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Canada

February 9, 2021

BY RESS AND EMAIL

Ms. Christine Long
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Long:

**Re: Enbridge Gas Inc. (Enbridge Gas)
Ontario Energy Board File No.: EB-2020-0091
Integrated Resource Planning Proposal
Curricula Vitae of Enbridge Gas Witnesses**

Please find the enclosed curricula vitae for Enbridge Gas in the above noted proceeding.

If you have any questions, please contact the undersigned.

Sincerely,

Adam Stiers
Technical Manager, Regulatory Applications

cc.: D. Stevens (Aird & Berlis)
M. Parkes (OEB Staff)
M. Millar (OEB Counsel)
EB-2020-0091 (Intervenors)

CURRICULUM VITAE OF
BRAD CLARK

Experience: Enbridge Gas Inc.

Manager, Distribution Optimization Engineering
2020

Manager, Regional Execution Manager
2019

Enbridge Gas Distribution

Manager, Construction – GTA East
2014

Manager, Major Projects
2013

Project Manager, Major Projects
2011

Project Manager, Engineering
2009

Special Projects Planner, Distribution Planning
2005

Education: Ryerson University - Bachelors of Engineering
2002

Appearances:(Ontario Energy Board)

N/A

John Dikeos

Senior Manager

ICF

200 Laurier Avenue West, Suite 700

Ottawa, ON K1P 6M7

Tel: 1.613.520.1835

Mobile: 1.613.850.0386

John.Dikeos@icf.com



Experience Overview

John Dikeos is a senior energy management consultant with over 13 years of experience with energy conservation and sustainable energy systems. His work has focused on assessments of energy efficiency technologies, energy efficiency potential studies, and the design and implementation of innovative DSM programs. In his current role, John acts as a senior leader on projects, leveraging his technical expertise and deep experience with a variety of energy efficiency-related projects, his effective communication skills, and his attention to detail to ensure that projects are running smoothly and that the level of quality of his team's deliverables is top-notch.

John's market study and technology characterization experience includes several in-depth studies on a broad array of natural gas and electric energy efficiency technologies. John has also worked on several conservation potential studies for natural gas and electric utilities across Canada, for which he's carried out various types of analyses to determine the economic viability and savings potential of energy efficient technologies.

John's program design experience is informed by projects for utilities across Canada and has included the development and analysis of energy efficiency measures, the completion of in-depth analyses of program and portfolio cost-effectiveness, and the development of program infrastructure. In addition, he has designed and supported the implementation of innovative energy efficiency programs, including a mid-stream lighting program and a program focused on supporting energy efficiency in hotels.

John is a Professional Engineer (P.Eng.) in the province of Ontario, a Certified Energy Manager (CEM), and a Certified Measurement and Verification Professional (CMVP). He also holds Master's and Bachelor's degrees in Mechanical Engineering.



Education

- M.A.Sc., Mechanical Engineering, University of Victoria, 2006
- B.Sc., Mechanical Engineering, Queen's University, 2003

Certifications/Other

- Certified Energy Manager (CEM), Association of Energy Engineers (AEE), 2019
- Licensed Professional Engineer (P.Eng.), Province of Ontario, 2011
- Certified Measurement and Verification Professional (CMVP), Association of Energy Engineers (AEE), 2011

Selected Project Experience

Conservation Potential and Other Macro-Level Studies

Integrated Resource Planning Study—Enbridge and Union Gas, Ontario, 09/2016 – 04/2018

Deputy project manager and DSM impact analysis lead for an integrated resource planning study focused on estimating the peak demand impacts of gas energy efficiency measures and the feasibility of using gas DSM to delay or defer infrastructure investments. Study is leveraging the results of ICF's natural gas conservation potential study for the OEB.

Natural Gas Conservation Potential Study—Ontario Energy Board (OEB), Ontario, 11/2015 – 06/2016.

Commercial team lead for a study to estimate the achievable potential for natural gas efficiency in Ontario from 2015 to 2030, including the franchise areas of Union Gas and Enbridge. Provided general oversight, training, and targeted support to the commercial sector modeling and analysis team, in addition to leading client-facing meetings on behalf of the commercial sector team.

Newfoundland Conservation and Demand Management Potential Study—Newfoundland Power Inc. and Newfoundland and Labrador Hydro, Newfoundland, 12/2014 – 08/2015.

Led the commercial sector modeling and analysis for this study, providing general oversight, training, and targeted expert support to the commercial team. My expertise on the assessment of the commercial technologies and the structure of the overall modeling approach was especially critical to the successful execution of this project.

Study on Energy Efficiency and Energy Savings Potential in Industry and on Possible Policy Measures—European Union (EU) Director General for Energy, London, UK, 04/2014 – 02/2015.

In collaboration with ICF's London office, led the development of models to characterize the energy efficiency potential in several industrial and commercial sectors in the EU. The model considered hundreds of potential energy efficiency measures and compared achievable potential savings to targets set out by the EU.

Achievable Potential Study—IESO, Ontario, 01/2013 – 06/2013.

Used the outputs of the IESO's End Use Forecaster (EUF) model to estimate the achievable potential savings for various energy efficiency measures in both the residential and commercial sectors. Market research was carried out on selected priority measure clusters to gain greater insight into the savings potential, the supply chain, program delivery channels, barriers to adoption of the measures, and potential strategies to accelerate their adoption.

Technology Assessments and Market Characterization

Non-Residential Lighting Market Characterization Study—IESO, Ontario, 03/2020 – 09/2020.

Project manager for a study to characterize the current state of the non-residential lighting market in Ontario, identify opportunities to further promote energy efficient lighting in the province, and develop a roadmap for future programming in the lighting sector over the next ten years.

Survey of Energy Consumption in Multi-Unit Residential Buildings (MURBs)—Natural Resources Canada (NRCan), Canada, 12/2017 – 03/2020.

Project manager for a study focused on collecting survey data related to energy usage and building characteristics from hundreds of MURBs across Canada. This will enable the creation of a 1-to-100 Portfolio Manager Benchmark for MURBs in Canada, which currently does not exist, while also answering critical policy questions.

Market Assessment of Ultra-High Efficiency Homes—Natural Resources Canada (NRCan), Canada, 06/2019 – 10/2019.

Executive director for a market assessment study of ultra-high efficiency homes in Canada, including net zero and net zero ready buildings. This study includes an assessment of the existing stock of ultra-high efficiency homes, an analysis of hotspots with regards to regions and building types, a forecast of future trends, and the development of recommendations for strategic programming opportunities.

Market Assessment of Ultra-High Efficiency Commercial and Institutional Buildings—Natural Resources Canada (NRCan), Canada, 03/2019 – 08/2019.

Executive director for a market assessment study of ultra-high efficiency commercial buildings in Canada, including net zero and net zero ready buildings at the top end but also including less efficient buildings that meet the top-tier requirements of certification programs such as LEED and BOMA BEST. This study includes an assessment of the existing stock of ultra-high efficiency buildings, an analysis of hotspots with regards to regions and building types, a forecast of future trends, and the development of recommendations for strategic programming opportunities.

Pre-Feasibility Studies: Innovative Technologies—FortisBC, British Columbia, 05/2013 – Present.

Deep involvement in several in-depth studies focused on characterizing the BC market for innovative natural gas energy efficiency technologies and determining whether they should be incorporated into pilot studies and/or existing DSM programs. In addition to in-depth reviews of the technologies and any available research and pilot studies, each of these studies includes consultations with key market actors, a review of relevant programs in other jurisdictions, a detailed savings analysis on a large number of scenarios, and the development of technical resource manual (TRM) entries. Have served as the primary researcher and project manager on these studies. However, most recently serving as the executive director, which involves training new staff and providing general oversight, technical support related to the research and analysis, and QA/QC of all major deliverables. Have carried out independent studies on the following technologies:

- Radiant barriers, 2020
- Window attachments, 2020
- Step 5 (net-zero ready) homes, 2019
- Vertical common venting in MURBs, 2019
- Warm mix asphalt, 2019
- Manufactured homes (top six measures with the most potential), 2017-2018
- Advanced boiler controls (central boilers in commercial facilities), 2016-2017
- Web-enabled programmable thermostats (RTUs in small and medium commercial facilities), 2016-2017
- Drain water heat recovery (DWHR) systems (residential applications), 2016
- Direct vent wall furnaces (replace lower efficiency space heating systems and lower efficiency fireplaces), 2016

- High-efficiency natural gas fireplaces (replacing existing decorative natural gas fireplaces), 2014
- Condensing unit heaters and IR radiant tube heaters (primarily in warehouses), 2013

DHW Recirculation System Controls—Union Gas, Ontario, 11/2016 – 09/2017.

Executive director and technical expert for technology, market and energy savings assessment of domestic hot water (DHW) recirculation system controls in commercial facilities. Provided general oversight, technical support, and QA/QC of all major deliverables.

Smart Thermostats Compatibility Study—FortisBC, British Columbia, 10/2016 – 04/2017.

Executive director for a compatibility study of smart learning thermostats for residential buildings. This study examined the Nest, Ecobee3, and Honeywell Lyric thermostats, focusing on aspects related to communication, homeowner interaction, utility and functionality, and equipment and thermostat providers. FortisBC employed this study in its development of a pilot program for residential customers in Kelowna, BC.

Compact Furnaces for MURBs and SFD Homes—Canadian Gas Association (CGA), Canada, 05/2015 – 11/2015.

Project manager for a pre-feasibility to assess potential energy savings from compact furnaces, a new class of furnaces with rated capacities of up to 30,000 BTU/h. This study focused on applying this technology in homes with space constraints, including multi-unit residential buildings (MURBs) and row/townhomes. Furthermore, ICF investigated market barriers to increased adoption of compact furnaces.

Demand Control Ventilation Market Expansion—Union Gas, Ontario, 09/2014 – 10/2015.

Led a pre-feasibility study centered on the market expansion of demand control ventilation (DCV) technology in Ontario. Union Gas used the resulting study to determine the feasibility of expanding their existing program for DCV, which is focused on office and retail facilities with single-zone HVAC systems.

Program Design and Implementation

Smart LED Streetlight Conversion Program—Pepco, Maryland, 02/2020 – Ongoing.

Leading the development of cost-effectiveness analysis and a business case related to the deployment of a smart LED streetlight conversion program in the State of Maryland. Also supporting the development of a related testimony and addressing any interrogatories as part of the regulatory process.

Natural Gas 2019-2022 DSM Plan—FortisBC, British Columbia, 08/2017 – 09/2018.

Project manager for a study aimed at assisting FortisBC to build their 2019-2022 DSM plan submission to the BC Utility Commission. This includes providing feedback on their draft program offerings, assessing the cost effectiveness of their portfolio, and preparing a detailed report to document the proposed plan and CE results.

Hotel/Motel Pilot Program—Niagara Peninsula Energy Inc., Ontario, 07/2015 – 04/2017.

Deputy project manager of an 18-month hotel/motel pilot program in NPEI's service territory. Unique features included a focus on all utility costs, end-to-end support to help participants identify and implement measures, and an emphasis on building recommissioning (RCx) and testing and metering new energy efficiency measures that are specifically tailored to the hotel/motel sector.

Yukon DSM Technical Support—Yukon Energy Corporation, Yukon, 09/2014 – 09/2015.

Led the delivery of technical advisory services to support the launch of residential DSM programs in Yukon. This included technical support related to the selection and analysis of LED lighting products, automotive heater timers, and low-cost energy efficiency products and updated modeling to estimate the cost-effectiveness of the program portfolio.

Energy Efficiency Program Design—SaskPower, Saskatchewan, 02/2012 – 09/2013.

Carried out analysis related to the design and implementation of several energy efficiency programs, including a prescriptive lighting program, a lighting redesign program, and an industrial energy optimization program. Tasks included the analysis of energy efficiency measures, the development of program process flows, and the production of program documentation, such as application forms and end user guides.

*Training Development and Delivery***Residential Insulation Retrofits Best Practices Training—Home Performance Stakeholder Council (HPSC), British Columbia, 10/2020 – Ongoing.**

Project manager for a project focused on the development and implementation of a BC-specific online training curriculum to help train BC contractors on the quality installation of residential insulation retrofits. In addition to developing and recording narration of slide deck content, this project involves the development of demo video, interactive exercises, knowledge checks, and a final exam. All of this content will be housed on ICF's learning management system (LMS) platform, which has been white-labelled for the client.

Residential HVAC Equipment Quality Installation Training Implementation—Home Performance Stakeholder Council (HPSC), British Columbia, 05/2020 – Ongoing.

Project manager for a project focused on implementing the furnaces and air source heat pump installation best practices training curriculum, which ICF previously developed for HPSC. This project involved formatting the curriculum in an online learning management system and delivering the training to residential HVAC contractors from all parts of BC. In addition to recorded content, ICF delivered live webinars and added interactive exercises, knowledge checks, and a final exam.

Heat Pump Installation Best Practices Guide Webinars—Home Performance Stakeholder Council (HPSC), British Columbia, 12/2019 – 04/2020.

Led the development of a webinar to inform contractors of about the availability and contents of an Air Source Heat Pump Installation Best Practices Guide, which ICF developed as part of a previous related project. Also acted as the moderator for the delivery of three 2-hour webinars to a total of over 150 participants and provided the client with recordings of the webinars and reports that tracked registrants, participants, poll results, and post-webinar survey feedback.

Residential HVAC Equipment Quality Installation Training Curriculum Development—HPSC, FortisBC, and BC Hydro, British Columbia, 04/2019 – 02/2020.

Project manager for a project focused on the development of a BC-specific training curriculum to help train BC HVAC contractors on the quality installation of high efficiency furnaces and heat pumps in residential retrofit applications. The project also includes the development of a Heat Pump Best Practices Installation Guide.

CDM Program Design and CDM Economics Training—MEARIE Group, Ontario, 10/2014 – 02/2016.

Led the delivery of a two-day training course related to CDM program design and CDM economics. The course was delivered on four separate occasions to groups of 10-25 staff from LDCs across Ontario. Also involved in the preparation of the training material and with updating the course material on an on-going basis.

Expert Testimony

1. Expert Report, "IRP Jurisdictional Review", September 2020. Authored by Michael D. Sloan, Vincent Dufresne, and John Dikeos and submitted on behalf of Enbridge Gas Limited before the Ontario Energy Board in Case EB-2020-0091.
2. Expert Witness Report "Rebuttal to Evidence of James Grevatt on 2017 FortisBC LTGRP Testimony", October 2018. Authored by Michael D. Sloan and John Dikeos and submitted on behalf of FortisBC before the British Columbia Utility Commission (BCUC) in Order G-132-18. Presented evidence concerning the use of non-pipeline solutions, including the use of natural gas DSM to defer or reduce the need for incremental infrastructure investments.
3. Expert Report, "DSM Plan 2019-2022: Program Description and Cost-Effectiveness Results", June 2018. Authored by John Dikeos and Daniel Bowie and submitted on behalf of FortisBC before the British Columbia Utility Commission (BCUC) in Order G-47-19. Presented evidence concerning the cost-effectiveness of FortisBC's proposed 2019-2022 DSM Plan and supported interrogatory responses in this proceeding.
4. Expert Report "Natural Gas Integrated Resource Planning: Initial Assessment of the Potential to Employ Targeted DSM to Influence Future Natural Gas Infrastructure Investment", January 2018. Authored by Michael D. Sloan and John Dikeos and submitted on behalf of Union Gas Limited and Enbridge Gas Limited, before the Ontario Energy Board in Case EB-2017-0128.

Security Clearances

Secret clearance with Canadian Industrial Security Directorate (CISD)

Languages

English: Fluent (spoken and written)

French: Intermediate (spoken and written)

Greek: Advanced (spoken and written)

Employment History

ICF. Senior Manager. Ottawa, ON. 03/2017 – Present

ICF. Manager. Ottawa, ON. 03/2013 – 03/2017.

ICF. Senior Associate. Ottawa, ON. 01/2011 – 03/2013.

ICF (formerly Marbek Resource Consultants). Consultant. Ottawa, ON. 01/2008 – 12/2010.

NRCan Office of Energy R&D. Science and Technology Analyst. Ottawa, ON. 06/2007 – 12/2007.

Tulmar Safety Systems. R&D Engineering Assistant. Hawkesbury, ON. 05/2002 – 08/2002.

CURRICULUM VITAE OF
JASON GILLET

Experience: Enbridge Gas Distribution Inc.

Director, Gas Supply
2020

Manager, Strategic and Power Markets
2019

Strategic Markets Account Manager
2016

Manager, Upstream Regulation
2015

Manager, Transportation Acquisition
2014

Manager, Planning and Technology
2009

IT Project and Operations Manager
2007

Application Specialist
2007

Application Developer
2003

Education: Bachelor of Science, Computer Science
Western University, London, Ontario, Canada, 2003

Appearances: Ontario Energy Board
EB-2015-0166
EB-2020-0094

Canadian Energy Regulator
RH-001-2016

CURRICULUM VITAE OF
CATHERINE MCCOWAN

Experience: Enbridge Gas Inc

Manager, Integrity & Asset Management Governance
2020

Manager, Risk Strategy & Planning
2019

Senior Manager, Asset Analytics
2014

Manager, Asset Management Systems Support
2011

The Multiverse

Independent Consultant & Toy Store Owner
2007

Enbridge Gas Distribution

Manager Operations Service
2002

Manager, Business Process Solutions
2001

Manager Performance Benchmarking
2000

Manager Distribution Expansion
1998

Manager Maintenance
1997

Supervisor C&M System Operations
1995

Senior Project Manager, Engineering
1993

British Gas plc

Senior Engineer, Mathematics & Computing, Engineering Research
1990

Scientist/Engineer, Mathematics & Computing, Gas Control & Network
Analysis
1987

Education: Master Engineering, Robert Gordon's University
Master Business Administration, Strathclyde University
Bachelors of Science Engineering (Hons), Queen's University

Appearances: (Ontario Energy Board)

EB-2012-0459
RP-2003-0203

CURRICULUM VITAE OF
SUZETTE MILLS

Experience: Enbridge Gas Distribution Inc.

Integrated Resource Planning Specialist, Energy Transition Planning
2019

Market Development Specialist, Business Development
2018

Integrated Resource Planning Lead, Carbon Strategy & IRP
2016

Senior Market Policy Advisor, DSM EM&V
2012

Senior Analyst, DSM Research & Evaluation
2012

Analyst – Intermediate Analyst, DSM Research & Evaluation
2001

Customer Attachment / Sales Coordinator
1997

Active / Final Collections Representative, Customer Service Representative,
Small Claims litigation representative
1990

Education: BA – York University
Certificate – Université Canadienne en France

Appearances: (Ontario Energy Board)

EB-2015-0049

CURRICULUM VITAE OF
RAVI SIGURDSON

Experience: Enbridge Gas Distribution Inc.

Manager, Technology Development
2016 - Present

Manager, DSM Program Design, Evaluation & Audit
2015 - 2016

Manager, DSM Evaluation, Monitoring, Verification & Policy
2013 - 2015

Manager, DSM Evaluation, Monitoring & Verification
2012

Union Gas Ltd.

Manager, DSM Research & Evaluation
2008 - 2009

Manager, Market Research & Analysis
2007

Senior Program Manager, Residential Marketing
2006

Commercial/Industrial Category Marketing Specialist
2003 – 2005

Imperial Oil Ltd.

Project Manager & Communications Specialist
2002

Business Analyst
2000 – 2001

Information Systems Analyst/Database Developer
1999

Education: M.B.A. – Major in Information Technology & Systems; Minor in
Operations Management
McMaster University
1999

B.A. – Economics
York University
1995

Appearances: (Ontario Energy Board)
EB-2017-0224
EB-2015-0344
EB-2015-0049
EB-2014-0277
EB-2014-0354
EB-2013-0352
EB-2013-0430
EB-2012-0394



Michael Sloan

Managing Director, Natural Gas and Liquids Advisory Services

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Michael.Sloan@icf.com



EXPERIENCE OVERVIEW

Michael Sloan is the Managing Director for ICF's Natural Gas and Liquids Advisory Services Group. He has more than 35 years of experience in the energy field.

Mr. Sloan provides in-depth analytical and regulatory support for natural gas utilities on issues related to policy-driven electrification and decarbonization policy, the potential for non-pipeline solutions to meet natural gas demand growth, natural gas utility avoided costs, and the value of natural gas demand side management (DSM). He also provides assessments of the value of new natural gas pipeline and storage assets to utilities and ratepayers. Mr. Sloan has worked extensively on Canadian natural gas market and regulatory issues.

Mr. Sloan has also provided market analytics and regulatory support for the propane industry since 2004. In addition to his work evaluating propane market trends and the economic impacts of the propane industry, he is currently focusing on the potential impacts of climate change policies on the industry.

Mr. Sloan is a frequent speaker at natural gas and propane conferences and association board meetings, and has submitted testimony in more than 35 regulatory and legal proceedings related to natural gas distribution company non-pipeline solutions, natural gas avoided costs, natural gas storage market power, natural gas storage economics, natural gas storage land owner issues, pipeline facility expansion economics, propane pricing power and other issues.



Years of Experience

- 35+ years of experience in natural gas and liquids market and policy analysis

Education

- B.A., Economics, Policy Studies/Operations Research, Dartmouth College, Hanover, NH.

PROJECT EXPERIENCE

Selected Natural Gas Industry Analysis and Regulatory Support Projects

Opportunities for Evolving the Natural Gas Distribution Business to Support the District of Columbia's Climate Goals, March 2020. For Washington Gas and AltaGas Mr. Sloan led a major study to evaluate the potential for a major natural gas distribution company to reach net zero carbon emissions by 2050.

018 Potential for Infrastructure IRP to Avoid Natural Gas Distribution Facilities Investments. March 2018. For Union Gas and Enbridge Gas in Ontario, Mr. Sloan led a major study to evaluate the potential for an integrated planning process to reduce the need for new distribution company infrastructure by implementing targeted DSM programs.

2018 American Gas Association Study on the Implications of Policy-Driven Residential Electrification. July 2018. For AGA, Mr. Sloan led a study to determine the cost implications of AGA residential electrification scenarios.

2015 Ontario Natural Gas Market Review: Assessing Ontario Natural Gas Market Requirements. January 2016. Mr. Sloan completed a detailed assessment of Ontario natural gas market requirements for Union Gas Limited, and presented the conclusions of the assessment to the Ontario Energy Board ("OEB") during the OEB 2016 Natural Gas Market Review.

Analysis of the Value of Nexus Pipeline Capacity to DTE Gas Customers. December 2015. Mr. Sloan completed a detailed assessment of the value of holding Nexus pipeline capacity on DTE Gas customers for DTE Gas. The assessment concluded that holding Nexus Pipeline capacity would provide long term benefits to DTE Gas customers.

Analysis of the Value of Nexus Pipeline Capacity on Michigan Energy Markets. November 2015. Mr. Sloan completed a detailed assessment of the value of holding Nexus pipeline capacity on Michigan Energy Markets for DTE Electric. The assessment concluded that holding Nexus Pipeline capacity would provide long term benefits to DTE Electric customers.

Analysis of Union Gas Avoided Costs 2016, 2018. For Union Gas, Mr. Sloan prepared an assessment of the Union Gas estimates of avoided costs used to evaluate DSM programs. The assessment included recommendations for revisions to the avoided cost estimation methodology.

Analysis of Impact of Changing North American Supply and Demand on Union Gas Pipeline Facilities. September 2014. For Union Gas, Mr. Sloan prepared an assessment of the impact of natural gas market changes on planned Union gas facilities. The assessment concluded that new Union Gas facilities would continue to be used and useful for the foreseeable future.

Analysis of the Impact of Changing Natural Gas Market Conditions on ATCO Pipelines Market Risk. January 2014. On behalf of ATCO Pipelines, Mr. Michael D. Sloan completed an assessment of the impact of recent natural gas market changes on ATCO Pipeline market risk. The assessment reviewed the changes in natural gas supply and transportation on market risks for shippers and customers in Alberta.

Analysis of Natural Gas Market Outlook and Options for Gaz Metro, Quebec, Canada, 2013. Mr. Sloan completed an assessment of natural gas market conditions including expected pipeline flows and constraints impacting the Gaz Metro supply planning.

Analysis of Value of Proposed Natural Gas Storage Facilities 2013: Mr. Sloan used his storage valuation model to evaluate the potential value of contracting for capacity on a proposed storage facility for Heritage Gas, Nova Scotia Canada.

Analysis of Natural Gas Supply Options, Centra Manitoba Gas Company – a Division of Manitoba Hydro, 2010 -2012: Mr. Sloan prepared a detailed assessment of natural gas supply options for Centra Manitoba Natural Gas. The review included detailed assessment of customer demand patterns relative to industry standards, availability and likely costs of alternative supply strategies capable of meeting demand. The assessment also included evaluation of the clients' current facility contracts, and recommendations for future natural gas facility development and contracting practices. The review includes an assessment of likely pipeline flows and tariffs on the TransCanada Pipeline system.

Storage Market Concentration, Union Gas Limited, 2005 – 2006: On behalf of Union Gas, Mr. Sloan evaluated natural gas storage market concentration and natural gas storage market power in Ontario and the Great Lakes Basin. His report included an assessment of the workably competitive market region for Union Gas storage based on an analysis of market liquidity, connectivity, and market concentration. Mr. Sloan also testified before the Ontario Energy Board on behalf of Union Gas Limited on these issues. At the conclusion to this proceeding the Ontario Energy Board deregulated more than 50 Bcf of Union Gas Storage.

Analysis of Natural Gas Commodity Options, Centra Manitoba Gas Company – a Division of Manitoba Hydro, 2006 -2007: Mr. Sloan prepared a detailed assessment of natural gas commodity issues and trends influencing natural gas commodity purchases for Centra Manitoba Natural Gas. The review included detailed assessment of customer demand patterns relative to industry standards, availability and likely costs

of alternative supply strategies capable of meeting demand. The assessment also included evaluation of the clients' current commodity purchasing agreements, and recommendations for future natural gas commodity purchasing practices.

Analysis of Optimum Storage Utilization, MichCon Gas, 2006, 2008, 2011: Since 2006, Mr. Sloan has prepared a series of analyses of the optimum storage utilization for the MichCon Gas local distribution company business to support MichCon regulatory proceedings related gas supply costs and storage utilization. The analyses evaluated the value of existing MichCon gas storage to LDC customers based on different weather patterns and usage scenarios.

Analysis of Value of Proposed Natural Gas Storage Facilities to Nova Scotia Power and Light (NSPI) – 2008: Mr. Sloan used his storage valuation model to evaluate the potential value of contracting for capacity on a proposed storage facility to NSPI.

Analysis of the Impact of LNG on Natural Gas Markets in Quebec, Rabaska Limited, 2005 – 2006: Mr. Sloan prepared a detailed analysis and forecast of the likely impacts of an LNG import facility located in Quebec on local, regional, and US and Canadian natural gas markets. The analysis concluded that the facility would substantially reduce natural gas prices in the region, and increase supply options and supply reliability. The report was filed with the Canadian Environmental Assessment Agency by Rabaska Limited as part of the facility approval process.

Analysis of Natural Gas Market Liquidity at Points Affecting New York State LDC's, Northeast Gas Association, 2003: Mr. Sloan co-authored a major study of natural gas market liquidity for the Northeast Gas Association to identify liquid markets for natural gas commodity purchases. The study included development of new approaches to evaluating market liquidity in the Northeastern U.S., and identified market centers that could be considered sufficiently liquid to provide a reliable source of natural gas.

Analysis of Natural Gas and Energy Price Volatility, for the American Gas Foundation and the Oak Ridge National Laboratory, 2003: Mr. Sloan managed a major study and co-authored a report on natural gas and energy price volatility for the American Gas Foundation.

Multi-Client Study, American Gas Association and Interstate Natural Gas Association of America: Mr. Sloan conducted the analysis, and co-authored the report "Short-term Natural Gas Markets" which was widely cited in FERC Order 637. The analysis was used by FERC to provide quantitative support for the removal of price caps in the short-term capacity release market.

Propane Market Analysis

Annual Retail Propane Sales Report: U.S. Odorized Propane Sales by State and End-Use Sector: 2018 – 2020: Mr. Sloan has managed a major project to collect and analyze annual propane sales data for the Propane Education and Research Council (PERC). This effort represents the only currently available data source on state by state retail propane sales, and includes the collection and processing of survey responses from more than 2000 propane marketers.

Propane Market Forecast Model Development: Mr. Sloan managed the development and implementation of two major propane demand forecasting models for the PERC. The models provide the only publicly available forecasting capability at the State and County levels. The Propane Database and Forecasting Model (PDFM) provides State by State assessments of the total odorized propane market by end-use, including residential, commercial, on-road vehicle, industrial, and portable cylinder markets. The County Residential Propane Model (CRPM) provided propane markets with a customizable forecasting tool capable of evaluating residential demand on a county by county basis.

Regulatory and Market Support, National Propane Gas Association, 2008 – 2019. Mr. Sloan provides market and regulatory analysis of issues influencing the propane industry for the National Propane Gas Association.

Assessment of the EIA Regional Residential Propane Model and Regional Residential Distillate Model, U.S. Energy Information Administration, 2006/2007. Mr. Sloan was asked by the EIA to peer review the EIA Residential Short Term Energy Model residential propane and distillate modules. The review included an in-depth review of the two modules, and recommendations to the EIA for model improvements.

EXPERT TESTIMONY

1. Written evidence of Dr. Michael O Lerner and Michael D. Sloan, *Long term natural gas transmission expansion economics*, 1995. Mr. Sloan submitted written evidence and testified on behalf of Union Gas Limited before the Ontario Energy Board in EBRO 486. Mr. Sloan's evidence concerned the long term economics of pipeline expansion on the Union Gas system.
2. Written evidence of Dr. Michael O Lerner and Michael D. Sloan, *Long term natural gas transmission expansion economics*, 1996. Mr. Sloan submitted written evidence and testified on behalf of Union Gas Limited before the Ontario Energy Board in EBLO 251. Mr. Sloan's evidence concerned the long term economics of pipeline expansion on the Union Gas system.
3. "Written Evidence of Bruce B. Henning and Michael D. Sloan", TransCanada PipeLines Limited, Hearing Order RH-1-2002 (dated May 2002). Mr. Sloan submitted written evidence before the National Energy Board on behalf of Enbridge Gas Distribution Inc., Societe En Commandite Gaz Metro, and Union Gas Limited. Mr. Sloan's written evidence concerned the proposed establishment of the Southwest Zone and its impact on market liquidity.
4. "Analysis of FERC Staff Report Investigating California Natural Gas and Electricity Prices", San Diego Gas & Electric Co., Docket Nos. EL00-95-045 and EL00-98-42, prepared by Bruce B. Henning and Michael Sloan, (dated October 15, 2002) and submitted on behalf of Energy and Environmental Analysis, Inc. ("EEA") before the Federal Energy Regulatory Commission ("FERC"). Mr. Sloan's report concerned issues related to FERC's investigation of natural gas and electricity prices.
5. "Written Evidence of Bruce B. Henning and Michael D. Sloan on Behalf of Union Gas Limited", Hearing Order RP-2000-0005 (dated October 29, 2003). Mr. Sloan submitted written evidence on behalf of Union Gas Limited before the Ontario Energy Board. Mr. Sloan's written evidence addressed issues related to the compensation of landowners for the use of natural gas storage pools located on their property.
6. "Written Evidence of Bruce B. Henning and Michael D. Sloan", TransCanada PipeLines Limited, Hearing Order RH-3-2004 (dated June 21, 2004). Mr. Sloan submitted written evidence and testified before the National Energy Board on behalf of Enbridge Gas Distribution Inc., Societe En Commandite Gaz Metro, and Union Gas Limited.
7. Report "The Impact of Rabaska LNG Imports on Quebec and Ontario Natural Gas Markets", authored by Bruce B. Henning and Michael Sloan (dated November 2005) and submitted on behalf of Rabaska Limited Partnership before the Canadian Environmental Assessment Agency.
8. Report "Analysis of Competition in Natural Gas Storage Markets For Union Gas Limited." 2006. Authored by Bruce B. Henning, Michael D. Sloan, and Richard Schwindt and submitted before the Ontario Energy Board Natural Gas Electricity Interface Review EB-2005-0551. 2006. Mr. Sloan testified on behalf of Union Gas Limited before the Ontario Energy Board of Canada.
9. Report "Storage Planning and Optimization for MichCon GCR Customers", December 2007. Authored by Bruce B. Henning and Michael D. Sloan and submitted on behalf of MichCon before the Michigan Public Service Commission U-15451.
10. Report "Assessment of Natural Gas Commodity Options for Centra Gas Manitoba". February 2009. Authored by Bruce B. Henning and Michael D. Sloan and submitted on behalf of Centra Gas Manitoba before the Manitoba Public Utilities Board.
11. Report "Dawn Gateway Pipeline Expansion Project: Market Fundamentals and Market Impact of Project Construction". Authored by Bruce B. Henning and Michael D. Sloan and submitted on behalf of Union Gas before the Canada National Energy Board.
12. Expert witness report "Opinions and Report on Propane Markets and Prices in Minnesota Related to Minnesota Attorney General Counterclaim and Answer". February 2011. Authored by Mr. Michael D. Sloan and submitted on behalf of Ferrellgas, L.P. before the State of Minnesota District Court, Second Judicial District.

13. Report "ICF 2011 Addendum to the 2007 ICF Report: Storage Planning and Optimization for MichCon GCR Customers", December 2011. Authored by Bruce B. Henning and Michael D. Sloan and submitted on behalf of MichCon before the Michigan Public Service Commission U-16921.
14. Report "Impact of Changing Supply Dynamics on the Ontario Natural Gas Market", January 30, 2013. Authored by Mr. Bruce B. Henning, Mr. Michael D. Sloan, and Ms. Briana Adams, and submitted on behalf of Union Gas Limited before the Ontario Energy Board in EB-2013-0074.
15. Report "Review of Natural Gas Pipeline Market Activity around the Dawn Hub". May 2013. Authored by Mr. Bruce B. Henning and Mr. Michael D. Sloan and submitted on behalf of Gaz M tro before the Quebec Public Utilities Board.
16. Expert Witness Report and Testimony "Impact of Changing Natural Gas Market Conditions on ATCO Pipelines Market Risk". January 2014. Authored by Mr. Michael D. Sloan and submitted on behalf of ATCO Pipeline before the Alberta Utilities Board. Mr. Sloan testified on behalf of ATCO Pipelines before the Alberta Utilities Board.
17. Expert Witness Report and Testimony "Updated Assessment of Alton Natural Gas Storage", July 2014, Authored by Mr. Leonard Crook and Mr. Michael Sloan and submitted on behalf of Heritage Gas Limited before the Nova Scotia Utility and Review Board. Mr. Sloan testified on behalf of Heritage Gas before the Nova Scotia Utility and Review Board.
18. Expert Witness Report and Testimony "Impact of Changing North American Supply and Demand on Union Gas Pipeline Facilities", September 2014. Authored by Mr. Michael D. Sloan and submitted on behalf of Union Gas Limited before the Ontario Energy Board.
19. Expert Witness Report "Evaluation of Union Gas Avoided Costs", December 2014, Authored by Michael D. Sloan and submitted on behalf of Union Gas Limited before the Ontario Energy Board in Case No. EB-2015-0029. Mr. Sloan testified on behalf of Union Gas Limited before the Ontario Energy Board.
20. Expert Witness Report and Testimony "The Value of Nexus Pipeline Capacity to DTE Gas Customers", December 2014, Authored by Michael D. Sloan and submitted on behalf of DTE Gas before the Michigan Public Service Commission in Case No. U-17691. Mr. Sloan testified on behalf of DTE Gas before the Michigan Public Service Commission.
21. Expert Witness Report "Impact of Natural Gas Market Trends on Utilization of the Union Gas Dawn Parkway System", June 30, 2015. Authored by Mr. Michael D. Sloan and submitted on behalf of Union Gas Limited before the Ontario Energy Board.
22. Expert Witness Report and Testimony "Impact of the Nexus Pipeline on Michigan Energy Markets", November 2015, Authored by Michael D. Sloan and Maria Scheller and submitted on behalf of DTE Electric before the Michigan Public Service Commission in Case No. U-17920. Mr. Sloan testified on behalf of DTE Gas before the Michigan Public Service Commission.
23. Expert Witness Report and Testimony "The Value of Nexus Pipeline Capacity to DTE Gas Customers", December 2015, Authored by Michael D. Sloan and submitted on behalf of DTE Gas before the Michigan Public Service Commission in Case No. U-17941. Mr. Sloan testified on behalf of DTE Gas before the Michigan Public Service Commission.
24. Expert Witness Report "2015 Ontario Natural Gas Market Review: Assessing Ontario Natural Gas Market Requirements", January 2016. Authored by Mr. Michael D. Sloan and submitted on behalf of Union Gas Limited before the Ontario Energy Board. Mr. Sloan presented the results of the analysis to the Ontario Energy Board on behalf of Union Gas Limited.
25. Expert Witness Report and Testimony "Propane Market Trends in the Northeastern U.S. and Atlantic Canada", January 2016, Authored by Michael D. Sloan and submitted on behalf of Heritage Gas before the Nova Scotia Utility and Review Board. Mr. Sloan testified on behalf of Heritage Gas before the Nova Scotia Utility and Review Board.

26. Expert Witness Testimony "Impact of the Nexus Pipeline on Michigan Energy Markets", October 2016, Authored by Michael D. Sloan and submitted on behalf of DTE Electric before the Michigan Public Service Commission in Case No. U-18143.
27. Expert Witness Testimony "The Value of Nexus Pipeline Capacity to DTE Gas Customers", December 2016. Authored by Michael D. Sloan and submitted on behalf of DTE Gas before the Michigan Public Service Commission in Case No. U-18243.
28. Expert Report "ICF Review of MNP Proposal for Irving Oil Load Retention Service". Authored by Michael D. Sloan and submitted on behalf of Nova Scotia Power before the Canada National Energy Board in Case RHW-001-2017.
29. Expert Report "Assessment of the Impact of the TransCanada Dawn LTFP Service Proposal on Natural Gas Markets", Authored by Michael D. Sloan and submitted on behalf of Union Gas Limited before the Canada National Energy Board in Case RH-003-2017.
30. Confidential Expert Report "Analysis of Merchant Natural Gas Storage Competition in Ontario", January 2017. Authored by Michael D. Sloan and submitted on behalf of Enbridge, Inc. and Spectra Energy Corporation to the Competition Bureau Canada.
31. Expert Witness Testimony "Impact of the Nexus Pipeline on Michigan Energy Markets", October 2017, Authored by Michael D. Sloan and submitted on behalf of DTE Electric before the Michigan Public Service Commission in Case No. U-18403.
32. Expert Report "Rebuttal to Evidence of James Grevatt on 2017 FortisBC LTGRP Testimony" addressing non-pipeline solutions. Authored by Michael Sloan and John Dikeos and submitted on behalf of FortisBC to the British Columbia Utilities Commission in Project No. 1598946.
33. Expert Report "Natural Gas Integrated Resource Planning: Initial Assessment of the Potential to Employ Targeted DSM to Influence Future Natural Gas Infrastructure Investment", January 2018. Authored by Michael D. Sloan and John Dikeos and submitted on behalf of Union Gas Limited and Enbridge Gas Limited, before the Ontario Energy Board in Case EB-2017-0128.
34. Expert Witness Testimony "Impact of the Nexus Pipeline on Michigan Energy Markets", September 2018, Authored by Michael D. Sloan and submitted on behalf of DTE Electric before the Michigan Public Service Commission in Case No. U-18412.
35. Expert Witness Testimony "The Value of Nexus Pipeline Capacity to DTE Gas Customers", April 2018. Authored by Michael D. Sloan and submitted on behalf of DTE Gas before the Michigan Public Service Commission in Case No. U-18412.
36. Expert Witness Testimony "Impact of the Nexus Pipeline on Michigan Energy Markets", September 2018, Authored by Michael D. Sloan and submitted on behalf of DTE Electric before the Michigan Public Service Commission in Case No. U-20221.
37. Expert Report "Impact of Changing Supply Dynamics on the Ontario Natural Gas Market", July 2019. Authored by Michael Sloan and Srirama Palagummi and submitted on behalf of Enbridge Gas Limited, before the Ontario Energy Board in Case EB-2019-0159.
38. Expert Report "Opportunities for Evolving the Natural Gas Distribution Business to Support the District of Columbia's Climate Goals", March 2020. Authored by Michael Sloan and Peter Narbaitz and submitted on behalf of AltaGas to the Public Service Commission of the District of Columbia, Formal Case No. 1142.
39. Expert Witness Testimony on behalf of Summit Utilities before the Maine Public Utilities Commission regarding the value of contracted pipeline capacity on the Atlantic Bridge Pipeline to natural gas consumers in the Summit Utilities Maine service territory. June 2020. MPUC Docket No. 2019-00185.
40. Expert Witness Testimony report and deposition, "Opinions and Report on Propane Markets and Prices in Michigan Related to Michigan Attorney General Complaint June 27, 2018". Authored by

Mr. Michael D. Sloan and submitted on behalf of AmeriGas before the State of Michigan Circuit Court for the 38th Judicial Circuit, Monroe County. June 2020.

41. Expert Report, "IRP Jurisdictional Review", September 2020. Submitted on behalf of Enbridge Gas Limited before the Ontario Energy Board in Case EB-2020-0091.

SELECTED PUBLICATIONS AND PRESENTATIONS

Harry Vidas, Michael Sloan. "Pipeline Markets in Transition: Cost Impacts of FERC Order 636." *Gas Research Institute*, March 1998.

Bruce Henning, Michael Sloan. "Analysis of Short-Term Natural Gas Markets." *Energy and Environmental Analysis, Inc.*, November, 1998.

Michael Sloan, Paul Friley. "Natural Gas Storage Overview in a Changing Market Environment." *Gas Research Institute*, GRI-99/0200, February 2000.

Michael Sloan, Paul Friley, Bruce Henning. "Restructuring Activity of Natural Gas Local Distribution Companies." *Gas Research Institute*, GR00/0018, June 2000.

Bruce Henning, Michael Sloan, Maria deLeon. "Natural Gas and Energy Price Volatility." *Prepared for the Oak Ridge National Laboratory by the American Gas Foundation*, October 2003.

Michael Sloan, Bruce Henning, Sol deLeon, David Clayton. "Propane Industry Issues and Trends." *Propane Education and Research Council*, June 2004.

Michael Sloan, Bruce Henning, Sol deLeon, David Clayton. "Propane Industry Issues and Trends II." *Propane Education and Research Council*, January 2005

Michael Sloan, Bruce Henning. "Propane Industry Issues and Trends III." *Propane Education and Research Council*, August 2005.

Michael Sloan. "Propane Market Growth: A Review of Propane Market Trends and the Role of the PERC Market Metrics Initiative", Prepared for the National Propane Gas Association, January 30, 2006.

Michael Sloan, Bruce Henning. "Propane Industry Issues and Trends IV. " *Propane Education and Research Council*, August 2006.

Michael Sloan. "Natural Gas Supply and Demand in an Uncertain Environment". Canadian Institute Conference on Natural Gas Storage, September 2008.

Michael Sloan, Richard Meyer. "2009 Propane Market Outlook – Assessment of Key Market Trends, Threats, and Opportunities Facing the Propane Industry Through 2020." *Propane Education and Research Council*, September 2009.

Michael Sloan. "What Keeps You Up at Night? Natural Gas Market Planning in an Uncertain Environment". Canadian Institute Conference on Natural gas Storage, February 2009.

Michael Sloan. "Back to the Future? Impact of Market Volatility and Uncertainty on Natural Gas Supply and Infrastructure". Canadian Institute Conference on Natural Gas Infrastructure and Supply, November 2009.

Michael Sloan, Richard Meyer. "2010 Propane Market Outlook – Assessment of Key Market Trends, Threats, and Opportunities Facing the Propane Industry Through 2020. " *Propane Education and Research Council*, June 2010.

Michael Sloan, Bruce Hedman, et al., "Strategic Market Assessment for Commercial Sector Propane Sales" *Propane Education and Research Council*, February 2011.

Michael Sloan, K.G. Duleep, et al. "Economic Impact of the Propane Green Autogas Solutions Act of 2011 (H.R. 2014)", *National Propane Gas Association*, October 2011.

Michael Sloan. "Industry at a Crossroads", *Propane Education and Research Council*, May 2012.

Michael Sloan, Warren Wilczewski. "2013 Propane Market Outlook – Assessment of Key Market Trends, Threats, and Opportunities Facing the Propane Industry Through 2020. " *Propane Education and Research Council*, April 2013.

Michael Sloan. "Implications of U.S. natural gas liquids (NGL) market developments on European petrochemical and NGL markets", Platt's European Petrochemicals Conference, Düsseldorf, Germany. March 2014.

Michael Sloan. "A Detailed Look at the Impact of Cochin Pipeline Reversal on Propane Markets in the Midwest", presented to the Midwest Governors Association Propane Supply Chain Working Group Meeting June 4, 2014, Madison Wisconsin.

Michael Sloan, Warren Wilczewski. "Impact of the Cochin Pipeline Reversal on Consumer Propane Markets in the Midwest", *Propane Education and Research Council*, August 2014.

Michael Sloan, "NGL Production Outlook in the Utica and Marcellus", NGL Gold Rush Executive Briefing, Cleveland, Ohio. September 2014.

Michael Sloan, "NGL Production, Economics, and Pricing in the Utica and Marcellus", NGL Gold Rush Summit, Cleveland, Ohio. September 2014.

Michael Sloan. "North American Propane and Butane Demand, Markets and Pricing", Platt's 4th Annual NGL's Conference, Houston, Texas, September 2014.

Michael Sloan, Warren Wilczewski. "Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2012", *Propane Education and Research Council*, November 2014.

Michael Sloan. "Future Trends: Assessing Ontario Natural Gas Market Requirements Through 2020", December 2014. Submitted on behalf of Union Gas Limited before the Ontario Energy Board, and presented to the Ontario Energy Board Stakeholder Conference, December 2014.

Michael Sloan. "NGL Market Outlook in a Dynamic Oil Price Environment", *2014 NGL Forum*, San Antonio, Texas, December 2014.

Michael Sloan. "Consumer Propane Markets in a Changing Oil Price Environment", 2015 NPGA Southeaster Convention, Atlanta, Georgia, April 2015.

ICF Consulting Canada, "*Impact of Energy East on Ontario Natural Gas Prices*", April 8, 2015, Prepared for the Ontario Energy Board by Michael Sloan, with Kevin Petak, Hua Fang, Leonard Crook.

Michael Sloan. "Outlook for Natural Gas Demand Growth in the Industrial Sector", 2015 ARGUS Natural Gas Markets Conference, Houston, Texas, May 2015.

Michael Sloan. "The Market for Global Petrochemical Feedstocks in a Changing Oil Price Environment – Current and Future Trends", 2015 Platt's Asian Petrochemical Markets Conference, Shanghai, China, August 2015.

Michael Sloan. "Global LPG Markets: The Outlook for Propane and Butane", Platt's 5th Annual NGL's Conference, Houston, Texas, September 2015.

Michael Sloan. "2016 Propane Market Outlook – Key Market Trends, Opportunities and Threats Facing the Propane Industry Through 2025. " *Propane Education and Research Council*, November 2015.

Michael Sloan. "Evaluating the End Game: The Outlook for the NGL Industry in a Low Oil Price Environment", *2015 NGL Forum*, San Antonio, Texas, December 2015.

Michael Sloan. "2015 Ontario Natural Gas Market Review: Assessing Ontario Natural Gas Market Requirements", January 2016. Submitted on behalf of Union Gas Limited before the Ontario Energy Board, and presented to the Ontario Energy Board Stakeholder Conference, January 2016.

Michael Sloan. "Is Demand Back?? Keeping up with Supply?? Things are not always as they seem – The Big Picture", 2017 NGL Forum, Atlanta, April 2017.

Michael Sloan. "2017 Propane Market Outlook: Current Market Conditions and the Outlook Through 2025", NPGA Southeast Convention, Nashville, April 2017.

Michael Sloan. "Business Risk: Implications of a Low Carbon World for Natural Gas LDC's", 2017 NGL Forum, Boston, June 2017.

Michael Sloan. "The Impact of Infrastructure Development Trends on Midwest Natural Gas Markets", 2017 NGL Forum, September 2017.

Michael Sloan and John Dikeos. "Natural Gas Integrated Resource Planning: Initial Assessment of the Potential to Employ Targeted DSM to Influence Future Natural Gas Infrastructure Investment for Ontario", Prepared for Union Gas and Enbridge Gas, March 2018.

Michael Sloan. "2018 Propane Market Outlook: Coping with Changing Markets", NPGA Southeast Convention, Atlanta, April 2018.

Michael Sloan, Joel Bluestein, Eric Kuhle. "Implications of Policy-Driven Residential Electrification – An American Gas Association Study prepared by ICF", July 2018.

Michael Sloan. "2019 Propane Market Outlook: Warning Signs in a Changing Market 2025", NPGA Southeast Convention, Atlanta, April 2019.

Eric Kuhle and Michael Sloan, "2018 Propane Industry's Economic Impact Report; Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2018", Propane Education and Research Council, April 2020.

EMPLOYMENT HISTORY

ICF	Managing Director	2016 - Present
ICF International	Project Manager to Principal	2007 – 2016
Energy and Environmental Analysis, an ICF International Company	RA to Project Manager	1981-2006

CURRICULUM VITAE OF
ADAM STIERS

Experience: Enbridge Gas Inc. / Union Gas Limited

Technical Manager, Regulatory Applications
2017

Union Gas Limited

Specialist, Strategic Accounts
2015

Project Manager, Business Development
2014

Coordinator, Strategic Sales
2011

Buyer, Gas Supply
2010

Specialist, Gas Management Services
2009

Coordinator, Gas Supply
2008

Education: University of Windsor – Masters of Business Administration

University of Windsor – Honours Bachelor of Commerce -
Business Administration

Memberships: N/A

Appearances: (Ontario Energy Board)

N/A

CURRICULUM VITAE OF
RICHARD SZYMANSKI

Experience: Enbridge Gas Inc.

Senior Advisor, Utilities Investment Review
2019

Union Gas Limited

Manager, Strategic Development
2017

Manager, Financial Forecasts
2015

Team Lead, Financial Forecasts
2007

Team Lead, Revenue and Gas Accounting
2001

Coordinator, Financial Forecasts
1998

Analyst, Financial Forecasts
1996

Olsonite Company Limited

Office Manager
1991

Education: Bachelor of Commerce, Honours Business Administration
University of Windsor, 1990

Appearances: (Ontario Energy Board)

N/A

CURRICULUM VITAE OF
HILARY THOMPSON

Experience: Enbridge Gas Distribution Inc.

Director, S&T Business Development
2020

Director, Asset Management
2016

Manager, Distribution Planning
2014

Manager, Regulatory Projects
2012

Manager, Technical Services
2011

Field Manager, Measurement & Regulation
2011

Senior Engineering Project Leader, Measurement & Regulation
2010

Senior Engineering Project Leader, Special Projects
2008

Engineering Project Leader, Special Projects
2007

Engineering Project Leader, Engineering Standards & Technical Services
2006

Education: University of Toronto – Faculty of Law
Global Professional Master of Laws

Queen's University – Faculty of Applied Science
Bachelor of Science, Chemical Engineering

Memberships: Professional Engineers Ontario (P.Eng. Licence Holder)

Appearances: (Ontario Energy Board)

EB-2018-0305
EB-2017-0306/0307
EB-2017-0102
EB-2015-0049

CURRICULUM VITAE OF
SARAH VAN DER PAELT

Experience: Enbridge Gas Inc. (Union Gas Limited)

Director, Marketing & Energy Conservation
2018

VP, Sales, Marketing & Customer Care
2017

Director, Distribution, Business Development & Strategic Industrial
Accounts
2015

Director, Sales Business Markets
2011

Director, Commercial Industrial Sales & Marketing
2009

Director, Energy Conservation
2007

Director, Accounting Services
2005

Manager, Gas Cost & Revenue Accounting
2004

Manager, Financial Forecasts
2004

Manager, Product and Service Development
2002

Manager, Product Development
1999

Administrator, Gas Delivery Products & Services
1997

Supervisor, S&T Nominations
1995

Co-ordinator Nominations
1993

Rate Design Analyst
1992

Cost Allocation Analyst
1991

Financial Forecast Analyst
1991

The Royal Bank of Canada

Assistant Manager, Customer Service
1987

Education: Certified General Accountant
1998

Masters of Business Administration
University of Windsor, 1991

Bachelor of Commerce
University of Windsor, 1987

Memberships: The Association of Certified General Accountants

Appearances: (Ontario Energy Board)

EB-2014-0012
EB-2011-0210
RP-2003-0063
RP-2002-0130
E.B.R.O. 493-04/494-06