

**Christopher J. Russo**  
Vice President

MS, Technology & Policy (Energy)  
Massachusetts Institute of Technology

BS, Mechanical Engineering  
Tufts University

Christopher Russo is a Vice President in CRA's Energy Practice. He advises domestic and international clients in the electricity and gas industries in the areas of investment strategy and economic analysis, asset valuation, energy technology, and generation and transmission development. His expertise covers electricity and gas markets in North America, Europe, the Middle East, and worldwide.

Mr. Russo started the Energy practice from a team of six people, growing it to over sixty as the Practice Leader from 2012 through 2025 before returning to focus full-time on client work.

He has testified in litigation and regulatory matters on issues regarding the economics, planning, operation, and manipulation of energy markets and has testified numerous times at trial in numerous countries. Mr. Russo also served on the Board of Directors of Neuco, a Boston-based company which provides software to enable AI and neural network control of thermal power plants.

Prior to joining CRA, Mr. Russo was a senior consultant with Cambridge Energy Research Associates in Paris, and prior to that, owned his own energy consulting firm as well as working for ABB Corporate Research in the US and Switzerland. He started his career at MIT as the Plant Engineer for the campus cogeneration power plant, and later held an academic appointment as a Visiting Scientist at the MIT Energy Laboratory where he investigated electricity technology and energy policy.

## Areas of Expertise

Mr. Russo is an energy economist and consultant with expertise in the following areas:

- The dynamics of electricity and gas markets in North America, Europe and worldwide, including market operations, regulatory economics, system planning, physical and economic grid characteristics, generation/dispatch system operations, power systems, and power plant operations. His experience covers nuclear, coal-fired, gas, hydroelectric and renewable (including solar, wind and hydro) generation resources and transmission projects.
- Expert witness testimony and reports related to energy disputes in multiple venues
- Strategic planning and advice for companies engaged in energy markets
- Financial valuations and assessments of generation and transmission assets
- Master planning for energy systems, including assessments of upstream supply sources, energy conversion, transmission, and demand sectors, and sustainability measurement and analysis.

## Professional History

- 2007–Present      *Vice President & Practice Leader*, Charles River Associates, Boston  
(Previously held positions as *Associate Principal, Principal and Vice President*)
- 2006                *Senior Consultant*, Cambridge Energy Research Associates (CERA), Paris
- 1999–2006        *Principal*, Russo & Associates LLC, Boston
- Worked with numerous market participants and regulators in markets in the US and abroad on the operations and software for restructured energy markets.
  - Provided economic analysis for market participants and regulators on generation and transmission assets.
- 1998–2002        *Consultant*, Department of Energy & Global Change, ABB Corporate Research Center, Baden-Dättwil, Switzerland
- Investigated CO<sub>2</sub> reduction strategies, new generation, and end-use technologies for decarbonization and helped to initiate the China Energy Technology Program. Acted as liaison between ABB and MIT. Worked closely with researchers from ETHZ and PSI. Held a Visiting Scientist appointment at the MIT Energy Laboratory.
- 1995–1998        *Plant Engineer*, MIT Cogeneration Project, Massachusetts Institute of Technology, Cambridge, MA
- Managed gas turbine and cogeneration plant operations, negotiated environmental permits, managed gas market purchases and contracts, and performed regular performance analyses for a cogeneration and district energy plant. Was a guest lecturer in the Department of Aeronautics teaching students about gas turbine technology.

## Testimonial History, Litigation Consulting & Major Public Reports (Prior Ten Years)

- *Confidential AAA arbitration*. Testimony on behalf of a US utility in a contract dispute regarding the economics of powerplant retirements, coal-supply contracts and electricity market dynamics. Expert report submitted January 2025, direct and cross-examination testimony at hearing, March 2025.
- *Grain Belt Express Holding, LLC v. Invenenergy Transmission LLC and Grain Belt Express LLC,, Index No. 651445/2023, Supreme Court of the State of New York*. Testimony on behalf of Grain Belt Express Holding on issues related to wind power, HVDC projects, and the SPP power market. Expert report submitted November 2024, deposition December 2024.

- *Beth Israel Deaconess Medical Center, Inc. v. MATEP LLC, et al, Suffolk Superior Court, 2384CV01373-BLS2.* Testimony as a 30(b)(6) representative on behalf of Charles River Associates. Deposition August 2024.
- *Power Distribution Services Ghana Ltd v. Electricity Company of Ghana (ECG) Ltd., UNCITRAL international arbitration.* Expert report prepared on behalf of ECG in international arbitration on the quantum related to the cancellation of a transmission and distribution concession in Ghana. Prepared jointly with Ms. Laura Sochat, expert report submitted September 2022, answering reports submitted October 2023 and January 2024. Direct and cross-examination at hearing July 2024.
- *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program Large-Scale Renewable Program and a Clean Energy Standard, New York Public Service Commission Proceeding 15-E-0302.* Testimony on behalf of Champlain Hudson Power Express and Hydro Quebec on tariff adjustments for transmission construction based macroeconomic conditions. Expert report submitted August 2023.
- *Confidential JAMS Arbitration.* Testimony on behalf of a defendant in a damages case related to financial/virtual power purchase agreements and swaps for a wind power project. My testimony related to custom and practice for power trading in US electricity markets, dynamics of power pricing, and mechanics of the swap agreement. Expert report submitted May 2023, direct and cross examination at hearing, June 2023
- *NECEC Transmission LLC et al. v. Maine PUC and NextEra Energy Resources, State of Maine Civil Action BCD-CIV-2021-00058.* Testimony on behalf of NextEra on issues of HVDC and AC transmission line construction and economic decisions. Deposition March 2023
- *NRG South Texas LP v. Matagorda County, District Court of Matagorda County, Case No. 21-F-0473.* Testimony on behalf of NRG and the South Texas Project nuclear powerplant on topics of electricity market modeling, and the ERCOT market. Expert report submitted November 2022, deposition December 2022.
- *Sjunde AP-Fonden and the Cleveland Bakers and Teamsters Pension Fund v. General Electric Company and Jeffrey Bornstein, United States District Court for the Southern District of New York, Case No. 17 Civ. 08457 (JMF) (GWG).* Expert report prepared on behalf of General Electric in securities class action litigation on topics of global energy markets, the market for gas turbines, customer service agreements, and factoring of receivables. Expert report submitted May 2022, deposition June 2022. Case was ultimately settled.
- *Rainbow Energy Marketing Corporation v. DC Transco, LLC, United States District Court for the Western District of Texas, Austin Division, Civil Action 1:21-cv-313.* Expert report prepared on behalf of Rainbow Energy Marketing on the topics of energy management agreements, ISDA agreements, controllable transmission lines, and the ERCOT market. Expert report submitted April 2022, rebuttal report submitted May 2022.

- *Superior Court of Nassau County, Long Island Power Authority v. Nassau County*, 403754/2016, 403760/2016, 403222/2017, 403227/2017, 402338/2018, 402348/2018, 403044/2019, 403046/2019, 401265/2020, 401267/2020 403757/2016, 403225/2017, 402347/2018, 403045/2019, 403739/2016, 403226/2017, 402354/2018, 403047/2019, 401264/2020, Expert Report on behalf of the Long Island Power Authority in tax litigation projecting revenues and costs for the E.F. Barrett and Glenwood powerplants on Long Island. Expert Report filed October 2021.
- *Buckthorn Wind Project, LLC v. JPMorgan Chase Bank, N.A., United States District Court for the Northern District of Texas, Fort Worth Division, Civil Action No. 4:21-cv-562*. Expert report prepared on behalf of JP Morgan on the topic of wind power purchase agreements, ISDA hedges, and the ERCOT market. Expert report submitted August 2021, deposition October 2021.
- *Confidential AAA Arbitration*. Lead expert on electricity markets in a case involving costs associated with coal plant shutdowns and coal fuel supply contracts. Expert report submitted January 2021. Case settled during hearing.
- *Confidential JAMS Arbitration*. Lead expert on damages and electricity markets in a case involving wake effects on wind turbines and PPA and merchant market revenues in California. Expert report submitted December 2020. Direct and cross examination at trial, February 2021.
- *Confidential AAA Arbitration*. Lead economic expert in a dispute related to miscalculation of payments under a power purchase agreement (PPA) between a US powerplant and an offtaker. Expert report submitted August 2019. Direct and cross-examination at trial November 2019.
- *Market Design Issues in the Alberta Capacity and Energy Markets*, Proceeding 23757, Application 23757-A001, *Alberta Utilities Commission*. Expert testimony filed on behalf of the Alberta Market Surveillance Administrator (MSA), February 2019, filed jointly with Dr. David Patton and Mr. Jordan Kwok. Cross-examination at hearing May 2019.
- *In the matter of Trina Solar Limited, Cause No. FSD 92 of 2017 (NSJ), Grand Court of the Cayman Islands*. Expert testimony related to the solar energy industry, solar manufacturing, and project development, submitted on behalf of Maso Capital Investments Limited and Blackwell Partners LLC in dissenting-shareholder litigation related to valuation of Trina Solar. Expert report submitted October 2018, rebuttal report January 2019. Cross-examination at trial May 2019.
- *Offer Behaviour Guidelines Prior to the Implementation of a Capacity Market*. Report prepared on behalf of the Alberta Market Surveillance Administrator (MSA), December 2018. Filed jointly with Dr. Adonis Yatchew, Dr. David Hunger, and Mr. Jordan Kwok. Presentation and oral appearance at Stakeholder Meeting January 2019.

- *Petition of Eversource & National Grid et al., for approval of long-term contracts for renewable energy, pursuant to Section 83D of An Act Relative to Green Communities, dockets DPU 18-64, 18-65 and 18-66, Massachusetts DPU.* Testimony related to the proposed Quebec- Maine New England Clean Energy Connect transmission line and power purchase agreement on behalf of NextEra Energy. Testimony filed jointly with Robert Stoddard and Stephen Whitley, December 2018. Cross-examination at hearing February 2019.
- *Affidavit on behalf of Vistra Energy Corp. & Dynegy Marketing & Trade, Docket Nos. EL16-49-000, ER18-1314-000, ER18-1314-001, EL18-178-000, Federal Energy Regulatory Commission.* Testimony related to proposed PJM capacity market reforms. Affidavit filed October 2018, answering affidavit filed November 2018
- *Hydro One Networks Inc. Lake Superior Link Project Leave to Construct Application, Ontario Energy Board, Docket EB-2017-0364 and EB-2017-0182,* Expert testimony submitted on behalf of NextBridge Infrastructure. Expert report filed April 2018. Testimony at hearing May 2018 and February 2021.
- *Request for Approval of CPCN for the New England Clean Energy Connect Consisting of a 1,200 MW HVDC Transmission Line from Québec-Maine Border to Lewiston (NECEC) and Related Network Upgrades, State of Maine Public Utilities Commission, Docket 2017-00232.* Direct testimony on behalf of NextEra Energy Resources filed April 2018. Testimony and cross-examination at technical conference and hearings, June 2018, August 2018, and January 2018.
- *Massachusetts Superior Court,* Expert report submitted on behalf of a plant owner calculating damages from operational limitations on a district energy plant in the ISO-New England Market. Expert report submitted March 2018.
- *State of New Hampshire,* expert report submitted on behalf of a plant owner and operator in a tax certiorari proceeding in February 2018. Case was settled before hearing.
- *In re: Request for Advanced Ratemaking Principles by Interstate Power & Light Company, Docket RPU-2017-0002, Iowa Utilities Board.* Direct Testimony on behalf NextEra Energy Resources commenting on IPL's resource plan and the Duane Arnold Energy Center nuclear power plant. Direct, rebuttal and sur-rebuttal written testimony, and cross-examination at hearing, November 2017.
- *ABB AB v. Alstom Grid AB, Alstom Grid SAS and Alstom Grid UK Ltd., Stockholms Tingsrätt (Stockholm District Court), Cases 7403-15 and 11527-15.* Expert testimony submitted on behalf of Alstom related to economic damages resulting from the alleged IP infringement of HVDC technology. Expert report filed August 2017. Direct and cross-examination (in English with translation) at trial, October 2017.
- *State of California v. Coral Power LLC et al., Docket EL02-71-057, Federal Energy Regulatory Commission.* Testimony on behalf of Shell Energy North America (f/k/a Coral Power) related to the causes of the 2000-2001 California Power Crisis and alleged energy market manipulation. Written testimony filed February 2017, deposition March 2017, direct and cross-examination at trial April 2017.

- *Confidential AAA Arbitration*, Lead economic expert in a dispute related to the economics of environmental regulations, coal-fired power plants, and coal supply contracts in the US. Expert report filed September 2016, deposition November 2016, direct and cross-examination at trial December 2016.
- *In re: Direct Application of MidAmerican Energy Company For The Determination Of Ratemaking Principles, Docket RPU-2016-001, Iowa Utilities Board*. Direct Testimony on behalf of Google Inc., Facebook Inc., and Microsoft Corporation related to the economics of MidAmerican's Wind XI proposal, filed June 2016. Case was settled before hearing.
- *MAG Energy Solutions Inc. v. TEC Energy Inc. et al., Province de Québec, Cour Supérieure, Case No. 500-17-087823-152*. Expert report submitted on behalf of TEC Energy on issues related to energy trading and transmission scheduling in Canada and the United States, filed May 2016. Joint report with opposing expert filed June 2019
- *Northern States Power Company, Southern Minnesota Municipal Power Agency, Aegis Insurance Services et al., v. General Electric Company, State of Minnesota, Tenth Judicial District, Case 71-CV-13-1472*, Expert report submitted on behalf of GE calculating damages related to the outage of the Sherburne county coal-fired power plant, filed March 2016. Deposition June 2016.
- *Entergy Nuclear FitzPatrick, LLC v. Town of Scriba, et al., Supreme Court of the State of New York*, Expert report of behalf of Entergy in a tax certiorari case projecting electricity revenue and nuclear fuel cycle costs for the James A. FitzPatrick Nuclear power plant, expert report filed January 2016. Case was settled before trial.
- *NRG v. State of Maryland, Case 09-RP-CH-261-265; 09-RP-CH-280-284; and 09-RP-CH-294-298*. Expert report on behalf of NRG projecting energy and capacity revenues for the coal-fired Mirant Mid-Atlantic Dickerson facility, 2014. Deposition March 2014, direct and cross-examination at trial, May 2014
- *In the Matter of Entergy Nuclear Indian Point 2, LLC & Entergy Nuclear Indian Point 3, LLC, DEC: 3-5522-00011/00004, SPDES: NY-0004472, DEC: 3-5522-00011/00030, DEC: 3-5522-00011/00031*, Direct and rebuttal pre-filed testimony on behalf of the City of New York related to the operations and economic impact of the Indian Point nuclear power plant, filed March 2014. Direct and cross-examination at hearing April 2014
- *NRG v. State of Maryland, Case 09-RP-CH-261-265; 09-RP-CH-280-284; and 09-RP-CH-294-298*. Expert report on behalf of NRG, jointly filed with Robert B. Stoddard, projecting energy and capacity revenues for the coal-fired Mirant Mid-Atlantic Morgantown facility, January 2014
- *ThyssenKrupp Companhia Siderúrgica do Atlântico v. CITIC Group, ICC Arbitration*, expert report for international arbitration submitted on behalf of CITIC group related to damages from improper operation of a coal-fired power plant in Brazil, filed July 2012. Case was settled before hearing.
- *Indian Point Energy Center Retirement Analysis*, Prepared for the City of New York, August 2011

- *Summary of economic effects for proposed Spectra NJ-NY gas pipeline*, Memo prepared for Spectra Energy, and submitted to the New Jersey Bureau of Public Utilities, March 2011
- *Confidential Arbitration*, Expert report provided on behalf of a power plant investor regarding the appraised value of a coal-fired power plant in the PJM market, August 2011. Case was settled before hearing.
- *Proceedings before the New York State Assembly on the economic and reliability impact of the potential closure of the Indian Point Nuclear Energy Center*. Direct testimony at hearing January 2012
- *Confidential Arbitration*, Expert report related to the valuation of a hydroelectric plant in California, which was settled before hearing, June 2013.
- *Coordination between Natural Gas and Electricity Markets, Docket AD12-12-000, Federal Energy Regulatory Commission*, Comments filed jointly with Dr. Richard Tabors and Scott Englander, 2012
- *In the Matter of Hudson Transmission Partners, LLC Case 08-T-0034*, direct and rebuttal pre-filed testimony on behalf of the City of New York before the New York State Public Service Commission in the Article VII proceeding for the proposed Hudson Transmission Partners HVDC cable. Direct and cross-examination at hearing April 2010
- *A Master Electrical Transmission Plan for New York City*, Prepared for the City of New York, May 2009
- *Public Utility Commission of Texas proceedings Cost-Benefit Analysis of the Texas Nodal Market*. Expert report on behalf of the Public Utilities Commission of Texas filed jointly with Alex Rudkevich and Ellen Wolfe December 2008. Direct testimony at hearing January 2009
- Mr. Russo was retained as an expert in civil litigation related the 2021 Texas Winter Storm on issues of market rules and dynamics. He was not disclosed before the case ended for legal reasons.
- Mr. Russo prepared an expert report calculating damages from the delayed construction of a gas-fired combined cycle power plant in the United States for a civil litigation matter. The case settled before his report was submitted and he was disclosed and thus remains confidential.
- Mr. Russo prepared testimony and analysis on behalf of a client accused of electricity market manipulation before the FERC. The case relates to alleged cross-product manipulation involving renewable and thermal assets and financial instruments. The case was settled before his testimony was submitted.
- Mr. Russo acted as an expert in a case concerning coal mines and fuel contracts with coal-fired power plants. The case was settled before his report was submitted and he was disclosed and thus remains confidential.
- Mr. Russo assisted in the damages analysis for a case litigated in federal court related to damages associated with renewable power plant revenue as a result of market rule changes in the MISO market.

- Mr. Russo assisted in analyzing how transmission upgrade costs were allocated in Quebec for new development in support of testimony before the Régie d l'Énergie.
- Mr. Russo performed analysis on behalf of a party in FERC litigation resulting from the California energy crisis, including simulation of the CAISO market clearing process and trading strategies employed by different parties.
- Mr. Russo is currently engaged as an as-yet-undisclosed expert witness in US Federal litigation related to cross-product manipulation of electricity markets.

## Selected Commercial Consulting Experience

- Mr. Russo has directed the analysis of over one hundred generation, transmission, and district energy assets for utilities, equity and debt investors, infrastructure funds, regulators and market operators. He has analyzed assets in all major power markets, including ISO-NE, PJM, ERCOT, SPP, SERC, NYISO, CAISO, IESO, AESO, MISO and the Pacific Northwest. These include thermal (gas, coal, nuclear, oil), renewable (solar, wind, biomass), hydro, and storage (pumped, CAES, and battery) assets.
- Mr. Russo directed the analysis of the value of a proposed entity which utilized HALEU fuel to fabricate and supply fuel for the advanced nuclear reactor market
  - Mr. Russo led a team supporting hyperscalers entering organized North American power markets
  - Led the regulatory analysis of proposed market rule changes for the ERCOT electricity market in Texas for a client.
  - Mr. Russo led an engagement for an investor developing a market entry strategy for investments in the US hydrogen market.
  - Mr. Russo led a team investigating the difference in financing approaches that exist between different-sized nuclear reactors and construction approaches.
- Mr. Russo led the team to help an advanced Gen IV nuclear reactor technology company develop a commercial strategy for market entry and commercialization.
- Mr. Russo directed the team assisting a client in its efforts to bid battery storage into utility-sponsored RFPs in the Northeast US.
- Mr. Russo directed the diligence efforts for the purchase of two large district energy facilities in the Northeast US.
- Mr. Russo led the analysis for a major foreign investor entering the North American gas pipeline, processing and midstream market, consisting of strategic guidance and the analysis and due diligence of numerous North American and Mexican midstream assets.
- Mr. Russo supervised the analysis for the Alberta Electric System Operator on the development of new capacity market mechanisms in the provincial electricity market.

- Mr. Russo directed and led due diligence efforts related to nuclear technology and power markets for a major private equity investor acquiring a nuclear fuel and services vendor in bankruptcy.
- Mr. Russo led the financial and transactional analysis for a group of investors on a combined heat and power gas-fired cogeneration plant.
- For a major renewable energy and transmission developer, Mr. Russo led the analysis of market impacts of proposed projects and assisted in developing commercial and regulatory strategy in New England and New York.
- Mr. Russo led the analysis for a major transmission project in PJM, including analysis of costs and benefits, production cost modeling, regulatory implications of FERC Order 1000 and other rules, and strategic advice on project development.
- For a transmission developer, Mr. Russo designed and directed the economic and technical analysis of a 2,000 MW HVDC project in the northeast US with detailed analysis of ISO-NE and NYISO markets.
- Mr. Russo directed the economic and technical analysis for a major offshore wind developer connecting into the NYISO and PJM markets for several proposed projects.
- For a worldwide operator of data centers, Mr. Russo directed a risk exposure analysis of multiple markets, commodities and assets to assess the company's exposure to global trends.
- For a private equity investor, Mr. Russo led the diligence on a potential acquisition of the services business of a gas turbine manufacturer. The work involved the analysis of the market for services, the market for service agreements, and an analysis of competitors.
- Mr. Russo directed the analysis of new regulatory approaches and energy technologies for a large African electric utility.
- Mr. Russo assessed the economic and technical suitability of large-scale photovoltaic technologies for a large Middle Eastern utility.
- Mr. Russo directed the analysis of renewable energy (solar and wind) procurement options for one of the largest renewable energy purchasers in the world. This evaluated technical, financial, and economic factors affecting the renewable technologies.
- Mr. Russo directed the analysis of capacity need and market conditions related to the siting of new capacity on Long Island for a client.
- Mr. Russo led a major review of new nuclear development strategy, including technical reviews, risk analyses, economic forecasts and prudence reviews for a US-based electric utility.
- Working for the mayor and city council of a major US city, Mr. Russo managed a due diligence effort to determine the feasibility of supporting new nuclear licensing applications for a municipally owned utility. This included a review of nuclear technology, market conditions, Nuclear Regulatory Commission (NRC) resource constraints, and federal regulatory policy related to nuclear loan guarantee programs.

- Mr. Russo led the analysis for a large industrial client of how electricity market rules related to reliability affected prices in installed capacity markets, including analyses of resource-adequacy and short-term grid contingency events.
- For a major municipal utility, Mr. Russo provided an independent review of the utility's investment analysis to retrofit emissions control equipment to a coal-fired power plant to comply with pending environmental regulations.
- For a transmission developer, Mr. Russo advised on the open-season transmission requirements and FERC process for a new merchant transmission line.
- Mr. Russo directed the analysis of the socioeconomic benefits of advanced coal technology in European, Chinese and South Asian markets, focusing on market effects, induced and indirect benefits and social impacts.
- Mr. Russo led the effort to develop an electrical market model for Europe for a Paris-based client. Working with the production-cost modeling software and his team, he assembled databases of resources, demand, fuel prices, and transmission network characteristics to build a comprehensive model of the EU grid.
- Mr. Russo designed and conducted a series of workshops to assist a major foreign investor with a market-entry strategy for offshore wind into the Northeast US.
- Mr. Russo directed and led a project to synthesize and summarize the nuclear technology risk and seismic hazard data for a two-unit nuclear reactor in North America.
- Mr. Russo directed an engagement for a client to assist in the purchase and contracting of large amounts of electricity to support aluminum smelting operations. This consisted of financial analysis of North American power markets including the MISO and PJM and financial evaluation of proposed contract structures.
- Mr. Russo managed a major effort for the City of New York to develop a Master Electrical Transmission Plan to address economic and reliability needs in the context of a multi-stakeholder process, incorporating the Mayor's Office, Economic Development Corporation, NYISO, ConEd, and the NYS Public Service Commission. The program addressed the economic and technical factors associated with AC and HVDC transmission, as well as the policy and financial impacts of public-private partnerships and equity investment strategies.
- For a major power development company, Mr. Russo led several projects to determine the optimal strategy for entering the gas-fired development market under pending environmental constraints and regulations. In a related project, he led efforts to investigate the feasibility of new and waste coal development in the PJM energy market.
- For the City of New York, Mr. Russo led a major effort to investigate the reliability and economic and environmental impact of the closure of the Indian Point Nuclear Energy Center on consumers and the economy. This comprised a report as well as testimony before various commissions.
- For a private equity firm, Mr. Russo directed the due diligence assessment of an energy storage technology manufacturer, focusing on the analysis of market opportunities for energy storage.

- For a major global semiconductor manufacturer, Mr. Russo led an effort to develop a global energy procurement strategy, analyze potential power contracts, and benchmark procurement activities against other similar firms
- Mr. Russo directed the review of the internal technical and financial modeling processes for an investor in the liberalized UK energy market.
- For a gas pipeline developer, Mr. Russo directed the analysis of a new pipeline project's impact on gas basis differentials.
- For a major European utility, Mr. Russo designed and managed a process to develop internally consistent analysis scenarios to enhance corporate planning. The effort involved soliciting input from different groups throughout the enterprise, designing scenarios, analyzing the results, and presenting the results to internal and external stakeholders.
- For a major Internet search provider, Mr. Russo directed the evaluation of potential sites for data centers in Europe and the US.
- For a major Asian utility, Mr. Russo managed an engagement to develop a growth strategy for a subsidiary of the parent firm, including a review of current operations, market positioning, potential risks, and strategic alliances, culminating in a concrete division growth plan.
- Working for the Executive Office of Sheikh Mohammed of Dubai, Mr. Russo was a principal in a major study examining the effectiveness of Dubai's current electric utility, petrochemical resources, and water resources. Working closely with local personnel, he spent significant time interviewing Dubai Electricity and Water Authority (DEWA) and Dubai Supply Authority (DUSUP) personnel, Emirati leaders, and stakeholders; evaluating petrochemical and water resources; and developing a comprehensive multi-attribute, multi-scenario energy system model of the emirate for evaluation of future energy strategies.
- Mr. Russo was a principal in a project to restructure a major utility in the United Arab Emirates, including long-term planning functions, regulatory efforts, customer service systems, IT architecture, and financial systems.
- Mr. Russo led a project for a major Hong Kong-based utility to help them adapt their management processes, planning infrastructure, and IT systems to pending emissions and energy trading regulations through performing needs assessments, sourcing strategies, and drafting RFPs.
- While with ABB, Mr. Russo helped design and organize the China Energy Technology Program, a joint ABB/AGS program to investigate sustainable energy systems in China, which included Electric Generation Expansion Analysis (EGEAS) modeling of the eastern China power network to identify long-term, cost-effective strategies for environmental improvement. The project was conducted in conjunction with the Swiss Federal Institute of Technology (ETHZ) and the Paul Scherrer Insitut (PSI).
- Working with the MIT Cogeneration Plant, Mr. Russo provided continuing guidance and expertise on cogeneration plant and gas turbine operations, as well as conducting several economic cost-benefit analyses to plan future plant expansion.

- For a major software firm and federal clients, Mr. Russo helped prepare and develop a wide-area synchronized phasor measurement system to measure phase angle and frequency perturbations across the Eastern Interconnection to enhance grid stability.
- For PJM, Mr. Russo developed software and systems to visualize market participant bidding behavior to assist market monitors and dispatchers.
- For New York ISO, Mr. Russo designed and implemented a PI data historian system for tracking all operational data. He also trained system operators on its use, played an integral part in the standard market design to implementation and EMS development and developed various software applications to analyze system operations.
- For the California ISO, Mr. Russo worked as a consultant during the startup, developing systems to track generator dispatch operations and identify anomalous generator behavior to assist market surveillance personnel. During the power crises and rolling blackouts, he managed and maintained a critical system in use by all ISO personnel and developed a system to analyze results of Stage 2 and 3 events.
- Mr. Russo began his career in power as an intern for the Trigen Energy Corporation analyzing the operations and economics of Trigen's fleet of cogeneration plants.

## Additional Professional Training

- New York ISO Market Operations Course
- New York ISO DSS Market Participants Course
- California ISO Market Participants Course

## Publications & Media Appearances

“*Climate policies and investment: implications for disputes*”, co-authored with Rebecca Rowden and Laura Sochat. Arbitration Review of the Americas 2023 (forthcoming).

“*Economic Evidence of Market Manipulation*,” chapter in the *Guide to Energy Market Manipulation* with Robin Cohen, David Hunger and Brian Rivard. Published by Global Competition Review, March 2018

“*Data Collection*,” chapter in *Integrated Assessment of Sustainable Energy Systems in China: The China Energy Technology Program*. Baldur Eliasson. Kluwer Academic Publishers, 2003.

Quoted in “*Ideas to Bolster Power Grid Run Up Against the System's Many Owners*”, New York Times, July 12, 2013.

## Citizenship and Languages

Mr. Russo is a dual citizen of the United States and Italy.

- English (native)

- Italian (proficient)
- German and French (basic)