

**Travis Lusney**

Manager, Procurement and Power Systems

**Power Advisory LLC**

55 University Ave. Suite 600

Toronto, ON M5J 2H7

Tel: (647) 680-1154

[tlunsey@poweradvisoryllc.com](mailto:tlunsey@poweradvisoryllc.com)

**Professional History**

- Ontario Power Authority (2008-2011)
- Hydro Ottawa Limited (2006-2008)

**Education**

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

**Travis Lusney**

Mr. Lusney is a Professional Engineer (P.Eng) with 12 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. Mr. Lusney offers a unique understanding of the similarities, differences and interactions between different power system networks and components.

**PROFESSIONAL EXPERIENCE****Generation Resource Procurement and Contracting**

Acted as the Independent Administrator for the Atlantic Link Solicitation. The solicitation process was initiated for energy to be bundled with transmission capacity on Emera Inc.'s proposed Atlantic Link submarine electricity transmission project for the delivery of clean energy into the ISO-New England market. As the Independent Administrator, provided assurance to proponents and the Federal Energy Regulatory Commission (FERC) as to the fairness and transparency of activities related to the Atlantic Link energy solicitation.

Technical expert for the Alberta Infrastructure (AI) solar RFP. Provided analysis and strategic guidance on program design, commercial agreement provisions and stakeholder engagement. Assisted the evaluation team in the review and assessment of proposals submitted to the RFP including evaluation of technical requirements for participation and assisting in evaluated cost bid price assessment.

Provide to select clients detailed competitor assessment for clean energy procurements including relative cost of capital analysis, capital cost estimates, procurement strategy, contract risk assessment, bid preparation and quality review of submissions.

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.

Worked as the Renewable Electricity Administrator in Nova Scotia responsible for the developing and administering 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.

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.

### **Strategic Investment and Risk Assessment**

Lead the development of Ontario wholesale electricity price forecast for multiple clients. Clients were provided with a description of wholesale price formation in Ontario. The forecasts include a description of assumptions and methodology based on assessments of power system fundamentals, government policy and Ontario's regulatory framework. Performed sensitivity analysis and scenario assessment to support a wide variety of investment and risk assessments.

Performed analysis of industrial rate design options in Ontario for Canadian Solar Industries Association (CanSIA) to determine the potential impact to net-metered solar generation and energy storage applications. Analysis modeled eight different rate design options over a ten-year forecast period. The avoided cost revenue from the industrial rates were then used in a financial model to assess the potential returns for each option.

Strategic guidance for investments in energy storage solutions in Ontario. Advice included detailed summary of Ontario's electricity market and assessment of opportunities for energy storage solutions along with identification of primary risks to potential revenue streams. Clients for this service included project developers, technology providers, load customers, financial investors, and insurance companies.

Developed a discussion paper on the barriers to development of load-displacement energy storage applications in Ontario. The paper detailed the benefits of energy storage for customers and the power system as a whole. The paper described key barriers restricting the ability to adopt energy storage solutions and proposed multiple regulatory framework changes that would reduce or remove the barriers based on experience in other jurisdictions and reflecting the unique Ontario electricity market.

Review, analysis and drafting of responses on behalf of the Association of Power Producers of Ontario (APPRO) and Canadian Solar Industries Association (CanSIA) to the Ontario Energy Board (OEB) for Residential distribution rate design and Commercial & Industrial distribution rate design. The analysis included assessment of impact on customers and suppliers economics, review of rate design in other jurisdictions, and identification of appropriate rate design that benefits rate-payers and distributed energy resource suppliers.

Review, analysis and commentary on regulated and unregulated of comparable LDCs for a large Ontario distributor. Analysis included detailed modeling of capital spending patterns of multiple LDCs and assessment of differences between spending focus and system plans.

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.

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.

Provided detailed analysis of operating gas-fired generation facilities as part of potential asset sale. Analysis included modeling financial returns, assessment of operational risks. Provided a summary of technical requirements and opportunities the facilities could provide the power system currently and in the future.

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.

Completed due diligence on project economics, connection capability and estimated generation operating performance for wide range of generation types as part of strategic acquisitions. Services included analysis of natural gas delivery, operation restrictions and government policy drivers.

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.

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.

### **Power System Planning**

Lead a jurisdictional survey on behalf of the Independent Electricity System Operator (IESO) on five core initiatives: bulk system planning process, regional planning and non-wires alternatives, customer reliability, end-of-life assets, and competitive transmission procurement. Jurisdictional survey included developing a detailed survey tool and performing over 50 interviews with represents from the around the world including all US Northeastern ISOs, CAISO, system operator and regulator in the UK, system operator, regulator and market operator in Australia, as well as multiple distribution and transmission facility operators. The lessons learned from the analysis were used as an input into a comprehensive overhaul of the IESO's planning methods.

Acted as a witness in Hydro One's transmission rate filing, an Ontario transmitter, providing an assessment on transmission loss in regulation in other jurisdictions and how transmission losses are included in power system planning decisions, including how those losses are related to conservation and demand management initiatives.

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**

Energy Storage Canada 2018: Speaker – Behind-the-Meter Storage for Commercial and Industrial Applications

Energy Storage Canada 2018: Keynote Speaker -How Market Reforms are Driving Energy Storage Opportunities, April 2018 (Toronto) and June 2018 (Calgary)

CanWEA Spring Forum 2017: Panelist - What lies ahead in Ontario and Quebec the low demand future, April 2017

APPrO Conference 2016: Panelist - The evolving connection assessment and planning process in Ontario, November 2016

Canadian Energy Research Institute (CERI) 2016 Electricity Conference: Ontario – A Case Study of Retail Price Impacts, October 2016

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**

Ontario Energy Board, Hydro One Networks Inc's 2017/2018 Transmission Revenue Requirement & Rate Application (EB-2016-016), Transmission Loss Reduction Options (December 2016)

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