1	Q.	Coyne Evidence – Attachment 1 – Expert Testimony of James M. Coyne: Please
2		provide a copy of Mr. Coyne's:
3		
4		Nova Scotia Power Evidence (2013 GRA)
5		
6	A.	Please see Attachment A to this response.

Nova Scotia Power Evidence (2013 GRA)

### NOVA SCOTIA UTILITY AND REVIEW BOARD

DIRECT EVIDENCE OF JAMES M. COYNE

August 7, 2012

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#### I. INTRODUCTION

#### 1 Q1. PLEASE STATE YOUR NAME, AFFILIATION, AND BUSINESS ADDRESS. My name is James M. Coyne, and I am employed by Concentric Energy Advisors, Inc. 2 A1. ("Concentric") as a Senior Vice President. Concentric is a management consulting and 3 economic advisory firm, focused on the North American energy and water industries. 4 5 Based in Marlborough, Massachusetts and Washington D.C., Concentric specializes in regulatory and litigation support, financial advisory services, energy market strategies, 6 7 market assessments, energy commodity contracting and procurement, economic feasibility studies, and capital market analyses. My business address is 293 Boston Post 8 9 Road West, Suite 500, Marlborough, MA 01752. 10 **ON WHOSE BEHALF ARE YOU TESTIFYING?** 11 Q2. 12 A2. I am submitting this Testimony on behalf of Nova Scotia Power, Inc. ("NSPI", or the 13 "Company") in this proceeding. 14 PLEASE DESCRIBE YOUR EXPERIENCE IN THE ENERGY AND UTILITY 15 **Q3**. **INDUSTRIES** YOUR **EDUCATIONAL** AND PROFESSIONAL 16 AND **QUALIFICATIONS.** 17 A3. I am among Concentric's professionals who provide expert testimony before Canadian 18

provincial agencies and U.S. federal and state commissions on matters pertaining to 19 economics, finance, and public policy in the energy industry. I regularly advise utilities, 20 generating companies, public bodies and private equity investors on business issues 21 22 pertaining to the utilities industry. This work includes calculating the cost of capital for 23 the purpose of ratemaking, and providing expert testimony and studies on matters pertaining to rate policy, valuation, capital costs, business and economic risk, demand 24 25 side management, low-income programs, fuels and power markets. In addition, I work 26 for utilities, independent developers and public bodies on issues pertaining to the management and development of power generation, distribution and transmission 27 28 facilities. I have authored numerous articles on the energy industry and provided testimony before federal, state and provincial regulators in the U.S. and Canada. 29

Prior to joining Concentric, I was Senior Managing Director in the Corporate Economics 1 2 Practice for FTI/Lexecon, and Managing Director for Arthur Andersen's Energy & Utilities Corporate Finance Practice. In those positions, I provided expert testimony and 3 advisory services on mergers, acquisitions, divestitures and capital markets for clients in 4 5 the energy industry. In addition to the foregoing prior positions, I was also Managing Director for Navigant Consulting, with responsibility for the firm's Financial Services 6 7 practice, Director in DRI's Electric and Natural Gas practices, and Senior Economist for 8 the Massachusetts Energy Facilities Siting Council, where I analyzed the supply plans 9 and facilities proposals from the state's electric and gas utilities. I also served as State 10 Energy Economist for the Maine Office of Energy Resources.

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I hold a B.S. in Business Administration from Georgetown University and a M.S. in
 Resource Economics from the University of New Hampshire. My educational and
 professional background is summarized more fully in Exhibit JMC-1.

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# 16 Q4. PLEASE DESCRIBE CONCENTRIC'S ACTIVITIES IN ENERGY AND 17 UTILITY ENGAGEMENTS.

A4. Concentric provides financial and economic advisory services to energy and utility
 clients across North America. Our regulatory services include utility ratemaking and
 regulatory advisory services; energy market assessments; market entry and exit analysis;
 corporate and business unit strategy development; demand forecasting, resource
 planning, and energy contract negotiations.

23

#### 24 Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. The purpose of my Testimony is to provide an overview of the primary economic and
business risks facing the Company. I also supplement several of the business and
economic risk topics addressed by Kathleen C. McShane in her "Capital Structure and
Return on Common Equity" evidence that was provided as part of the Company's 2013
General Rate Application (2013 General Rate Application, NSUARB P-893).

11S

### Q6. WHAT IS YOUR UNDERSTANDING OF THE COMPANY AND THE BUSINESS AND ECONOMIC ENVIRONMENT IN WHICH IT OPERATES?

A6. Since 2004 I have provided a variety of consulting services to NSPI, to Emera Inc., the 3 4 parent company of NSPI, and to other subsidiaries of Emera Inc. These assignments 5 have included studies that required an understanding of the general economic, regulatory and business environment in Canada generally and Nova Scotia specifically. With regard 6 7 to the Company's current Rate Application, I have reviewed the Company's discussions of business risk and the Company's responses to the Information Requests of intervening 8 9 parties. Regarding business and economic risk in other regions, I have provided testimony regarding the cost of capital and business risks before regulatory bodies in 10 Ontario, Alberta and British Columbia, as well as in numerous U.S. jurisdictions. I have 11 12 also undertaken recent consulting assignments that require an understanding of the 13 electric utility operating and regulatory environments in Canada and the U.S.

#### II. OVERVIEW OF BUSINESS AND ECONOMIC RISKS FACING NSPI

# 14 Q7. PLEASE DESCRIBE THE ECONOMIC ENVIRONMENT IN WHICH THE 15 COMPANY OPERATES.

NSPI provides over 95% of electricity generation, transmission and distribution in the 16 A7. 17 Province of Nova Scotia ("Nova Scotia Power, Inc.", DBRS Credit Report, July 17, 18 2012, at 5), tying the Company closely to the Provincial economic environment. Influenced strongly by the ailing pulp and paper industry and depressed natural gas 19 prices, as well as exports to the U.S. and others, the Nova Scotia economy is weak. As 20 indicated in Table 1, below, Nova Scotia's real GDP increased only 0.3 percent in 2011, 21 22 which is closer to the 1.7 percent real GDP growth of the U.S. in that period than it was to Canada's overall 2.5 percent real GDP growth in 2011. Similarly, unemployment in 23 24 Nova Scotia remains high relative to the rest of Canada.

TABLE 1							
Economic Indicators in Nova Scotia, Canada and the U.S.							
	Nova Scotia	Canada					

	Nova Scolla	Callaua	0.5.			
Change in Real GDP, 2010-2011	0.3%	2.5%	1.7%			
Unemployment, June 2012	7.7%	6.1%	8.2%			
Note: Canada and Nova Scotia Unemployment rates are guoted on a comparable basis to the U.S. rate						

Note: Canada and Nova Scotia Unemployment rates are quoted on a comparable basis to the U.S. rate. Sources: Statistics Canada; U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics.

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## 1Q8.HOW HAS THE RELATIVELY WEAK ECONOMY IN NOVA SCOTIA2AFFECTED NSPI'S BUSINESS RISK?

A8. NSPI's overall business risk increases when the Nova Scotia economy is weak. The 3 4 business risk that is most closely related to Nova Scotia's weak economy is the increased 5 risk of deferral of costs related to serving load that was forecast but that never For example, in September 2011, Nova Scotia's NewPage Port materialized. 6 7 Hawkesbury paper mill ("NewPage") suspended operations and was granted creditor 8 protection in Canada ("Nova Scotia Power, Inc.", 2011 Annual Information Form, March 9 29, 2012, at 5). NewPage is NSPI's largest single customer, consuming more than 10 percent of forecast 2012 load (NS Power 2013 General Rate Application, at 34). As a 10 result, NSPI filed for and received the ability to defer recovery of its fixed costs starting 11 in 2012 for recovery beginning in 2013 (Id., at 6). Even without the failure of NewPage, 12 NSPI forecasts that its 2013 load will fall by 3.2 percent from 2012 levels due to 13 14 weakness in the general economy (Id., at 34-35), and NSPI continues to remain significantly exposed to a concentration of industrial customers. The failure of the 15 NewPage mill was contemporaneous with the approval of a load retention tariff for 16 Bowater, a smaller mill that operated for a portion of 2012 under a load retention 17 agreement (NS Power 2013 General Rate Application, at 19), but that closed indefinitely 18 19 in June 2012 ("Bowater Mill Closing Indefinitely in Nova Scotia", The Globe & Mail, June 15, 2012). Overall for 2013, NSPI forecasts that recent losses in load account for a 20 total revenue shortfall of \$53 million out of its total 2013 revenue requirement of 21 22 \$1,323.0 million (NS Power 2013 General Rate Application, at 139).

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#### 24 Q9. WHAT OTHER BUSINESS RISKS DOES NSPI FACE?

- 25 A9. NSPI also faces the following primary risks:
- Risk of timely fuel cost recovery. NSPI is one of only two investor-owned vertically-integrated electric utilities in Canada (the other being FortisBC) with substantial company-owned fossil fuel generating capacity ("Capital Structure and Return on Common Equity", McShane, at 7). The largest portion of the Company's costs is composed of fuel purchases ("Nova Scotia Power, Inc.", DBRS Credit Report, November 25, 2011, at 4). This position subjects the

Company to substantial fuel price risk. Therefore, in 2009, the Nova Scotia 1 2 Utilities and Review Board ("NSUARB") adopted a fuel price adjustment 3 mechanism ("FAM") in order to protect the Company from such fuel price 4 volatility (Nova Scotia Power, Inc, 2011 Annual Information Form, March 29, 5 2012, at 6 and 18). While the FAM is expected to generally mitigate risk to NSPI, some risk remains. The auditor for the NSUARB in the current 6 7 investigation into the Company's fuel purchasing practices recommends a 8 disallowance of \$6.0 million of cost recovery related to natural gas purchasing 9 and \$3.65 million related to solid fuel procurement and plant operation 10 ("Confidential Report to the NSUARB", July 9, 2012, Liberty Consulting Group, at V-20 and IV-28, respectively), with the potential for deferral of approximately 11 \$12 million in additional costs related to hedging practices. The credit rating 12 agency DBRS has commented that a deferral significant enough to have a 13 material effect on the Company's liquidity could affect its credit rating (Company 14 15 response to Booth IR 8-(c), in reference to "DBRS Comments on Nova Scotia Power Inc.'s Fuel Cost Decision", January 26, 2011, DBRS). The nature of the 16 Company's vertically integrated status and fossil-fuel based generation portfolio 17 carry operating and financial risks that are greater than NSPI's peers. 18

Risk of timely recovery of forecast capital expenditures over the next three 19 **years.** The Company plans over \$300 million per year in capital expenditures 20 over the next three years ("Nova Scotia Power, Inc.", DBRS Credit Report, July 21 22 17, 2012, at 1). Those capital funds will be used primarily to comply with recent environmental legislation in Canada and standards in Nova Scotia regarding the 23 integration of renewables (Id). Current legislation in Nova Scotia calls for an 24 25 increase in the contribution of renewables to utility generation portfolios in the amount of to 25% renewables in 2015 and 40% in 2020 ("Nova Scotia Power 26 Inc.", Standard & Poors, April 18, 2012, at 2). Such large expenditures are likely 27 28 to result in a substantial drain on cash flow in the near term, and may contribute to 29 higher customer charges in the future.

Risk of coal plant forced retirements. I understand that, under proposed Nova
 Scotia greenhouse gas ("GHG") regulations, the Company will be required to shut

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1 down all coal plants that reach the end of their 45-year economic life, and that 2 GHG reductions will be tied to the federal standard of 25% reductions by 2020 ("Nova Scotia Power, Inc.", DBRS Credit Report, November 25, 2011, at 3). I 3 also understand that the Province of Nova Scotia is currently negotiating an 4 5 equivalency agreement with Environment Canada in order to provide flexibility with regard to the generation portfolio used to meet these reduction targets 6 7 ("Canada and Nova Scotia Working Together to Reduce Greenhouse Gas 8 Emissions", Environment Canada, March 19, 2012). Regardless of any such 9 permitted flexibility, the portfolio changes required to meet the Provincial goals 10 exposes the Company to the risk of disallowance or deferral of cost recovery in 11 relation to peer companies without such requirements.

- 12 **Risk of timely recovery of storm-related costs.** Given NSPI's coastal location, • 13 the Company is significantly exposed to storm-related damage and the associated 14 operating costs to restore power to customers ("Nova Scotia Power, Inc.", DBRS Credit Report, November 25, 2011, at 3). Nova Scotia weather has steadily 15 worsened in the last decade and the Company's System Average Interruption 16 17 Frequency Index ("SAIFI") has been on the rise (NS Power 2013 General Rate Application, at 91). Over the last five years, storm recovery costs have averaged 18 \$10.3 million per year in 2013 dollars, with a peak recovery cost of \$14.1 million 19 in 2010 (Id., at 93). Given that current rates include annual storm costs of \$5 20 21 million (Id., at 92), the Company faces the risk of a shortfall in annual storm 22 funding, especially during periods of extreme events.
- 23

# 24Q10. HOW DO NSPI'S BUSINESS AND ECONOMIC RISKS AFFECT THE25COMPANY'S FINANCIAL RISK?

A10. It is my view that the Company's primary business risks are related to uncertainty surrounding the NSUARB's potential treatment of the future cost of fuel, the cost of compliance with regulations adopted by Environment Canada and other regulatory bodies, and other risks noted above. The recent FAM report from the Board's fuel consultant, which relies on a retrospective review of NSPI's fuel purchases, is an example of the kind of risk that exists for the Company. These issues expose the

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Company to risks unlike those faced by transmission and distribution companies, or those 1 2 with a largely hydroelectric generation portfolio, such as FortisBC. From the viewpoint of the financial markets, uncertainty surrounding cost recovery and regulatory lag 3 translates into greater risk relative to the Company's peers. 4

- 5
- 6

#### HOW DO THE COMPANY'S BUSINESS AND ECONOMIC RISKS COMPARE **Q11.** 7 TO OTHER ELECTRIC UTILITIES IN CANADA?

A11. It is apparent to me that the Company faces higher business risk than that of other 8 9 Canadian utilities, primarily as a result of its substantial generation portfolio, coupled 10 with the high fuel expense and capital requirements associated with environmental compliance for its portfolio. As noted by Ms. McShane, "NSPI produces close to 90% of 11 the power that it sells" ("Capital Structure and Return on Common Equity", McShane, at 12 9) and "is one of only two investor-owned utilities in Canada (FortisBC being the other) 13 14 which own and operate regulated facilities that generate more than a third of the power consumed by their customers." (Id., at 7) This risk is manifest in the fact that Standard 15 and Poor's business risk rating for the Company is merely "Strong", while the majority of 16 other utilities in Canada are given a business risk rating of "Excellent." (Id., at 12) 17

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#### 19 012. HOW DO THE COMPANY'S BUSINESS AND ECONOMIC RISKS COMPARE TO OTHER ELECTRIC UTILITIES IN THE U.S.? 20

As I describe earlier in this Testimony, economic indicators and a high integration of 21 A12. U.S. and Canadian markets point to comparability at least as strong between the Nova 22 23 Scotia economic environment and the U.S. as that between the Nova Scotia and the rest of Canada. Canadian regulators have begun to accept the use of U.S. data and proxy 24 25 groups for purposes of establishing the allowed ROE for regulated utilities, and there is strong regulatory precedent for including U.S. proxy groups for such purposes. In a 26 study performed for the Ontario Energy Board ("OEB") on this matter, I addressed this 27 issue directly and concluded that "no fundamental differences were identified that would 28 29 indicate a significant difference in investor required returns between the two markets" (A Comparative Analysis of Return on Equity of Natural Gas Utilities", Concentric Energy 30 Advisors, June 14, 2007, at 3). 31

1 Upon reviewing extensive evidence on the matter of comparability, the OEB concluded:

2 The Board is of the view that the U.S. is a relevant source for comparable data. The Board often looks to the regulatory policies of State and Federal 3 4 agencies in the United States for guidance on regulatory issues in the 5 province of Ontario. For example, in recent consultations, the Board has 6 been informed by U.S. regulatory policies relating to low income customer 7 concerns, transmission cost connection responsibility for renewable generation, and productivity factors for 3<sup>rd</sup> generation incentive 8 ratemaking. 9

- 10 Finally, the Board agrees with Enbridge that, while it is possible to 11 conduct DCF and CAPM analyses on publicly-traded Canadian holding 12 companies of comparable risk, there are relatively few of these companies. 13 As a result, the Board concludes that North American gas and electric 14 utilities provide a relevant and objective source of data for comparison 15 (Report of the Board on the Consultative Process on the Cost of Capital for Ontario's Regulated Utilities, Decision EB-2009-0084, December 11, 16 17 2009, at 21-22).
- 18The National Energy Board has made similar pronouncements (see, for example,19"Reasons for Decision", In the Matter of TransQuébec & Maritimes Pipelines Inc. Cost
- 20 of Capital for 2007 and 2008, RH-1-2008, March 2009, at 66-71).

#### III. CONCLUSIONS

## Q13. WHAT DO YOU CONCLUDE REGARDING NSPI'S PRIMARY ECONOMIC AND BUSINESS RISKS?

23 A13. I conclude that NSPI faces some unique risks that are relevant to the determination of the Company's cost of capital. The Company operates in a service area that is experiencing a 24 25 significant loss of industrial load and in an economy that remains weak by comparison to the country as a whole. Further, the Company's vertically integrated status with a 26 27 portfolio of largely fossil-based generating resources expose NSPI to both capital and fuel cost recovery risks unlike their Canadian peers, and many U.S. peers. I recognize 28 29 that the NSUARB provides the Company the opportunity for recovery of prudently incurred costs, but the nature of these risks is unique to NSPI, and ultimately translate 30 31 into greater risk for the Company in relation to its peers.

- 1 Q14. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
- 2 A14. Yes, it does.

#### James M. Coyne

#### Senior Vice President, Concentric Energy Advisors

Mr. Coyne provides financial, regulatory, strategic, and litigation support services to clients in the power and utilities industries. Drawing upon his industry and regulatory expertise, he regularly advises utilities, public agencies and investors on business strategies, investment evaluations, and matters pertaining to rate and regulatory policy, capital costs, valuation, fuels, and power markets. Prior to Concentric, Mr. Coyne worked in senior consulting positions focused on North American utilities industries, in corporate planning for an integrated energy company, and in regulatory and policy positions in Maine and Massachusetts. He has authored numerous articles on the energy industry and provided testimony and expert reports before the Federal Energy Regulatory Commission and jurisdictions in Alberta, British Columbia, California, Connecticut, Massachusetts, New Jersey, Ontario, Maine, Texas, Vermont, and Wisconsin. Mr. Coyne holds a B.S. in Business from Georgetown University with honors and an M.S. in Resource Economics from the University of New Hampshire.

#### **REPRESENTATIVE PROJECT EXPERIENCE**

#### **Expert Testimony and Litigation Experience**

- FortisBC Utilities: Before the British Columbia Utilities Commission, provided direct evidence and a supporting study on formulaic approaches to the determination of the cost of capital (BCUC 2012 Generic Cost of Capital Proceeding)
- Northern States Power Company: Before the South Dakota Public Utilities Commission provided expert testimony on the appropriate cost of capital for the company's South Dakota electric utility operations. (Docket No. EL12 )
- Vermont Gas Systems, Inc.: Before the Vermont Public Service Board, filed expert testimony on the appropriate cost of equity and capital structure. (Docket No. 7803A)
- Northern States Power Company: Before the South Dakota Public Utilities Commission, provided expert testimony on the appropriate cost of capital for the company's South Dakota electric utility operations. (Docket No. EL11-019)

- Public Service Commission of Wisconsin, provided expert testimony on the cost of capital for the company's Wisconsin electric and natural gas utility operations. (Docket No. 4220-UR-117)
- Atlantic Path 15, LLC: Before the Federal Energy Regulatory Commission, filed expert testimony on the appropriate rate of return for the Path 15 transmission facilities in California, and the economic and business environment for transmission investments. (FERC Dockets Nos. ER11-2909 and EL11-29)
- Enbridge: Cost of capital witness for the company's 2013 rate filing, providing testimony on recommended ROE and capital structure for the company's Ontario gas distribution business, and a separate benchmarking analysis designed to illustrate the efficiency of the company's operations in relation to its' North American peers. (EB-2011-0354)
- Northern States Power Company: Before the Public Service Commission of Wisconsin, provided expert testimony on the cost of capital for the company's Wisconsin electric and natural gas utility operations. (Docket No. 4220-UR-117)
- FortisBC Energy Inc., provided a detailed study of alternative automatic adjustment mechanisms for setting the cost of equity, filed with the British Columbia Public Utilities Commission, December, 2010. (In response to BCUC Order No. G-158-09)
- Commonwealth of Massachusetts, Superior Court, Central Water District vs. Burncoat Pond Watershed District, provided expert testimony on the appropriate method for computing interest in an eminent domain taking. (Civil Action No. WDCV2001-01051, May 2010)
- Retained by the Ontario Energy Board to evaluate the existing DSM regulatory framework and guidelines for gas distributors, and based on research on best practices in other jurisdictions, make recommendations and lead a stakeholder conference on proposed changes. (2009-2010)
- ATCO Utilities: Primary cost of capital witness on behalf of ATCO Utilities in the 2009 Alberta Generic Cost of Capital proceeding, for the establishment of the return on equity and capital structure for each of Alberta's gas and electric utilities. (AUC Proceeding ID. 85)
- Enbridge: Primary cost of capital witness before the Ontario Energy Board in its Consultative Process on the Board' policy for determination of the cost of capital. (EB-2009-0084)
- Provided written comments to the Ontario Energy Board on behalf of Enbridge Gas Distribution, and separately for Hydro One Networks and the Coalition of Large Distributors in response to the Board's invitation to interested stakeholders to provide comments to help the Board better understand whether current economic and financial market conditions have an impact on the reasonableness of the Cost of Capital parameter values calculated in accordance with the Board's established Cost of Capital methodology; and to help the Board determine if, when, and how to make any appropriate adjustments to those parameter values.
- Atlantic Path 15, LLC: Before the Federal Energy Regulatory Commission, provided expert testimony on the appropriate rate of return, capital structure, and rate incentives for the development and operation of the Path 15 transmission facilities in California. (FERC Docket ER08-374-000)

- Wisconsin Power and Light Company: Before the Public Service Commission of Wisconsin, on establishing ratemaking principles for the company's proposed wind and coal electric generation facility additions, providing expert testimony on the appropriate return on equity. (PSCW Docket Nos. 6680-CE-170 and 6680-CE-171, 2007)
- Aquarion Water Company: Before the Connecticut Department of Public Utility Control, providing expert testimony on establishing the appropriate return on equity for the Company's Connecticut operations. (DPUC Docket No. 07-05-19, 2007)
- Central Maine Power Company: Before the Maine Public Utilities Commission, provided expert testimony on the theoretical and analytical soundness of the Company's sales forecast for ratemaking purposes. (MPUC Docket No. 2007-215, 2007)
- Vermont Gas Systems, Inc.: Before the State of Vermont Public Board, on the company's petition for approval of an alternative regulation plan, provided expert testimony on models of incentive regulation and their relative benefits for VGS and its ratepayers. (VPSB Docket No. 7109, 2006)
- Texas New Mexico Power Company: Before the Public Utility Commission of Texas, on the approval of the company's stranded cost recovery associated with the auction of the company's generating assets. (PUC Docket No. 29206, 2004)
- TransCanada Corporation: Provided an independent expert valuation of a natural gas pipeline, filed with the American Arbitration Association. (AAA Case No. 50T 1810018804, 2004)
- Advised the Board of Directors of El Paso Corporation on settlement matters pertaining to western power and gas markets before FERC. (2003)
- Conectiv: Before the New Jersey Board of Public Utilities, on the approval of the proposed sale of Atlantic City Electric Company's fossil and nuclear generating assets. (NJBPU Docket No. EM00020106, 2000-2001)
- Bangor Hydro Electric Company: Before the Maine Public Utilities Commission, on the approval of the proposed sale of the company's hydroelectric and fossil generation assets. (MPUC Docket No. 98-820, 1998)
- Maine Office of Energy Resources: Before the Maine Public Utilities Commission on behalf of the Maine Office of Energy on the establishment of avoided costs rates for generators under PURPA. (1981-1982)

#### **Regulatory Support Experience**

- Retained by Gaz Métro to provide an independent assessment of the comprehensive incentive rate mechanism designed to improve the performance of Gaz Métro, and evaluate the proposed mechanism resulting from the Company's collaboration with a stakeholder working group. (R-3693-2009, 2011)
- For the Canadian Gas Association, facilitated workshops between Canadian regulators and utility executives on regulatory and utility responses to a low carbon world, and drafted follow-up white paper to facilitate further discussion on emerging industry issues. (2010-2011)

- Retained by Ontario's Coalition of Large Distributors (Enersource Hydro, Horizon Utilities, Hydro Ottawa, PowerStream, Toronto Hydro, and Veridian Connections) to examine the cost of capital for Ontario's electric utilities in relation to those in other provinces and in the U.S. (2008)
- Retained by the Ontario Energy Board to analyze ROE awards for the past two years in Ontario, and compare against other jurisdictions in Canada, the U.S., U.K., and select other European jurisdictions. Differences in awarded ROEs were examined for underlying factors, including ROE methodology, company size, business risks, tax issues, subsidiary vs. parent, and sources of capital. The analysis also addressed the question of whether Canadian utilities compete for capital on the same basis as U.S. utilities. (2007)
- Retained by the Nantucket Planning and Economic Development Commission to educate government officials and island residents on the wind industry, and provide analysis leading to constructive input to the Army Corps of Engineers and the Minerals Management Service on the siting of proposed wind projects. (2004-2007)
- Interim manager of Government and Regulatory affairs for Boston Generating, LLC. Coordinate activities and interventions before FERC, NE-ISO, state regulatory agencies, and local communities hosting Boston Generating power plants. (2004)
- Facilitated the development of an Alternative Regulation Plan with the Department of Public Service and Vermont Gas Systems providing research and advice leading to a rate proposal for the Vermont Public Service Board. Conducted several workshops including the major stakeholders and regulatory agencies to develop solutions satisfying both public policy and utility objectives. (2004-2005)
- For an independent power company, perform market analysis and annual audits of its utility power contract. Services provided include verification of the contract price as a function of its index components, surveys of regional competitive energy suppliers, and analysis of regional spot prices for an independent benchmark. Meet with PUC staff to discuss and represent the company in its annual adjustment process, and report results to the company and its creditors. (2003-2004)

#### Financial and Economic Advisory Experience

- Advisor to a major international corporation in the strategic evaluation of the SmartGrid related business segments, and development of specific investment and acquisition options in those business segments. (2011)
- Advisor to the New Brunswick Department of Energy on facilitating cross-border exports of energy from the Canadian Maritimes to Northeast U.S. markets. (2008-2011)
- Financial advisor to a major international corporation for investments in U.S. nuclear generating units. (2007-2009)
- Lead regulatory and market due diligence advisor to Macquarie Securities in the \$7.4 billion acquisition of Puget Sound Energy. (2007)
- Retained by five Vermont electric utilities to study the comparative economics building the next generation of electric power generation within the state. Working with the utilities, the Vermont Department of Public Service, and the Electric Power Research

Institute (EPRI), ten possible generation technologies were analyzed for their economic and environmental attributes. Costs were compared across technologies, and financial impacts including credit rating were examined. The report was presented in public forums and before state agencies. (2007)

- Advisor to the City of Mesa, Arizona for the potential privatization of the City's electric utility. (2007-2008)
- Independent Market Expert for a large Midwestern utility seeking a credit rating for its electric generation subsidiary. Providing a complete PJM and MISO market assessment and forward financial projections for the company's generation business including over 13,000 MW's of generating capacity. Financial projections are based on LMP price projections for the PJM-MISO interconnect, fuels prices, air emissions prices, and complete financial analysis of the business unit. Also provided support for discussions with the major credit rating agencies in conjunction with an investment bank and independent engineer. (2005-2006)
- Completed financial advisory services to a private equity consortium on the successful acquisition of a gas-fired power generating facility. The engagement included evaluation of all revenue streams, confirmation of investment economics under alternative market scenarios, and support for negotiations on key terms. (2005)
- Engaged by Goldman Sachs to assist with the financial and industry due diligence associated with the acquisition of Zilkha Renewable Energy, a wind energy company with over 20 projects under development. (2005-2006)
- Engaged by the State of Vermont to study of the feasibility of acquiring 550MW of hydroelectric generation facilities from USGen-New England. Completed a valuation of the assets, researched financing options with alternative tax-exempt and taxable structures, monitored the status of NEG's bankruptcy proceedings, researched comparable large-scale municipalizations, studied the potential in-state and out-of-state uses for the power, and tested the market for power sales to regional utilities. Facilitated discussions with companies for equity partnership, as well as for the purposes of providing power marketing and O&M services to the project. In addition to in-house consulting staff, compiled a team of legal, engineering and financing experts to deliver a comprehensive work product reflecting all aspects of the risks and benefits of purchasing this unique set of assets out of bankruptcy. (2003-2004)
- Evaluated a major utility's unregulated energy services business units and advised management on valuation and the potential market for the businesses. Developed offering materials and represented the company in negotiations with a potential buyer. (2001-2002)
- Lead advisor in the auction of Conectiv's \$875 million in fossil and nuclear electric generation assets to NRG, PSE&G, and Exelon. Provided expert testimony before the New Jersey Board of Public Utilities on the auction process and asset values. (1999-2002)
- Provided financial and market analysis to Provincial Auditor of Ontario in examination of the long-term lease arrangement for the Bruce nuclear facility between Ontario Hydro and British Energy. (2002)

- For a private equity firm, evaluated on investment in a manufacturer of electric generation equipment. Analyzed the company's sustainable technological advantage, interviewed major customers, assessed competitor positioning, and provided market and revenue projections for the investment evaluation. (1999)
- Served as technical and market advisor for an investment consortium in the evaluation of an investment in five cogeneration plants. Analyzed fuel and off-take contracts, regulatory risk, plant operating procedures, and management personnel. Provided revenue and cost projections, supported bank discussions, and assisted bid negotiations. (1998)
- Co-advisor to Sithe Energies in the auction of the company's North American assets to Reliant and Exelon, and the marketing of its assets in Australia and Asia. (1999-2000)
- Lead advisor in the electric restructuring, auction of generating assets, and long-term power contracting for Denton Municipal Electric. Conducted regular briefings for the City Council. (1999-2001)
- Co-advisor to Sierra Pacific Resources in the proposed auction of 3,000 MW of fossil generating assets. (1999-2000)
- Co-advisor to TXU in the proposed auction of 560 MW of fossil generating assets. (2000)
- Co-advisor to Boston Edison (NSTAR) in the auction of \$536 million in fossil generating assets to Sithe Energy. (1997-1998)
- Co-advisor to GPU in the auction of \$1.7 billion in fossil generating assets to Sithe Energy. (1997-1998)
- Lead advisor to Bangor Hydro Electric Company in the auction of \$90 million in hydroelectric, transmission, and fossil generating assets to PP&L Global. (1998-1999)

#### **Business Strategy Experience**

- Retained by a major Canadian electric company to study the cross-border transmission constraints into U.S. power markets and identify strategic options and transmission investments for expanding capacity and energy flows into these markets. (2007)
- Retained by the Western Electric Coordinating Council's (WECC) Board of Directors to facilitate the development of the WECC's five-year strategic plan. WECC is one of eight regional electric reliability organizations in North America, with 180 members across 14 states, and portions of Canada and Mexico. Leading the effort for Concentric, the planning process entails interviewing key stakeholders, facilitating discussion within and across member groups, gathering and presenting research, and making recommendations to the Board on the Strategic Plan. (2007)
- Engaged by a Canadian based utility company to develop its business strategy for growth in the U.S. Working with senior management, providing both a "big picture" strategic assessment of driving forces and opportunities in distribution, transmission and generation, supported by more detailed evaluation of specific investment options for presentation and discussion with its Board. (2005-2007)

- Advisor to Cook Inlet Regional, Inc., an Alaskan Native corporation, for the purpose of developing wind energy projects within the State of Alaska. (2006)
- Advisor to Tamarack Energy, Inc., for the purpose of developing renewable energy projects in the Northeast U.S. (2006)
- Engaged by a major Japanese corporation to provide assistance with the strategic evaluation of its ability to enter the \$400 billion power and gas trading market. Management in Tokyo and New York required an independent assessment of the new and complex U.S. market for power and natural gas, and a determination of the company's ability to successfully compete. (2005-2006)
- Retained by an international power company to assist with evaluation of its corporate strategy and financial performance. Evaluated the company's corporate strategy using modern portfolio management tools to determine the inherent risk/reward trade-offs in the company's business portfolio. Analyzed core drivers of movements in the company's stock price and assisted the management team with engaging the Board of Directors in a strategic evaluation of the company's electric business. (2004)
- Strategic advisor to a major Public Power Authority in its evaluation of alternative business strategies and organizational structure. Provided industry benchmarking and qualitative analysis of various public power models for the Authority and developed future industry scenarios. Collaborated with team of legal and banking advisors in examining restructuring options to maximize benefits to the Authority's stakeholders. (2004-2005)
- Provided analysis for the FirstEnergy Board of Directors regarding the potential economic impact of the 2003 power outage. (2003)
- Provided a strategic assessment of an eastern utility's electric generation and marketing business. The strategic assessment included: analysis of wholesale and retail electric markets in PJM, NE and NY markets, capacity, energy and ancillary service products, transmission and congestion, customers for wholesale products, competitors, short-term and long-term financial measures of viability, and factors for success. The engagement involved brainstorming sessions with the client team, research and analysis, and concluded with a report and evaluation of the company's strategic options and business prospects. (2003)
- Developed a cost of capital and investment decision-making framework for the company's new business investments. (2002)
- Strategic advisor to a Mid-Atlantic Utility in the development and implementation of the company's generation and marketing business. (1999-2000)

#### PUBLICATIONS AND RESEARCH

- "Autopilot Error: Why Similar U.S. and Canadian Risk Profiles Yield Varied Ratemaking Results" (with John Trogonoski), Public Utilities Fortnightly, May 2010
- "A Comparative Analysis of Return on Equity of Natural Gas Utilities" (with Dan Dane and Julie Lieberman), prepared for the Ontario Energy Board, June, 2007

- "Do Utilities Mergers Deliver?" (with Prescott Hartshorne), Public Utilities Fortnightly, June 2006
- Utility Strategy and Shareholder Return (with Prescott Hartshorne), Public Utilities Fortnightly, October 2004
- "Winners and Losers in Restructuring: Assessing Electric and Gas Company Financial Performance" (with Prescott Hartshorne), white paper distributed to clients and press, August 2003
- "The New Generation Business," commissioned by the Electric Power Research Institute (EPRI) and distributed to EPRI members to contribute to a series on the changes in the Power Industry, December 2001
- Potential for Natural Gas in the United States, Volume V, Regulatory and Policy Issues (co-author), National Petroleum Council, December 1992
- "Natural Gas Outlook," articles on U.S. natural gas markets, published quarterly in the Data Resources Energy Review and Natural Gas Review, 1984-1989

#### SELECTED SPEAKING ENGAGEMENTS

- "M&A and Valuations," Panelist at Infocast Utility Scale Solar Summit, September 2010
- "The Use of Expert Evidence," The Canadian Association of Members of Public Utility Tribunals (CAMPUT) 2010 Energy Regulation Course, Queens University, Kingston, Ontario, June 2010
- "A Comparative Analysis of Return on Equity for Utilities in Canada and the U.S.", The Canadian Association of Members of Public Utility Tribunals (CAMPUT) Annual Conference, Banff, Alberta, April 22, 2008
- "Nuclear Power on the Verge of a New Era," moderator for a client event co-hosted by Sutherland Asbill & Brennan and Lexecon, Washington D.C., October 2005
- "The Investment Implications of the Repeal of PUCHA," Skadden Arps Client Conference, New York, NY, October 2005
- "Anatomy of the Deal," First Annual Energy Transactions Conference, Newport, RI, May 2005
- "The Outlook for Wind Power," Skadden Arps Annual Energy and Project Finance Seminar, Naples, FL, March 2005
- "Direction of U.S. M&A Activity for Utilities," Energy and Mineral Law Foundation Conference, Sanibel Island, FL, February 2002
- "Outlook for U.S. Merger & Acquisition Activity," Utility Mergers & Acquisitions Conference, San Antonio, TX, October 2001
- "Investor Perspectives on Emerging Energy Companies," Panel Moderator at Energy Venture Conference, Boston, MA, June 2001
- "Electric Generation Asset Transactions: A Practical Guide," workshop conducted at the 1999 Thai Electricity and Gas Investment Briefing, Bangkok, Thailand, July 1999
- "New Strategic Options for the Power Sector," Electric Utility Business Environment Conference, Denver, CO, May 1999

#### EXHIBIT JMC-1

- "Electric and Gas Industries: Moving Forward Together," New England Gas Association Annual Meeting, November 1998
- "Opportunities and Challenges in the Electric Marketplace," Electric Power Research Institute, July 1998
- "New Market Dynamics," New England-Canada Business Council Annual Meeting, November 1996
- "Fuels Markets and Generation Choices," Electric Power Research Institute Seminar, Charleston, SC, October 1989
- "Issues Underlying the Long-Term Outlook for Natural Gas Markets," International Association for Energy Economics' International Conference, Calgary, Canada, July 1987

#### **EXHIBIT JMC-1**

#### **PROFESSIONAL HISTORY**

Concentric Energy Advisors, Inc. (2006 – Present) Senior Vice President Vice President

FTI Consulting (Lexecon) (2002 – 2006)

Senior Managing Director – Energy Practice

Arthur Andersen LLP (2000 – 2002)

Managing Director, Andersen Corporate Finance - Energy and Utilities

#### Navigant Consulting, Inc. (1996 – 2000)

Managing Director, Financial Services Practice Senior Vice President, Strategy Practice

TotalFinaElf (1990 – 1996)

Manager, Corporate Planning and Development Manager, Investor Relations Manager of Strategic Planning and Vice President, Natural Gas Division

Arthur D. Little, Inc. (1989 – 1990) Senior Consultant – International Energy Practice

#### **DRI/McGraw-Hill** (1984 – 1989)

Director, North American Natural Gas Consulting Senior Economist, U.S. Electricity Service

#### EXHIBIT JMC-1

#### Massachusetts Energy Facilities Siting Council (1982 – 1984)

Senior Economist – Gas and Electric Utilities

Maine Office of Energy Resources (1981 – 1982)

State Energy Economist

#### **EDUCATION**

M.S., Resource Economics, University of New Hampshire, with Honors, 1981

B.S., Business Administration and Economics, Georgetown University, Cum Laude, 1975

#### **DESIGNATIONS AND AFFILIATIONS**

NASD General Securities Representative and Managing Principal (Series 7, 63 and 24 Certifications), 2001 NARUC, Advanced Regulatory Studies Program, Michigan State University, 1984 American Petroleum Institute, CEO's Liaison to Management and Policy Committees, 1994-1996 National Petroleum Council, Regulatory and Policy Task Forces, 1992 President, International Association for Energy Economics, Dallas Chapter, 1995 Gas Research Institute, Economics Advisory Committee, 1990-1993 Georgetown University, Alumni Admissions Interviewer, 1988 - current