana electric utility focused primarily on the treatment of regulatory assets and rate riders for financial modeling purposes. (2014)
- Performed transaction-related regulatory due diligence for the potential acquisition of a large North American transmission target. (2014)
- Assisted in the development of a valuation of a desalination facility in California for corporate accounting purposes. (2008)
- Validated valuation models for a portfolio of power purchase agreements against fuel supply and transportation contracts and steam sales agreements to assist in due diligence in an acquisition of generating projects. (2007 – 2008)
- Assisted in auctions for the sales of the Palisades nuclear power plant and the Masspower gas plant. (2005-2006)



PROFESSIONAL HISTORY

Atrium Economics (2022 – Present)

Managing Consultant

Concentric Energy Advisors, Inc. (2004 – 2022)

Senior Consultant, Project Manager, Senior Project Manager

Green Pasture Software, Inc. (2001 – 2004)

Controller

AllEnergy Marketing Co., LLC (1997 – 2001)

Energy Analyst

Global Petroleum Corp. (1992 – 1997)

Director of Transportation Operations

Ernst & Young (1989 – 1992)

Audit Manager

Pennzoil Company (1984 – 1989)

Internal Auditor

PUBLICATIONS, PRESENTATIONS & WHITE PAPERS

“Hidden Risk in Revenue Stabilization Mechanisms – Two Cases Gone Awry,” Public Utilities Fortnightly (June 2024)

“Regulatory Pathways for Advancing Low-Carbon Gas Resources (LCR) for Gas Distribution Companies” (with Gregg Therrien, Kelly Porter, Pieter Zwart, and Jack Gross of Concentric Energy Advisors, Inc.). Report was prepared for the American Gas Foundation (February 2023).

“How Transmission Planning & Cost Allocation Processes Are Inhibiting Wind & Solar Development in SPP, MISO, & PJM” Report was prepared for the American Council on Renewable Energy (March 2021).

“Is there a Silver Lining in Nuclear Decommissioning?” (March 2019).

“Tax Reform and the Regulated Distribution Utility: A Regulatory Summary” (October 2018).

“Study of Residential Inclining Block Rates – New Mexico Retail Service Area,” (with Ron Amen) Report prepared for: Southwestern Public Service Company (November 2012).

“Hedging Under Scrutiny, Planning ahead in a low-cost gas market.” (with Julie Ryan), Public Utilities Fortnightly (February 2012).



“Rates of Return for New Transmission Build in the US and Canada.” Presentation to the Canadian Electricity Associations Transmission Workshop (February 2009).

“A Comparative Analysis of Return on Equity of Natural Gas Utilities” (with James Coyne and Dan Dane), prepared for the Ontario Energy Board (June 2007).



SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Federal Energy Regulatory Commission				
Starwood Energy Group Global, LLC	2020	Startrans IO, LLC	ER21-263-000	Cost of Capital (Electric Transmission)
Davis Wright Tremaine LLP	2022	PJM Indicated Transmission Owners	EL21-39-000	Declaration re.: Electric Transmission Cost Allocation
Alberta Utilities Commission				
ENMAX Power Corporation	2020	ENMAX Transmission	Proceeding 23966	Capitalization of transmission assets
Ontario Energy Board				
Enbridge Gas Distribution and Hydro One Networks and the Coalition of Large Distributors	2009	Enbridge Gas Distribution and Hydro One Networks and the Coalition of Large Distributors	EB-2009-0084	Ontario Energy Board's 2009 Consultative Process on Cost of Capital Review (Gas & Electric)
Enbridge Gas Distribution	2012	Enbridge Gas Distribution	EB-2011-0354	Cost of Capital (Gas Distribution)
Vermont Public Utility Commission				
Green Mountain Power	2022	Green Mountain Power	Case Nos. 22-0175-TF 21-3707-PET	Cost of Capital (Electric Distribution)
Régie de l'énergie Québec				
Hydro Québec Distribution	2014	Hydro Québec Distribution	R-3905-2014	Deferral and Variance Account Remuneration