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October 19, 2016

BY COURIER (2 COPIES) AND RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, Suite 2700, P.O. Box 2319
Toronto, Ontario M4P 1E4

Dear Ms. Walli:

Re: EB-2016-0160 – Hydro One – Cost of Service

I am writing pursuant to Procedural Order #3 to provide the Board with information in relation to expert evidence that Environmental Defence wishes to provide in this proceeding.

Nature of the Evidence

Environmental Defence wishes to retain Travis Lusney of Power Advisory LLC to provide evidence regarding transmission losses. As noted previously, Environmental Defence intends to explore whether customer bills could be reduced if Hydro One were directed to make more efforts to monitor, manage, and reduce transmission losses. The evidence that Environmental Defence proposes to commission would assist the Board in assessing the kinds of directions it should or should not provide to Hydro One in relation to transmission losses.

Power Advisory would be asked to provide recommendations regarding potential procedures and criteria to be followed by Hydro One to ensure that transmission losses are adequately addressed in its operational decision-making and investment planning. The evidence would focus on high-level recommendations, not comments on individual technical measures. In providing these recommendations, we expect that Power Advisory would also provide examples of how transmission losses are regulated in other jurisdictions and managed by other transmission companies. We hope that this evidence would assist the Board in considering the degree and nature of transmission loss management it should require of Hydro One.

Although this would not be the main focus of the evidence, Power Advisory LLC would also be asked to provide some background information regarding transmission losses such as the kinds of operational measures and capital investments that can be implemented to reduce losses. This kind of background information would assist the Board and parties in assessing whether transmission losses are worth managing at all and shed light on the kinds of directions to Hydro One that the Board may wish to make.

This evidence would relate to high-level issues. It would not delve into the details of Hydro One's transmission system, recommend that specific capital investments be made, or address other similar issues at that level of granularity. We therefore anticipate that the evidence would be concise and brief.

Impact on Customers' Interests

Environmental Defence intents to commission this evidence without express collaboration with other intervenors as we believe that would be the most efficient method to do so. However, this evidence is relevant both for Environmental Defence's constituency as well as all electricity consumers. Better management of transmission losses could lead to reduced bills as well as significant environmental benefits.

Timing of Evidence and Scheduling

We expect that this evidence could be provided on November 9th, 2016 or within two weeks of receiving the Board's guidance on cost eligibility, whichever is later. Although the schedule for this proceeding may need to be adjusted accordingly as contemplated by Procedural Order #3, we will endeavour to proceed as expeditiously as possible and to take steps to ensure that this proceeding can move forward. For example, we would not object to the hearing commencing prior to the filing of this evidence or any interrogatory responses. Also, Mr. Lusney's testimony (if required) could be scheduled for the later days in the hearing schedule.

In considering these scheduling issues, please note that Environmental Defence would have notified the Board earlier had it originally intended to file evidence when it applied for intervenor status in this proceeding. Environmental Defence only decided to file evidence after receiving a number of unexpected interrogatory responses from Hydro One. Environmental Defence was surprised when Hydro One was not able to provide its own transmission losses, provide substantive detail on the kinds of measures that it could take to address transmission losses, or discuss transmission losses in other jurisdictions. Although Environmental Defence still hopes to receive more information from Hydro One, it no longer appears that this will be sufficient.

In light of this unexpected development, Environmental Defence decided to seek an independent expert on this issue. Although we considered the possibility of requesting information through interrogatories to the Board Staff consultant, Chris Oakley, we confirmed only this week that Mr. Oakley will not be testifying. Were it not for these attempts to save ratepayer dollars by seeking information from elsewhere, we would have sought approval for our own expert earlier. In the end, we believe that a focused report from Power Advisory will provide the best and most concise evidence for the Board to consider this issue.

Expert's Experience

As noted above, the evidence would be prepared primarily by Travis Lusney. Mr. Lusney is a Professional Engineer with over ten years of experience in the regulated and commercial electricity sectors. He offers extensive experience in transmission and distribution power system

planning and policy development, including as a Transmission Planner for the Ontario Power Authority. Mr. Lusney has prepared evidence and testified at the Alberta Utilities Commission. He also provided expert consulting services in a previous Hydro One proceeding, EB 2013-0053, in which his costs were approved by the Board. In addition, the principals of Power Advisory, John Dalton and Jason Chee-Aloy, have testified in countless regulatory proceedings. The CVs of Mr. Lusney, Mr. Dalton, and Mr. Chee-Aloy are attached.

Cost Estimates

As noted above, Environmental Defence made a number of attempts to avoid the need and cost associated with an expert. Now that we believe that an expert is necessary, we have also attempted to focus the requested evidence on high-level issues so as to reduce the anticipated cost. We believe the cost estimates outlined below are very reasonable, especially in light of the annual cost of Ontario's transmission losses, which we estimate to be over $389,000,000.[1]

Procedural Order #3 requests an estimate of the incremental time that will be spent by the evidence proponent's counsel and other consultants in relation to the expert evidence. If the Board approves cost eligibility, we anticipate approximately 5 to 15 hours in incremental time from that point forward. The final amount would depend on a variety of factors such as the need for interrogatories and oral testimony. If my incremental time amounted to 10 hours, the cost would be $2,100 (plus tax).

Travis Lusney of Power Advisory has provided the following cost estimates in relation to Power Advisory's work:

Item	**Hours**	**Cost (@ $230/hour)[2]**
Prepare Evidence	15 to 20	$3,450 to $4,600
Interrogatory Responses	4 to 8	$920 to $1,840
Oral Testimony	2 to 4	$460 to $920
Total (assuming interrogatories and oral testimony are needed)	**21 to 32**	**$4,830 to $7,360**

Based on the nature of the evidence in question, it is possible that it will attract only a small number of interrogatories. It is also possible that there will be no questions for Mr. Lusney, in which case oral testimony may not be needed. If that is the case, it is expected that the costs would be less.

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[1] Ontario's generator output in 2015 was 153.7 TWh (*http://www.newswire.ca/news-releases/ieso-releases-2015-ontario-electricity-data-sector-wide-changes-continue-to-impact-supply-demand-price-564992261.html*). Average transmission system line losses were approximately 2.5% (*http://www.ieso.ca/Documents/conservation/LDC-Toolkit/Guidelines-and-Tools/CDM-EE-Cost-Effectiveness-Test-Guide-v2-20150326.pdf, Appendix A*). Multiplying those figures provides approximate system losses for 2015 of 3,842,500 MWh. The weighted average Ontario wholesale market electricity price for 2015 was $101.38/MWh (*http://www.ieso.ca/imoweb/pubs/marketReports/monthly/2015dec.pdf, p. 22*). Multiplying the losses by the price provides an approximate total cost of $389,552,650.

[2] Plus tax.

Other Scheduling Issues

Although this evidence would require some adjustment of the hearing schedule, it may be that an adjustment is required regardless of the approval of expert evidence because of the remaining steps that are needed in relation to the two outstanding motions relating to interrogatory responses. Reply submissions from the moving parties, the School Energy Coalition and Environmental Defence are due on 4:45 pm on Tuesday, October 25, 2016. That would leave only three business days before the start of the hearing on October 31, 2016. We are concerned that this would not leave sufficient time for the Board to issue a decision on those motions and for Hydro One to provide any responses (if it is ordered to do so).

Conclusion

Environmental Defence submits that the above evidence would assist the Board in addressing an important issue worth over $389,000,000 a year. It therefore respectfully requests that costs eligibility be granted. Environmental Defence also respectfully requests that the schedule be adjusted to allow the interrogatory motions to be addressed and also to allow for the filing of the evidence noted above (should costs eligibility be granted).

Please do not hesitate to contact me should anything else be required or of assistance.

Yours truly,

Kent Elson

Encl.

cc: Participants in EB-2016-0160

Travis Lusney

Travis Lusney
Director

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Professional History

- Ontario Power Authority
- Hydro Ottawa Limited

Education

- Queen's University, MSc Electrical Engineering, 2007
- Queen's University, BSc Electrical Engineering, 2004

Mr. Lusney is a Professional Engineer (P.Eng) with 10 years of experience working in both the commercial and regulated areas of the electricity sector. Mr. Lusney is a knowledgeable industry leader with a focus on generation development, market assessment, policy analysis, business strategy, and risk mitigation. Mr. Lusney is a former distribution and transmission planner with a deep expertise in power system planning and resource integration.

Mr. Lusney joined Power Advisory after a position as the Senior Business Analyst of Generation Procurement at the Ontario Power Authority, where he was responsible for management and development of the Feed-In Tariff program. Prior to joining Generation Procurement, Mr. Lusney worked as a Transmission Planner in Power System Planning at the Ontario Power Authority where he was actively involved in regional transmission planning, bulk system analysis and supporting system expansion procurements and regulatory procedures. Mr. Lusney also worked for Hydro Ottawa Limited as a Distribution Engineer responsible for reliability analysis, capital budget planning, power system planning, and project management.

PROFESSIONAL EXPERIENCE

Strategic Investment and Risk Assessment

» Developing an Ontario generation supply outlook to determine future resource needs and related future procurement processes with consideration for power system expansion. The power system outlook considered key areas of risk assessment, supply development scenarios, investment opportunities based on connection capability and project economics.

» Advising generation developers on new competitive procurement processes and determining strategy to help ensure successful participation while reduce exposure to risk. Participated in consultation and stakeholder engagement as an expert in transmission planning, procurement design, and proposal bid development.

» Working with renewable energy developers (mainly wind and solar PV) to plan, construct and successfully reach commercial operation for projects with long-term. Work includes assessment of project risk, investment opportunities, development strategy, solutions for connection issues and advice for securing construction approvals and permits.

» Analyzed the Long-Term Transmission Plan (LTP) for Alberta and developed a comprehensive forecast of Capital Expenditures over the planning time period (2014-2032). The forecast includes an estimate of Development Capital Expenditures by project and region over the three time periods considered in the LTP. Estimated Capital Expenditures for General Plant and Sustainment based on the growth expectations of Alberta's transmission rate base. The analysis provides a detailed view of the long term trend for capital investment in Alberta's transmission system and includes an alternative scenario for lower economic growth and oil sand development.

» Primary consulting resource for CanSIA's Distributed Generation Task Force (DGTF). The DGTF objective included developing a customer based generation model for solar generation after the conclusion of the Feed-In Tariff (FIT) program in Ontario (post-FIT solution), to identify transitional changes to the existing FIT program to support the post-FIT solution and to support solar market growth in the long-term. Responsible for jurisdictional review to identify best practices for customer based solar generation, technical and policy analysis to support the post-FIT solution and development of recommendation report and accompanying communication plan with key stakeholders.

» Co-leader of Solar Development Evolution Working Group which has participation and support from key solar PV project developers, EPC firms, asset operators and owners. The mandate of the working group was to develop policy for a long-term customer centric procurement approach for solar PV generation and identify priorities for transition of the existing FIT program.

» Modeling procurement mechanics and Ontario system characteristics for renewable energy developers to establish a strategic direction for successfully securing power purchase agreements. This work included modeling connection capability within both the distribution and transmission system and assessing attrition risk of currently contracted and under development projects.

» Working with manufacturers of solar PV and wind generation components regarding strategic advice and solutions to meet Provincial content requirements and ultimately increase their market share.

» Completed due diligence on project economics, connection capability and estimated generation operating performance for wind and solar PV developers as part of strategic acquisitions.

» Constructed a quantitative project attrition model for projects with FIT PPAs to determine opportunities for future investment for clients. The model determined probabilistically which contracted FIT projects were at risk of failing to reach commercial operation and identify where new connection capacity would become available.

Generation Resource Procurement and Contracting

» Worked as the Renewable Electricity Administrator in Nova Scotia responsible for the developing and administrating a Request For Proposal (RFP) process to procure over 300 GWh of low impact renewable energy. The process included engagement with stakeholders, development of an RFP document and Power Purchase Agreement and filing the Power Purchase Agreement for regulatory approval with the Nova Scotia Utility and Review Board On August 2nd 2012, after completing the evaluation of all 19 proposals that were submitted, the process successfully concluded with the execution of 355 GWh of contracted facilities.

» Provided support to Non-Utility Generators (NUGs) in negotiations with the Ontario Power Authority for extension of existing Power Purchase Agreement. Support included economic dispatch analysis, development of net revenue requirement pro formas to determine contract value, leading negotiation and providing strategic advice.

» Technical expert for procurement participation for a variety of resource developers including renewables and energy storage. Provided detailed analysis and assessment of procurement process and documentation including strategy for development of proposed projects to maximize opportunities within the Request For Proposal (RFP) and Contract in the multiple procurement processes.

» Responsible for development and ongoing management of the standard offer Feed-In Tariff program for Renewable Energy. Involved with a wide range of stakeholders including project developers, manufactures, investors, regulatory agencies and Government. Analyzed ongoing project costs and market rates to update and maintain Feed-In Tariff price assumptions. This work included analysis of supply chain evolution, equipment providers capability and assessment of project economics.

» Involved in domestic content development within the Feed-In Tariff program as chair of the Domestic Content Working Group. Advised and clarified expectations for project developers and manufactures in understanding the domestic content requirements.

Transmission System Planning

» Provided strategic advice and power system analysis to generation development clients on connection capability of proposed generation projects. Assisted clients in determining optimal project location and estimation of connection cost for different interconnection options.

» Assisted in leading engagement with distributors, transmitters and system operators for variety of clients. Engagement included determining interconnection options, assessing connection risks and establishing timelines and milestones to support overall project development.

» Supported analysis for the Integrated Power System Plan (IPSP) dealing with bulk and regional system considerations, including reliability assessment. Developed regional integrated plans for constrained areas. Lead stakeholder consultation with local distribution companies, regulatory agencies, transmitters and local government officials to develop 10 to 20 year plans and activity coordination.

» Represented through expert evidence and testimony the Utility Consumer Advocate Alberta during Transmission Rate Tariff hearing in front of the Alberta Utility Commission as an expert witness on transmission planning and cost allocation.

» Advised and supported a major gas generation procurement for the Province of Ontario. Work included analysis of regional power system needs and constraints. Assisted in the development of evaluated criteria considerations.

» Developed procedures and policy for system connection assessment under the Feed-In Tariff program, in particular lead the development of the Transmission Availability Test (TAT) and Distribution Assessment Test (DAT) used to assess connection capability. Oversaw development of custom database to support the connection assessment process and coordination with over 80 local distribution companies. Managed staff for regional system analysis as part of the Feed-In Tariff program to determine connection capability for contract awards.

» Lead a study on Distributed Generation impacts and opportunities in the major urban centers as part of a long term energy plan. Lead analysis on behalf of the Ontario Power Authority to determine the distribution generation potential in Central and Downtown Toronto along with the associated cost to develop the distributed generation resources. Worked closely with the local distribution companies, city officials and key stakeholders in understanding specific and general barriers and benefits.

Distribution Reliability and Planning Assessment

» Developed capital work planning process for Asset Management department to ensure accountability and situation and issue identification. Lead the development of the capital budget and work plan for all distribution projects including a 25 year capacity plan for Distribution rate filing. Oversaw capital project tracking and reporting metrics to ensure accountability and transparency for senior management requirements

» Managed reliability statistical reporting as part of regulatory requirements and senior executive requests. Involved in evolution of information gathering methods and worst feeder identification. Lead reliability engineer working closely with planning, design and construction personnel in identifying issues and resolution members. Chair of the asset management committee which oversaw the expectations of future capital sustainment work and associated risk levels

» Involved in the development of the distribution and station asset management plan as key support for current and future Distribution Rate filing.

Selected Speaking Engagements

» Solar Ontario 2016: Moderator for panel on Ontario Electricity Market Renewal Implications for Solar Generation, May 2016

» Clean Energy BC - BC Generate 2015: Panelist on Overview of Canadian Renewable Energy Markets, November 2015

» CanWEA 2015: Panel Member on Wind Generation Integration in Canadian Wholesale Electricity Markets, October 2015

» Solar Ontario 2015: Panel Member on Lessons Learned for the Large Renewable Procurement, May 2015

» Green Profit 2015: Plenary Panel Member on The Future is Now: The Economic Case for Renewables, March 2015

» CanSIA's Solar Canada 2014: Panel Member on Setting Precedents for the Future of Solar Distributed Generation Utility Programs, December 2014

» CanSIA's Solar Ontario 2014: Moderator on Balancing Supply: A look inside Ontario's Electricity System during Peak Demand on July 17, 2013, May 2014

» CanSIA's Solar Ontario 2013: Presenter and Moderator on Electricity Consumer Empowerment – Enabling Distributed Solar Power Generation, May 2013

» Ontario Feed-In Tariff Forum: Panel Member on Barriers to Connection Solar Projects at the Local Level, April 2012

» EUCI's 3rd Annual Conference on: Ontario's Feed-In Tariff, June 2011

» 4th International Conference on Integration of Renewable and Distributed Resources, Albuquerque, December 2010

» OSEA Community Power Conference, November 2010

List of Expert Testimony

Alberta Utilities Commission, Alberta Electric System Operator's 2014 General Tariff Application (Proceeding 2718), Proposed Approach for Designating Transmission Projects (February 2014)

Jason Chee-Aloy

Jason Chee-Aloy
Managing Director

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Professional History

- Ontario Power Authority
- Independent Electricity System Operator
- Ontario Ministry of Energy, Science and Technology
- Canadian Enerdata Limited

Education

- York University, MA, Economics, 1996
- University of Toronto, 1995

Mr. Chee-Aloy is a professional with 20 years expertise in electricity and natural gas market analysis, policy and market development, and project development. He has worked as an energy economist with a strong analytical foundation and understanding of commodity pricing, market design, contract design, industry restructuring, policy development, business strategy, industry governance, and development of electricity infrastructure.

Mr. Chee-Aloy joined Power Advisory after being the Director of Generation Procurement at the Ontario Power Authority (OPA), where he was responsible for procuring over 15,000 MW of generation. He led the development, consultation and implementation of North America's first comprehensive Renewable Energy Feed-in Tariff (FIT) Program. Prior to joining the OPA, he worked for the Independent Electricity System Operator (IESO) where he was actively involved with restructuring Ontario's electricity sector by leading key areas of market design.

Mr. Chee-Aloy is acting for multiple generator, transmitter, trade associations, financial institutions, utility, and regulatory agency clients regarding numerous areas of, but not limited to: market design; contract design; contract negotiation; project development; market analysis; business strategy; market entry strategy; policy analysis and development; power system planning and resource assessments; project acquisitions; etc.

PROFESSIONAL EXPERIENCE

Generation and Transmission Project Development and Project Acquisition

» Working with multiple generation clients regarding the development of their projects in response to the IESO's Large Renewable Procurement and the Alberta Electricity System Operator's (AESO's) forthcoming Renewable Electricity Program (REP) procurement.

» Working with multiple generation clients regarding their participation in the IESO-Administered Markets and resolution of contract issues. Work with these generators includes strategy and solutions regarding analysis of impacts to changes to IESO's market rules and analysis of impacts to changes in the market design of the IESO-Administered Markets.

» Working with multiple generation developers towards commercial operation of their projects under multi-year contracts with the OPA. Work with these developers includes strategy and solutions regarding analysis of permitting and approvals, provincial content requirements, connection requirements, financing and future operations in the wholesale power market to optimize operations and maximize revenues in the wholesale market and under long-term contracts.

» Working with manufacturers of solar PV and wind generation components regarding strategic advice on how to increase their market share by helping them develop their business strategies.

» Working with lenders, financiers, and equity providers providing market intelligence and strategic advice regarding investment in renewable generation projects by helping them develop their business strategies to

invest in generation projects, provide project financing to generation projects, provide equity to generation projects, or acquire generation projects.

» Working with owners of existing generation facilities and prospective developers to value projects for purposes of acquisitions. This work involves assessment of Ontario's electricity market and valuation of specific generation assets, including development of electricity market assessments with projections of power system needs, analysis of the development of projects, and ranking of projects by way of their likely attrition in order to help determine their potential acceptance of partnership opportunities or being acquired. Market entry strategies, business strategies, partnership strategies, and/or acquisition strategies were developed for these generation clients.

» For generation and financial institution clients, assisted these clients in formal and non-formal processes to partner and acquire gas-fired generation projects, wind generation projects, and solar PV generation projects by performing and delivering: Ontario market assessments; Hourly Ontario Energy Price forecasts; contract and market revenue projections; project due diligence; etc.

» Working with multiple generation clients providing assessments of Ontario's electricity market regarding the future generation needs to meet power system adequacy and reliability, coupled with analysis of contracted project attrition and analysis of policy developments, in order to help determine future generation development and investment opportunities, where some of these opportunities may be generation development, partnerships, and/or project acquisitions.

» For multiple trade associations providing assessments of Ontario's electricity market and determining potential future direction of policy developments that help form the basis of policy positions for these associations regarding how certain generation types can best be positioned to continue penetration within Ontario's electricity market.

Ontario Market and Wholesale Market Development

» Acted for the IESO as the facilitator/consultant for the IESO's Electricity Market Forum. One of his main deliverables was the development of the Roadmap that identified and sequenced the major initiatives and recommendations required to evolve Ontario's electricity sector throughout the short-term (present to 2014), Medium-Term (2015-2019) and Long-Term (2020 and beyond). The initiatives and recommendations included: review of wholesale spot pricing, costs (including global adjustment), and cost allocation; review of OPA contracts to ensure alignment with the wholesale market; review of regulated rate design regarding its effect and integration with the wholesale market; increasing demand-side participation in the wholesale spot market; review and assess the need for new ancillary services in light of Ontario's changing supply mix; review of the two-schedule dispatch system within the wholesale market; and review of the framework for scheduling intertie transactions in the wholesale market.

» For generator clients, advised how these generation facilities can meet power system needs in the Ontario electricity market and operate more efficiently given changes to the IESO-Administered Markets regarding spare generation on-line programs and day-ahead commitment programs.

» For transmission clients, advising how new regulated or merchant transmission lines may be developed in the Ontario electricity market and the specific requirements of Ontario Energy Board (OEB) policies.

» For multiple renewable generation clients, advising and representing their interests in the IESO's SE-91 stakeholder consultation and the Visibility Technical Working Group, Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG) on the integration of variable generation in the IESO-Administered Markets. The work within the DTGWG and FPFG requires intimate and technical knowledge of the operations on the IESO-Administered Markets and the technical capabilities of generation facilities regarding how generation units are scheduled and dispatched, how prices are set, and the mechanisms for

compensation for production of energy output.

» For multiple generation clients and associations, advising on IESO's SE-105 (HOEP Review) and SE-106 (GA Review) including analysis of recommendations regarding changes to HOEP and associated changes to the design of the IESO-Administered Markets and IESO Market Rules, and analysis of recommendations regarding changes to the GA.

» For multiple renewable generation clients, advising and representing their interests towards developing their generation projects, including work in areas dealing with OPA contracts, Renewable Energy Approvals, Domestic Content Requirements, Connection Impact Assessments, System Impact Assessments, and Financial Plans.

» For multiple clients, advised on Financial Transmission Rights Market rules and protocols relating to intertie transactions regarding scheduling transactions and associated risks dealing with congestion rents, failed transactions, etc.

» For multiple financiers, advising on investment opportunities in the Ontario electricity market, OPA contracts and IESO-Administered Markets.

» Worked with IESO staff on OPA contract provisions to incentivize efficient offers and dispatch in the IESO-Administered Markets and to manage help Surplus Baseload Generation.

» Developed, managed and delivered OPA Procurement Processes and innovative strategies to procure generation, including assessment of potential new market mechanisms to be developed within the IESO-Administered Markets (e.g., capacity markets).

» Worked with IESO staff to assess how Non-Utility Generator (NUG) facilities could be commercially incentivized to more efficiently participate in the IESO-Administered markets which concluded with a short-term OPA contract with TransAlta Ottawa NUG that was validated by the IESO and OPA to have increased market efficiency.

» Member of the OPA's Integrated Power System Plan (IPSP) Steering Committee that reviewed the IPSP and developed strategy for the regulatory filing and OEB proceeding.

» While at the IESO, was Project Manager of Long-Term Resource Adequacy and developed and delivered high-level design, detailed design, and draft market rules for a centralized forward capacity market (i.e., Resource Adequacy Market (RAM)), and chaired the Long-Term Resource Adequacy Working Group comprising over 20 electricity sector stakeholders.

» For the IESO, implemented short-term resource adequacy mechanisms through the Hour-Ahead Dispatchable Load program and Replacement Generation to Support Planned Outages in 2003 and 2004.

» Developed and drafted over 50 IESO Market Rule amendments, including applicable quantitative assessments, mainly regarding market surveillance, compliance, reliability, scheduling, dispatch and pricing rules, and settlements (i.e., Chapters 3, 5, 7 and 9), therefore having a very strong understanding and knowledge on how the IESO-Administered Markets operate and in particular how the dispatch and pricing algorithms work.

» Developed business processes, developed data requirements, and reviewed applicable Market Rules (e.g., local market power rules) for the Market Assessment Unit.

Generation and Transmission Procurement and Contracting

» Acting for multiple NUG facilities and other generator clients by leading contract negotiations before the OPA for existing and new generation facilities resulting in the OPA executing applicable contracts.

» Acting for multiple wind and solar PV generation clients by leading contract amendment negotiations before the OPA in order to mitigate economic impacts resulting from potential economic curtailment of energy production resulting from IESO market rule changes incorporating transmission-connected wind and solar PV generation into the IESO's real-time scheduling and dispatch process.

» Responsible for the delivery of the design, management and execution of all generation procurement processes and contracts for development of electricity supply resources while at the Ontario Power Authority (2005 to 2010). This included contracting for over 15,000 MW of generation capacity (including some demand-response) with an approximate value of over $25 billion, including combined cycle gas turbine facilities, simple cycle gas turbine facilities, combined heat and power facilities, waterpower facilities, bio-energy facilities, wind power (on- and off-shore) facilities, solar PV facilities and energy-from-waste facilities ranging in size from under 10 kW to over 900 MW through competitive and standard offer procurements and sole source negotiations. The development of procurement processes and long-term contracts needed to necessarily take into account the integration of these generation projects into the wholesale market.

» Managed over 80 staff, developed and successfully implemented North America's first large FIT procurement program for renewable electricity supply resources. To date, over 20,000 applications totaling over 18,000 MW from prospective generation projects have been submitted to the OPA, with over 2,500 MW successfully contracted. In addition, chaired the Renewable Energy Supply Integration Team (RESIT) comprising of Ontario agencies and Government. This Team also held responsibility to implementing the FIT Program.

» Chaired the RESIT that delivered recommendations to the Minister of Energy for development of the Green Energy Act and the FIT Program. Delivered a consensus document assessed and recommended changes to OEB Transmission and Distribution System Codes, regulations and legislation, in addition to the roles and responsibilities of the OPA, IESO, transmitters, OEB and Local Distribution Companies (LDCs) towards ensuring timely development of renewable generation. Senior staff from the IESO, OPA, Hydro One, OEB and the Ministry of Energy comprised the RESIT while Executives from IESO, OPA, OEB and Hydro One frequently attended these meetings.

» Advised the Alberta Electricity System Operator (AESO) regarding development of their present transmission procurement process by researching and reviewing transmission procurement processes from Ontario and Texas.

» Assisted a transmission client in justifying the Ontario power system's need for the East-West Tie transmission line, and delivered applicable technical analysis to support this justification, as part of the client's filing with the OEB for purposes of potentially being appointed developer of the East-West Tie transmission line by the OEB

» Advising a client regarding transmission development opportunities and power system needs relating to the Ontario Government's identified transmission projects contained in the Long-Term Energy Plan (LTEP).

» Led discussions with Hydro Quebec, Nalcor (i.e., formerly Newfoundland and Labrador Hydro) and Manitoba Hydro exploring scope of potential contracts for capacity and/or energy supply, including potential solutions to qualify Ontario capacity for trade with other jurisdictions.

» Received the Canadian Solar Industries Association's 2009 Solar Industry Leader of the Year award.

Policy Development

» For multiple generation and association clients, used power system planning techniques to develop alternate supply and demand scenarios to the LTEP in order to project changes to the generation supply mix and conservation and demand management (CDM) targets in order to help these clients develop their generation development strategies and/or policy positions

» For multiple generation and association clients, using the supply mix and CDM scenarios and targets conveyed in the above point to assess and analyze the Ontario Government's present review of the LTEP, and developing policy positions for these clients regarding forthcoming changes to the LTEP.

» For multiple generation and association clients, assessing and analyzing applicable changes to CDM policies and targets as proposed in the July 2013 Ontario Government's conservation white paper, and developing policy positions for these clients.

» For multiple generation and association clients, assessing and analyzing a potential framework for regional planning and siting of large energy infrastructure projects, as the IESO and OPA have been directed by the Minster of Energy to provide recommendations by August 1, 2013, and developing policy positions for these clients.

» For multiple generation and association clients, assessing and analyzing potential changes to the procurement and contracting of renewable generation projects outside of the FIT Program though an OPA to-be-developed competitive procurement process, and developing recommendations on the design of a competitive procurement process for these clients.

» Advised the Association or Power Producers of Ontario (APPrO) on the structure and design of the Ontario electricity market from policy, market structure and market design points of view (including SWOT analysis of APPrO vis-à-vis its position in Ontario's electricity market and with other energy associations) and facilitated meeting of the APPrO Board of Directors.

» Advised the Ontario Energy Association on various policy developments relating to the Green Energy and Green Economy Act, 2009, OEB's Renewed Regulatory Framework, etc.

Selected Speaking Engagements

» UBS, Alberta's Evolving Energy Landscape, New York, July 2016

» EUCI, U.S./Canada Cross Border Summit, Boston, February 2016

» Canadian Solar Industry Association Annual Conference, Toronto, December 2015, December 2014, December 2013, December 2012, December 2011, December 2010 and December 2009

» Association of Power Producers of Ontario Annual Conference, Toronto, November 2015, November 2014, November 2013, November 2012, November 2011, November 2010, November 2009, November 2008, November 2007, November 2006 and November 2003

» Canadian Wind Energy Association Annual Conference, Toronto, October 2015

» Ontario Energy Association, Annual Energy Conference, Toronto, September 2015, 2014, 2013, Niagara Falls, September 2012

» UBS Utilities Conference, Toronto, June 2015

» Mindfirst Lunch Seminar: Ontario Capacity Auction - Analysis of Feasibility and Criteria for Design Elements, Toronto, May 2015

» U.S./Canada Cross-Border Power Summit, Boston, April 2015

» Ontario FIT and Renewable Energy Forum, Toronto, March 2015

» Canadian Wind Energy Association Operations & Maintenance Summit, Toronto, February 2015

» Canadian Power Finance Conference, Toronto, January 2015

» EUCI, Canada Energy Storage Summit, Toronto, November 2014

» UBS, Ontario Power Markets, New York, November 2014

» Solar Ontario, Ottawa, May 2014

» Ontario Power, Examining the Future Structure of Ontario's Electricity Market: Should Ontario Incorporate a Capacity Market or Alternative Structure Framework?, Toronto, April 2014

» Ontario Waterpower Association, Niagara Falls, October 2013, October 2013, December 2012, December 2011

» TREC Education, Toronto, June 2013

» Canadian Solar Industry Association, Solar Ontario 2013, Niagara Falls, May 2013

» FIT Forum, Toronto, April 2013, April 2012

» Nuclear Symposium, Toronto, May 2012

» TD Securities, The Future of Ontario's Power Sector, Toronto, April 2012

» Ontario Power Perspectives, Toronto, April 2012

» Ontario Energy Association Speaker Series - FIT and the Provincial Budget: What do they mean for Ontario's Electricity Sector, Toronto, April 2012

» Energy Contracts, Calgary, March 2012

» Canadian Power and Finance Conference, Toronto, January 2012, January 2011

» Environmental Law Forum, Cambridge, January 2012

» Capstone Infrastructure Corporation, Investor Day, Toronto, December 2011

» Canadian Projects and Money, Toronto, June 2011

» Ontario's Feed-in Tariff, Toronto, June 2011

» Photon's Solar Electric Utility Conference, San Francisco, February 2011

» Ontario Solar Network, Solar Summit, Toronto, February 2011

» Electricity Invitational Forum, Cambridge, January 2011

» Credit Suisse Alternative Energy Conference, Washington, June 2010

» Transmission and Integrating New Power into the Grid, Calgary, April 2010

» Feed-in Tariff: Another Tool for Meeting RPS, San Francisco, February 2010

» BC Power, Vancouver, January 2010

» Infrastructure Renewal, Toronto, October 2009

» Green Energy Week, Toronto, September 2009

» Ontario Waterpower Association Executive Dialogue, May 2009, May and October 2008

» GasFair and PowerFair, Toronto, April 2008, May 2007 and April 2006

» Eastern Canadian Power and Renewables Finance Forum, Toronto, February 2008

» Quebec Forum on Electricity, Montreal, April 2007

» Energy Contracts, Toronto, March 2007 and November 2003

» Power On, Toronto, October 2006

» Generation Adequacy in Ontario, Toronto, April 2006, March 2005 and April 2004

John Dalton

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Professional History

- Navigant Consulting
- Reed Consulting Group
- R.J. Rudden Associates Inc., 1987-1988
- Massachusetts Energy Facilities Siting Council, 1984-1987
- Massachusetts Department of Environmental Protection, 1981-1984

Education

- Boston University, MBA, 1987
- Brown University, AB, Economics, 1980

A senior electricity market analyst and electricity policy consultant with over 25 years of experience in energy market analysis, power procurement, project valuation, and strategy development. Experienced in the evaluation and analysis of electricity markets and the competitive position of generation technologies and projects within these markets including the assessment of the competitiveness of the underlying market, the development of power market price forecasts, the implementation of power procurement processes, and the development and evaluation of renewable energy policies. Frequent speaker on these subjects at energy industry conferences.

Professional Experience

Market Assessment

» Developed and supported numerous market price forecasts for wholesale power markets across North America. Price forecasts were used to support generation project development efforts, project financings and acquisitions, regulatory policy development, and power procurement efforts.

» Demonstrated the need for electric generation projects in filings submitted to various state and provincial regulatory agencies. Evaluated the cost of a wide range of different generation technologies for a number of clients. Defended analyses in prepared and oral testimony before these state agencies.

» Conducted wholesale power market analyses across North America for a wide range of market participants. Analysis included identifying likely competitors and pricing, security provisions, and general terms and conditions of various power supply options. Evaluated pricing required to compete in the market.

» Advised the Ontario Electricity Financial Corporation with the management of its non-utility generation contracts. Advice included addressing the policy issues associated with balancing concerns with the sanctity of existing contracts and the desire to minimize stranded debt as well as to use the contracts as a source of competitive discipline for the incumbent provincial electric utility.

» Managed a team that was retained by a large power generation company to develop a market assessment and wholesale power market price forecast for the Alberta market. Our assessment focused on issues affecting the fundamentals of the Alberta power market, including the future demand supply balance, growth in demand, market interconnections, and potential new generation capacity additions.

» Retained by the financial advisors for the developer of a proposed new combined cycle gas turbine project in Alberta to establish the toll between the Corporate entity participating in the income fund and the parent. Defended forecast assumptions and the modelling approach before investors as part of a public offering.

» Directed the use of ProSym in a proceeding before the Alberta Energy and Utilities Board (AEUB) to estimate the costs of transmission congestion and the benefits of increasing the transfer capability of the North South transmission interface. Modeling assumptions and methodology were successfully defended before the AEUB.

» Advised numerous generation project developers across North America on opportunities offered by participating in the relevant wholesale power market and various power supply procurement RFPs. Evaluated market risks and outlined strategies for managing these risks most efficiently.

» Analyzed and critiqued the supply planning methodologies of electric and gas utilities, focusing on the appropriateness of the supply planning models and methods. Provided recommendations for improving supply planning methods which were designed to assist the utilities in addressing the uncertainties associated with long-range planning. Prepared recommendations for the refinement of demand forecasting methods for electric and natural gas utilities. Analyzed and evaluated the statistical and quantitative projection methods used, including end-use and econometric forecasting techniques.

» Evaluated electric generating technologies on the basis of the capital and operating costs, technological risk, and environmental impact, identifying a preferred alternative in light of these considerations. Defended the selection process before a regulatory agency.

» Prepared strategic plan for a number of electric and natural gas market participants which evaluated the state/provincial and federal regulatory climate for cogeneration and generation projects, market prices and risks and recommended a competitive strategy.

Market Structure Development and Evaluation

» Advised the governments of Ontario, New Brunswick, Nova Scotia, Western Australia, and Manitoba regarding the restructuring of their wholesale power markets and possible market structures to achieve a workably competitive wholesale market.

» Responsible officer for market design project for the Province of New Brunswick. Navigant Consulting assisted the Market Design Committee and its subcommittees in providing the Minister of Natural Resources and Energy with recommendations on the implementation of electricity restructuring. Issues addressed included developing a market design that addresses concerns with the potential for the exercise of market power and enables New Brunswick to integrate with its interconnected markets. The Market Design Committee addressed development of the electricity market including its design, structure and rules. Navigant Consulting provided advice on the issues to be addressed, prepared issue papers and presentations, created strawmen for resolution of issues, and developed guidelines and direction for the creation of market design rules and protocols.

» Project manager for an assignment with the Province of New Brunswick to assist with the development of its ten-year energy policy. The cornerstone of this energy policy was the framework for restructuring its wholesale and retail electric markets. Advised regarding developments in other wholesale and retail markets and the prospects for meaningful competition in New Brunswick's wholesale and retail markets. Navigant Consulting advised regarding benefits offered by wholesale and retail competition; strategies for protecting New Brunswick consumers from market dislocations and higher prices; appropriate regulatory frameworks for the wires businesses and the prospects for achieving a workably competitive wholesale market in New Brunswick and the resulting market design requirements; and policies for addressing stranded costs raised by market restructuring.

» Markets and economics expert for a project with Western Power, the state-owned fully integrated utility that serves the vast majority of Western Australia. Advised regarding potential changes to the wholesale and retail electric power markets to enhance the competitiveness of these markets. Alternative market structures were evaluated and assessed in an effort to determine the market structure that offers the greatest societal net benefits. Offered proposed market structure changes that would accommodate government policy objectives of allowing greater levels of retail contestability and new entrants to satisfy the market's need for additional capacity. Evaluated restructuring reforms that had been implemented in a range of different markets that were of a similar size as Western Australia.

» Advised the Energy Strategy Working Group regarding the development of an electricity restructuring policy for the Province of Nova Scotia. Reviewed the experience with respect to the wholesale and retail market restructuring in California, New England, PJM, and Alberta and based on this experience outlined lessons learned and potential implications for electric restructuring Nova Scotia. Outlined the arguments for considering the restructuring of Nova Scotia's electricity market, reviewed contrasting market models, and discussed the critical constraints on wholesale and retail market restructuring in Nova Scotia.

» .Provided numerous presentations regarding the experiences with the restructuring of wholesale power markets and the lessons learned. Markets evaluated have included California, Alberta, New York, New England, PJM, Victoria, and England and Wales.

Project Valuation

» Served as Project Manager for assignments requiring the development of valuation estimates for numerous energy projects. Projects typically entailed modeling revenues and costs to predict cash flows and calculate the cumulative present worth of after-tax cash flows. The overall viability of projects were assessed by reviewing the status of project permitting efforts and financial commitments, the major provisions of power purchase agreements and steam purchase agreements.

» Managed a project to provide an independent valuation of a multi-unit generating portfolio as part of a refinancing for the portfolio. Oversaw and managed the development of an electricity market price forecast and estimate of the fair market value of the proposed portfolio. Defended analyses before credit rating agencies and lenders.

» Completed a comprehensive valuation of an oil-sands cogeneration project. As part of this effort, the team examined various market scenarios and potential spot market volatility and the subsequent impact on the client's electricity commodity costs.

» Performed detailed analyses of numerous generation projects' financial feasibility. Analyses considered alternative financing schemes and identified strategies for enhancing project values.

» Evaluated the economic and financial feasibility of a number of different generation projects for project developers, project hosts, and a gas utility. Assisted in the development of a cogeneration feasibility assessment model.

» Developed an estimate of the capital and operating costs of a wide range of generating technologies as part of a comprehensive assessment of the costs of new entry. Also estimated the appropriate cost of equity using the capital asset pricing model and debt and capital structure based on market information for merchant generators.

» Oversaw the development of numerous electricity distribution company valuation models. Used models to derive an estimate of the fair market value of the LDCs. Defended analysis before utility boards and management.

» Developed quantitative and qualitative analyses of generating assets in support of numerous generation asset acquisitions. Assisted in the management and coordination of multiple facets of the due diligence process, including technical engineering assessments, environmental, fuel supply, etc. Experience includes a broad range of fuels / technologies, including wind and other renewables.

Competitive Procurement Support

» Advised on the development of over 25 RFPs for power supplies and demand-side resources for electric utilities across North America, serving as project manager for well over half of these RFPs. Support covered the full range of RFP support services including advising regarding the appropriate form of the RFP and evaluation process to secure resources that best satisfy the client's objectives, drafting the RFP, developing the evaluation framework, marketing the RFP process to prospective bidders and negotiating with bidders.

» Testified before the Alberta Utilities Commission on the appropriate structure for the Alberta Electric System Operator's competitive procurement process. The applicant adopted the many of the recommendations made in rebuttal testimony and the Commission directed the applicant to revise its proposal to conform to other recommendations. A primary focus of the testimony was how to enhance competitive tension in the procurement process for the benefit of electricity consumers.

» Managed a multi-disciplinary team that served as the Renewable Electricity Administrator for the Province of Nova Scotia responsible for procuring 300 GWh of renewable energy through a competitive procurement process.

» Advised the Vermont Public Service Board on the development of a market-based mechanism for the procurement of renewable energy. Legislation identified a reverse auction as a possible procurement mechanism. This along with other procurement methods were evaluated to determine the method that would be serve customers. Alternatives were evaluated by contrasting the product and other distinguishing characteristics, degree of price transparency, requirements for bidders, with each alternatives evaluated in terms of efficiency of outcomes given the anticipated level of competition.

» Advised on commercial issues for power purchase agreements.

» Offered testimony before the Massachusetts Department of Public Utilities on a utility RFP process. Authored reports on the evaluation of proposals.

» Reviewed the performance of the Alberta PPA Auction and critically assessed elements of the PPAs and the auction design which caused the auction to reduce the value secured for the generation assets that were auctioned.

» Outlined the pro and cons of different frameworks that could be used for the sale of surplus energy and reviewed whether these sales frameworks were appropriate for the products being offered and the relevant market.

» Advised the Western Australia Electricity Restructuring Task Force with respect to the performance of auctions in Ireland for the sale of capacity and energy. Reviewed the structure of the auction how it could be employed in Western Australia to mitigate the market power of the incumbent state generator.

» Managed numerous competitive solicitations for renewable energy resources and energy efficiency projects. Projects involved the development of frameworks for evaluating these energy alternatives and for comparing them on a consistent basis with conventional electricity supplies. Analyses considered the relative environmental impacts, reliability benefits, and cost-effectiveness of alternatives.

» Acted as Project Manager for several assignments to serve as the independent evaluator of conventional generation, renewable resource and demand-side RFPs. Responsible for determining whether proposals satisfy the threshold requirements in the RFP and for scoring all proposals. Also responsible for identifying the short-list of proposals, conducting bid clarification meetings with shortlisted bidders, and recommending to the selection of winning bidders.

Transmission Facility Review and Pricing Proceeding Support

» Advised the staff of the Ontario Energy Board on the evaluation of the proposal for a 1,250 MW HVDC line between Quebec and Ontario and served as a participating staff member for the Massachusetts Energy Facilities Siting Board's evaluation of the 2,000 MW HVDC interconnection between Massachusetts and Quebec.

» Advised OEB staff on the review of evidence presented by Hydro One in its application for two 240 kV transmission lines to alleviate the Queenston Flow West constraint.

» Advised clients in Saskatchewan, Newfoundland and Labrador, and Alberta on transmission pricing issues. Testified in the Alberta Transmission Congestion Pricing Principles proceeding.

» Led a consulting team that assisted with the preparation of the East-West Electrical Transmission Grid Study. Authored subsequent updates to this study for Natural Resources Canada.

» Advised a client regarding the elements of a comprehensive electricity export policy framework. Advice focussed on economic and social issues arising from the development of export oriented transmission infrastructure to support the development generation for export.

» Provided testimony on Northeast power markets and transmission issues and consequential damages in a civil case in New York. Evaluated the implications of the loss of a transmission facilities on the power system adequacy.

» Advised a number of clients on the issues associated with the development of merchant transmission facilities. Projects included reviewing the status of merchant project development efforts, merchant project structures, key success factors for merchant plant development and a review of merchant plant development opportunities worldwide.

Renewable Energy Policy Development and Evaluation

» Advised governments of Ontario, New Brunswick, Nova Scotia, and Manitoba on policies for the promotion of renewable energy technologies.

» Advised the Ontario Select Committee on Alternative Fuels on the most promising renewable technologies, identified barriers to their development and adoption and proposed policies for overcoming these barriers.

» Directed a project for a group of municipalities in Manitoba that evaluated the economic opportunity offered by wind projects in Manitoba and identified policies to promote the development of Manitoba's wind resources.

» Evaluated a Continental Renewable Portfolio Standard (RPS) that would span the US and Canada. Project included reviewing the RPS designs for all the major RPS programs in the US and evaluating the changes in electricity trade and resulting electricity cost savings from relaxing various RPS provisions.

» Advised the Ontario Power Authority on the development of a standard offer for renewable energy technologies.

» Delivered a presentation on Canadian policies to promote the development of wind energy projects. Presentation reviewed federal and all relevant provincial programs and policies to promote the development of wind energy projects.

» Developed recommendations for the Manitoba Sustainable Energy Association on policies to promote the adoption of renewable energy technologies in Manitoba. Reviewed the relative advantages and disadvantages of standard offers versus RFPs and made recommendations regarding the appropriate applications of each.

» Advised numerous electricity generation development companies on the implications and opportunities presented by renewable energy policies. Developed strategic plans for a wide range of renewable energy technologies including large scale wind, landfill gas, biomass, anaerobic digestion, and small hydro.

» Evaluated electricity wholesale market and REC prices that would apply to landfill gas projects and reviewed US federal policies that benefited these projects including the production tax credit.

» Reviewed the general market for the development of renewable energy projects in Canada and contrasted market conditions with those in other countries.

» Led the development of a multi-client study that evaluated the opportunities for wind project development in Ontario under existing federal and provincial programs.

» Contrasted state RPS programs by identifying eligible technologies, eligibility requirements for projects in different jurisdictions, strategies for assessing compliance, RPS targets, and penalty provisions for failure to achieve the target.

Speaking Engagements

» "Strategies for Enhancing the Value of Your Asset", IBC Conference, (November, 1999)

» "Electricity Restructuring Lessons Learned: Implications for Ontario", Ontario Energy Marketers Association (April, 2001)

» "Electricity Power Prices in the Deregulated Ontario Market, 2001 CERI Conference, (October, 2001)

» "Electricity Restructuring in the US and Eastern Canada", World Bank/CREG/CERI Conference, (November, 2001)

» "Prices and Price Volatility in the Ontario Wholesale Power Market" PowerFair 2002, (May, 2002)

» "Pricing Fundamentals in the Ontario Wholesale Power Market" PowerFair 2003, (August, 2003)

» "The Economics of Power Generation in Atlantic Canada", 2003 Atlantic Power Summit (October, 2003)

» "Future Opportunities in the Maritimes", 2003 Ontario Energy Contracts Conference, (November, 2003)

» "A Perspective on Ontario's Evolving Wholesale and Retail Power Market Structures", PowerFair 2004, (May, 2004)

» "Canadian Policies to Promote Wind Project Development" EUCI's 4th Wind Energy and Power Markets Conference (September, 2004)

» "Effectively Navigating Ontario's RFP Processes" Power ON Conference, (October, 2004)

» "Enhancing the Performance of the Maritimes Market", 2004 Atlantic Power Summit, (November, 2004)

» "What Will the Ontario Landscape Look Like?", 2005 Ontario Energy Contracts Conference, (January, 2005)

» "Policies to Promote the Adoption of Renewable Energy Technologies in Manitoba", Manitoba Sustainable Energy Association, (April, 2005)

» "Outlook for Ontario Electricity Supply & Pricing", PowerFair 2005, (May, 2005)

» "Key Risks Affecting Ontario Electricity Consumers", AMPCO General Member Seminar (November, 2005)

» "What Kind of Market Structure Would Spark New Investment?" Canadian Institute's Generation Adequacy in Ontario Conference (April 19, 2006)

» "Where are Electricity Pricing Going" Insight Information, Ontario Power Forum (June 15, 2006)

» "Transmission Planning and Policy Development: An Update", APPrO Conference (November 15, 2006)

» "Recent Developments in Transmission Access and Pricing" Insight Information's Grid Reliability and Competition in the Power Sector (December 12, 2006)

» "Renewables in Ontario" Insight Info Conference (June 14, 2007)

» "Report Card on Ontario's Electricity Market" Ontario Energy Association Annual Conference (September 6, 2007)

» "Opportunities for Selling Renewable Power into the New England Market" Insight Info's 5th Annual Atlantic Power Summit (September 26, 2007)

» "New England Market Opportunities and the Prospects for Increased Inter-Regional Trade" Canadian Institute's Atlantic Energy Conference (May 28, 2008)

» "Cost Recovery and Return on Equity for Transmission Investment in the U.S.", Canadian Electricity Association Transmission Council (February 25, 2009)

» "Ontario's Feed In Tariff in the Context of North American Renewable Energy Policies", 2009 OEA Industry Leaders' Roundtable (April 30, 2009)

» "Transmission as Barrier to Wind Power Exports from the Maritime Provinces to the US Northeast", Canadian Wind Energy Association Wind Matters Conference (May 20, 2009)

» "Electricity Transmission Enhancements to Capitalize on Opportunities for Renewable Resource Development", Renewable Energy Conference 2009 (May 28, 2009)

» "Lessons Learned in the Design of Standard Offer and Feed-in Tariff Programs" Vermont Public Service Board Standard Offer Workshop (July 10, 2009)

» "Impact of the Current Economic Climate on North American Renewable Energy Investment", Rothesay Energy Dialogue 2009 (July 14, 2009)

» "Evaluation of Opportunities and Barriers to Wind Power Exports from the Maritime Provinces to the US Northeast", CanWEA 2009: Infinite Possibilities (September 21, 2009)

» "Stakeholder Conference Presentation on the Cost of Capital", Ontario Energy Board (September 22, 2009)

» "Opportunities Offered by the New England Power Market", Insight Info's 7th Annual Atlantic Canada Power Summit (October 5, 2009)

» "Assessment of Ontario's Green Energy Act and its Implications for Ontario", PowerLogic ION Users Conference 2009 (October 23, 2009)

» "Securing Regulatory Support for Smart Grid Investments", Canadian Electricity Association Customer Council (November 24, 2009)

» "Creating a Policy Environment that Supports New Transmission Development", Canadian Institute's Transmission and Integrating New Power into the Grid, (April 19, 2010)

» "Policies for Facilitating Transmission Investment" 2010 OEA Energy Leader's Roundtable, (April 21, 2010)

» Clean Energy Dialogue Conference, U.S. Department of Energy and Natural Resources Canada, (May 20, 2010)

» "Providing Revenue Stability for Offshore Wind: PPAs, RFPs and FITs", Insight Info's Freshwater Wind 2010 (July 19, 2010)

» "Market and Economic Barriers to Electricity Storage", Canadian Electricity Association Generation Council Meeting,, (September 16, 2010)

» "Opportunities Offered by the New England Power Market", Canadian Wind Energy Association: Growing Wind Energy in Atlantic Canada, (September 22, 2010)

» "Considerations for Implementing Feed in Tariffs in Atlantic Canada", 8th Annual Atlantic Canada and US NE Power Summit (October 26, 2010)

» "The Role of Cross Border Trade in Achieving Regional Renewable Energy Objectives", Council of State Governments Energy Plenary (August 8, 2011)

» "Overview of RFP Process for the Procurement of 300 GWh of Renewable Energy from IPPs", The Nova Scotia Feed In Tariff Forum (September 22, 2011)

» Procuring Renewable Electricity under Long-Term Contracts: Balancing Customer and Developer Interests, Atlantic Canada and NE US Power Summit 2011 (October 20, 2011)

» Assessing the Competitiveness of Atlantic Canada's Renewable Energy Sector, Rothesay Energy Dialogue (October 26, 2011)

» Nova Scotia's 2012 Renewable Energy RFP: Delivering Value for Customers 8th Canadian German Wind Energy Conference (February 23, 2012)

» Employing Competition to Procure Transmission: Lessons Learned from Other Markets, IPPSA 18th Annual Conference (March 12, 2012)

» Future Opportunities for IPPs in Atlantic Canada, Halifax 2012 FIT Forum (September 24, 2012)

» Procurement Programs for Long-term Contracts for Renewable Energy Projects in New England, Northeast Energy and Commerce Association, 10th Annual Renewable Energy Conference, (March 28, 2013)

» Market Issues Associated with Wind Integration, Canadian Wind Energy Association and Natural Resources Canada, (September 18, 2013).

» Evidence Regarding Future Declines in the Cost of Wind, CanWEA 2014 Annual Conference (October 28, 2014)

» Renewable Energy Credits and Harmonizing Renewable Energy Trading, EUCI US and Canada Cross Border Trade Conference (April 9, 2015)

List of Expert Testimony

Alberta Utilities Commission, Regulated Rate Option Service Providers Generic Proceeding on Energy Price Setting Plans, (Proceeding 2941), Establishing the Appropriate Return Margin for the Regulated Rate Option (October 2014)

Ontario Support Court, Ogichidaakwe (Grand Chief) Diane M. Kelly on her own behalf, on behalf of all members of the Anishinaabe Nation in Treaty 3 and on behalf of Grand Council Treaty 3, Grand Council Treaty 3, Chief Lorraine Cobiness, Chief Janice Henderson, Chief Kimberly Sandy-Kasprick, and Chief Earl Klyne, on their own behalf and on behalf of Grand Council Treaty #3, Chiefs in Assembly versus Ontario Minister of Energy and Ontario Power Authority, (Court File No. 411/11) (March 2014)

Alberta Utilities Commission, Alberta Electric System Operator's 2014 General Tariff Application (Proceeding 2718), Proposed Approach for Designating Transmission Projects (February 2014)

Province of Quebec Superior Court, Churchill Falls (Labrador) Corporation Limited v. Hydro-Québec, Evaluation of the Power Purchase Contract for the Churchill Falls Project when Negotiated and under Current Market Conditions, (September 2013)

Nova Scotia Utility and Review Board, Nova Scotia Power's Application to Build the Maritime Link (ML-2013-01), (June 2013)

Vermont Public Service Board, Investigation into the Development of Standard Offer

Prices for Sustainably Priced Energy Enterprise Development (SPEED) Program, (Docket No. 7874), (January 2013)

Vermont Public Service Board, Investigation into the Establishment of a Standard Offer Prices for Baseload Renewable Power under the SPEED Program (Docket No. 7782), (May 2012)

Vermont Public Service Board, Investigation into the Establishment of a Standard Offer Prices for certain existing Hydroelectric Plants under the Sustainably Priced Energy Enterprise Development (SPEED) Program (Docket No. 7781), (February 2012)

Vermont Public Service Board, Investigation into the Review of a Standard Offer Prices for Qualifying Sustainably Priced Energy Enterprise Development (SPEED) Resources (Docket No. 7780), (November 2011)

New Hampshire Public Utilities Commission, Concord Steam Corporation, Application of Public Service Company of New Hampshire for Approval of the Power Purchase Agreement with Laidlaw Berlin BioPower LLC (Docket DE 10-195), (December 2010)

Ontario Energy Board, Hydro One Networks Inc. 2010-2011 Electricity Transmission Revenue Requirement and Rates Application, (Docket EB-2010-0002), (September 2010)

Vermont Public Service Board, Investigation Re: Establishment of a Standard Offer Program for Qualifying Sustainably Priced Energy Enterprise Development ("SPEED") Resources (Docket No. 7533), (December 2009)

United States District Court for Eastern California, Global Ampersand, LLC v. Crown Engineering & Construction, Inc., Damage Cost Analysis for Chowchilla and El Nido Biomass Projects (July 2009)

Florida Public Service Commission: Florida Power & Light Company Application for Approval of Standard Offer Contract and Tariff (Docket NO. 080193-EQ), (December 2008)

Louisiana Public Service Commission: Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery (Docket No. U-301922) (September 2007)

Alberta Energy and Utilities Board: Transmission Congestion Management Principles Proceeding, testified on behalf of TransAlta Corporation (EUB 2002-099)

New Brunswick Public Utilities Board: Generic Proceeding on the Need for Proposed Facilities, testified on behalf of New Brunswick Power Corporation Re: forecast of electricity market prices in New England (2001)

New Jersey Board of Public Utilities: Proceeding regarding the competitive implications of restructuring electricity markets on behalf of Orange and Rockland Utilities (1998)

New York Public Service Commission: Proceeding regarding competitive implications of restructuring electricity markets on behalf of Orange and Rockland Utilities (1997)

Federal Energy Regulatory Commission: Review of Competitive Implications of Proposed Merger between Delmarva Power & Light and Atlantic City Electric, testified on behalf of Delmarva Power & Light and Atlantic City Electric (1996)

Rhode Island Energy Facilities Siting Board: Application of Aquidneck Power Ltd. To Build a Natural Gas-fired Generating Facility (1995)

Massachusetts Department of Public Utilities: Review of the Commonwealth Electric Company's Competitive Procurement Process for Demand-Side Resources, testified on behalf of Commonwealth Electric Company (91-234)

Massachusetts Energy Facilities Siting Council: Review of Application by MassPower to build an electric generating facility, testified on behalf of MassPower on the Need and Impacts relative to alternative generation technologies of the proposed project (20 DOMSC 301 (1990))

Massachusetts Energy Facilities Siting Council: Review of Application by Northeast Energy Associates to build an electric generating facility, testified on behalf of Northeast Energy Associates on the impacts and costs relative to alternative generation technologies (16 DOMSC 335 (1987))