Curriculum Vitae

JULIA FRAYER

Managing Director, London Economics International LLC

LONDON ECONOMICS

KEY QUALIFICATIONS:

Julia Frayer is a Managing Director with London Economics International LLC ("LEI"), specializing in economic analysis and evaluation of infrastructure assets, such as power plants, natural gas-related infrastructure, electricity transmission and distribution systems, and utilities, as well as market design and expert economic advisory services for regulated and competitive power markets. She has worked extensively in the US, Canada, Europe, and Asia.

Julia Frayer has spent the last 28 years working in the electricity, gas, and water industries across the US and internationally on various regulatory and market-related issues with respect to market design, enhancements to competition, investment, and policy evaluation. She has supported billions of dollars of investment through due diligence engagements for M&A transactions, greenfield development (including market analysis for purposes of financing), and regulatory approvals. She has also advised on many facets of regulation in the energy space, testifying before state and Federal regulators on rate design, mergers and acquisition, retail issues, as well as integrated resource planning. Her work is grounded in economic theory, and she frequently uses quantitative techniques in her work, including econometric analysis, machine learning and simulation modeling, total factor productivity analysis, econometric benchmarking, and input/output computable general equilibrium models.

For planning and investment analysis, she has worked with independent system operators ("ISOs"), utilities, regulators and other stakeholders to develop approaches for incorporating economic analysis in the engineering-focused world of transmission planning. She has also advised stakeholders on how to improve integrated resource planning methods and expand the criteria that is used to evaluate projects. Her work with California ISO in the early 2000s led to adoption of the first ever, regulatory-approved economic evaluation framework for new transmission at a U.S. ISO. She has also conducted numerous cost-benefit studies to evaluate the economics of transmission infrastructure, as well as non-transmission alternatives, to assess the implications of policy changes including decarbonization and ESG-related policies. Finally, Julia has also led due diligence projects, conducting evaluation of utilities, stand-alone generation and transmission assets, as well as commercial instruments and trading books.

In the areas of rate design and regulation, Julia has worked on policy issues related to both generation and wires (transmission and distribution) sectors. On wholesale market design, she has advised on energy price formation, day ahead versus real-time mechanisms, ancillary services and scarcity, best practices for inclusion and integration of demand-side resources, as well as various capacity mechanisms. On the regulated front, she has advised on cost-of-service

and performance-based rate design, designed performance incentive mechanism frameworks, examined different transmission use rates, consulted on RTO/ISO and DSO practices, evaluated the economic cost-benefit of regulatory changes and infrastructure investment, and quantified efforts by policymakers to advance reliability and resiliency. She is also experienced with conducting cost allocation studies and performing productivity and benchmarking studies. Finally, Julia has also testified on the topic of weighted average cost of capital and appropriate risk compensation.

In December 2025, Julia was elected as President of Northeast Energy and Commerce Association ("NECA"), after having previously served on NECA's Executive Committee.

EDUCATION:

Boston University (Massachusetts): M.A. in Economics, and B.A. in Economics and International Affairs.

EMPLOYMENT RECORD:

From: 1998	**To:** present
Employer:	*London Economics International LLC, United States*
	Managing Director

Prior to joining LEI, Julia was working as an Investment Banker with Merrill Lynch in New York.

PROJECT EXPERIENCE:

The projects briefly described below are typical of the work Julia has performed throughout her career at London Economics International.

Written and Oral Testimony

- ***investigated New Hampshire's Participation in ISO-New England:*** LEI was retained by the New Hampshire Department of Energy ("NH DOE") to produce an independent expert report detailing the potential costs and benefits of New Hampshire exiting ISO-New England. This study was mandated by House Bill 690. In addition to extensive research (through analysis of precedent cases and interviews with stakeholders) LEI conducted economic modeling that assessed the potential costs and benefits of severing membership as it relates to transmission rates and costs of supply. A final report with key findings was presented to the New Hampshire Senate and House Committees in July 2025. [NH DOE INV 2025-002]

- ***review of wholesale market design options for price and settlement in ERCOT***: LEI was retained by ERCOT to conduct an economic study required in Texas House Bill 1500, § 52(d) (88th Legislature, Regular Session) assessing alternatives to ERCOT's single market clearing price. including pay as bid and separation of markets. LEI developed modeling tools to assess how offer behaviors of generation owners to a change in market design, leveraging game

theory and real options concepts from economics and finance, as well as machine learning and market simulation techniques. The report was filed with the Texas legislature in December 2025. [PUCT Project. No. 58847]

- ***supported client in assessing OEB payments relating to hydroelectric facilities:*** LEI was engaged to support Ontario Power Generation ("OPG") in connection with its application to the Ontario Energy Board ("OEB") for payment amounts in respect of its prescribed hydroelectric generation facilities for a period starting in 2027. The project involved performing: (i) an assessment of the appropriateness of the inflation factor; (ii) an updated total factor productivity ("TFP") study on trends in the North American hydroelectric generation industry; and (iii) a cost benchmarking analysis of the costs of hydroelectric generation companies in North America. [OEB Case No. EB-2025-0297]

- ***subject matter expertise provided in settlement discussions in advance of litigation surrounding retail business activities and allegations of affiliate code of conduct abuse:*** LEI was retained by outside counsel to major competitive retail provider in electricity to develop economic arguments in response to allegations of code of conduct violations leveled by competition authority related to specific terms of creditworthiness processes undertaken in qualifying new customers. LEI examined legislation and statutory regulations, investigated fact pattern and assessed the economic merits of alleged unfair advantage. LEI staff developed and presented its independent analysis, which resulted in settlement of dispute.

- ***independent technical expert in state regulator's investigation into the rate design for large loads:*** LEI was retained by Portland General Electric to advise on design of a distribution and transmission tariff for large customers (such as data centers and microchip fabricators). LEI performed a desktop study and provided case studies of other jurisdictions which sought (either successfully or unsuccessfully) to adopt new rates and/or tariffs for large loads. Based on the case studies and LEI's insight into effectiveness of various rate design features and regulatory principles around cost causation, LEI advised PGE on rate design and validated the key features of the new tariff that PGE is proposing. LEI staff attended and presented at stakeholder workshop and submitted written testimony before the Oregon PUC. LEI also consulted PGE on the design of cost allocation methods to differentiate and properly capture cost causation of investments of varying vintages and business purposes. [Oregon PUC UE 430 and Oregon PUC UM 2377]

- ***preparation of industry TFP study and independent expert testimony on the design of a performance-based ratemaking ("PBR") plan gas distribution utility***: LEI was asked by Eversource Energy, parent company of Yankee Gas Systems, to prepare an industry TFP study to empirically calibrate the key elements of the revenue adjustment mechanism for Yankee Gas Systems' proposed 4-year rate plan. LEI also provided its independent expertise of the overall PBR plan. LEI's written testimony was submitted to the Connecticut regulator as part of Yankee Gas Systems' rate application; Julia Frayer also provided oral testimony in hearings in June 2025. [PURA Docket No. 24-12-01]

- ***technical consultant for Public Service Commission of the District of Columbia ("DC PSC") in rate case:*** LEI was retained to provide expert technical advisory support related to the application of Potomac Electric company as it sought to implement a multi-year rate plant for electric distribution service in the District of Columbia. Julia and her team advised on matters related to the assessment of the forecast revenue requirements, determination of an attrition relief mechanism, and rate design. LEI also advised on reconciliation of existing deferral accounts, performance incentives, and implementation of an ESM. LEI staff also created a revenue requirement and rate design model in Excel format that were used by DC PSC staff to support comparative review of different regulatory assessments and alternative rate designs. [DC PSC Formal Case No. 1176]

- ***technical assessment of future supply adequacy of a wholesale electricity market:*** LEI was engaged by the Alberta Utilities Commission ("AUC") to provide an independent economic analysis for the government-mandated public inquiry into the impact of additional renewables generation on the electricity sector (referred to as "Module B" of the "Renewables Inquiry"). Specifically, LEI assessed the impact of the increasing growth of renewables on both generation supply mix and electricity system reliability in Alberta, deploying a technical, simulation-based assessment of future long-term wholesale market fundamentals to project the reliability and market price outcomes under the current energy-only market design and policy framework. LEI also examined future electricity affordability through the lens of the average electric bill for a typical residential customer in the province. The LEI team, led by Julia Frayer, presented its findings in a public forum at the AUC and to key policymakers in the province. [AUC Proceeding 28542].

- ***expert testimony on rate design***: LEI was retained by a distribution cooperative to assess the reasonableness of proposed rate design changes put forward by Wabash Valley Power Association ("WVPA") for load following supply and transmission service. On behalf of its client, Julia Frayer prepared expert testimony that was filed with FERC that identified cost causation flaws in the proposed rate design changes. Julia's testimony also presented estimates of the embedded cross-subsidies and rate tilt in the proposed formula rate tariff design and explained the implications in the longer term from these flaws. [FERC Docket No. ER23-255-001]

- ***competition analysis:*** LEI was retained by a leading law firm working on a major merger acquisition in the generation space. LEI was retained to perform a competition analysis for presentation to the (Canadian) Competition Bureau. The LEI team led by Julia Frayer assessed the impact of the merger using various concentration and market share metrics and examined the specific characteristics of the merging parties' portfolio of assets considering recent developments in the industry and regional markets where the merging parties have assets. Using its proprietary modeling tools, LEI prepared simulations to consider whether the merger would substantially prevent or lessen, or have the potential to likely prevent or lessen, competition in the wholesale electricity market (this is known as a "SPLC" analysis). Julia

presented the results of LEI's SPLC analysis to Competition Bureau staff. The merger was eventually approved by the Competition Bureau and consummated.

- ***expert oral and written testimony in an uncontested regulatory proceeding involving rate design in Connecticut:*** Over a multi-year period including several phases of work, LEI provided independent, expert testimony before the Public Utilities Regulatory Authority, related to the development and adoption of a framework for implementing performance-based regulation ("PBR") for Connecticut's electric distribution utilities. [PURA Docket No. 21-05-15RE01]

- ***expert report on commercial matters involving PPAs:*** LEI provided independent, expert analysis in an arbitration proceeding involving a former PPA counterparty and the Balancing Pool, on issues related to commercial nature of the PPAs, the timing and substance of regulatory decisions made around transmission line losses in Alberta, and application of retroactive determination of lines loss obligations and whether and to what extent those determinations affect wholesale market outcomes.

- ***preparation of expert report related to operations of a distribution system-connected reciprocating engine power plant in the Alberta power markets:*** LEI provided an independent, expert report that explained how power markets work in Alberta and described the revenue streams accessible to a distribution system-connected gas-fired power plant. LEI also explained the relationship between physical power market and financial markets, and the risks and opportunities of financial forward sales for purposes of hedging and/or speculative trading. In rebuttal testimony, LEI prepared a fair market valuation of a 20 MW power plant in Alberta, taking into consideration its future cash flows and capital investment requirements. LEI's expert reports have been presented to the presiding judge in a commercial litigation matter. [Court of Queen's Bench of Alberta, Court File Number 1601-08926]

- ***preparation of expert analysis, written declaration and oral testimony related to the estimation of Unsecured Net Revenue Claim of Bondholders in the bankruptcy of the Puerto Rico Electric Power Authority:*** In 2022, LEI was retained by the Official Committee of Unsecured Creditors ("UCC") to provide independent expert advice related to the regulatory and economic issues arising out of the bankruptcy proceeding of Puerto Rico Electric Power Authority ("PREPA"). Ms. Frayer prepared expert analysis and appeared before the Bankruptcy Court in June 2023 related to estimation of the Unsecured Net Revenue Claim of the Bondholders. [PROMESA Title III Adv. Proc. No. 19-00391 (LTS)]

- ***analysis of fair market prices for natural gas:*** LEI provided economic analysis and independent expert advice related to natural gas market activities in Texas during and around February 2021 in conjunction with Brazos Electric Power Cooperative, Inc. bankruptcy case in Texas. LEI prepared expert testimony for the matter, which was used for settlement. [Cause No. 21-03863]

- ***expert report on proposed changes to ancillary services markets:*** LEI was engaged by TransAlta Corp. to perform an independent review of proposed changes from AESO to the current OR market design in Alberta. LEI prepared an expert report that was filed publicly with all stakeholders monitoring the AESO's Operative Reserve Market Review initiative in September 2022, discussing the pros and cons of an open auction versus a sealed bid auction and other information disclosure policy changes being contemplated. In March 2023, LEI prepared a rebuttal expert report responding to stakeholder feedback; the rebuttal expert report was also subsequently released on the AESO website.

- ***expert testimony on efficient transmission rate design:*** LEI was engaged by ENMAX Energy Corporation to do an independent review of the AESO regional and bulk transmission rate application which was filed with the Alberta Utilities Commission ("AUC") in late 2021. LEI focused on the appropriateness of the objectives and principles and the reasonableness of the approach in the proposed tariff design with respect to efficiency, equity, and practicality criteria. LEI staff prepared written testimony and participated in the AUC hearings. [AUC Proceeding 26911]

- ***reasonableness of utility financing request:*** On behalf of a Midwestern distribution cooperative, LEI reviewed a Generation & Transmission cooperative's petition for approval of $300 million in financing for the next three years. This petition was presented to the Indiana Utility Regulatory Commission ("IURC"). LEI's review included an assessment of the information provided by the applicant regarding the planned capital expenditures in generation and transmission infrastructure, as the IURC's standard of review for these applications requires a determination that the application is in the public interest. LEI also assessed the various risks associated with the financing request, and how these risks could impact end-use customers, including the customers served by the distribution cooperative that retained LEI. Julia Frayer filed written testimony. [IURC Cause No. 45656]

- ***expert testimony on financing raise associated with generation and wires investments:*** LEI was retained by an Indiana-based distribution cooperative to assess the capital investment plans and rate implications of a $330 million debt raise proposed by the generation and transmission cooperative. LEI filed testimony before the Indiana Utility Regulatory Commission ("IURC"). [IURC Cause NO. 45656]

- ***proposal for market reforms in the ERCOT market:*** LEI was retained by Vistra to assess the shortcomings of the current energy-only market design and to make recommendations to correct the shortcomings. LEI prepared analysis that was filed with the Public Utility Commission of Texas ("PUCT") on September 30, 2021. Julia presented the LEI proposal to improve investment signals and ensure against supply shortages during infrequent system emergency events on October 14th, 2021, before the PUCT. In February and March 2022, Julia presented analysis in respect of Protocol changes proposed for treatment of Reliability Unit Commitment ("RUC") before the ERCOT Technical Advisory Committee ("TAC"). [PUCT Project No. 52373]

- ***expert testimony in response to Supplemental NOPR on RTO incentives:*** LEI was retained by counsel to the MISO transmission owners to prepare a cost-benefit evaluation of FERC's proposed policy changes with respect to the RTO ROE adder. LEI's report and reply report contained meta-analysis of the benefits of RTO participation and was submitted as evidence at FERC in June and July 2021. [FERC Docket No. RM20-10-000]

- ***independent analysis of the impact of PUCT emergency orders:*** LEI was retained by Vistra Corp. to investigate the impact of the PUCT emergency orders and ERCOT actions on real-time energy prices in ERCOT during Winter Storm Uri. Using published market rules (nodal protocols) and detailed dispatch and pricing information released by ERCOT, LEI estimated sub-hourly real-time prices that would have occurred but for the PUCT and ERCOT actions during the week of February 15th, 2021. LEI's analysis was submitted to the PUCT and the public in June 2021. [PUCT Project No. 51812]

- ***expert written testimony (whitepaper) on transmission incentive policy:*** LEI was retained by WIRES to author an independent economics-based review of transmission incentive policy reforms being proposed by FERC; LEI's report was submitted to FERC's NOPR proceeding in July 2020. [FERC Docket No. RM20-10-000]

- ***stranded cost assessment*:** LEI was retained by Tipmont REMC ("Tipmont") to prepare an independent expert assessment of potential stranded costs for its early termination of a wholesale power supply agreement with Wabash Valley Power Association ("WVPA"). LEI's analysis was filed with FERC in February 2020; Julia Frayer testified in May 2021. [FERC Docket No. ER20-1041-000]

- ***rate impact analysis and study of costs and benefits of municipalization:*** LEI was retained by the Maine Public Utility Commission to fulfill a legislative mandate to study proposed legislation that would involve municipalization of the state's transmission and distribution networks. LEI submitted its expert report for the Legislature on February 15, 2020, and testified before the Joint Standing Committee on Energy, Utilities and Technology on February 26, 2020. [MPUC Docket 2019-00280]

- ***expert witness in a performance-based ratemaking case for a gas LDC:*** LEI was retained in early 2019 to conducted Total Factor Productivity and Benchmarking analyses for the US gas distribution industry, and provide expert technical advice to a gas utility company in Massachusetts; LEI's analysis and expert testimony was submitted in a in anticipation of a performance-based distribution ratemaking application in late 2019; Julia Frayer along with other LEI Team members testified before the Massachusetts DPU in June 2020. [DPU Docket 19-120]

- ***assessment of biomass power plants economics:*** LEI was asked by Emera Maine to assess the financial viability of ReEnergy's Ashland and Fort Fairfield plants from 2018 through 2021 and confirm ReEnergy's assertion that a discount on certain transmission costs was required to avoid plant closures. [FERC Docket No. ER18-2123-000 and ER18-2124-000]

- ***independent evaluation of New England Clean Energy Connect transmission project in its siting proceeding at the Maine Public Utility Commission ("MPUC"):*** LEI was retained in 2017 to advise the MPUC staff on the wholesale electricity market impacts and macroeconomic effects of the new transmission project on Maine's economy and the economies of other New England states. LEI prepared an independent forecast of future energy and capacity market benefits, carbon emissions reductions, and local GDP and employment impacts because of the construction and operations of the project; LEI also critically reviewed the submission of other parties on this topic. After providing written testimony, LEI staff led by Julia Frayer testified at the MPUC in late 2018. [MPUC Docket 2017—00232]

- ***provided independent assessment of Alberta's Comprehensive Market Design:*** LEI provided a critical review of the new capacity and energy market design being proposed by the Alberta Electricity System Operator ("AESO") in a written report submitted, on behalf of a market participant, to the Alberta Utilities Commission ("AUC"). LEI identified criteria for evaluation of the new market design, compared the AESO's proposal against other well-established organized wholesale electricity markets, and then categorized associated rules based on an objective evaluation of both positive and negative features. [AUC Proceeding No. 23757]

- ***assessment of Efficiency Maine Trust's submission of its program plan and specifically the avoided cost of energy supply:*** LEI was retained by the Maine Public Utility Commission ("MPUC") to provide an independent forecast of future natural gas prices, wholesale energy and capacity prices, which would be relevant for cost effectiveness analysis of future energy efficiency programs. LEI was also asked to review the multi-stakeholder report that Efficiency Maine Trust and other New England program administrators commissioned in 2014 (and 2015 Update), and subsequently in 2017. LEI staff testified before the MPUC on several occasions over the course of this multi-year engagement. [MPUC Docket 2018-00321]

- ***efficacy of distributed generation as a non-transmission solution to local transmission reliability problems:*** LEI prepared direct testimony and rebuttal testimony related to the technical efficacy and cost-effectiveness of various non-transmission alternatives and specifically distribution levels solar and battery storage solution to a known reliability problem in a load pocket within Massachusetts. [Massachusetts, docket EFSB 17-02/D.P.U. 17-82/17-83]

- ***conducted non-transmission alternative study:*** LEI was hired to conduct a Non-Transmission Alternatives ("NTA") analysis for the two transmission projects, which are a component of larger transmission solution being proposed by Eversource for the Greater Hartford and Central Connecticut ("GHCC") area. The objective of the NTA analysis was to determine the feasibility and viability of other non-transmission resources – such as new generation and new demand-side resources – to be developed in lieu of these two specific transmission projects to relieve transmission reliability concerns. The NTA analysis was filed as part of

Eversource's application with the Connecticut Siting Council ("CSC") for each of these transmission projects. [CSC Docket No. 474]

- ***assessment of congestion in the New York power market:*** LEI was commissioned by a coalition of community groups to prepare an independent outlook of the New York power wholesale market conditions and assess the level of congestion anticipated on major transmission interfaces within the state. LEI studied multiple scenarios to illustrate the impact of major drivers on congestion levels. LEI presented the findings at a technical conference organized by the New York Public Service Commission ("NYPSC") for the purpose of evaluating the benefits of new AC transmission projects. [NYPSC Case 12-T-0502]

- ***engaged by Eversource and National Grid to determine the economic viability of non-transmission alternatives ("NTAs")***: LEI started the analysis by screening prospective NTA technologies based on their technical characteristics, their relevance in the New England market and their technical applicability. LEI conducted a comparative cost analysis to estimate the levelized cost per kW-month over the economic life of each of the technologies. Finally, the most probable combinations of NTA technologies identified in the selection process were further evaluated based on criteria including physical constraints such as land availability, siting issue, financing hurdle, etc. This NTA analysis was conducted for three separate NTA projects that together formed a part of the overall Greater Boston Reliability Project (also known as "AC Solution"). LEI also provided oral testimony about its analysis to the Massachusetts regulator for each of these projects: Wakefield-Woburn NTA Analysis (DPU 15-140 & 15-141), Mystic-Woburn NTA Analysis (DPU 15-64 & 15-65) and Merrimack Valley Reliability Project (DPU 15-44 & 15-45).

- ***prepared total factor productivity study and presented testimony in respect of Ontario Power Generation's ("OPG") hydroelectric incentive ratemaking plan:*** LEI was retained by OPG to assist in the development of its first generation IRM plan, following the formulaic I-X approach. LEI prepared an industry study of TFP trends spanning the North American hydroelectric sector. LEI also recommended an inflation index, which reflected cost drivers relevant to OPG while also aligning with the regulatory precedent in Ontario. LEI testified before the Ontario Energy Board. LEI's analysis supported the successful approval of OPG's first generation IRM plan for its regulated hydroelectric fleet. [OEB EB 2012-0340]

- ***independent evaluation of the costs and benefits of the Northern Pass transmission project:*** LEI submitted written testimony to the Site Evaluation Committee ("SEC") in New Hampshire on the costs and benefits of the proposed transmission project; the analysis focused on wholesale electricity market impacts as well as macroeconomic effects of lower electricity rates and infrastructure investment at the state level in New Hampshire and other states in the region; Julia Frayer also provided oral testimony as part of the SEC's hearings on the project. [SEC Docket No. 2015-06]

- ***assisted in exploring options to expand Maine's natural gas supply:*** LEI was engaged by the State of Maine Public Utilities Commission to assist the MPUC in evaluating options for

expansion of natural gas supply into Maine (with a view to reducing the cost of gas and power to Maine customers). LEI reviewed and evaluated proposals for firm natural gas transportation service by pipeline developers. These evaluations included LEI's review of commercial terms in the pipeline Precedent Agreements that underpin capacity expansion projects; review of contract provisions for Firm Transportation Agreements and Negotiated Rate Agreements; and evaluation of the status of the FERC and state-level permitting process for each pipeline proposal. The project also included natural gas network modeling (using GPCM, an industry-standard network model of the North American natural gas system) and power simulation modeling (using LEI's proprietary POOLMod model) to arrive at a quantitative cost-benefit analysis of proposals. The Regional Analysis was an additional modeling exercise, to extend the analysis to address the impact on Maine if it were to go forward under a regional initiative to procure pipeline capacity. Testimony was filed in February 2016 and LEI testified in March 2016. [MPUC Docket Number 2014-00071]

- ***estimation of the spot market and forward market impacts around the discretionary timing of outages by large generation owner in Alberta:*** LEI prepared an independent analysis of the spot market and forward market impacts of outage scheduling practices by TransAlta over the period of 2010-2011; the analysis was filed with the Alberta Utilities Commission ("AUC") as part of a litigated case of alleged market power abuse. [AUC Proceeding No. 3110]

- ***provided an analysis of building block incentive ratemaking approaches and their applicability to Enbridge, a natural gas distribution utility in Ontario:*** LEI's report supported the client's distribution tariff proposal submission to the Ontario Energy Board ("OEB") for a second-generation Customized Incentive Regulation ("IR") plan for the period of five years (2014-2018). The testimony set out the theory behind - as well as the practical experience of using - the building blocks approach in incentive regulation regimes. Julia Frayer appeared before the OEB for cross examination. [OEB File No. EB-2012-0459]

- ***testified on behalf of the NEPOOL in a jump ball filing at FERC regarding the Performance Incentive scheme proposed by ISO-NE:*** In written testimony submitted to FERC, Julia Frayer identified shortcomings in ISO-NE's proposed performance incentive scheme for tis forward capacity market. [Docket No. ER14-1050 at FERC]

- ***served as testifying witness on the issue of utility joining a wholesale market:*** Julia served as testifying witness and lead author in evaluating Entergy's decision to join the Midwest Independent Transmission System Operator ("MISO") Regional Transmission Organization ("RTO") on the behalf of the Public Utility Commission of Texas. LEI evaluated several existing cost/benefit studies related to Entergy's decision to join MISO over the Southwest Power Pool ("SPP") and will be providing quantitative and qualitative analysis of specific costs/benefits attributable to ETI and its customers following membership in either MISO or SPP, including but not limited to net trade benefits, transmission cost allocation, governance issues, and continued participation in the Entergy Service Agreement following RTO membership. [SOAH Docket No. 473-12-6206; PUC Docket No. 40346]

- ***served as Independent Expert regarding Load Following Service products:*** ENMAX retained LEI to function as an independent expert on matters related to proposed auctioning for the Load Following Service ("LFS") product. LEI provided an independent evaluation of the proposed auction, including evaluation of both the product being auctioned and the auction mechanism and key parameters. The LFS product as proposed to be auctioned was meant to represent the "shape risk" in the RRO service. LEI's evaluation considered whether the product and auction mechanism would result in an efficient, competitive, and fair outcome for the Alberta market, RRO providers, potential suppliers of the auctioned product, and customers of the RRO service. LEI prepared a report titled "Independent assessment of proposed market-based determination of shape risk in RRO supply" dated January 24, 2014, which was filed in ENMAX's Application No. 1610120 before the Alberta Utilities Commission ("AUC"). [AUC Proceeding No. 2941]

- ***testimony in support of transmission operating rules and curtailment protocols for interties into Alberta:*** Julia provided testimony in support of transmission operating rules and curtailment protocols for interties into Alberta, as proposed by the Alberta Electricity System Operator ("AESO"), to support a fair, efficient and openly competitive power market. The testimony was made in front of the Alberta Utilities Commission ("AUC"), on behalf of Morgan Stanley Capital Group ("MSCG"), a customer of the Montana-Alberta Transmission Line. Julia's analysis considered commercial as well as operating protocols in deregulated power markets and considers how market rules incentivize new entry and produce dynamic efficiency gains related to more intense competition The AUC issued a favorable decision to MSCG in early 2013. [AUC Proceeding No. 1633]

- ***provided testimony regarding proposed merger of two regional utilities at PURA:*** Julia provided written testimony and oral testimony at the Connecticut Public Utility Regulatory Authority ("PURA") related to the market power consequences of proposed merger of NU-NSTAR. [PURA Docket No. 12-01-07]

- ***prepared testimony and testified in support of TransAlta in relation to a settlement for contravention of FEOC Regulation related to timing of exports from 2010:*** The settlement was crafted by the Market Surveillance Administrator and filed with the Alberta Utilities Commission ("AUC") for approval in December 2011. LEI assessed the economic and policy considerations of the settlement and its appropriateness in context of enforcement and sufficiency of penalty payment. [AUC Proceeding No. 1553]

- ***conducted RPS review:*** Pursuant to *An Act to Reduce Energy Prices for Maine Consumers*, P.L 2011, ch.413, sec. 6 (the "Act"), the Maine Public Utilities Commission ("MPUC") was directed by the Legislature to study Maine's renewable portfolio requirement established in 35-A M.R.S.A. § 3210 (3-A). LEI was engaged by MPUC to conduct an in-depth analysis of the renewable portfolio standards ("RPS") required by the Act which would support the MPUC's study and report to the Legislature. Julia led the team in preparation of the report, which was submitted to the Commission in January 2012 and later testified at the state legislature on the key findings of that report. [MPUC Docket No. 2011-271]

- ***provided expert testimony in support of FortisAlberta Inc. ("FAI") in its filing for a performance-based ratemaking ("PBR") plan with the Alberta Utilities Commission ("AUC"):*** The testimony provided detailed data analysis (including inflation and TFP trends), underpinning PBR economic theory, and reviews of best practices in various North American and International jurisdictions. The testimony offers back up elements for each of the various components of the PBR plan that is being proposed by FAI. Julia testified at the AUC in Spring of 2012. [AUC Proceeding No. 566]

- ***prepared detailed cost-benefit analysis and macroeconomic impact analysis in support of the Champlain Hudson Power Express ("CHPE") application for siting approval at the New York Department of Public Service ("DPS" or also known as "NYPSC"):*** LEI's analysis on economic effects was the cornerstone of the settlement agreement reached between TDI and several New York agencies. Julia acted as independent expert on behalf of TDI and prepared updated study results on energy market impacts, capacity market impacts and macroeconomic benefits stemming from the operation of the CHPE project. Julia's testimony was used in the DPS proceedings in the summer of 2012 and CHPE was successfully granted its Article VII permit. [NYPSC Case 10-T-0149]

- ***served as lead expert witness for a private equity investor in matter related to a contractual dispute regarding a long-term power purchase agreement between a municipal utility located in New England and a landfill gas generator:*** Ms. Frayer analyzed key contractual terms of the PPA and provided an expert's review of how those terms compared to the industry norm when the contract was signed and became effective. Ms. Frayer provided an independent estimate of potential contractual damage. The case was scheduled to be heard in Massachusetts Superior Court, however, Julia's analysis helped support a successful settlement.

- ***merger analysis between hydroelectric operators:*** Julia and her team of economists supported the client in preparation of a merger application to the Federal Energy Regulatory Commission ("FERC") under Section 203 of the Federal Power Act, in conjunction with the client's acquisition of a Maine-based hydroelectric generation portfolio. LEI performed a full Delivered Price Test analysis for the ISO New England control area. LEI's analysis was filed with FERC; the Merger Application was approved in early 2013; market-based rate authority was subsequently granted in mid-2013. [FERC Docket No. ER13-1613]

- ***merger analysis in support of the NRG, Inc. and GenOn merger:*** LEI staff, under Julia's direction and guidance, performed Delivered Price Tests analysis for the Federal Energy Regulatory Commission ("FERC") under Section 203 of the Federal Power Act and submitted extensive analysis to FERC in the summer of 2012 that focused on markets such as PJM, New England and California. The Merger Application was successfully approved by FERC in December 2012. Subsequently, LEI assisted the client in preparation of the 205 market-based rate authority analysis. [FERC Docket No. EC12-134]

- ***provided expert testimony before FERC related to Shell Energy's sale of capacity commitments from facilities in New York to New England in an alleged market manipulation case:*** Julia examined market rules, operating procedures, and pricing arrangements in New England and New York at the time of the investigation, and examined the participation of Shell in the capacity markets and compliance offers in the energy markets, commenting on the economic rationale behind the client's must offer strategies in the energy market for capacity compliance. [FERC Docket No. EL-09-47 and EL-09-48]

- ***advised the Coalition of Large Distributors in Ontario on 3rd generation Incentive Regulation Mechanism proceedings of the Ontario Energy Board:*** The work involved expert testimony filed with the Board with detailed analysis of the theory behind the various components of PBR system, including inflation and efficiency gains factors, treatment of capital expenditures among others. The analysis was supplemented with comparison of actual factors and indices, and determination of the more robust and appropriate indices for the Ontario's distribution industry, including total factor productivity analysis for the sector. [OEB Docket No. EB-2007-0683]

- ***provided testimony on behalf of NRG Energy, Inc. in opposition to the proposed acquisition of NRG by Exelon Corp (Exelon):*** LEI performed a preliminary Herfindahl-Hirschman Index test for market power for all regions affected, and a Delivered Price Test, for the PJM East and ComEd regions. In addition, LEI examined Exelon's post-merger optimal bidding strategies using our proprietary model of strategic, known as CUSTOMBid. LEI also assessed the impact of changes in the parent company Exelon's cost of capital on the activities of the company's two regulated subsidiaries: ComEd and PECO. LEI also estimated the impact on customer costs from potential debt downgrades following the merger and assessed the effectiveness of Exelon's proposed ring-fencing measures. LEI's written evidence was filed with FERC and Pennsylvania Public Utility commission. [FERC Docket No. EC-12-134]

- ***prepared testimony on cost-benefit analysis:*** Julia submitted testimony on behalf of the Staff of the Maryland Public Service Commission ("MPSC") to the MPSC to conduct a cost-benefit analysis in relation to the proposed transaction between Constellation Energy Group, Inc. ("CEG") and Électricité de France ("EDF") whereby EDF would purchase from CEG a 49.99% interest in Constellation Energy Nuclear Group, LLC ("CENG"). Benefits related to the decreased likelihood of a Baltimore Gas & Electric ("BGE") downgrade, increased likelihood of the Calvert Cliffs expansion being completed, and several macroeconomic benefits stipulated to by EDF. Costs related to the limitation on the allocation costs of CEG corporate support services to CENG, increased risk of capital deprivation and reduced quality of service, and implications of CEG's more aggressive nuclear development. [MPSC, Case No. 9173]

- ***assessed the costs and benefits of new transmission versus generation alternatives to the system:*** New England wholesale electricity markets were simulated to determine whether the Greater Springfield Reliability Project ("GSRP") would produce economic benefits to the New England region. To ensure that economic benefits were not subject to the forced outage and

availability schedule of the simulated energy markets, LEI simulated the energy market with 30 different random forced outage and availability schedules. Using these simulations, a distribution of results was used to calculate confidence intervals and hypothesis tests run on the results, hence increasing the robustness of our findings. The study results were used to produce written testimony to the Connecticut Siting Council ("CSC") and oral testimony was provided in late August and early September 2009. [CSC Docket No. 370B]

- ***prepared proposal on pricing safeguards:*** In September 2005, Julia's proposal for pricing safeguards in the wholesale market, referred to as the Peaker Entry Test, was submitted to the Public Utility Commission of Texas as an alternate to the Commission staff's proposal initially under Project No. 24255 which was later moved to and renamed by the PUCT Project No. 31972. In April 2006, the PUCT adopted a variant of this proposal for use as pricing safeguards – the Scarcity Pricing mechanism (as specified in the above-mentioned project). Under Project No. 29042 in September 2005, Julia looked at the Pivotal Supplier Test and supplied a critique of the PUCT staff's initial market power mitigation proposal. In June 2005, Julia participated in a panel discussing market monitoring issues, as well as market power safeguards for wholesale electricity markets. In 2004, she also provided testimony on pricing safeguards proceeding, which looked at alternative market power testing procedures for market power, analyzed implications on investment, and discussed efficiency consequences of certain bidding behavior. She also prepared and filed comment testimony and quantitative analysis on questions of market definition and market integration for the Public Utility Commission review in Project No. 29042. [In November 2005, pursuant to PUCT decision, both Project Nos. 24255 and 29042 were rolled into the PUCT Project No. 31972.]

- ***served as independent evaluator and RFP manager for the Connecticut Department of Public Utility Control's ("DPUC") request for proposals for incremental capacity:*** LEI was retained by the Connecticut state regulator to help realize a legislated mandate to hedge the risks of evolving capacity markets and import constraints through a competitive RFP aimed at securing incremental capacity located electrically in the state of Connecticut. LEI authored a report determining the range of investment needs that could be required in Connecticut over the next 15 years due to localized ISO-NE markets for capacity and forward reserves. LEI then designed a procurement process, including the RFP and associated contracts. The RFP solicited capacity from both supply side and demand side resources. LEI served as the RFP manager for the process, and provided independent evaluation services of the bids, and recommendations around the winning portfolio. LEI also served as the DPUC's expert witness in the hearings approving the winning portfolio. LEI's analysis helped the DPUC successfully defend the contracts from legal appeal. [DPUC Docket No. 05-07-14PH2]

- ***testimony at FERC on market power issues on behalf of intervener in proposed Exelon-PSEG merger per Section 203 of the Federal Power Act:*** In May 2005, Julia provided direct and supplemental testimony outlining key considerations relating to the potential for adverse competitive effects in light of the proposed merger and recommended additional mitigation measures to cure horizontal market power concerns through independent analysis of

merger's impact on wholesale energy and capacity markets in PJM. [FERC Docket No. EC09-32]

- ***prepared MBR authorization:*** In the matter of Hawk Nest Hydro LLC acquisition of Hawk Nest-Glen Ferris Hydroelectric Project Julia and the LEI team prepared the MBR Authorization for the FERC filing. [FERC Docket No. ER06-1446-000]

- ***testimony regarding confidentiality of long-range supply and demand forecasts by California utilities:*** LEI represented the California Energy Commission ("CEC") staff in a CEC and in a state regulatory proceeding at the California Public Utilities Commission ("CPUC") in respect of the merits of making public the investor-owned utilities long range energy and capacity supply forecasts, as part of the integrated resource planning process. LEI served as an independent expert and supported the CEC in successfully arguing for the release of certain information, despite the utilities' assertions that such data would undermine competitive markets. [CPUC Rulemaking No. 05-06-040]

- ***provided testimony regarding the price elasticity of demand for transmission service:*** In the context of a transmission rate case for Hydro Quebec TransÉnergie, and consideration of alternative transmission rate designs, Julia led an economic analysis on behalf of Brascan Energy Marketing, Inc. that examined the impact on trade from increased transmission costs, involving multi-factor regression analysis of nodal electricity prices, price spreads across markets, and interchange flows (imports and exports) across borders. Julia also considered the impact of the elasticity of demand for transmission services between Canadian provinces and US markets in the Northeast for maximizing revenues in rate setting. Julia presented oral testimony at the Régie de l'Énergie du Québec. [Dossier R-3549-2004]

- ***served as Independent Monitor in a multi-state renewables solicitation process:*** Julia was part of a consortium that served as the Independent Monitor for PacifiCorp's renewable solicitation process for the 2008R-1 solicitation process for additional renewable power supplies. The Independent Monitor reported to the Utah Public Service Commission ("Utah PSC"), but filings were also made with the Oregon regulator. This process included review and assessment of the solicitation process, documents, and modeling methodologies; valuation of the bidder pre-approved process; development of review criteria, monitoring, auditing, and validation of bid evaluation process; bid evaluation; contract negotiation. [Docket No. UM1368]

- ***monitored power procurement processes for Connecticut Light & Power***: The Department of Public Utility Control retained the services of LEI to assist the DPUC in monitoring the power procurement processes for Connecticut Light & Power's (CL&P) Transitional Standard Offer auction in November 2004 for services in 2005 and 2006, and once again selected LEI in September 2005 to monitor the November 2005 auction for services in 2006. Julia led LEI's team in providing advisory services to the DPUC, including guidance on communications protocols, design of sales contract agreement (between CL&P and winning bidders), and valuation of final bids vis-à-vis the forward market alternatives available to the utility. In

November 2004 and 2005, Julia filed an affidavit after completion of the procurement process which the Commissioners used to approve the process and the contracts between CL&P and the winning bidder. [DPUC Docket No. 03-07-18PH02]

- ***performed market power analysis:*** Bear Swamp Power Company LLC (a pumped storage generation unit) asked LEI to perform a market power analysis in conjunction with Bear Swamp's application for market-based rate authorization. A similar study was done for Carri Street Generating Station L.P., Erie Boulevard Hydropower L.P., Brascan Power St. Lawrence River LLC, and Piney and Deep Creek LLC. [FERC Docket No. ER05-639 et al]

- ***prepared expert testimony related to horizontal market power considerations:*** In support of various acquisitions by IPPs spanning many years, Julia has prepared expert testimony for filing with FERC, related to Market-based Rate Authorization applications, Triennial Reviews, and Section 203 (merger) applications. LEI has a 100% track record in getting its clients' applications for market-based rate authority and/or mergers approved by FERC.

Market Design Work

- ***supported ERCOT in the evaluation of cost allocation reforms for ancillary services:*** LEI was engaged by ERCOT to assist in estimating market participant behavior changes for both the short-term and long-term under 3 different proposed ancillary services and reliability services cost allocation methodology, as requested under PUCT Project. 58555. This engagement involved extensive analysis and modeling of changes in offer behaviors by generators in response to new cost allocation methods, assessment of fixed cost characteristics, evaluation of drivers that could change hedging behavior, generators' dispatch preferences and maintenance practices, relative constraints of existing market rules and policies, and long-term impacts on investment decisions and resource mix.

- ***Expert Advisor to the Competitive Markets Committee ("CMC") of the PJM Board of Managers:*** LEI, led by Julia Frayer, in its capacity as Expert Advisor was responsible for actively monitoring key PJM stakeholder groups to understand the intent and implications of PJM and other stakeholders' proposals aimed at fixing and managing resource adequacy in response to extensive growth in demand from large loads. In the first half of 2026, LEI participated in Reliability Backstop and Connect and Manage stakeholder discussions and supported the CMC in identification and evaluation of trade-offs and potential market impacts. LEI will also assist the CMC with other market-related matters, including broader wholesale market reforms initiated at the direction of the Board of Managers in January 2026 and the changes laid out by the reserve certainty taskforce. .

- ***evaluated the impacts of market rules related to Dispatchable Reliability Reserve Service ("DRRS") on ERCOT's energy market:*** LEI was retained by a major generator and retainer to develop a comprehensive market analysis and simulation study assessing the integration of DRRS into the energy market. The work included the development and evaluation of various demand scenarios, incorporating alternative assumptions regarding the degree of

substitution among energy, non-spin reserves, and DRRS products. The analysis assessed the resulting effects of DRRS on wholesale market prices, overall market costs, and generation profitability under each scenario.

- ***Workshop on Alberta market redesign (2026):*** London Economics International LLC ("LEI"), in collaboration with McCarthy Tétrault, developed and delivered a two-part workshop series examining Alberta's Restructured Energy Market ("REM") and its implications for market participants, project developers, investors, and lenders. The workshop provided practical commercial considerations for stakeholders active in Alberta's electricity sector.

- ***assessment of new class of ancillary services (2025):*** on behalf of a large generation owner in Texas, LEI conducted an independent review of ERCOT's proposed rules for the new Dispatchable Reliability Reserve Service ("DRRS") and supporting analysis filed under PUCT Project No. 55797. (Texas)

- ***development of reliability standards and interconnection process oversight (2025 - present):*** LEI was engaged as part of a consortium to serve as the Electric Reliability Administrator in Hawaii. LEI, with its partners, will develop reliability standards, oversee a new interconnection process and provide on-the-job training to the reliability administrator. (Hawaii)

- ***evaluation of Pay-As Bid pricing for spot energy and ancillary services markets (2025):*** As part of a multi-firm consortium, LEI was retained to assist ERCOT with responding to requirements for an independent study in Texas House Bill 1500, § 52(d) (88th Legislature, Regular Session) regarding alternative market design for price formation in connection with the organized wholesale electricity market in Texas. The LEI team, under Julia's supervision and guidance, prepared simulation-based analysis of wholesale market outcomes under alternative market designs that included pay as bid / pay as offer settlement frameworks, as well as separate clearing of various generation resource types, based on their attributes. The Consortium's findings were filed by the PUCT on December 1, 2025. (ERCOT, PUCT Project No. 58847)

- ***detailed review of IESO's Market Renewal Program ("MRP"), with practical implications for contracted wind generation participating in the market (Spring 2025):*** LEI was engaged by the operator of a wind generation plant in Ontario to provide introduction/overview of key MRP components to the asset management team and a risk assessment and recommendations for how the bidding behavior should change to accommodate the client's feed-in tariff ("FIT") contract and the new day ahead market for energy along with nodal elements and negative offer floor. (Ontario)

- ***technical analysis in support of Alberta's restructured energy market design (2024-present):*** LEI was retained by the Alberta Utilities Commission ("AUC") to provide ongoing support to AUC staff during the Alberta Electric System Operator ("AESO")'s Restructured Energy Market ("REM") consultation. This involved reviewing material prepared by AESO, as well

as written comments prepared by stakeholders in response to the AESO material. LEI also attended the REM design sprint sessions and kept AUC staff abreast of progress. (Alberta)

- ***expert advisory on various wholesale energy market rules and reforms in ERCOT (2021-present):*** LEI was retained as an independent market expert by a large generation owner in the aftermath of Storm Uri to provide technical and economic advisory on market reforms in ERCOT; LEI investigated the impact of various recent 2023 legislative reforms and had also authored written comments and whitepapers on various discrete market-related topics, such as the design of new reliability standards for the electricity market, evaluation of new ancillary services products (like the recently launched ERCOT Contingency Reserve Service ("ECRS"), assessment of the newly minted Texas Energy Fund ("TEF"), and the potential impact of the proposed performance credit mechanism ("PCM"), and investigation how all these reforms will harmonize with upcoming energy price formation changes due to adoption of real time co-optimization. LEI has participated in multiple workshops and stakeholder sessions and has submitted written comments that have been filed with the Public Utility Commission of Texas in various proceedings. In 2025, LEI has advised- through rigorous analysis and modeling – the consequences of the implementation of real time co-optimization ("RTC") of the ancillary services and energy markets, and the design of an amended scarcity pricing regime. (ERCOT)

- ***review of specific ISO market rules and compliance in respect of provision of reserves:*** LEI performed a detailed and independent technical review of a market participant's compliance with current ISO rules related to provision of specific class of ancillary services in Alberta. (Alberta)

- ***review of Alberta OR market rules:*** LEI provided independent expert advice to an Albertan generator in its consideration and review of proposed changes to the current OR market design, as part of stakeholder engagement with AESO and other parties. (Alberta)

- ***expert review of MISO's FTR market and ARR mechanisms:*** LEI was retained by MISO to prepare an independent assessment of MISO's FTR markets and ARR construct to determine whether the current mechanisms and market rules are efficient and result in maximum benefits to transmission customers. (MISO)

- ***best practices for managing system frequency issues:*** At the request of a large generation owner in North America, LEI conducted an extensive, case study review of how various jurisdictions are tackling potential inertia and frequency issues given the decarbonization and technology-driven transformation of generation fleets around the world.

- ***reforming an energy-only market design:*** on behalf of major generator and retailer provider in Texas, LEI analyzed various legislated requirement for reforming ERCOT's markets in response to SB#3 legislated in 2021. Specifically, LEI examined proposed changes to ancillary services provision, modifications to important features of the energy markets administered

by ERCOT, and considered other adjustments to reduce volatility and improve system reliability and resiliency. (ERCOT)

- ***independent review of NYSERDA's market analysis related to awarded Tier 4 contracts:*** LEI was asked by its client to complete an independent investigation of the New York State Energy Research & Development Agency's ("NYSERDA") analysis of ratepayer impacts associated with the two long-term contracts under the Tier 4 procurement for the development of HVDC transmission projects that would bring clean energy to New York City. NYSERDA selected the projects in a competitive procurement and is seeking the approval of the contracts by the state regulator. LEI provided written comments to the client aimed at improving the comprehensiveness of the ratepayer impact analysis. LEI recommended that NYSERDA adjust the ratepayer impact analysis to consider the costs of the alternative investments that would be needed if the contract (and projects) are not approved, to show the cost of meeting the state's legislated clean policy requirements. (NYISO)

- ***nodal market design:*** for international research center advising stakeholders in an Asian market, LEI was asked to examine the practical details of moving from a zonal to nodal energy market design based on US experience; LEI documented the necessary rules changes to dispatch, transmission congestion offsets for load, and accommodating renewables and energy storage resources, as well as practical considerations around software and implementation timelines. (US)

- ***analysis of market and non-market mechanisms to motivate inertia improvements:*** LEI conducted a detailed case study-based analysis of different potential pathways for designing fast frequency response markets or otherwise arresting inertia problems. LEI's analysis covered the market institutions and arrangements in Europe (Great Britain and Ireland), U.S. (California and Texas) and Australia.

- ***analyzing clean energy market pathways:*** in support of a renewable generation owner, LEI is engaged in stakeholder consultations (at ISO-NE and NEPOOL committees) involving assessment of various potential market design changes including carbon pricing, integrated clean energy markets, and forward capacity market reforms. (Northeast U.S.)

- ***analysis of the causes of the ERCOT firm load shed event in February 2021:*** LEI assessed the various factors that contributed to firm load shed event in ERCOT and consider to what extent the wholesale and retail market design was contributing factor or amplified the negative consequences. (ERCOT)

- ***expert review of PJM's FTR market and ARR mechanisms:*** LEI was retained by PJM to conduct a holistic assessment of its FTR markets and ARR processes to determine whether the current mechanisms and market rules are ensuring that load receives the optimal value of the transmission system for which it is paying through its transmission access charges. LEI performed a critical review of the underlying premise and purpose for FTRs; undertook

quantitative analysis of historical outcomes in the ARR process, FTR auctions and PJM forward markets; surveyed PJM's stakeholders; and compared the functionality of PJM's design to other US RTOs with FTRs/ARRs and other similar instruments. LEI's report was issued in December 2020 for review and consideration by PJM stakeholders. (PJM)

- ***design of risk management, monitoring, and compliance program:*** LEI was retained by major Canadian-based IPP to redesign its compliance program, including guidance for traders, economic assessment for executive management, and benchmarking and monitoring guidelines for assessing competitive nature of market outcomes and management of regulatory and political risk.

- ***analyzing the macroeconomic impacts of investment and policy changes:*** LEI was engaged by the Hawaii Clean Power Alliance ("HCPA") to develop a whitepaper to educate decision-makers about the importance of evaluating the macroeconomic impacts of a policy and investment decision. This whitepaper identified the key factors that must be considered to quantify such impacts and showcased holistic ways to assess local economic implications of investment and policy decisions.

- ***forecasting and analysis to support a Grid of the Future study:*** LEI was engaged by Eversource Energy to conduct a comprehensive and rigorous modeling-based review of the New England wholesale market design and power system capabilities going out to 2050, while identifying the investment needs, regulatory reforms, and policy changes that would provide pathway for effective compliance with state level decarbonization mandates. LEI's analysis was presented and discussed at NEPOOL Market Committee meetings. (New England)

- ***independent assessment of transmission rights and associated mechanisms***: LEI was engaged by a Regional Transmission Operator ("RTO"), PJM, to conduct a holistic assessment of its transmission rights auction and associated congestion hedging mechanism to determine whether the current market design is appropriate – efficient and equitable - given the overall energy market design. LEI's analysis and recommendations were presented to the stakeholder Task Force. (PJM)

- ***analysis of different wholesale market mechanisms:*** as part of LEI's multi-client regional market analysis program ("Continuous Modeling Initiative"), LEI staff conducted a cross-market analysis of how various market designs can accommodate increasing volumes of intermittent resources and retirement of conventional, dispatchable fossil fuel fired resources. LEI also evaluated development/siting and operations of new dispatchable resources, including energy storage to support a decarbonized electricity sector. (multiple U.S. regions)

- ***wholesale market design efforts to address fuel security/winter-time energy reliability issues:*** LEI staff assisted the Massachusetts Attorney General's Office ("MA AGO") in 2018 to evaluate the problem statement and the market design fixes being proposed by ISO-NE staff as well as other NEPOOL market participants in a FERC-mandated proceeding on energy

security issues in the region. In early 2019, LEI presented a counterproposal for an energy storage-based ancillary services product and adjustments to the existing capacity market design at the NEPOOL Markets Committee. LEI also supported the MA AGO with a review of other stakeholders' proposals and strategy in the run-up to the FERC submissions. (ISO-NE)

- ***prepared an independent white paper reviewing the merits of various expert's positions with respect to re-design of the competitive retail market in New York and imposition of price caps on competitive retail providers based on the embedded costs of incumbent utilities:*** LEI staff, led by Julia, reviewed the competition-related testimony of various experts in the retail case proceeding before the NY PSC and provided an independent critique of the substantive arguments (and flaws thereof). LEI concluded that the regulator's testifying experts' mis-defined the market for competitive retail services, and mis-applied standard concepts in competition theory and anti-trust policy. LEI proposed alternative theories for observed price differences and customer switching trends. (NYISO)

- ***prepared research paper on transmission investment practices:*** LEI prepared a research paper describing the opportunity to evolve system planning practices, by discussing several "myths" or "fallacies" surrounding the drivers for the need for transmission investment and difficulties for developing transmission projects. LEI also made recommendations on how more recent macro trends impacting investment can be holistically considered for purposes of creating more effective planning.

- ***provided independent guidance to Alberta stakeholders on electricity market reforms in the face of evolving environmental and electricity industry policy:*** LEI supported the largest independent power producer in Alberta through the initial negotiations around climate change policies, including introduction of a renewable investment program, coal generation settlement, carbon taxation, and design of a capacity market. LEI staff participated in two years of industry consultation and stakeholder engagement on what kind of capacity market design to introduce in the province. LEI staff worked closely with several industry participants and presented at AESO-led working groups on a variety of issues, including the setting of the demand curve, and market power rules and regulations. (Alberta)

- ***prepared a White Paper to identify and debunk the myths about transmission investment and prove the truth with real-world cases studies:*** To offer a more accurate portrayal of the need to invest in transmission infrastructure, the White Paper concluded with recommendations for practical and feasible improvements to the process of evaluating transmission projects.

- ***advised private clients on the intersection of state and Federal policies in wholesale market rules and specifically MOPR-related issues in organized capacity markets:*** LEI modeled the latest proposals from PJM and stakeholders on its evolving MOPR design and compared the rules with ISO-NE's FERC-approved solution for dealing with investments mandated by state policy (e.g., CASPR). LEI advised clients on FERC strategy and discussed opportunities for existing resources to enhance end-of-life economics via the CASPR. (ISO-NE)

- ***presented to the NY Public Service Commission ("PSC") regarding NYISO's proposed changes to the energy market to include social cost of carbon:*** LEI advocated in committee meetings for neutrality of treatment between imports and local resources in setting of the carbon bidder. (NYISO)

- ***conducted an empirical analysis of market design change to the Forward Capacity Market to align with states' clean energy initiatives:*** Specifically, LEI examined the Competitive Auctions with State Policy Resources ("CASPR") proposal from ISO-NE. The CASPR proposal involves adding a second or "substitution" auction to the current Forward Capacity Market ("FCM") framework. LEI examined the fundamentals for this substitution auction and integrate it within Contractor's overall FCM model. LEI evaluated the financial incentives for incumbent (existing) resources to remain in operation versus the financial incentive to retire (and therefore the bidding strategy of these resources). LEI considered critically the trade-offs that existing generators will be making in the face of the substitution auction, including the opportunity/risk of continuing to operate versus the opportunity/risk of submitting a retirement bid and participating in the substitution auction. (ISO-NE)

- ***performed economic advisory in a matter relating to market design strategy for a large Canadian generator:*** LEI performed a case study-oriented comparative review of energy-only and energy and capacity markets in North America and abroad, with lessons learned from other jurisdictions. LEI's work plan called for the simulation modeling of three forms of market design: an energy-only market, an energy and capacity market akin to Eastern U.S. markets, and a hybrid market with long term contracts and a spot market for capacity. The third phase involved the creation of a customized tool for future analysis, based on the simulation modeling results.

- ***provided expert insight on capacity performance schemes, on behalf of NEPOOL:*** LEI was retained by NEPOOL to provide expert insight into the proposed Performance Incentives scheme for ISO New England's Forward Capacity Market. LEI considered the implications for generators' risk profiles and the costs to consumers. LEI's report was filed with FERC as part of the Jump Ball filing. (ISO-NE)

- ***advised client on electricity capacity product:*** LEI advised the California Energy Commission and other stakeholders on the design and development of a web-based software system supporting the trading of an electricity capacity product tracked by state regulators in connection with resource adequacy requirements. LEI analyzed similar systems in other jurisdictions, defined potential core functionalities of the California system – including, for example, posting of bids and offers. The engagement also required LEI to track titles, examine bilateral and/or multi-lateral trades and compliance reporting. LEI conducted a survey of industry participants to identify required and desired system capabilities. (CAISO)

- ***market design in support of electricity sector restructuring in Greece, specifically consideration of alternatives to physical divestiture of generation assets:*** On behalf of PPC, the government-owned vertically integrated national utility, LEI examined the following

options: virtual power plant ("VPP") auctions, contract for difference ("CFD") and physical energy swaps. In case study format, the various options were compared against the following criteria: instrument objective, contract structure, contract terms, sale platform, settlement structure and the extent of physical control right transfer. Real-world experience from France, UK, Belgium, Denmark, Netherlands, Australia, and Alberta (Canada) helped shape the discussion of comparative advantages and disadvantages, considering the unique concerns for Greek policymakers. (Greece)

- ***conducted modeling and forecasting related to the Alberta government's recent announcements to transition to a capacity market and continue meeting its carbon emissions reduction plans:*** LEI developed several scenarios that evaluated the impact of various policy and market related changes in the Alberta market on incumbent and new generators in the province. These changes included market design (energy only or energy & capacity market), plants' retirements/repowering plans, varying carbon tax regimes and different renewable investment targets. Results from these scenarios were designed to identify specific operational and regulatory risks for the client and develop a strategic best response to optimize the client's portfolio considering these uncertainties. (Alberta)

- ***advised on Strawdog related to estimation of market harm:*** LEI was retained by a market participant in Alberta to develop comments on MSA's Strawdog for the Framework for the Assessment of Market Harm. More specifically, LEI was asked to comment on the economic issues associated with the proposed Strawdog pertaining to the definition of harm in the context of Alberta's market design and the impact of the implementation of the Strawdog on wholesale power market design, market manipulation and market power abuse. (Alberta)

- ***prepared white paper for Canadian electricity regulators and utilities on the comparative advantages and drawbacks of various tariff-setting regimes, from performance-based regimes to cost-of-service:*** This project involved a general overview of tariff-setting practices across Canadian provinces as well as highly detailed Canadian and international case studies and an examination of the key-lessons to be learned from each case. Detailed case studies covered the tariff-setting regimes in place in the UK, the Australian National Electricity Market, and the Netherlands. As part of the project deliverables, two workshops were conducted with a variety of regulators and utilities.

- ***conducted a capacity market modeling exercise to evaluate the potential impacts of different resource adequacy mechanisms:*** LEI was engaged by a major US utility where the objective of the study was to identify a market design that would provide the maximum profits at the lowest possible risk, including market and regulatory risk. LEI modeled market prices, market revenues, and gross profits under three supply-demand scenarios and tried to simulate the impact of market intervention policies on such market revenues to understand the potential risks and benefits to the client's baseload fleet under different market designs.

- ***provided economic advisory on market power mitigation tests for a large US-based utility:*** LEI consulted on market design features related to a proposed nodal market, including most

significantly the market power analysis framework. LEI proposed strategy and is assisting in the development of an implementation framework for the local market, including prepared reports for the market design team and state commission. In addition, the approach will be proposed for federal review at FERC.

- ***conducted review of capacity market rules:*** DECC was interested in whether US power markets evaluate generation bids based on criteria other than the price bid, specifically, if the length of contract had a role in the auctions. LEI reviewed capacity market rules for PJM, ISO-New England, and the New York ISO. LEI also examined whether and for how long a "lock-in" option for the first-year capacity price is offered to new generation assets bidding into the auctions. LEI also reviewed international spectrum auctions, North American gas transmission open season rules, and international auctions for toll roads to examine whether and how duration or length of contract is incorporated into bidding rules and auction clearing processes.

- ***provided a comprehensive analysis of the proposed market power mitigation measures for Alberta's electricity market for a major market participant:*** Julia and her team looked at various scenarios and presented the likely outcomes given various generation portfolio configurations under each proposal and whether the mitigation measures will result in the desired results. Led by Julia, the LEI staff made a case that more rigorous and robust approaches are needed than the proposed measures. Additionally, Julia's team conducted a comparative analysis of the procurement processes and compensation schemes of the different ancillary services products in eight markets, namely: New York, New England, Pennsylvania-New Jersey-Maryland, Texas, UK, Alberta, Australia, and Ontario. The results of this analysis were used to support the client in Alberta's stakeholder process to redesign a system operator's procurement process. (Alberta)

- ***authored paper on a virtual power plant auction format:*** Julia and the LEI team prepared a white paper outlining the concept of a Virtual Power Plant product and auction format, as part of a multi-consultant engagement in support of restructuring of the Greek power sector.

- ***prepared and filed testimony and quantitative analysis on questions of market definition and market integration:*** In June 2005, Julia participated in a panel discussing market monitoring issues, as well as market power safeguards for wholesale electricity markets. In 2004, she also provided testimony on pricing safeguards proceeding, which looked at alternative market power testing procedures for market power, analyzed implications on investment, and discussed efficiency consequences of certain bidding behavior.

Electricity and Natural Gas Asset Valuation and Transaction Advisory Work

- ***financial and market advisory for start-up developing power facilities to serve data centers:*** LEI was retained to provide market and financial advisory to a developer of large-scale data center sites to power AI activities in Texas. LEI created an operational prototype of the co-location sites to assess off-grid mode of operation versus grid-connected modes, in order to

examine comparative costs and benefits, develop a detailed financial model, and quantify growth opportunities (for example, load ramping over time, arbitrage between behind-the-meter versus front-of-meter generation and "time to market" advantages).

- ***critical review of the potential for large load growth as part of a vertically integrated utility's resource planning process:*** LEI was engaged by a public interest group to serve as an independent technical consultant on selected issues related to the integrated resource plan ("IRP") of Georgia Power filed in January 2025, in Docket No. 56002. Julia reviewed and supported the LEI team's analysis of Georgia Power's load growth from data centers and advised on issues related to potential for stranded costs.

- ***market power analysis arising from acquisition in a vertically integrated region:*** LEI was engaged by a public interest group to serve as an independent technical consultant related to the application for FERC approval for the purchase and sale of a generating asset in Alabama. LEI reviewed the methodology and results of a market power test performed by a consultant to the applicants. LEI examined the Horizontal Competitive Analysis Screen, including the Delivered Price Test ("DPT") and the Herfindahl-Hirschmann Index ("HHI"). LEI provided a critical review of the methodology and assumptions underlying the market power test. Julia served as advising expert to the testifying expert. [FERC Docket No. EC25-27-001]

- ***assessment of utility bill impacts for a utility from state policy programs:*** In light of various Federal initiatives related to Federal tax incentives and off-shore wind work stop orders, LEI performed an analysis of cost and wholesale electricity market impact of New York Climate Leadership and Community Protection Act ("CLCPA") programs and policies approved, budgeted, under construction or operating as of September 2025. LEI also conducted electricity market simulation modeling to assess carbon reduction progress and wholesale market costs in relation to a counterfactual state without CLCPA.

- ***policy paper on advanced transmission technologies:*** LEI was engaged by WIRES to prepare a policy paper on the use of advanced transmission technologies. LEI surveyed transmission owners around the U.S., as well as technology developers. LEI also used case studies to illustrate the real-world experience with deployment of advanced technologies and range of benefits to consumers. Finally, LEI identified barriers for more extensive deployment and proposed regulatory and legislative solutions to help overcome such challenges.

- ***evaluation of the standard offer service in Maine:*** LEI was retained by the Maine Public Utilities Commission to conduct a study investigating the efficacy of the current SOS program in Maine and recommend changes that would support various policy goals.

- ***independent evaluation of transmission capacity rights on a proposed new transmission line:*** LEI assessed the economics of Twin States, a new bidirectional transmission line between Canada into the northeast US. LEI prepared a long-term market outlook using its proprietary energy market simulation model, POOLMod, to evaluate the economic value of the transmission rights. LEI also utilized the REMI E3+ model to estimate the macroeconomic

benefits of the proposed project during both its construction and operations phases. Benefits were estimated for the states in which the line is located, the surrounding region, as well as the US at large. The results of this work were used by the client in its Part 2 application to the US Department of Energy's Transmission Facilitation Program; the project was successful in getting awarded DOE funding.

- ***review of a G&T bundled tariff in a FERC proceeding:*** LEI was retained by counsel to an electric cooperative to assist with the review of a proposed tariff changes that were filed by a Midwestern G&T at FERC; LEI identified flaws in the proposed tariff that mis-allocated costs and created cross subsidization effects amongst members of the G&T; LEI's analysis assisted the client in settlement discussions before a FERC ALJ.

- ***evaluation of commercial strategies for enhancing the value to ratepayers from legislative contracts:*** LEI was engaged by the Maine Public Utilities Commission ("MPUC") to identify options for selling the output from the portfolio of renewable energy resources under contract pursuant to legislative mandates. LEI examined the costs and likely outcomes for various options to maximize the value of these contracts for the benefit of Maine ratepayers. (Maine)

- ***evaluation of repowered wind portfolio in Pacific Northwest:*** in support of infrastructure fund looking to acquire a major stake in a wind portfolio, LEI conducted an initial due diligence of a recently repowered land-based wind project located in the Pacific Northwest. LEI estimated potential energy, capacity and renewable attribute revenues for the post-PPA period based on multiple destination markets across the western US; LEI's analysis supported the client in final stage of negotiations with the seller.

- ***expert support related to proposed merger of two independent power producers:*** In the context of a deregulated Canadian electricity market, LEI was retained to provide economic analysis to assess the competitive impacts of a proposed merger; LEI staff conducted various competitive screening analysis, including calculation of concentration metrics, market share analysis, pivotality test, and examined historical trading patterns. LEI also deployed its simulation-based modeling tools to also estimate the potential impact of the merger on wholesale market dynamics.

- ***expert support in mediation and evaluation of proposed settlement(s) for resolving the bankruptcy of PREPA:*** In 2022, LEI was engaged by the Official Committee of Unsecured Creditors ("UCC") to advise on mediation and consider the implications of any proposed settlements put forth by the Financial Management and Oversight Board ("FOMB") of Puerto Rico. LEI performed a detailed review of the current and projected costs of service for PREPA, based on certified Fiscal Plans released by PREPA and other documents related to future investment needs. LEI also studied how the customer base is likely to evolve in Puerto Rico over time given the rate projections stemming from the certified Fiscal Plans and any settlements.

- ***expert economic advice to Brazos Electric cooperative in its negotiations and settlement with gas suppliers:*** LEI was retained by one of the legal counsels to Brazos Electric cooperative to assist with the settlement of outstanding gas supply invoices. LEI evaluated the purchase costs in the days preceding, during and after Storm Uri, as well as the functionality of the Texas gas market. LEI prepared an independent view of competitive market price benchmarks for use in negotiations by counsel – based on normal operating dynamics as well as in relation to energy market opportunities. The majority of the gas supply transactions have been successfully settled.

- ***due diligence support for M&A transaction involving offshore wind projects in the US:*** for an international utility, LEI staff provided regulatory, commercial, and wholesale market advisory services to support mergers and acquisitions ("M&A") and other associated transaction. LEI staff assisted in interpretation of regulatory mechanisms, commercial arrangements, and advised on congestion/constraints analysis, settlement issues, and re-contracting risks.

- ***long -term revenue forecasts for hydroelectric portfolio in Southeast US:*** LEI staff prepared a "red flags analysis" and provided revenue forecasts for private equity firm looking to acquire a stake in an operating hydroelectric generation portfolio located in Southeast US; LEI advised on market revenue potential, policy uncertainties, and conducted simulation analysis to support the due diligence and valuation work for the client. LEI also examined capacity market qualification rules and trading opportunities in PJM, MISO, and emerging balancing market in the Southeast US.

- ***competition analysis of Texas gas markets in 2020-2021:*** LEI was retained by external legal counsel to consider the possibility of price gouging and market manipulation leading to the events of load shed by ERCOT during mid-February 2021 (Storm Uri). LEI considered the structural characteristics of the Texas power market, conducted detailed research on asset control and ownership, and consider the intent and economic ability to profit from various trading strategies during February 2021.

- ***risk assessment of potential renewable developer platform acquisition:*** In support of an internal energy company, LEI staff conducted a risk assessment of a renewable development platform with wind and solar PV projects dispersed across multiple markets/RTOS in the US: Texas (ERCOT), SPP, MISO, and PJM. LEI identified risks and opportunities, ranked project viability, and advised on contracting and market pricing assumptions for use in the financial model.

- ***quantifying import-export potential among neighboring systems in the Northeast and the benefits of new transmission:*** LEI assessed the future supply and demand outlook in eastern Canadian provinces, New York, and New England, to estimate the volumes of exports that could flow from Canada to these US states over the next 30 years, and the impact of these imports on the NY and New England power markets. As part of the engagement, LEI analyzed long-term planning studies, transmission system limitations and leveraged its

simulation modeling of the deregulated markets. In addition, LEI performed modeling of the ISO-NE market under various future conditions and import considerations to estimate the impact of a new transmission line carrying clean energy from Canada. As part of the modeling, LEI calculated benefits to New England customers from lower energy and capacity market prices, reduced greenhouse gas emissions, increased fuel diversity, and increased resilience.

- ***exploring the economic benefits and applications of HVDC technology:*** LEI performed an assessment of the current use of HVDC interconnectors across the US. LEI's discussion included a review of existing interconnectors, their use, and business models. LEI further discussed current market rules pertaining to inter-jurisdictional HVDC transmission links, rule changes contemplated by various ISOs to enable increased market participation from these resources, together with potential business models identifying revenue streams and beneficiaries for future HVDC transmission assets.

- ***cost-benefit analysis of the various programs motivated by the New York Climate Leadership and Community Protection Act ("CLCPA"):*** LEI identified and catalogued the various programs and policies that emerged to support the statutory goals of CLCPA. Based on program documents filed with the regulator, LEI examined the costs and benefits of each program over time and estimated the ratepayer bill impacts by 2030.

- ***due diligence of the regulatory and commercialization pathways for a renewable developer platform:*** LEI was engaged by a multinational energy company to support its due diligence of an acquisition of a 3000 MW+ portfolio of solar and wind development assets across PJM, ERCOT, and SPP. LEI performed a review of the state regulations and RTO markets for each asset, to determine evaluate the opportunities and risks around the commercialization paths for each asset. LEI also reviewed the assumptions used in the client's pro forma analysis for each asset. ***simulation-based analysis of the benefits created by an HVDC project connecting eastern Canada with the New England power market:*** LEI was engaged by a transmission developer to analyze the ramifications of new transmission line that would bring clean energy to the U.S. from eastern Canada. LEI considered the technology and its operations within the ISO-NE power market, including the value that it would have on congestion, marginal costs of electricity and capacity, fuel diversity, and reliability. (New England)

- ***analysis of merchant market opportunities for a battery energy storage system in New England:*** on behalf of a developer, LEI performed a detailed hourly optimization of operations for different BESS technologies (with varying capacity to energy storage characteristics) to optimize potential energy, capacity and ancillary services revenues and minimize potential for performance penalties. LEI forecast market prices for the FCM, energy market, regulation service market, and forward reserve market using simulation and statistical techniques. (New England)

- ***assessment of clean energy policies in New York under the Climate Leadership and Community Protection Act ("CLCPA"):*** for a major transmission utility and load serving

entity, LEI examined the various programs being pursued to decarbonize the New York power market by 2030 and beyond; LEI also conducted a holistic analysis of the numerous programs (such as offshore wind, new transmission, renewable credits for other renewable technologies, solar PV support mechanisms, energy storage, energy efficiency programs, and nuclear subsidies), including documentation of direct energy and capacity market benefits and programs costs, as well as indirect benefits to the economy and allocation of program costs and direct benefits to ratepayers in the state. (New York)

- ***PJM and New York capacity market reviews and implications for IPP portfolio:*** in the aftermath of recent market rules changes in New York (approval of seasonal out-of-service plans for some in0city generators to meet NOx requirements and NYISO's proposal to modify the Buyer Side Mitigation) and FERC decisions pertaining to PJM's capacity market (impacting CONE and offer strategy), LEI was asked to review the fundamental market opportunities for an existing generation portfolio composed of mainly peaking facilities. LEI considered short-term impacts as well as medium term and longer-term implications for value creation at these generation sites. (PJM and New York)

- ***analysis of the economic value proposition for a battery energy storage facility:*** for a developer looking to bring online new battery energy storage system, LEI created hourly simulations of market prices and a detailed financial analysis to evaluate the revenue potential of different potential system configurations given the energy. ancillary services and capacity market rules in specific regions of the U.S. (California, New England).

- ***evaluation of stranded cost valuation framework for US G&T cooperative:*** in context of FERC-mandated confidential settlement discussion and on behalf of a cooperative member of the target G&T, LEI prepared a quantitative review of the proposed stranded cost methodology and identified five recommended corrections that would provide for a more accurate estimation of stranded costs to support an early exit fee arrangement with members that would want to depart the G&T before the expiration of the existing wholesale supply arrangements.

- ***financial analysis and optimization of revenue streams for a battery energy storage project located in California:*** LEI staff prepared a historical and forward-looking analysis identifying optimal combination of services that a 4-hour storage BESS can sell into the wholesale markets administered in California to maximize returns on investment. LEI deployed its proprietary modeling tools and multi-client market price forecast for locational energy, ancillary services, and resource adequacy (capacity) products.

- ***valuation of a pumped storage hydro development:*** LEI prepared an independent long-term forecast of energy market and operating reserve market dynamics and estimate of potential revenues for a new pumped storage hydro project in Alberta, Canada.

- ***non-transmission analysis ("NTA") in Massachusetts:*** LEI conducted a feasibility assessment and cost analysis to select technically feasible NTA solutions that could defer

identified transmission investment in a local load pocket in southern Massachusetts. LEI worked with transmission planners to characterize the operating dimensions of an NTA resource that would eliminate identified reliability violations across various load conditions subject to calculated critical load levels. LEI then applied its proprietary database of levelized costs to estimate the cost of the NTA solutions for ratepayers.

- ***review of transmission investment in multi-state RTOs:*** LEI was retained by a Midwest utility to examine transmission investment plans in MISO and other RTOs. LEI examined the major investment trends for transmission owners ("TOs") in MISO and other multi-state RTOs (ISO-NE, PJM, and SPP). The comparative analysis included a review of TOs active in each RTO, the planning process in each RTO, and investment trends (including a summary of the major capital projects in last four years, and examination of planned projects, including outcomes that are emerging because of FERC Order 1000).

- ***analysis of non-transmission solutions for ensuring reliability standards in high-growth urban load pocket:*** local electric distribution utility hired LEI to perform an analysis on the ability of Distributed Energy Resources ("DERs") to address potential reliability issues identified in the urban load pocket due to unusual load growth and limited physical space for a new substation. LEI assessed feasibility of various DER technologies to relieve the reliability problems, based on expected hourly load expectations and thermal requirements, and the operating, performance standards, and other technical characteristics of various DER technologies. LEI also considered siting and other practical development constraints. LEI also provided a cost estimate on the technically feasible DER solutions.

- ***risk management in the Texas retail electricity market:*** LEI performed a detailed market assessment of ERCOT retail market and the use of various hedging strategies by competitive electric retailers.

- ***evaluation of proposed pumped storage project in Alberta***: For a developer in Alberta, LEI was engaged to assist the client in assessing future revenue opportunities and optimization of the offer strategy between energy and ancillary services markets. Using LEI's proprietary simulation software, POOLMod and ConjectureMod, LEI provided a pool price and operating reserve price forecast for the longer term and customized a financial model that would optimize the offer strategies across product markets to maximize the gross profit margin.

- ***open solicitation for an inter-regional HVDC transmission project:*** LEI was retained to design a multi-phased open solicitation for electric transmission capacity on a proposed inter-regional transmission project in the Midwest. LEI will also serve as the Independent Evaluator during the open solicitation process, to ensure that FERC requirements are met for the allocation of transmission capacity in a fair and non-discriminatory fashion. LEI's scope of work included designing the solicitation process, meeting with FERC staff in advance of the project's application for negotiated rate authority, preparing all solicitation documents, coordinating the marketing campaign with an outside PR firm, conducting information

sessions, matching suppliers/buyers/marketers, allocating transmission capacity, and submitting a report to FERC demonstrating the results of the process as part of the developers' Section 205 filing. The Open Solicitation commenced in mid-2020 and continued through 2022.

- ***analyzed Chicago congestion issues:*** London Economics International LLC ("LEI") was retained to do a resource analysis in the Chicago area and to analyze the congestion within the Chicago area (PJM) and MISO zones surrounding Lake Michigan, in support of various infrastructure strategies by a merchant transmission developer.

- ***conducted due diligence on gas-fired assets in the US:*** LEI was engaged by a private equity firm to conduct due diligence on a 3,000 MW portfolio of gas-fired assets in PJM and ISO-NE. LEI was responsible for developing the model that was used in the pro forma financial statements.

- ***conducted forecasting on gas-fired plant:*** LEI was retained by an infrastructure fund to do a 20-year energy and capacity price forecast in support of a potential acquisition of a planned gas-fired plant in Pennsylvania. The results will also be used to update the firm's valuation of its other plant in Ohio.

- ***reviewed energy and capacity prices in PJM:*** A private client engaged LEI to assist in the due diligence surrounding an acquisition of a pumped storage hydro generation facility in the PJM region. LEI prepared a forecast of the energy and capacity prices for the next 20 years of the relevant zone for this target asset. The price forecast exercise required LEI to model both energy and capacity markets on integrated basis, as well as using a Real Options Model to simulate the target unit's operational decision in arbitraging the peak versus off-peak hours in the energy market.

- ***analyzed the potential investment opportunities for a large IOU in energy storage in New England:*** Through intensive research and analysis, including simulation-based modeling, LEI identified potential opportunities for energy storage investment in New England and prepared estimates of societal benefits from such investment.

- ***conducted forecast on potential energy revenues of two proposed wind farms in Texas and operating solar project in New Jersey:*** Using simulation-based techniques, LEI projected the merchant energy, capacity, and renewable revenues for the generation developments in Texas and operating power plants in New Jersey.

- ***analysis of the long-term costs and benefits in the formation of a state power authority:*** LEI was retained by the Maine Public Utilities Commission to analyze the short- and long-term costs and benefits of Maine's new legislation (L.D. 1646) which will establish the Maine Power Delivery Authority ("MPDA"). LEI examined the legal, regulatory, technical, financial, and operational issues related to the L.D. 1646 proposal and its implementation, including quantification of the anticipated impacts on electricity rates. The results of LEI's findings were

presented to the Maine Legislatures' Joint Standing Committee on Energy, Utilities and Technology.

- ***identification of the transmission benefits to households and businesses from transmission investment:*** LEI prepared a research paper for WIRES that provided a laypeople's perspective on the value of transmission to the typical household or firm. The diversity of benefits (in terms of affected parties and timing) from new transmission was demonstrated through a quantitative analysis centered around two realistic transmission projects. LEI identified and evaluated the economic impacts across various benefit streams and for all beneficiaries. The paper also showed policymakers that there are multiple benefits of varying time dimensions stemming from transmission investment and therefore laid the groundwork for how these time-based benefits can be reliably measured and estimated, therefore making benefits analysis a viable component of transmission planning in the future.

- ***wholesale market supply strategy:*** LEI was retained by a rural electric cooperative to assist it evaluating wholesale market supply options. LEI prepared Board presentation materials that describe wholesale market rules and future opportunities. LEI also provided support to the rural electric cooperative in its efforts to identify competitive supply options.

- ***valuation for a cogeneration project:*** LEI assisted a private equity firm with valuation of a large urban cogeneration facility in the Northeast US. LEI developed a dispatch profile and calculated all electricity, steam, environmental, and maintenance revenues and costs to determine the gross margins of the plant for the next 20 years; LEI's analysis was prepared for purposes of independent asset valuation.

- ***analyzed opportunity for a transmission tariff rebate based on going forward financial viability of a customer:*** LEI was engaged by Emera Maine, a transmission utility in Maine, to assess the financial viability of a customer to continue to operate several power plants in coming years with and without a transmission tariff rebate. LEI's analysis supported public discussions regarding the transmission rebate and a FERC filing by Emera Maine.

- ***prepared a tutorial on power markets***: For a client looking to acquire an asset in New York City, LEI prepared a tutorial on power markets tailored specifically to market rules and market drivers of electricity, capacity, and ancillary services markets in the city.

- ***assisted with the evaluation of an investment in a new gas-fired power project in Alberta:*** LEI created a Baseline forecast for the Alberta market to allow the client to evaluate the energy & capacity market dynamics in the province, which was paired with detailed reporting for the financial and operational details for the client's project. In addition, LEI also created two sensitivities to assess the upside and downside opportunities.

- ***conducted due diligence of a potential asset acquisition in MISO-South:*** LEI reviewed the contracts and financial analysis, with specific focus on the assumed market value of capacity

in the long term, and locational marginal prices for energy. LEI also reviewed certain contracts and supporting materials and participated in due diligence calls.

- ***retained by large private equity firm to present a market overview of the markets where it owns generation assets:*** These markets include PJM, New York, New England, ERCOT, and SERC. In addition to this, LEI presented an investment opportunity presentation to senior management.

- ***consulting services and forecasts related to avoided energy supply costs***: LEI conducted an empirical analysis of proposed key New England wholesale electricity market design change to the Forward Capacity Market, which included long term modeling of the New England energy and capacity markets. Specifically, LEI examined the Competitive Auctions with State Policy Resources ("CASPR") proposal from ISO-NE. The CASPR proposal involves adding a second or "substitution" auction to the current Forward Capacity Market ("FCM") framework. LEI examined the fundamentals for this substitution auction and integrate it within Contractor's overall FCM model. LEI evaluated the financial incentives for incumbent (existing) resources to remain in operation versus the financial incentive to retire (and therefore the bidding strategy of these resources). LEI considered critically the trade-offs that existing generators will be making in the face of the substitution auction, including the opportunity/risk of continuing to operate versus the opportunity/risk of submitting a retirement bid and participating in the substitution auction.

- ***research paper demonstrating best practices for measuring the benefits of transmission*** for a WIRES-funded research project, LEI prepared a "how-to" guide and demonstrated its application on two hypothetical transmission projects, showcasing how system planners and other decision-makers can measure objectively the benefits of transmission investment from the perspective of various stakeholders, and over the short- medium- and longer-term.

- ***conducted empirical analysis of key features of proposed capacity markets in Alberta and Ontario:*** LEI assisted the client in understanding the capacity market design initiatives across Canada. LEI staff presented a series of work papers on various topics, related to market mechanics and resource adequacy and setting of the demand curve. LEI also assisted the client in critical evaluation of design options from the perspective of the existing generation fleet, new entry, and consumers through detailed quantitative modeling and simulation-based analysis of the target markets.

- ***advised a major utility in Canada in its tender strategy for procuring firm capacity over a long-term horizon from neighboring jurisdictions:*** Julia evaluated the opportunity for purchasing capacity from interconnected jurisdictions and devising a procurement that would efficiently overcome seams issues and market design issues that attach different counting and valuation methods for capacity across jurisdictions.

- ***designed an innovative approach for evaluating the economics, environmental, and siting costs and benefits of transmission (and generation investment) for the California***

Independent System Operator: building upon the traditional economic framework for cost-benefit analysis, the LEI team devised an approach to quantitative value the expected net benefits from various infrastructure projects, taking into account market uncertainties as well as the classic deregulated market coordination problem of planning for transmission give uncertain generation investment and vice versa. A scoring technique for environmental permitting and siting issues was also developed, to quantify the potential impact of the proposed project on the local environment and economy, as well as to measure the impact of such factors on the project timetable and eventual net benefits to society. Real option techniques were also considered in this engagement to assess the potential value of uncertainty and the benefits of delaying various investment strategies. The methodology was also expanded to handle the potential to evaluate numerous competing projects, in recognition of the fact that transmission and generation investments (and other potential investments) could be both complements and substitutes.

- ***served as Independent Examiner for Western Interconnect transmission line:*** LEI was selected by developers of the Western Interconnect transmission line in New Mexico to serve as Independent Examiner for their Open Season process, through which WI offered transmission capacity over the line to any interested party at the same rates, terms, and conditions as those offered to anchor customers on the line. LEI designed and managed the entire process, which included creating the evaluation criteria, drafting announcements and press releases, preparing the Open Season documents and forms, conducting information sessions, overseeing the process website, and evaluating and ranking bids. At the conclusion of the process, LEI prepared and submitted a report to FERC (in docket ER15-2647) attesting that the process was market-driven, fair, transparent, and non-discriminatory.

- ***capacity price review on auction bidding:*** The UK market regulator was interested in whether US power markets evaluate generation bids based on criteria other than the price bid, specifically, if the length of contract had a role in the auctions. LEI reviewed capacity market rules for PJM, ISO-New England, and the New York ISO. LEI examined whether and for how long a "lock-in" option for the first-year capacity price is offered to new generation assets bidding into the auctions. LEI also reviewed international spectrum auctions, North American gas transmission open season rules, and international auctions for toll roads to examine whether and how duration or length of contract is incorporated into bidding.

- ***provided independent market analysis to clients interested in understanding the implications of expansion of natural gas supply into New England:*** LEI began with a review and evaluation of the numerous proposals for pipeline expansions. LEI staff also performed natural gas network modeling (using GPCM, an industry-standard network model of the North American natural gas system) and power simulation modeling (using LEI's proprietary POOLMod model) to arrive at a quantitative impacts assessment of various projects on the Northeast gas markets and electricity markets.

- ***conducted cost of electricity comparisons across Canada:*** LEI was engaged by a consortium of private companies to estimate and compare the delivered cost of electricity for all Canadian

provinces over the 2011-2015 timeframe. In addition, LEI also forecasted how the delivered cost of electricity in Alberta could develop over the next fifteen years (2017-2031) under the Climate Leadership Plan ("CLP"). LEI forecasted energy, transmission, and distribution rate components, using three modeling scenarios in addition to a Base Case, evaluating different assumptions for renewable investments, demand levels, and reserve margin targets. The Base Case and scenarios were designed to inform the public about the impacts of various policies and market-based interventions on the delivered cost of electricity to consumers in Alberta in the future.

- ***conducted gas price forecasting:*** For a private equity client, LEI forecasted the energy and capacity revenues of various gas-fired plants in PJM for a 20-year period. More specifically, LEI projected the energy and capacity prices, plants' annual generation, load factor, and operating costs. LEI's analysis influenced the client's going forward investment decisions.

- ***price forecasting for wind facilities:*** LEI analyzed the revenue potential for wind facilities in CAISO, SPP and PJM, developing price forecasts through 2045 and assessing market rules to identify any potential penalties that may apply to intermittent generation and deviations from generation profiles. Three cases of merchant forecasted revenues, Base Case, High Case and Low Case, were developed to identify key uncertainties and opportunities.

- ***served as Independent Examiner for a proposed merchant transmission project's Open Solicitation process***: The project entailed designing the solicitation process, meeting with potential shippers on the line to garner early interest, drafting announcements and press releases, conducting information sessions, updating the solicitation website, evaluating and ranking bids, assisting with bilateral negotiations with shippers, and submitting a report to FERC as part of the developers' Section 205 filing.

- ***conducted independent analysis on power market in support of transmission development: LEI supported*** a major transmission developer in the Northeast US in its analysis of opportunities and market impacts from several potential projects to bring energy into the New England region. LEI performed independent analysis measuring the impacts of numerous project designs on the power market (including energy and capacity markets, production cost savings, and environmental benefits) and local macroeconomic analysis.

- ***retained by private equity firm to provide 20-year monthly energy and capacity prices and operating metrics results for several CCGT plants in PJM:*** LEI reviewed plant parameters, financial model, and market consultant reports provided by the seller and delivered price forecast and dispatch results to the client.

- ***conducted New England modeling:*** LEI conducted an empirical analysis of New England wholesale electricity market dynamics, including long term simulation based of the New England wholesale market to measure energy and capacity market impacts, production cost savings, generators profitability under various future market conditions. The client used LEI's

modeling results to perform policy analysis and prepare a research report that the client plans to release publicly in 2017.

- ***Alberta market analysis:*** For a major stakeholder in Alberta, LEI conducted empirical analysis to identify how change in offer behavior of some resource owners affected spot and forward markets in Alberta. LEI developed two separate econometric models (a time-series analysis for spot, and a panel (or a cross-sectional time-series) regression for forward markets) to estimate the price impacts from the change in the offer behavior, lost value in wholesale markets, and foregone revenues for key market participants. The engagement also involved a detailed analysis of historical offer bid data to determine when the offer behavior changes occurred, and an analysis of select Alberta power plants' financial losses due to uneconomic offer behavior.

- ***conducted wind price forecasting:*** LEI used its proprietary dispatch model, POOLMod, to project energy prices in ERCOT for a wind developer undertaken financing of its projects in West Texas. LEI also examined the implications of PPA related to the two wind farms. LEI also provided energy, capacity, and solar renewable revenues for an operating solar plant in New Jersey as part of the same engagement.)

- ***reviewed energy storage installations in New England:*** For a transmission and distribution company in New England, LEI analyzed the cost and benefit to consumers on different configurations of energy storage installations in the ISO-NE grid. The engagement involved modeling multiple configurations of energy storage solutions, including different storage capacity and duration, as well as various charging and discharging cycles.

- ***developed a simulation model for forecasting ancillary services revenues:*** The engagement involved analyzing the dynamics of ancillary market prices and revenue under different market scenarios. The model developed was able to simulate hourly dispatch and clearing of the ancillary services market and was integrated with LEI's Alberta energy market model.

- ***reviewed trading activities within energy market:*** On behalf of an electricity marketer, LEI liaised with NYISO Market Monitoring & Analysis department in respect of trading activities in the energy market.

- ***serves as Independent Examiner for a proposed merchant transmission project open solicitation process:*** The project entailed designing the solicitation process, meeting with potential shippers on the line to garner early interest, drafting announcements and press releases, conducting information sessions, updating the solicitation website, evaluating and ranking bids, assisting both bilateral negotiations with shippers, and submitting a report to FERC as part of the developers' Section 205 filing.

- ***performed analysis of HVDC transmission projects:*** LEI was retained by a transmission developer to perform a high-level analysis of the cost-competitiveness of HVDC transmission as a regulated solution with respect to generation resource. The work included comparing the

revenue requirement for HVDC transmission projects with the net Levelized Cost of Entry ("LCOE") of comparatively sized and located generation resources.

- ***advised on New York transmission project:*** LEI provided advisory service to a transmission developer looking to position its project in New York. LEI provided an overview of the current regulatory and legislative framework and assisted in identifying and targeting potential shippers on the line.

- ***provided analysis on new HVDC transmission line***: Julia Frayer led an LEI team that provided strategic support and analysis of various regulated and unregulated business models for proposed new HVDC transmission line, including identification of potential shippers and RFP opportunities, as well as categorization of potential private and social benefits of the project.

- ***advised existing generation owner on climate change policy in Alberta:*** LEI provided research, analytical and advisory support to a client in Canada as the Alberta government implemented its climate change policy, which will shut down coal plants early, ramp up renewable generation, and put province-wide carbon tax in place.

- ***assisted a client to perform the competitive landscape analysis for projects participating in the Clean Energy RFP:*** LEI's competitive landscape study employed a three-step approach. At the Step I, LEI identified the potential projects that can qualify for the Clean Energy RFP and production of a matrix of competitors. The comparative analysis then graded each project from Step I, using the type of criteria listed in the evaluation and selection process section of the Clean Energy RFP. In summary, LEI's comparative analysis looked at both the minimum threshold requirements and the characteristics of each project relative to the quantitative and qualitative benefits enumerated in the Clean Energy RFP. Lastly, based on the rankings from the comparative analysis in Step II, LEI concluded with the SWOT analysis for the client's project relative to possible competitors and examined the relative strengths, weaknesses, opportunities, and threats in the Clean Energy RFP.

- ***provided a 20-year market outlook report for New England:*** The market outlook report was to include a 20-year regional price forecast for the energy and capacity markets, summary of recent market developments, comparison of monthly and peak versus off-peak prices, and a Tier-1 Renewable Energy Credits ("RECs") forward price forecast.

- ***reviewed NYISO due diligence materials:*** For an infrastructure investment fund, LEI reviewed due diligence materials for the client's potential acquisition of a cogeneration plant participating in the NYISO markets. LEI further performed an analysis to forecast future fuel and operating costs for the plant, revenues from the sale of energy and capacity in the wholesale markets, and revenues from the sale of steam to an off taker.

- ***analysis of congestion in the New York market***: For a transmission project developer, LEI performed an analysis of congestion in the NY markets for proposed renewable generation

resources as well as a new transmission link. LEI relied on results from a power flow study to properly model the proposed resources and transmission constraints in POOLMod.

- ***analyzed the impact of a new transmission project between upstate and downstate New York:*** LEI used its proprietary energy and capacity market simulation models to assess the impact of the proposed transmission line on New York energy and capacity markets over a 20-year horizon. LEI further prepared a forecast of revenues for potential shippers from the results of the simulations.

- ***supported a risk management assessment:*** LEI assisted in a large provincial institution in the development and assessment of alternative risk management and investment strategies for its trading and investment businesses. As part of this work LEI completed a Risk Assessment Survey of the Board of Directors as well as additional Value-at-Risk ("VaR") modeling, scenario, and stress testing.

- ***led a due diligence team and assisting in the exclusivity negotiations with respect to an acquisition of a 400+ MW coal fired plant in the PJM market by a group of private investors:*** Julia's role included management of LEI's economic appraisal, coordination of preliminary technical due diligence, negotiations with third parties on possible off-take arrangements, and oversight over financial modeling.

- ***prepared a market study of the Ontario electricity market for a major potential investor in Ontario's generation assets:*** This report contained an overview of the Ontario electricity market, including a description of market evolution, a summary of key institutions, regulatory and policy initiatives that have impacted the market landscape, and a long-term projection for the market going forward.

- ***conducted New England gas price forecasting:*** LEI was retained to forecast delivered gas prices in New England (Connecticut) and PJM (New Jersey) and locational marginal prices as well as retail electricity prices in Connecticut.

- ***engaged by an investment firm in association with its acquisition of a proposed natural gas-fired plant in Ohio:*** Work involved asset valuation, due diligence support, and market analysis. LEI reviewed the documents in a virtual data room, and performed analysis related to drivers of gross margin for the asset: macroeconomics, fuel and electricity cost projections, and overview of gas and electricity market in the region where the asset was located.

- ***workshop to review New England markets:*** LEI was hired by a New England transmission & distribution utility to prepare a two-day workshop for company executives detailing the current state of the New England markets, major players across all sectors of the industry, major investment drivers, and investment analysis methodology. LEI staff prepared workshop material and traveled to the client's office to present the material and answer client's questions.

- ***conducted price driver analysis on gas-fired asset:*** LEI was engaged by a private client to conduct a price driver analysis and strategy optimization exercise to enhance the bidding and dispatch strategy on a jointly owned gas-fired asset. This included a report on ISO-New England's Winter Reliability Program to identify and evaluate key wholesale price drivers in the New England region. LEI also examined the generating asset's financial data to help optimize its bidding strategy.

- ***prepared a quantitative analysis to test the efficacy of a proposed cross hedging strategy for a merchant transmission project that will be bringing energy from Canada:*** The proposed strategy is to use natural gas futures contracts to hedge energy market exposure and revenues. Analysis will include ordinary least squares regressions as well as an error correction model to determine the appropriateness of the hedge.

- ***analyzed revenue/gross margin modules for various district energy assets in Illinois being considered for acquisition:*** LEI reviewed information received from the client, including detailed documents in the data room, and presented analysis in a slide deck relating to contract revenues (prices and volumes) and fuel costs (electricity) along with revenue and cost drivers. LEI also presented sensitivity analysis for high/low sales volumes, new customers, expiry dates of existing contracts, fuel costs etc.

- ***provided due diligence analysis and support on the acquisition of a portfolio of small hydropower plants in the PJM region:*** The portfolio consisted of a mix of mini and small run-of river hydropower plants. LEI's scope of work was threefold. Firstly, LEI provided an overview of PJM RTO market, describing market fundamentals, key players, supply mix, retirements, and new build, as well as discussing historical market trends. Then, LEI used its proprietary dispatch and simulation cost production model POOLMod to simulate power market dynamics and develop forecasts of energy prices in the assets' location over a 20-year horizon. As part of this modeling exercise, LEI used its in-house capacity market to develop capacity prices forecasts over a similar horizon. Finally given the conventional storage capability of one of the units, the client requested LEI to provide a description of the frequency regulation market in PJM and to determine potential revenue opportunities for the plant. LEI provided results of its modeling exercise in Excel format and prepared a slide deck summarizing key messages, key findings, and recommendations to the clients.

- ***provided due diligence review on New England plant:*** LEI worked with private equity investor on an M&A due diligence review of a combined heat and power generation unit in New England. LEI provided market analysis, price forecasting services, and supported the investor in its valuation of the assets.

- ***conducted review of Maine hydro facilities:*** For an infrastructure investment fund, LEI reviewed due diligence materials for the client's potential acquisition of a portfolio of hydro facilities located in Maine and provided an independent valuation of the projects based on forecast energy market dynamics and REC opportunities.

- ***reviewed NESCOE Gas Electric Phase Three study:*** LEI conducted a comprehensive review of the NESCOE Gas Electric Phase Three study to ensure that the appropriate economic models and techniques were being used to accurately model the hydro and gas solutions. LEI also aided the client in identifying any assumptions and modeling approaches which may be suboptimal and communicated how these issues can be addressed and improved in future studies.

- ***asset valuation, due diligence support and market analysis for an infrastructure fund:*** The engagement involved reviewing documents in a virtual data room, and analysis related to drivers of gross margin for the asset: macroeconomics, weather fluctuations, fuel and electricity cost projections, and overview of gas and electricity market in the region where the asset was located.

- ***conducted market study regarding renewable generation:*** Julia led the preparation of a market study to support financing of a renewable generation portfolio in New England. The market analysis supported a successful multi-million-dollar debt raise for the client. (New England)

- ***developed HHI screens in support of a valuation of a gas-fired facility:*** LEI developed simplified HHI screens looking at summer peak period for a client's potential acquisition of a gas-fired facility in New York. Several scenarios were developed to test the impact on HHI.

- ***conducted evaluation of fair market sales value of a coal-fired unit in Arizona, as required by a lease that expires in 2015:*** Results from LEI's proprietary modeling tool, POOLMod, on market prices and dispatch were used as inputs in the financial model, which used discounted cash flow techniques. Two cases (Base Case and High Case) were created to develop a range of value with a weighted average point estimate. In addition to the discounted cash flow model, the market approach, which looks at comparable transactions, and the cost approach, which looks at the cost of building the same facility were considered.

- ***provided valuation services for a waste coal facility located in the Pennsylvania-New Jersey-Maryland ("PJM") regional market:*** Specific tasks consist of i) due diligence review of documents such as past financial statements, operational statistics report, fuel agreements and power purchase agreements ("PPA"); ii) forecasts energy and capacity prices in the PJM regional market; iii) create a pro forma financial model to evaluate the market value of the plant as of expiration of its PPA; iv) writing a final report documenting assumptions, methodologies used and modeling results.

- ***provided forecasting and modeling support for a start-up company:*** Julia and her team assisted Tres Amigas LLC, a start-up company, with the revenue forecasting and modeling of their novel transmission project for the second stage financing. The start-up company was developing a unique three-way AC/DC transmission facility located in New Mexico. In 2010, for the feasibility analysis stage, LEI provided extensive transmission evaluation, financial modeling, price forecasting, and market analysis for the markets, including the Arizona/New Mexico/Southern Nevada sub region of the Western Electricity Coordinating Council, the

Electric Reliability Council of Texas, and the Southwest Power Pool. LEI's analysis supported the start-up in securing over $15 million of development stage funding.

- ***Market power analysis because of a proposed merger:*** in support of a client's opposition to a proposed utility merger in the Northeast US, LEI provided a white paper analyzing the impact of the merger on competition. The white paper covers analysis on buyer market power, concerns with utility's returning to rate base generation and vertical market power.

- ***conducting forecasting for electricity generation assets in New England:*** Using LEI's proprietary simulation model of electricity wholesale markets in ISO New England, LEI forecasted future cash flows for a portfolio of electricity generation assets and applied the net present value analysis to evaluate the portfolio's economic value under different potential future market conditions. This analysis supported the investment fund's decision to acquire and hold the generation portfolio's distressed debt.

- ***led research on biomass plants regarding renewable energy revenue options:*** Julia investigated opportunities for portfolio of biomass plants to earn renewable energy revenues from RECs, capacity markets, and carbon offsets given regulations in all states belonging to MISO, PJM, and ISO-NE. Engagement also involved formulating strategies for client to optimize the generation assets' revenue potentials by exploiting the identified renewable energy opportunities.

- ***analyzed potential revenues of pumped storage hydroelectric facilities (energy, capacity, ancillary services) proposed in various locations in ISO-NE and NYISO:*** The analysis included detailed simulations of the wholesale electricity markets, application of sophisticated statistical tools to estimate the volume and the price level of various ancillary services.

- ***assisted a major Canadian renewable power company in its economic valuation of a New England based renewable company, prior to acquisition:*** Work involved due diligence, analyzing the revenue potential of the potential acquiree's assets over the 2009-18 period across all major ISO-NE product markets, and separately analyzed the market power implications of the acquisition in preparation of a potential FERC application, including analysis of market power issues in ancillary services market.

- ***evaluated potential value of assets available under various regional auctions for a dominant IPP player:*** Julia worked with the client in composing a bid proposal by assessing market risks posed by various factors, such as fuel price shifts, merchant plant construction scenarios, site conversion potential, and transmission constraints and through extensive production cost modeling.

- ***conducted an indicative valuation of a proposed new transmission line, known as the International Transmission Line:*** LEI forecasted the revenues associated with the project and

combined this revenue forecast with the estimated costs of the project to arrive at an estimate of the net present value of the project and return on investment.

Power, Gas, and Infrastructure Sector Business Development and Strategy

- ***provided economic and regulatory analysis in support of AI-related strategies:*** LEI was retained by an oil and gas exploration and production company based on Texas, to analyze the economic value, regulatory and legal strategies of developing powered land owned by the client in West Texas for use by hyperscalars. LEI assisted the client in developing a blueprint for a reliable and economic off-grid solution and on-grid solutions that would incorporate a mix of power generation and energy storage resources, along with facilities for advanced parallel computing electric use cases, such as AI data centers. LEI provided the client with assistance with analyzing and presenting the economics of this opportunity - to its future partners (i.e., computing customers), to financial co-investors, to policymakers, regulators, ERCOT and interconnecting utilities, and other stakeholders.

- ***authored white paper on advanced transmission technologies:*** LEI was engaged by WIRES, a national trade association focused on the electric transmission industry, to prepare an independent research-based white paper on the use of advanced transmission technologies ("ATTs") and innovative practices (together, ATT+) in electric grid systems. The paper described the various types of advanced technologies being deployed in the transmission industry, categorized by different stages of the transmission business lifecycle – siting and design, construction, and operations. LEI also used case studies to illustrate the real-world experience with deployment of ATT+ and ensuing benefits to customers and transmission owners. Finally, LEI administered a survey to utilities and technology providers to identify trends in ATT use and potential barriers to further adoption.

- ***conceptual design of a bridge solution to ensure supply adequacy:*** LEI was retained by a market participant in Alberta to advise on a bridge solution that would assist with ensuring system reliability while also being maximally compatible with the energy-only market in Alberta. LEI conducted research on reliability-related arrangements in deregulated power markets around the world and considered the application of similar contractual arrangements in Alberta. Based on its knowledge of the Alberta market and the lessons learned from other jurisdictions, LEI proposed a framework for structuring and entering into such contractual arrangements, and how best to align them with the current market design in Alberta and policy requirements.

- ***cross-jurisdictional review of market-based and non-market-based solutions to support implementation of decarbonization policy in the electricity sector:*** LEI performed a jurisdictional review of market design advances used in jurisdictions around the world to support reliable and reasonably affordable electricity sector development in the face of technological change and demanding environmental policies.

- ***implications of clean energy policies on electricity consumers:*** On behalf of a large utility, LEI identified and assessed the impact of Climate Leadership and Community Protection Act ("CLCPA") programs and policies on consumer bills in the state of New York. As part of the analysis, LEI identified reviewed existing cost and benefits studies for the various CLCPA programs, provided an assessment of the inputs, methodology, and results of these studies, and created a holistic summary of program costs and benefits. Lastly, LEI performed case studies of California's, Germany's, and the UK's clean energy policies to review the results of previously enacted clean energy policies through analyses and reports that were prepared in these jurisdictions. Julia Frayer presented findings from LEI's study at a forum for policymakers and electricity sector stakeholders in Albany, New York.

- ***technical advice and financial risk analysis with respect to market investigation***: LEI assisted a client that was under investigation for alleged ISO rules violations; LEI examined market data to evaluate alleged non-compliance and estimated the potential penalties that may be applied by the regulator.

- ***implications of state and regulatory policy on credit metrics for IPPs in PJM and NYISO:*** LEI presented at a series of roundtables sponsored by GLG Research to assist investors in understanding various state environmental regulations (such as New York's peaker rule that will require seasonal out-of-service of certain generators) and Federal (FERC) initiatives pertaining to capacity markets. Julia presented her views on how these state and Federal policies and rules will affect revenues and cashflows for different generation assets in the markets.

- ***evaluation of innovation and key trends in the power trading sector: LEI*** conducted an interview-based research project to identify best practices and new developments in the energy trading space to support its client's internal strategic review of the trading business unit's functionality and productivity.

- ***analysis of performance incentive metrics as part of a utility's regulatory strategy:*** LEI was asked to review best practices and innovative regulator design through in-depth case study research of performance incentive mechanisms ("PIMs") applied to electric distribution utilities across the US; LEI provided a comparative analysis of regulatory processes, negotiated PIMs and key regulatory and policy decisions regarding how to select relevant PIMs and design reporting and/or financial incentives to support reliability and state policy mandates across seven state jurisdictions.

- ***examination of economic stimulus and climate change outcomes resulting from planned transmission investment:*** on behalf of the WIRES organization, LEI analyzed how economic stimulus programs targeted at infrastructure investment can support economic recovery and longer term environmental policy goals; as part of this engagement, LEI used U.S. Bureau of Economic Analysis multipliers to create a customized analysis of the implications for regional economic activity (measured as GDP) and labor markets from construction of currently planned transmission investments across the US.

- ***evaluation of the rate impacts associated with bankruptcy-related settlement for PREPA:*** In 2019, LEI was engaged by legal counsel to the Official Committee of Unsecured Creditors to consider the implications of a proposed settlement with bondholders put forth by the Financial Management and Oversight Board of Puerto Rico and various other parties. LEI's analysis focused on the impact that the settlement would have on the rates for electricity service that the Puerto Rico Electric Power Authority ("PREPA") would need to charge its customers. LEI also examined the impact on electricity demand, considering the increase in rates due to the settlement. LEI also studied how rates in Puerto Rico compared to other island systems. LEI created a detailed long-term model of rate impacts where the rate impacts were dynamically linked to consumers' willingness to purchase electricity from the grid.

- ***long-term assessment of transmission and distribution system investments for purposes of supporting regional and local decarbonization goals:*** LEI was retained by a regional utility to assess the dynamics in the wholesale market through 2050, given aggressive decarbonization goals of the states in the region, changing supply mix, and evolving consumer attitudes (and interest in DERs and self-supply). LEI began the project with a meta-survey that analyzed and compared research findings from over 100 studies, to develop inputs and assumptions into the simulation-based economic modeling. Scenario-based analysis was used to then consider the variety of uncertainties about future supply and demand conditions, as well as policies affecting the wholesale market out to 2050.

- ***comparative analysis of electric performance incentive mechanisms ("PIMs") in the US:*** on behalf of major Northeastern electric utility, LEI prepared a case study-oriented analysis of regulatory policies adopted in other US jurisdictions for purposes of improving utility operations and service quality metric. LEI collected data on ratemaking plans and components, including various performance-based ratemaking features, and specific PIMs, and prepared a detailed comparison for purposes of strategic planning for the utility's next ate case.

- ***support on regulatory and market strategies for an electric distribution cooperative in the Midwest:*** LEI was retained to assist the CEO of a Midwestern electric cooperative to analyze various regulatory and market strategies for harnessing competitive markets and new technologies, for purposes of reducing costs of supply in the future and de-risking exposure to Federal and regional environmental policies.

- ***independent assessment of restructuring possibilities for large generation & transmission ("G&T") cooperative:*** on behalf of one member of an existing G&T cooperative utility, LEI examined the benefits and costs of restructuring the G&T, including functional and financial unbundling and potential sale of certain assets and businesses. LEI also identified practical steps that would need to be taken to further study and/or implement such a corporate restructuring.

- ***redesign of trading practices and compliance program:*** LEI was retained by major Canadian-based IPP to help comprehensively redesign its trading practices and compliance program.

LEI staff provided economic support, including critical review of independent legal opinion, assistance in drafting compliance documentation for traders, robustness testing of trading practices, competitive analysis of future states of the market, and "what if" assessment of regulatory and political risk.

- ***optimization of market strategy for energy storage development:*** LEI was engaged to assist a generation developer in optimizing its offer strategy for an energy storage project, between energy and ancillary services markets. Using LEI's proprietary simulation software, POOLMod and ConjectureMod, and customized market optimization tool, LEI provided forward price outlooks and guidance on the operations of the energy storage project and optimization of gross profit margin. Additionally, LEI studied the economies of scale and scope of the project, by testing various charging and discharging capabilities and energy storage reservoirs.

- ***assisted in strategizing for a Clean Energy RFP:*** For a leading New England law firm, LEI modeled several potential eligible projects that could offer into the RFP, and then performed a mock evaluation, with various cost-benefit ratios. Through this analysis, LEI identified key drivers and assumptions that could affect project ranking.

- ***review and advisory on corporate-wide trading and compliance policy:*** LEI was retained to provide economic advisory services to major IPP looking to review and refresh its corporate policies for trading in a deregulated North American wholesale market and compliance with Federal and local competition statues and requirements. LEI was responsible for economic and regulatory advisory, working closely with an expert legal team providing legal advisory and the internal compliance team.

- ***electricity market analysis of climate change policies:*** LEI conducted an impact assessment, covering a period of 2030-2050, and considering how policies and decarbonization goals will change the landscape for new supply resources; LEI also examined the impact of beneficial electrification on system demand. LEI conducted an extensive simulation-based modeling exercise that considered different capacity expansion profiles, taking account of economics of various resources, customers' willingness to pay, policy goals, and technical constraints relevant for each technology. The capacity expansion analysis was integrated with LEI's energy simulation model to also factor in overall system reliability requirements. LEI supplemented the power market simulations with detailed analysis of other components of the customers' bill, to consider economically rationale customer response to different possible retail rate design and options for self-supply. Results of LEI's study were published in late 2020.

- ***strategic analysis of the value of on-site peakers for an Alberta industrial client:*** LEI was engaged by an industrial client in Alberta that was considering the addition of on-site gas peakers. LEI's scope of work consisted of identifying potential technology type candidates that would suit the client's needs, reviewing historical and projected site loads, developing a

status quo estimation for the cost of delivered power rates, and finally creating a relative economic model that compared the use of on-site generation against the status quo.

- ***Portfolio optimization strategy:*** LEI was engaged by a Canadian client to explore options associated with entering into a service agreement with a third-party. LEI prepared a report which identified several firms which could provide this service and provided a more detailed profile of the firms which best meet the requirements of the client. LEI also acted as an independent advisor to guide the client through a process to contract with a third-party service provider.

- ***advised on policy and government framework to Malaysia client:*** LEI was engaged by Tenaga Nasional Berhad ("TNB") to work as the project manager of its Incentive Based Regulation ("IBR") submission for the 2nd regulatory term. LEI provided advice on the policy and government framework for the implementation of IBR, providing strategic advice to IBR Council and TNB management regarding the IBR submission, managing and monitoring the submission process, and coordinating with business entities. LEI staff also attended IBR Council meetings, progress meetings, and challenge workshops. LEI reviewed the current Regulatory Implementation Guidelines ("RIGs") set by the Energy Commission and proposed enhancements to the RIGs. LEI also assisted in the writing of the IBR submission report to the Energy Commission. LEI was responsible for updating and providing enhancements to TNB's Revenue Requirement Model ("RRM") which sets the approved IBR tariff for each business entity.

- ***conducted Total Factor Productivity study:*** In December 2014, London Economics International LLC ("LEI") prepared a report for Ontario Power Generation ("OPG") entitled "Empirical Analysis of Total Factor Productivity Trends in the North American Hydroelectric Generation Industry." The purpose of this report was to share findings from LEI's TFP study, which estimated TFP trends for a select group of peers from the North American hydroelectric generation industry. Data for this study covered an eleven-year period from 2002-2012. The purpose of this new engagement is to update this study for newly available data (encompassing operating costs and other statistics for calendar years 2013 and 2014).

- ***performed a forward analysis and market simulation of potential wholesale revenues for a proposed wind project in Wyoming:*** analysis was used by developer to attract potential counterparties for a long term PPA.

- ***conducted a comprehensive cost-benefit analysis of a proposed transmission project in New England using simulation-based analysis of the ISO-NE wholesale power markets:*** LEI's analysis included detailed examination of the benefits to consumers from lower energy and capacity prices, as well as emissions reductions and local economic impacts (associated with spending during construction and lower retail costs of electricity).

- ***conducted a Non-Transmission Alternatives ("NTA") analysis for the two transmission projects, which are components of a larger transmission solution in New England:*** The

objective of the NTA analysis was to determine the feasibility and viability of other non-transmission resources – such as new generation and new demand-side resources – to be developed in lieu of these two specific transmission projects to relieve transmission reliability concerns. The NTA analysis was to be filed as part of the client's application with the Connecticut Siting Council.

- ***supported a client in administering its compliance program:*** For all the US regions where the client (international IPP) is currently active, LEI was engaged to support the client's Regulatory Group in its administering of the company's compliance program. LEI provided a monthly report covering developments by regional market and products which included: energy, capacity, long-term transmission service, FTR auctions, ancillary services, diesel oil, PRB coal, natural gas commodity, transmission, and storage, RECs, and CO2. The purpose of this monthly update was to ensure that client's transactional and business groups were made aware of market rules and regulatory risks.

- ***provided due diligence support:*** LEI was engaged by a private equity company in association with asset valuation, due diligence support, and market analysis for a wind generation and HVDC transmission project proposing delivering wind-based renewable energy from Wyoming into California.

- ***authored report on regulatory policies to curb pollutants and reduce power plant emissions:*** LEI was hired by a large Canadian IPP to prepare a report providing an overview of past and current initiatives pertaining to pollutants emissions regulation with the purpose to inform the potential paths forward for future carbon regulation in the US. The engagement was initiated following the Executive Office of the President released the President's Climate Action Plan ("CAP") to reduce greenhouse gas ("GHG") emissions, and to prepare for the impacts of climate change. Under this engagement, LEI performed a detail literature review of the President's directive, past Environment Protection Agency ("EPA") regulations, as well as exiting regional carbon reduction programs. The overarching purpose of this exercise was to estimate the potential shape of a future carbon rule in the US (with associate features such as timing, mechanisms, and regulatory framework) based on EPA's legal authority scope, procedures and lessons learned from failed or successful rules implementation. LEI identified various market-based and non-market-based regulatory frameworks/scenarios and ranked them on their relative likelihood based on a set of established criteria including affordability of the regulatory scenario, impact on generation retirement and system reliability, alignment with EPA's precedents, congruency with Presidential directives, consistency with EPA's jurisdiction, and political palatability.

- ***evaluated the impact of the implementation of potential future Federal regulation limiting carbon emissions on ERCOT's energy markets and on Energy Future Holdings' ("EFH") portfolio:*** For a large Canadian IPP, LEI used its dispatch and simulation model POOLMod to develop forecasts of energy prices in ERCOT under a variety of potential frameworks under which carbon emissions could be regulated. The purpose of this exercise was twofold: a) evaluate the impact of a carbon rule (of any shape) on wholesale energy prices, and on the

performance of the EFH's portfolios; b) determine the most impactful carbon rule regulatory framework. (Texas)

- ***conducted New York price forecast:*** LEI was retained to do a 30-year (2015-2044) energy price forecast for Western New York, capacity price forecast for the Rest of the State, and revenue forecasts for a small hydroelectric plant in preparation for an asset sale process. (New York)

- ***assisted an Ontario electricity generator in performing a productivity study on their hydroelectric assets to fulfill the mandate of the Ontario Energy Board ("OEB"):*** LEI proposed a structured approach to address how productivity should be measured, what methods are available, identify a relevant peer group, and provide the client with a productivity study for filing with the OEB. (Ontario)

- ***reviewed client's risk management practices and provided meaningful insights with regards to the risk management related issues:*** Analysis included quantification of the magnitude and probability of risks being faced by trading and other operational activities of the client, as well as research into the best practices of other similar organizations.

- ***engaged by a global investment firm to provide a market outlook for three assets located in ERCOT:*** LEI provided a 10-year detailed market revenue forecast for the three plants under base case assumptions.

- ***provided independent review and assessment of cost-benefit analysis related to termination of certain PPAs between Entergy Texas Inc. and Entergy Louisiana:*** LEI's assessment was requested by the Public Utility Commission of Texas, as follow on to previous consultative services that LEI has provided.

- ***served as Independent Evaluator ("IE") for Pacific Gas & Electric Company ("PG&E") for PG&E Electric Fuels Department's Natural Gas Storage Services Request for Offer ("RFO"):*** Specifically, LEI worked with PG&E to ensure that Offers were evaluated consistently and appropriately in accordance with the solicitation protocol and in accordance with applicable rules and processes of the California Public Utilities Commission ("CPUC").

- ***prepared a study of the Value of Lost Load ("VoLL") in ERCOT and evaluated current utility practices for manual load shedding:*** LEI's report on VoLL was filed with the PUCT in June 2013 under PUCT Docket 40000.

- ***engaged by a Japanese research institute to research the environment for investment and financing of new generation in the US competitive electricity markets as well as the types of approaches used to manage investment risk:*** The LEI team researched the impact of market restructuring in the US on generation investment, methods for financing new generation, and analyzed policies promoting generation investment. LEI also performed four case studies on projects that were successfully financed and constructed in recent years, including assets in California (CAISO), Maryland (PJM), New York (NYISO) and Texas (ERCOT).

- ***led a comprehensive ratepayer-focused cost-benefit study of integrating a remote service territory of a single-state utility into a Northeast RTO's footprint:*** The cost-benefit analysis looked that at the long-run the benefits of joining an RTO versus the costs of new infrastructure that would be needed to accomplish the integration. LEI's analysis was used by regulators and state policymakers to pursue a transmission investment strategy by the utility.

- ***provided a study on electricity sector unbundling in the US for a Japanese client:*** The study starts with an overview of the electricity sector unbundling in the US, including the history of restructuring and unbundling efforts, the categorization of unbundling, and the organizational impact of unbundling. Three case studies were also provided on specific unbundling experiences of TXU Corp., Commonwealth Edison, and Consolidated Edison.

- ***supported the negotiation of fuel supply and energy sales agreements for a biomass to energy facility:*** In particular, LEI's analysis focused on the appropriateness and risk associated with price and cost escalation factors. Reviewed similar power purchase agreements and analyzed a suite of available indices.

- ***counseled on transmission cost allocation:*** LEI advised Maine Public Utilities Commission on methodologies for transmission cost allocation by comparing alternative planning approaches and pricing models employed within the US and one international jurisdiction, the United Kingdom. The final report provided a 'strawman' recommendation for an effective cost allocation methodology, which was used by the Maine PUC to guide it in its filings at FERC related to Order 1000 and the preceding NOPR on the same issue.

- ***served as Independent Monitor for Energy New Orleans:*** Julia acted as manager for LEI's engagement with the City of New Orleans. LEI was engaged to act as the independent monitor for Entergy New Orleans' solicitation of a Third-Party Administrator to implement and deliver conservation and demand management programs on behalf of the utility. LEI provided guidance to Entergy and the City on the development of the request for proposals, including mandatory requirements and commercial terms. LEI oversaw the bid receipt as well as the review and selection process. A final report was provided outlining LEI's opinion as to the fairness of the overall process.

- ***assisted a client with certain matters pertaining to a FERC investigation:*** Specifically, the scope of this retention includes economic and market analysis in support of a market participant in ISO New England's day ahead load response program ("DALRP"). Julia also provided affidavits and deposed in connection with FERC investigation of behind-the-fence industrial generator and participation in a wholesale power market in New England. Julia helped the client to respond to assertions of market manipulation and estimate market benefit provided through its participation in demand response program.

- ***advised a major transmission company on financial implications of proposed new 400kV transmission line to New York City and Connecticut:*** LEI analyzed the impact of new

transmission, assuming it delivered 100% carbon-free energy, on electricity prices and emissions levels in New York and New England.

- ***served as an independent economic expert, opinion on specific matters related to a market participant's participation in the day ahead demand response program implemented by ISO-NE:*** LEI staff reviewed the specific facts of the case related to how the customer baseline was developed and the offering strategy of the market participant in the demand response program. LEI conducted independent analysis of the decision-making process that had been undertaken in support of the customer baseline and offer strategy. LEI also prepared an analysis of the market benefits created for the market through the demand reductions offered by the market participant (a customized VBA model was created to reconstruct day-ahead ("DAH") and real-time ("RT") energy market clearing prices using public historical hourly offer and bid data.

- ***supported a client in preparing an offer to provide new capacity:*** LEI evaluated projects submitted in the context of a competitive solicitation (RFP) for new capacity, aimed at reducing Connecticut consumers' Federally Mandated Congestion Charges ("FMCC"). LEI drafted and administered the RFP. LEI then served as an independent evaluator on behalf of the DPUC and performed a comprehensive evaluation of the proposed projects, using LEI's proprietary production cost model, POOLMod. Julia testified at the Connecticut Department of Public Utility Control ("DPUC") regarding the RFP process and recommended selection of winners and award of contracts.

- ***authored FERC addendum:*** Julia wrote the report that served as an Addendum to the market power analyses that were filed with FERC in Docket No. ER05-665-001. The objective of this Addendum was to address the items requested by FERC in the deficiency letter issued on June 23, 2005, to an IPP requesting market-based rate authority.

- ***conducted market assessment:*** For a major Canadian utility, Julia undertook a comprehensive market assessment of the New England REC markets, and specifically the Massachusetts and Connecticut markets, under three different scenarios, the status quo, with the utility's resource commercialization schedule, and assuming sporadic participation by the utility.

Regulatory Economics

- ***transmission rate design consulting services for a large Alberta utility:*** LEI provided the client with foundational knowledge regarding best practices for effective rate design and cost allocation. In addition, LEI monitored consultations by the Alberta Electric System Operator ("AESO") regarding proposed changes to its rate design and ancillary services cost allocation approaches, reviewed related published reports and materials, and identified the positions of other parties involved in AESO's consultations. Ultimately, LEI advised the client on potential impacts to its distribution-level customers and generation assets, outlining areas of concern and developing recommendations.

- ***supported a client in assessing policies on consumer bills in New York:*** on behalf of a large utility, LEI performed a retail rate impact analysis of the costs and benefits of New York Climate Leadership and Community Protection Act ("CLCPA") programs and policies. As part of this work, LEI reviewed the existing cost estimates of various CLCPA programs, and prepared a comprehensive independent benefit estimate of wholesale market impacts and carbon emissions savings (based on both market value of carbon allowances and social cost of carbon estimates). The analysis focused specifically on CLCPA-related projects that are either confirmed or currently under construction.

- ***regulatory advisory in multi-year rate case in Puerto Rico:*** On behalf of general unsecured creditors in PREPA's Title III bankruptcy, LEI monitored and advised the client on a variety of regulatory and financial issues presented by LUMA, Genera, and PREPA to the PREB for setting of base rates for FY 2026-2028, including the efficacy and practicability of introducing a legacy debt rider.

- ***competitiveness analysis around electric utility rates:*** LEI was retained by a trade association representing large energy users to conduct a thorough analysis regarding the relative competitiveness of electricity rates in Iowa and surrounding states. LEI completed a quantitative analysis using time series data and considered multiple dimensions of electric service, including cost, reliability, and various drivers like consumption patterns, local economic conditions, renewable generation investment trends, and ISO/RTO membership.

- ***expert advisory on transmission planning:*** Under its independent expert advisory services retainer with the provincial regulator, LEI evaluated the transition from a zero-congestion transmission investment policy to a "optimal transmission policy" in Alberta, including identification of alignment with the new wholesale market design (under "REM") and specifically congestion managements, as well as development of enhancements to address gaps and implementation challenges.

- ***regulatory support for a utility transitioning from cost of service to PBR:*** LEI was hired to provide technical assistance on the development of a utility's first multi-year rate plan ("MYRP"). The purpose of the MYRP was to address a series of issues highlighted by the regulatory commission and reduce regulatory lags. The scope of work included guidance on strategic planning and MYRP design. This effort was supported by a systems analysis on the risk and opportunities, and executive leadership work sessions. In addition, LEI provided pre-filing and litigation support to the utility from the inception of the design throughout the rate case proceeding.

- ***analysis of affiliate conduct in a competitive electricity market:*** LEI was retained by legal counsel on behalf of a regulated entity to provide expert economic support in the context of a Market Surveillance Administrator ("MSA") investigation in Alberta, Canada. The engagement included advising on economic principles and evidence-based rationale for settlement discussions.

- ***legislative-mandated study reviewing current Iowa Code provisions and ratemaking procedures:*** LEI was commissioned by the Iowa Utilities Board ("IUB") to conduct a comprehensive review of the current Iowa Code provisions and ratemaking procedures for electric, gas, and water utilities in the state. LEI prepared an independent assessment, based on a detailed review of rates, ratemaking procedures, and comparative analysis of Iowa's utilities to those in neighboring states across the Midwest. To ensure a well-rounded assessment, LEI also facilitated three policy charrettes, during which input were gathered from various stakeholders.

- ***implementation of performance-based ratemaking in Connecticut:*** LEI has been engaged by Connecticut Light & Power, an electric distribution utility, to advise on the design of performance incentive mechanisms ("PIMs") and performance-based ratemaking ("PBR") framework. LEI prepared written comments and oral presentations on a variety of topics related to PBR and PIMs. LEI staff participated in technical workshops, virtual hearings. LEI staff also reviewed straw proposals and draft decisions from the regulator and prepared written comments that were filed with the regulator.

- ***costs and benefits of net energy billing:*** LEI was engaged by the Maine Office of the Public Advocate ("OPA") to assist in examining the costs and benefits of Maine's Net Energy Billing program. Julia supported the LEI team assessing the costs and benefits of the program.

- ***assessment of formula rate design at FERC for setting transmission rates***: At the request of the WIRES organization, LEI examined the history of formula rate design in the U.S. transmission sector and prepared a primer comparing FERC policies with the stated rate approach versus the formula rate approach. (U.S.)

- ***design of a PBR framework in Connecticut:*** LEI was retained by Eversource Energy to provide independent expert advice on the design of a PBR framework for regulating electric distribution companies in Connecticut. LEI participated in the stakeholder engagement process. LEI also advised Eversource Energy on the fundamental concept of PBR and best practices in development of revenue adjustment mechanisms and performance incentives.

- ***investigation of best practices and trends in the design of electric utility performance incentive metrics:*** LEI prepared a study examining trends in PIMs across the U.S., including the various forms that PIMs take, how PIMs fit within broader regulatory regime, process for selecting and setting PIMs and associated factors (like threshold levels and financial incentives and penalties. LEI's work will support a utility's response to legislative mandate changes to regulation in its jurisdiction.

- ***co-authored analysis of productivity trends in the gas LDC sector:*** Julia managed a team of LEI experts in the analysis of productivity trends in the US over the last fifteen years; LEI also studied the effect of indicators that drive relative efficiency differences across LDCs. LEI's analysis supported regulatory strategy and decision-making on rates.

- ***drafted a white paper reviewing New York PSC's recommendation to set a price cap on competitive retailers:*** Julia reviewed and refuted the evidence submitted by the regulatory staff in support of their recommendation to institute a price cap on the competitive electricity providers in New York's retail market based on market power assertions.

- ***reviewed a utility's internal non-transmission alternatives analysis and conducted a fatal flaw analysis to provide comments and critiques:*** LEI also prepared an analysis describing qualitatively the challenges to various NTA solutions identified in a northeast utility's internal analysis. LEI also conducted an independent analysis to estimate the costs of any possible NTA solutions. This involved talking to engineering firms, other utilities (on a no-names basis) and gathering specific data on DG and micro grid generation installations. LEI also commented on the practical feasibility/challenges associated with siting specific NTA technologies in the project region.

- ***performed benefits analysis on proposed New York transmission line:*** LEI performed an analysis of benefits to NY consumers from a proposed transmission line between New York State and New England, analyzing the impacts from the proposed project's investments on GDP, jobs, tax revenues, and system reliability. LEI also performed a cursory review of the proposed project's environmental impact, based on criteria established by the NY DPS Staff in previous cases before the Public Service Commission

- ***prepared overview of PJM market:*** LEI was hired to put together a presentation about the PJM market and investment opportunities in generation for the Public Utilities Commission of Ohio.

- ***provided support to FortisAlberta Inc. ("FAI"), a Canadian electricity utility, in its filing for its capital tracker application with the regulator:*** LEI reviewed the submissions of the interveners and advised FAI on how to address the issues raised by these interveners. (Alberta)

- ***evaluated impact of changes to Alberta's climate change and carbon emission regulations on the portfolio of the power sector, and electricity consumers:*** The analysis included modeling various scenarios using POOLMod relating to different specific regulations and assumptions to determine the financial impact on selected plants as well as the prevailing Pool Price forecasts for the province.

- ***reviewed procurement process:*** LEI was retained by Delaware Public Services Commission ("PSC") to assist with review of the procurement process for the provision of Delmarva Power & Light Company ("Delmarva Power")'s standard offer services, and to provide information and analysis regarding alternative long-term electricity procurement options for Delmarva Power to meet its Standard Offer Service residential and small commercial retail load. [Docket 14-0283]

- ***advised on market power screening analysis in contemplation of large-scale utility merger:*** LEI provided advice on analytical approach and potential mitigation strategies for horizontal market power concerns.

- ***authored report on IPP investment decisions:*** LEI was engaged by a private equity company to provide a briefing paper that compares the opportunities and trade-offs of the "Buy" versus "Build" investment decision in the IPP sector. The paper contains quantitative and qualitative research and analysis, based on market data on purchase prices from recent transactions (focused on New York, New England, and PJM), versus the cost of new build assets.

- ***reviewed New England REC prices:*** LEI was retained by a renewable investor to review REC prices in the New England region and provide a forecast for various classes of REC prices for purpose of investment appraisal.

- ***assisted in the development of critical "go to market" strategy and other materials for a transmission developer's roadshow:*** As part of this engagement, LEI developed a series of ready-to-share slide decks tailored to the specific target customers. Three categories of customers were considered: traders, utilities, and wind developers.

- ***investigated the costs and benefits of proposed transmission line projects across New York State:*** The study included reviewing the proposed projects from each of the applicants to identify key characteristics of each project. LEI also undertook simulation-based modeling of the New York market to assess the potential magnitude of future congestion on the New York system under varying levels of projected gas prices.

- ***conducted a simulation-based modeling exercise to determine the potential revenues for the proposed transmission project wheeling power from western MISO to eastern MISO (and eventually PJM):*** LEI evaluated both the revenue opportunities to the investors (e.g., private benefits of the line based on market price differences and the market value of the transmission) as well as social benefits to the MISO system (i.e., wholesale price reductions and capacity market price differences); and evaluated the incremental value of the business strategy of selling the energy (and capacity) out of East MISO to third parties who will serve customers ultimately in PJM. LEI's modeling exercise entailed evaluating intrinsic revenues (originating from power markets), extrinsic revenue (originating from price volatility), along with the green value of the Project (originating from the purchase of low-cost renewable energy).

- ***reviewed operation status of nuclear plants:*** LEI was retained to assess the impact of the continued operations of nuclear plants in the Midwest with state subsidies versus the closure of these nuclear plants in the electricity rates and the state's local economy.

- ***provided asset valuation due diligence and market analysis in support of the evaluation of geothermal resource opportunities in Germany as well as other investment initiatives in the***

region: LEI's scope included a comprehensive review of Germany's electricity sector, renewable energy policies, and integration within surrounding European power markets.

- ***authored paper on MRAs:*** LEI was engaged by WIRES to prepare a White Paper on Market Resource Alternatives ("MRAs") which provides external parties with a clear understanding of MRAs and a concise description of how MRAs can work effectively alongside transmission investment in US power markets to support market development, reliability, and cost-effective supply.

- ***analyzed clean energy export opportunities:*** LEI was retained by Corporate Knights Inc. to perform a high-level estimation and analysis of potential opportunity for developing clean energy exports from Canadian markets to target US power markets. Julia Frayer presented a preview of her analysis at the ABB Energy and Automation Forum in September 2014.

- ***provided a market outlook for a portfolio of assets located in ERCOT:*** For a global investment firm, LEI provided a 10-year detailed market revenue forecast for the assets under base case assumptions. LEI also used its Real Options model to estimate a scarcity premium that would be included in addition to the intrinsic energy revenues.

- ***assisted a New England incumbent utility in evaluating the economic benefits of two solutions aiming to relieve energy congestion in the metropolitan area of Boston:*** LEI modeled various transmission solutions. The objective of the economic analysis from the energy market perspective was to examine whether there are any production cost savings or market price ("LMP") impacts from either proposal.

- ***prepared a 10-year energy market price outlook for the New England wholesale power market and forecast the impact of a proposed project on New England market prices:*** LEI also determined the benefits of the proposed transmission project on employment, economic activity, and tax revenues in New England. LEI utilized the dynamic input-output ("I/O") economic model developed by Regional Economic Models, Inc. ("REMI") to measure the economic benefits to various New England states from the project on employment, economic activity, and tax revenues. LEI separated the economic impact caused by the construction of the project, and the impact caused by the reduction in energy prices due to the commercial operation of the project, considering issues such as usage of electricity in residential, commercial, and industrial sectors in the region, and existing long-term energy contracts that would limit the impact of the project.

- ***analyzed revenue/gross margin modules for a district cooling asset being considered for acquisition in Ohio:*** Under this engagement, LEI performed a due diligence review of the information received from the seller (including documentation from the data room) and designed a series of models aiming at quantifying the asset's potential revenues. Part of LEI's scope work also consisted of identifying and assessing the opportunities to enhance and extend the customers base within the Cincinnati existing and future market conditions. LEI

also evaluated the risks associated with prospective/existing customers forgoing the asset's services in exchange of self-supplying their cooling needs.

- ***provided expert analysis and insight on how the restructuring of the US electricity markets has affected the economics of nuclear power plants:*** For a Japanese research institute, LEI provided a Briefing Memo that responded to discrete questions related to the role of government, and the impact restructuring had on nuclear plant operations and financing.

- ***assessed proposed transmission project:*** LEI assessed the economics of the proposed Lake Erie HVDC transmission project to investors and potential customers, by projecting revenue streams associated with the sale of energy, capacity, and other products via transit on the Lake Erie HVDC transmission project ("LEP"). The LEP is a 100-km long 1,000 MW bi-directional HVDC transmission line that will connect the Ontario energy market with the PJM market. LEI prepared a comprehensive report that includes a review of the Ontario and PJM markets, a 20-year (2017 to 2036) market outlook and prices for electricity, capacity and renewable energy credits in Ontario and the relevant zone/s in PJM; the total gross arbitrage value for the energy congestion rents, the capacity revenue potentials for PJM, and the renewable energy credits revenue potential in PJM.

- ***for a utility in the northeastern US, LEI prepared a cost-benefit analysis of a proposed transmission line with the potential to change existing market arrangements:*** In the analysis, LEI developed a base case, and multiple project cases based on different configurations of the transmission project. Using its proprietary modeling tool, POOLMod, LEI simulated energy and capacity prices in each configuration over a 15-year timeframe and compared the price differences against various cost allocation scenarios for the transmission line's construction. LEI also tested the statistical significance of the project case results against the base case results and conducted further analysis on the economic effects of additional renewable generation projects that construction of the transmission line would make possible.

- ***assessed proposed transmission project:*** LEI was retained to assist a private client in assessing the economics of this proposed transmission project and determining additional revenue streams or value adders from the perspective of third-party shippers. LEI was specifically asked to isolate and measure the spot market volatility premium.

- ***performed a due diligence and market study for three hydro units in PJM:*** LEI's tasks included reviewing the merchant prices and REC prices, evaluating the power purchase agreement and capacity charges, and providing energy, capacity, and REC forecasts.

- ***performed a review and analysis of rate making approaches applied to the client's capital expenditure profile including demonstration of the negative potential impact of "I-X" rate making approaches on a utility's ability to earn a fair return:*** The objective of this engagement will be to demonstrate to stakeholders and the Ontario Energy Board the reasonableness of the revenue cap per customer model that the client has previously relied upon and planned to propose in its next ratemaking review Furthermore, the secondary

objective was to conceptualize the insufficiency of the "I-X" regime, even with a revenue cap per customer model, in consideration of the fair return standard and given the client's business is operating in an environment where substantial capital expenditure needs are projected over the next Incentive Regulation Plan ("IRP") period. Docket Number EB 2012-0459

- ***prepared 10-year (2014-2023) energy and capacity markets price outlooks for the New England market:*** This report presents results of a base case and low case long term price forecasts for the New England market using updated market information, as well as underlying assumptions, methodology, and a brief overview of the market along with a review of relevant regulatory considerations.

- ***testified in front of the New Mexico Finance Authority Oversight Committee regarding the potential economic benefits of new investment in transmission in the state of New Mexico:*** Julia considered the impacts of local spending during construction of the proposed HVDC project on the state economy, using BEA RIMS multipliers to estimate the boost to economic activity. Julia also employed the DOE's JEDI model to estimate the potential for new jobs and GDP growth because of new renewables development in state (wind and solar) as a result of the transmission access that would be provided by the HVDC project.

- ***provided independent review of market benefit reports:*** LEI was engaged by NRG to provide an independent review of the economic analysis in two reports: "Report and recommendations comparing repowering of Dunkirk Power LLC and transmission system reinforcements", published by National Grid ("NG") on May 17, 2013, and "NRG Dunkirk Repowering Project Economic Impact Analysis", published by Longwood Energy Group LLC ("LEG") on March 20, 2013. Both reports forecasted market benefits, production cost savings and macroeconomic benefits. LEI's review compared methodologies and assumptions used by each report, and how these may have affected their results; LEI's review was subsequently submitted by NRG to Case 12-E-0577 at the New York Public Service Commission.

- ***conducted macroeconomic analysis of HVDC project:*** Julia was part of a team of economists that performed a macroeconomic analysis to estimate the local economic benefits accruing to taxpayers, residents, and businesses along the 800+mile route during construction of the Zephyr HVDC project, which runs from Wyoming to Colorado, Utah, and Nevada. LEI performed the analysis using the REMI P1+ model.

- ***conducted regulatory review in PJM:*** LEI was hired to review regulatory and market drivers of energy and capacity prices in PJM and forecast prospective revenues of a portfolio of pumped storage and conventional hydro generation facilities offered by FirstEnergy, over a 20-year horizon.

- ***assessed market opportunities for industry-scale battery storage technology in the US and selected European jurisdictions for energy arbitrage and ancillary services provision:*** Under this assignment, LEI modeled the operation regime of a battery operating in energy and

ancillary services markets to monetize added revenues for wind and solar generators. Findings and modeling results were analyzed and presented before the client's management team and were then deployed to develop strategy for marketing battery technology to renewable developers and utilities. Another objective of the project was to identify most suitable markets and products to optimize the strategy of the battery's market entry.

- ***managed a market study reviewing historical electric rates (and projecting forward electric rates) for large commercial customers in the New England market:*** The electric rates analysis was composed of several components, such as the commodity costs of electricity, compliance costs for certain state programs (like RPS), delivery charge for delivering electricity, and ancillary services and administrative supply charges. LEI created projection for each of these components and considered state retail sales requirements for renewables, etc.

- ***advised on regulatory processes:*** LEI was engaged by Ontario Power Generation ("OPG") to support senior management through regulatory processes related to performance-based rates. Julia and her team of experts prepared a discussion paper on incentive regulation mechanisms ("IRM") currently in place in Ontario for electricity and natural gas distribution utilities and presented it at a technical workshop at the Ontario Energy Board ("OEB").

- ***triennial market power analysis:*** in support of various clients' application to renew market-based rate authorization under the provision of the Federal Energy Regulatory Commission ("FERC"), LEI performed Pivotal Suppliers Analysis and Market Share Analysis for the Northeast region, including New England, New York, PJM as well as the Connecticut, NYC, and PJM East submarkets; as well as California and Southwest US markets.

- ***conducted a modeling analysis, in which the market price impact of incremental wind resources was projected:*** LEI staff completed a simulation-based forecast of the New England system for a future test year (2015) with varying levels of wind generation. Using the multi-scenario approach, we then estimated the energy market price reductions across a range of incremental wind generation scenarios. The simulation modeling was further supplemented with statistical analysis. The one-year analysis was also supplemented with sensitivities employing different baseline assumptions with respect to fuel prices.

- ***conducted market analysis on Maine transmission:*** LEI performed a fifteen (15) year simulation analysis to estimate the market impacts resulting from a new transmission interconnection (covering the timeframe 2015-2029) and project the impact on Maine customers (including Northern Maine customers). LEI evaluated the market evolution with and without the interconnection and described the potential ramifications for purchasing electricity for Northern Maine customers. The analysis also estimated the potential impact on ratepayers from the re-allocation of the ISO-NE Pool Transmission Facility rate to incorporate the Northern Maine load and franchise area under a pro forma 10-year transitional agreement. LEI performed the modeling using our up-to-date ISO-NE simulation model (which covers the energy and capacity markets), extended to represent in detail the Maritimes control area.

- ***prepared presentation material on the electricity market impacts and the benefits of Northern Pass Transmission project for New Hampshire and New England consumers:*** In addition, LEI staff assisted the client in preparation of an op-ed piece for dissemination to New Hampshire press outlets. LEI staff also attended an internal company meeting and testified on behalf of the client. Lastly, LEI staff assisted in the preparation for and attended the live New Hampshire Public Radio program "The Exchange" to discuss the benefits of the Northern Pass Transmission over the hour-long live show.

- ***provided extensive late-stage development due diligence for an investor in four potential merchant transmission investments:*** LEI prepared three presentations analyzing four proposed merchant HVDC transmission projects across the US. Analysis included detailing the development roadmap for HVDC projects and the status of the proposed projects, identifying potential competitive threats from other similar competing transmission lines and proposed local generation, and examining the renewable needs and willingness to pay of utilities in the "sink".

- ***authored report on capital expenditure recovery mechanisms:*** For a Canadian client, Julia prepared a report that investigated the different capital expenditure recovery mechanisms utilized in four markets namely Australia, New Zealand, Ontario, and the UK for electric network utilities. The report also provided different options that the client can propose for its performance-based ratemaking filing.

- ***evaluated third-party energy price forecast for the New England and Texas (ERCOT) regions, with a specific eye on the underlying assumptions:*** LEI recommended that certain key assumptions should be updated, including demand projections and CO2 price forecasts. We also argued that some underlying assumptions were unrealistic given actual market conditions and should be adjusted or eliminated.

- ***assisted the Maine Public Utilities Commission in developing an electric resource adequacy plan to aid MPUC in the development of a strategy for the pursuit of the long-term contracts:*** The LEI team, led by Julia, submitted a report that builds up a set of recommendations for a long-term investment strategy based on an analysis of the current supply-demand situation, a review of the existing wholesale market rules for energy and the Forward Capacity Market, an examination of historical price trends, and review of the investment needs assessments prepared by the utilities and ISO-NE, as well as relevant sub-regional planning studies.

- ***authored report on California capacity markets:*** LEI prepared for the California Energy Commission a background report on the design evolution of a capacity market in California and its potential future impact on the generating assets in Mexico that import into the California ISO market.

- ***analyzed Kentucky electricity industry:*** To satisfy the requirements of a recently passed statutory mandate, Julia and the LEI team conducted a broad-based analysis of current practices and the potential for reform within Kentucky's electricity industry in four areas: (i)

energy efficiency and demand side management; (ii) use of renewables; (iii) full cost accounting; and (iv) tariffs. Reported results to the state's regulatory commission, including a full set of recommendations in each of the four areas for overcoming existing impediments to legislative objectives for improvements in the industry's overall efficiency and reductions in its environmental impact.

- ***offered feedback on benchmarking methodology:*** Julia provided comments on the benchmarking methodology suggested by OEB consultants, looking at the analytical aspects of defining and benchmarking the performance of multiple utilities across long periods of time. The critique provided details on how each criterion affects the benchmarking study and what are the remedies available to improve the results.

- ***conducted review on Ontario transmission:*** Julia led a team that reviewed industry best practices in other jurisdictions and the current situation in Ontario to advise OEB on the appropriateness of the uniform transmission rate, as well as on the feasibility of moving to long-run zonally differentiated marginal cost pricing. As part of this process, LEI undertook a comprehensive stakeholder review.

- ***prepared MBR filings:*** Over the course of 2007 and 2008, LEI prepared over a dozen MBR filings for various markets coming under the FERC's triennial schedule as established in Order 697.

- ***electricity price forecasting:*** For an infrastructure fund, LEI used our propriety production cost simulation model to forecast electricity prices and generation from each plant. In addition, LEI provided capacity price forecasts for California based on the Resource Adequacy Requirement (RAR) at the system and local level.

- ***conducted price forecasting analysis throughout North America:*** Julia headed the analysis of long-term price forecasts and energy market dynamics for many of the regions in the US and Canada, including New England, Pacific Northwest, California, Alberta, Southwest Power Pool, SERC, the Midwest US (ECAR, MAIN, and MAPP), Maritimes, Ontario, New England, and PJM. In this practice area, she manages a team of economists that use a variety of modeling tools to forecast one-year to fifteen-year wholesale energy, capacity (where relevant), and market-based ancillary services price forecasts. As part of the modeling effort, LEI proprietary dispatch simulation model, POOLMod, as well as other tools that have been developed by LEI, such as CUSTOMBid, ConjectureMod, ViTAL, and LEI's real options spark-spread module. This type of modeling effort required detailed investigation of the micro and macro-economic issues facing these regional markets: demand profiling, growth forecasting, reserve margin and new entry activity assessment. Such analyses are used by clients in establishing market values for assets they have targeted to acquire, consideration of portfolio risk and exposure, and assessments of procurement opportunities. This same modeling has supported regulatory analysis of utility acquisitions and planning strategies, consideration on the impact of market rules and as "reservation prices" for sale processes.

- ***reviewed power purchasing options at a large industrial customer's Southeastern facilities over three years:*** LEI assessed the probability of a supply interruption over the next three years due to the state of the transmission system in this region. We also assessed the facility's options for purchasing power for this load in the wholesale market.

SPEAKING ENGAGEMENTS AND PUBLICATIONS:

"Affordable and reliable electricity – how do we get there?" Presentation. International Rethinking Electricity Forum at CIGRE 2026. Paris, France. August 25, 2026. (upcoming)

"Economics of System Flexibility and Infrastructure Resilience: Storage, Grids, and Security." Panelist. 47th IAEE International Conference. Santiago, Chile. July 20, 2026. (upcoming)

"Planning and Operating Under Uncertainty." Panelist. Grid Forward 2026 Annual Member Meeting (Virtual). June 30, 2026.

"Revisiting Market Design Decisions Using Machine-Learning Models: Pay-as-Bid vs. Single Market Clearing Price." New England Chapter of USAEE Luncheon. Boston, Massachusetts, USA. June 25, 2026.

"An examination of how Alberta's changing transmission policy framework will impact the landscape for reliability, affordability, and future generation development." Panellist. IPPSA Conference. Banff, Alberta, Canada. March 17, 2026.

"Screening for siting of data center customers to resolve uncertainty in large load forecasts." Concurrent Session Presentation at the USAEE North American Conference. Fort Worth, Texas, United States. November 18, 2025.

"Inter-regional transmission planning: lessons learned from the US and observations on current Canadian landscape." Panelist, Session 1: Integrated Planning, Annual Workshop: Charting the Path for Canada's Energy Future. Toronto, Ontario, Canada. November 5, 2025.

"The Cost of Uncertainty: Changes in Our Energy and Regulatory Landscape." Moderator. Connecticut Power and Energy Society ("CPES"). Hartford, Connecticut, United States. October 7, 2025.

"Hedging Locational Price Risk under LMP – Experiences from North America." Speaker. The German Institute for Economic Research ("DIW"). Webinar. October 7, 2025.

"Lessons from Other Power Markets: Beyond Texas." Moderator. Gulf Coast Power Association ("GCPA") 40th Annual Fall Conference. Austin, Texas, United States. September 30, 2025.

"The Future of Energy Markets – Challenges & Opportunities." Panelist. Energy Trading Institute ("ETI") 2025 Conference. Washington D.C., United States. September 18, 2025.

"Straight Talk: Transforming Transmission." Publication. T&D World. September 3, 2025.

"Advanced Transmission Technologies." Panelist. WIRES Summer 2025 Conference. Woodstock, Vermont, United States. July 10, 2025.

"Should we expect increasingly variable inter-regional electricity flows? What are the implications for electricity market design and system planning" Paper and Presentation. 45th IAEE International Conference (with Victor Chung and Sayad Moudachirou). Paris, France. June 2025.

"Data Centers 101." Moderator. NEECE. Falmouth, Massachusetts, United States. June 5, 2023.

"Closing Session: Evolved Energy Markets for a Modern Grid." Panelist. Grid Forward 2024 Conference. Banff, Alberta, Canada. October 2, 2024.

"Market Design: What's Still Under Development?" Panelist. Gulf Coast Power Association ("GCPA") 39th Annual Fall Conference. Austin, Texas, United States. September 30, 2024.

"Exploring Transmission Solutions – Offshore and Onshore" and ***"Partnering with Utilities."*** Moderator. Offshore Wind Transmission US (8th Annual Conference) / CleanWeek NYC. New York City, NY, United States. September 25, 2024.

"Strengthening the Grid: Transmission Solutions for Reliable and Resilient Power Amid Extreme Weather." Panelist. WIRES Summer Member Meeting. Boston, Massachusetts, United States. July 25, 2024.

"Assessing the Benefits of Large (Flexible) Load and Rethinking Demand Response in Future Electric Power Systems." Speaker. Annual Conference of International Association of Energy Economists. Istanbul, Turkey. June 27, 2024.

"Utilities' Priorities and Perspectives." Moderator. Transmission Infrastructure U.S. Conference. New York, NY, United States. June 6, 2024.

"Power Markets 101." Panelist. Northeast Energy and Commerce Association. Webinar. May 16, 2024.

"New England Power Market "Reno": Light refresh or Complete Makeover?" Conference Co-Chair. Northeast Energy and Commerce Association, Power Markets Conference. Waltham, Massachusetts, United States. November 13, 2023.

"Pursuing Progress: Overcoming Infrastructure Siting Challenges." Moderator. NEECE. Providence, Rhode Island, United States. June 8, 2023.

"Affordability." Panelist. NY Electrification Summit. Albany, New York, United States. May 31, 2023.

"Financing an Affordable and Reliable Transition." Moderator. IPPSA Conference. Banff, Alberta, Canada. November 2022.

"Utility plans and priorities." Moderator. Transmission Infrastructure U.S. Conference. Washington, D.C., United States. August 9, 2022.

"Why will capacity markets never achieve equilibrium levels of supply?" Paper and Presentation. 43rd IAEE International Conference (with Victor Chung). Tokyo, Japan. August 2, 2022.

"Who should pay for transmission?" Paper and Presentation. 43rd IAEE International Conference (with Stella Mueller and Andrei Comlosan-Pop). Tokyo, Japan. August 2, 2022.

"Impact of Net 0 on Alberta's Electricity Industry and Economy." Panelist. IPPSA Spring Webinar Series (virtual). March 29, 2022.

"Making Our Way Through Uncertain Times." Conference Co-chair. Northeast Energy and Commerce Association, Power Market Conference 2021 (virtual). November 16, 2021.

"Coordinated grid and system resiliency." Panelist. AESO Economics Excellence Conference. September 28, 2021 (virtual).

"Needs and challenges session: Transmission Infrastructure Investment." Moderator. Global Transmission Report's conference on Transmission Infrastructure Investment (virtual). July 28, 2021.

"Utility plans and priorities." Moderator. Transmission Infrastructure Investment: Building a decarbonized, resilient, and modern grid (virtual conference). July 29, 2021.

"Transmission Stimulus." Panelist. WIRES Summer Meeting 2021 (virtual). July 29, 2021.

"Transmission investment needs and challenges." Moderator. Transmission Infrastructure Investment: Building a decarbonized, resilient, and modern grid (virtual conference). July 28, 2021.

"Low Carbon Hydrogen: A Silver Bullet for Climate Change?" Moderator. USEA. Webinar. July 15, 2021.

"Is Low Carbon Hydrogen the Panacea for Climate Change: what can the US learn from early adoption in Europe?" Moderator. USEA webinar (virtual). July 15, 2021.

"Western RA: Cali, Texas and the Summer Crunch." Participant. Bank of America Power Roundtable. June 18, 2021.

"Lessons Learned from Texas: What can we do to better weather the extreme weather?" Lead Organizer. Northeast Energy Commerce Association. May 15, 2021.

"A look back at February 2021 winter storm: what really happened in Texas?" Panelist. Independent Power Producers of Alberta seminar (virtual). April 28, 2021.

"Fireside Chat: Evolving Compensation and Market Mechanisms." Panelist. National Council on Electricity Policy's Annual Meeting. December 8, 2020.

"Integration of renewables and transmission through ERCOT/MISO perspective." Moderator. Northeast Energy and Commerce Association, Power Market Conference: Not Your Grandpa's Power Grid? November 19, 2020.

"Transmission Incentives Roundtables Discussion." Panelist. WIRES Summer 2020 Member Meeting. July 30, 2020.

"A Holistic Assessment of the Challenges Associated with Powering the Electric Grid with 100% Renewable Energy." Presenter. IAEE 2020 International Conference (originally scheduled for June 2020 in Paris, France).

"Ensuring Electricity Capacity for the Future: What Works, What Doesn't, and Who's Responsible?" Panelist. United States Association for Energy Economics. July 8, 2020.

"Renewables & Storage" Panelist. Northeast Energy and Commerce Association, Power Markets Conference, Massachusetts, United States. November 7, 2019.

"Investing Trends in Canadian Energy." Energy Roundtable, Calgary, Alberta, Canada. October 10, 2019.

"Reflections on US Market Developments." IPPSA Annual Conference 2019. Banff, Alberta, Canada. March 12, 2019.

"Outlook for US Eastern Electricity Markets: ISO-NE, NYISO and PJM." Bank of America Merrill Lynch 2019 Ga, Power and Solar Leaders Conference. Boston, Massachusetts, United States. March 5, 2019.

"Alternate Regulatory Approaches." CAMPUT 2018 Conference. May 10, 2018.

"The Transformation of the Energy Sector" and "Role of Women in Energy." SIPA's Women in Energy Event at Columbia University. New York City, NY, United States. March 28, 2018.

"Market pricing of oil: are there lessons for the electricity market?" Gulf Coast Power Association 31st Annual Spring Conference - Session VIII -Valuing Dispatchable Resources. Houston, Texas, United States. April 20, 2017.

"Studying the impact of environmental policies on electricity market design." AIEE Energy Symposium: Current and Future Challenges to Energy Security, The University of Milan – Bicocca, Milan, Italy. December 1, 2016.

"Energy storage – how will it be part of "Grid of Things" in the future?" WIRES' 2016 Spring Meeting. April 16, 2016.

"Implications of Energy Infrastructure Investment on Local Economies in New England." REMI E3 Conference 2015: Energy, the Environment and the Economy. Amherst, Massachusetts, United States. United States. July 30, 2015.

"Renewables: No Longer a Noble Way to Lose Money?" Moderator. SuperReturn US 2015 Conference. Boston, Massachusetts, United States. June 15, 2015

"Perspectives on future trade opportunities between Canada and the US, and benefits to US consumers." EUCI US/Canada Cross Border Power Summit Conference. Boston, Massachusetts, United States. April 8, 2015.

"Are transmission expansions and upgrades compatible with both small- and large-scale clean energy?" Panelist. Southwest Clean Energy Transmission Summit. Albuquerque, New Mexico, United States. April 1, 2015.

"CEO Panel." Moderator. ABB Energy & Automation Forum. Calgary, Alberta, Canada. September 10, 2014.

"International Views and Addressing the Need for More Underground Transmission in the US." Panelist. Platts 2014 Transmission Planning and Development Conference: Ensuring Grid Reliability, Planning Timelines, and a Robust Market's Relationship with New Build. Arlington, Virginia, United States. June 18, 2014.

"System Operator's Response to 1000 – How Can the Various Regions Work Together?" Moderator. Platts 2013 Transmission Planning and Development Conference. Washington DC, United States. September 23, 2013.

"Merchant Transmission: Planning and Development and Lessons Learned from North America." Integrated Transmission Planning and Delivery, Imperial College - Workshop for OFGEM. London, United Kingdom. January 11, 2013.

"Demand for wind in New England: an economist's perspective." AWEA Regional Wind Energy Summit. Portland, Maine, United States (with Shawn Carraher). September 5, 2012.

"Cost effective procurement of Renewables to Meet Policy Requirements." NECPUC Symposium. Rockport, Maine, United States. May 22, 2012.

"Best Practices for Transmission Asset Valuation." Transmission Grid Conference. London, United Kingdom (with Shawn Carraher and Yifei Zhang). March 16, 2012.

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