



LONDON
ECONOMICS

London Economics International LLC

About London Economics International LLC

September 2015



LEI is active across the value chain and has a comprehensive understanding of the issues faced by utilities and regulators alike



ASSET VALUATION, PRICE FORECASTING & MARKET ANALYSIS



REGULATORY ECONOMICS, PERFORMANCE -BASED RATEMAKING & MARKET DESIGN



EXPERT TESTIMONY & LITIGATION CONSULTING

- ▶ Exhaustive sector knowledge and a suite of state-of-the art proprietary quantitative modeling tools
 - Wholesale electricity market models
 - Valuation and economic appraisal
 - Due diligence support
 - Cost of capital database
 - Contract configuration matrices

- ▶ Market design, market power and strategic behavior advisory services
- ▶ Incentive ratemaking
 - Quantify current and achievable efficiency levels for regulated industries
 - Convert findings into efficiency targets mutually acceptable to utilities and regulators

- ▶ Reliable testimony backed by strong empirical evidence
- ▶ Expert witness service
 - Material adverse change
 - Materiality
 - Market power
 - Contract frustration
 - Cost of capital
 - Tax valuations



TRANSMISSION



RENEWABLE ENERGY



PROCUREMENT

- ▶ Creating detailed market simulations to identify beneficiaries and quantify costs and benefits from proposed transmission lines
 - Valuing transmission
 - Transmission tariff design
 - Procurement process and contract design

- ▶ Renewable energy policy design, procurement, modeling, and asset valuation
 - Solar, wind, biomass, and small hydro
 - Demand response
 - Energy efficiency
 - Emissions credits trading
 - Energy storage technologies
 - Cogeneration
 - Micro-grids

- ▶ Designing, administering, monitoring, and evaluating competitive procurement processes
 - Auction theory and design
 - Process management
 - Document drafting and stakeholder management



LEI team has numerous energy sector clients around the world



Market design and policy advisory is a business practice area where LEI deploys its mastery of economics and best practices alongside learned experiences from prior engagements from around the world

Our regulatory economics practice examines the universe of economic and financial issues facing regulators, market institutions, and regulated companies. Using quantitative modeling techniques, exhaustive knowledge of innovative regulatory practice worldwide, and a sound grasp of underlying economic principles. LEI is often help our clients with the following areas:

Electricity Market Design: We have extensive experience in coordinating input from stakeholder groups, and in developing the institutions necessary for day-to-day market operation. Our team has carefully studied “seams issues” between markets and developed potential solutions.

Market Power and Strategic behavior: LEI has exhaustively explored questions of market definition in wholesale and retail electricity and natural gas markets. We have created proprietary game theoretic models to show the extent to which players can influence prices.

Renewable and carbon policies: LEI has experience both working with state and provincial authorities in the design of renewable procurement initiatives and with clients crafting their responses to solicitations.

Relevant Experience

- ▶ Assisted the government in drafting the National Renewable Energy Policy (Saudi Arabia)
- ▶ Assessed the costs of the Green Energy Act in Ontario
- ▶ Examined the appropriate interaction and evolution of institutions for price formation, transmission operation, market surveillance, and management of residual obligations
- ▶ Reviewed the past and current initiatives pertaining to emissions regulation with the purpose of informing the potential future of the US carbon regulation
- ▶ Evaluated market power issues associated with divestiture of specific assets and advised on particular market rules to ameliorate strategic behaviour
- ▶ Advised on stakeholders on market design changes to ISO-NE’s Forward Capacity Market and energy market
- ▶ Analyzed VoLL for ERCOT and stakeholders in order to create better planning and market rules

Julia Frayer **Managing Director of London Economics International LLC**



- ▶ **Julia Frayer specializes 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 power markets.**
- ▶ **She has worked extensively in the US, Canada, Europe, and Asia in advising on market rules, innovative rate design, and institutional best practices.**
- ▶ **Julia also leads many of the firm's regulatory economics projects, spanning such diverse issues as cost-benefit analysis, market power mitigation, tariff ratemaking, auction design (including competitive solicitations for procurement), wholesale market rules design, productivity analysis and efficiency benchmarking.**
- ▶ **Julia and her team of economists and consultants have developed and applied proprietary real-options based valuation tools, portfolio risk analytics, models of strategic bidding behavior, and sophisticated power system simulation tools, as well as customized econometric models.**