Statement of Qualification – William Harper

William Harper received his Honours Bachelor of Science in Math and Economic from the University of Toronto in 1973. He received his Master of Applied Science in Management Science (specializing in Applied Economics and Operations Research) from the University of Waterloo in 1975. Mr. Harper is currently an Associate with Econalysis Consulting Services.

Since joining Econalysis in 2000, Mr. Harper has supported clients in Manitoba, British Columbia, Quebec, Saskatchewan and Ontario (primarily public interest groups) with their participation in regulatory proceedings on issues related to electricity utility revenue requirement determination, long-term planning (including demand-side management plans), capital project approvals, cost of service and rate design with analysis of applications and recommendations based on regulatory and economic principles.

In Manitoba, Mr. Harper has served an expert witness before the Manitoba Public Utilities Board regarding Manitoba Hydro's 2002 Status Update, 2004/05 and 05/06 General Rate Application, 2008/09 GRA, 2013 Need For And Alternatives To, and the 2015 Cost of Service Methodology Review. In addition, he appeared as an expert witness before the Manitoba Clean Environment Commission with respect the Wuskwatim Need For And Alternatives To Submission by Manitoba Hydro/Nisichawayasihk Cree Nation. He has also assisted clients in their participation in all other rate applications (General Rate Applications, Diesel or Interim) by Manitoba Hydro since 2002.

Mr. Harper has provided expert testimony before the Quebec Regie and the Ontario Energy Board on matters related to electricity regulation and rates. In addition he has served on numerous Working Groups established by the Ontario Energy Board to deal with specific cost of service and rate design policy issues and was a member of the Ontario Independent Electricity System Operator's Technical Panel from 2004 to 2010.

Prior to joining Econalysis Consulting, Mr. Harper worked at the Ontario Ministry of Energy for five as an economic analyst focussing on electricity matters and was with Ontario Hydro for 20 years. While with Ontario Hydro, he was involved in the preparation of the Company's cost of service studies and then in the preparation of the rates charged to Ontario Hydro's municipal and large industrial customers. As the Manager of Ontario Hydro's Rates Department from the years 1989 to 1995 he testified regularly before the Ontario Energy Board in annual rate proceedings. At the same time he was also responsible for Ontario Hydro's policy role in regulating the rates charged by Ontario's municipal electric utilities and the annual review of their rate applications. During his final years with Ontario Hydro/Hydro One, Mr. Harper held various positions in regulatory affairs where he was responsible for coordinating applications to the

Ontario Energy Board as well as submissions to the Ontario Energy Board regarding its new role in regulating the restructured Ontario electricity industry.

Mr. Harper will rely on his expertise in regulatory, cost of service and rate design principles and practices in this proceeding relating to Manitoba Hydro.

Statement of Qualification – Pelino Colaiacovo

Pelino Colaiacovo has been a Managing Director at Morrison Park Advisors Inc. since 2005. He focuses on the utility, electricity and infrastructure sectors, as well as Crown Corporations and green technology more broadly. He advises corporate, government and not-for-profit clients on mergers and acquisitions transactions, the raising of new capital, the valuation of corporations and major assets, and the financial fairness of proposed transactions or initiatives to various stakeholders.

As part of this work, Mr. Colaiacovo has built hundreds of financial models and analyzed the financial impacts and sensitivities of scenarios. He tracks the view of the capital markets on initiatives and developments in the utilities, power and infrastructure sectors, and provides advice and assistance to clients that must interact with the capital markets.

Mr. Colaiacovo regularly speaks at and participates in conferences, roundtables and industry associations with respect to energy policy development, and the likely financial impact on utility companies of new policies, technologies and financial developments. He has provided advice to several governments about energy policy.

Before joining Morrison Park Advisors, he served as the Chief of Staff to the Ontario Minister of Energy, and was integrally involved in a large number of significant reforms to the electricity industry in that province. Prior to that he was a consultant to a wide variety of domestic and international companies and industry associations on energy and other policy issues.

Mr. Colaiacovo appeared before the Manitoba Public Utilities Board in 2014 as part of the Needs For And Alternatives To process, and provided a view on the fairness of the Needs For And Alternatives To process to Manitoba ratepayers, and also commented on the financial viability of Manitoba Hydro's plan. Mr. Colaiacovo has appeared before the Nova Scotia Utilities and Review Board in 2013 on the fairness of the Maritime Link Project to ratepayers in that province (and is currently in the process of participating in the Nova Scotia Utility and Review Board review of the Maritime Link project to date).

Mr. Colaiacovo will rely on his expertise in financial modeling, capital markets, electricity planning and policy to comment on the financial and intergenerational consequences of Manitoba Hydro's General Rate Application.

Statement of Qualification – Thor Hjartarson

Mr. Thor Hjartarson completed his Master's Degree in Electrical Engineering at the University of British Columbia in 1990. Mr. Hjartarson is a licensed Professional Engineer in the province of Ontario and the member and past president of the Icelandic Society of Electrical Engineers. Over his 25+-year career in electrical engineering and utility asset management, Mr. Hjartarson amassed a wealth of practical experience and continuous exposure to innovative approaches and best practices in the areas of risk-based asset health and lifecycle optimization approaches, overhead and underground plant maintenance, generation integration, reliability forecasting and smart grid technologies, among many others.

Mr. Hjartarson's professional experience spans a variety of progressively senior management roles in both the utility environment, electricity system equipment manufacturing, and professional management consulting. As a Senior Supervising Engineer of the Acres International – a manufacturer of transmission and distribution equipment, Mr. Hjartarson undertook extensive technical studies and process audits ahead of new equipment integration on behalf of clients like the BC Transmission Corporation, Hydro One Networks Inc. the Russian Federal Grid company, and the Moses Hydroelectric Station in New York, USA.

Between 2005 and 2006, Mr. Hjartarson led several major asset condition assessment projects on behalf of utility clients for Kinetrics Inc., including generation, transmission and distribution work for ENMAX in Calgary, Hydro Ottawa Ltd., Exelon, Idaho Power and a variety of international utilities. In 2007-2012, Mr. Hjartarson applied his asset management expertise at Toronto Hydro in the capacity of the Manager of System Reliability Planning, where he led the development of the company's asset management evidence, along with helping establish the utility's Smart Grid program through a suite of feasibility studies and implementation projects for feeder automation, transformer smart metering and asset analytics. At Toronto Hydro, he was involved in four rate filings where he was a leader in the capital planning justification of the submittals.

Most recently, in the capacity of the Managing Partner and CEO of METSCO, Mr. Hjartarson led the development of advanced asset analytics, maintenance optimization, and smart grid projects for EPCOR in Edmonton, ENMAX in Calgary, Toronto Hydro, Portland General Electric, BC Hydro, Guelph Hydro, Hydro Ottawa, Ontario Energy Board and many others. Mr. Hjartarson is also an accomplished author and speaker with other 30 publications and presentations in professional magazines and industry conferences, including the facilitation of a Smart Grid workshop for the World Bank.

Mr. Hjartarson's expertise in asset planning, maintenance and performance optimization practices spanning Europe, Asia and North America positions him optimally to offer strategic advice for utilities in various states of asset management maturity and sophistication. His participation in the Manitoba Hydro rate case in the capacity of the Head of METSCO's expert team will benefit of stakeholders involved to advance the

common objectives of ensuring that the applicant’s asset management policies are both sustainable and efficient.

Statement of Qualifications – Alexander Bakulev

Mr. Bakulev received his Diploma's degree (5-year full-time undergraduate education) with a specialty in Mathematical Methods of Economics and Candidate of Science in Economics (3-year full time post-graduate program) from the St. Petersburg State University, Russia in 2003 and 2007 respectively. His area of expertise includes asset management, financial analysis and business case development.

As a partner of METSCO Energy Solutions Inc. (METSCO), Mr. Bakulev contributed his extensive utility asset management and operations optimization experience to a variety of management consulting projects in the areas of asset lifecycle optimization, risk management and business case project justification, including work for EPCOR, ENMAX, Hydro One Remote Communities Inc., Toronto Hydro, Southern Power, SaskPower and many other utilities.

Prior to joining METSCO in 2014, Mr. Bakulev leveraged his extensive academic background in economics and econometrics in a variety of positions and assignments with Toronto Hydro, which included direct oversight of the company's asset sustainment portfolio planning and risk-based asset lifetime optimization processes. Mr. Bakulev also led the company-wide productivity improvement program and acted as a manager of Toronto Hydro's inaugural five-year Custom Incentive Regulation Rate Application to the Ontario Energy Board, where he contributed to the filing strategy development and oversaw preparation of extensive benchmarking studies in the areas of asset management and operating efficiency.

Upon moving to Canada in 2008, Mr. Bakulev acted as a project manager in a management consultant company and led several large projects to implement asset condition assessment programs and risk-based life-cycle decision-making procedures in hydro generation, transmission and distribution utilities.

Mr. Bakulev is also a co-author of several publications and research papers for the Institute of Electrical and Electronics Engineers, the International Council on Large Electric Systems (CIGRE) and the Centre for Energy Advancement through Technological Innovation, related to asset management and risk-based optimization, and he made numerous presentations at industry conferences, educational courses and workshops.

Mr. Bakulev has provided an expert opinion on behalf of METSCO to the Ontario Energy Board in the regulatory proceedings where he was tasked to conduct assessments of distribution system plans proposed by utilities applying for Ontario Energy Board rate increases.

Mr. Bakulev's involvement in the Manitoba Hydro rates proceeding will entail providing his extensive practical experience and academic expertise in the areas of quantitative analysis underlying asset investment and sustainment decisions and operational process optimization and rationalization approaches.

Statement of Qualification – Dmitry Balashov

Dmitry Balashov received a Master of Public Administration degree from the Queen's University School of Policy Studies in 2008, where he specialized in Canadian Energy Policy and Trade Policy. Mr. Balashov is currently completing his Executive Master of Business Administration degree at the University of Toronto's Rotman School of Management, where his areas of concentration include Energy Project Finance, Utility Operations Productivity and Corporate Governance. While completing his Master of Business Administration, Mr. Balashov acted as an adjunct instructor of Rotman's Capstone Course on Utility Productivity for the first-year full-time Master of Business Administration program students, sponsored by the Ontario Ministry of Energy.

Mr. Balashov has nearly a decade of experience in Canadian energy policy and utilities regulation. Between 2008 and 2011, he worked in the Ontario Ministry of Energy's Supply, Transmission and Distribution Policy Division, where he took part in developing a framework capacity allocation and grid integration policies for the Feed-In Tariff renewable generation program, and undertook feasibility studies for transmission connection of Northern Ontario's off-grid communities. Between 2011 and 2013, Mr. Balashov Acted as a Senior Policy Advisor in the Energy Ministry's Regulatory Affairs and Strategic Policy Division, where he liaised on behalf of the Province with Hydro One Networks on all relevant financial, regulatory and governance issues.

Prior to joining METSCO in May of 2017, Mr. Balashov spent four years in progressively senior positions at Toronto Hydro's Legal and Regulatory Affairs Division. Since 2015, Mr. Balashov occupied the position of Lead, Regulatory Process and Analytics, where he was responsible for the development and implementation of Toronto Hydro's internal programs and regulatory strategies on the issues of utility productivity, operating expenses, and asset management. In his role, Mr. Balashov led the development, defence and implementation of Toronto Hydro's 2015-2019 Custom Incentive Regulation Rate Application in the areas of Operation Maintenance & Administration, Productivity and Performance Management.

While at Toronto Hydro, Mr. Balashov also took active part in over 25 Ontario Energy Board policy consultations and working groups on a variety of subjects related to utility regulation and performance management. He will leverage this experience, along with his academic background in finance and energy economics throughout the Manitoba Hydro proceeding.

Statement of Qualifications – David K. Richmond

David Richmond is a licensed Professional Engineer in the province of Ontario with over 40 years of experience in electrical engineering, asset management and regulatory oversight of electric utilities asset management and maintenance operations.

Mr. Richmond was the Manager of Ontario Energy Board's Facilities and Infrastructure Applications Department, where he led the regulatory review and approvals processes transmission and distribution utilities asset investment plans, Major Transmission Leave to Construct and Proponent Selection proceedings, major transmission development projects (such as Bruce to Milton 500 kV double circuit 200 km with an estimated cost of $700M and East West Tie Wawa to Thunder Bay 230 kV double circuit 400 km with an estimated cost of $650M), a variety of technical policy consultations related to Ontario Energy Board's Transmission and Distribution System Codes, OPA 2006/2007/2009 revenue requirements and proposed fees submissions), and other technical requirements.

Prior to the Ontario Energy Board, Mr. Richmond's worked at two engineering consulting companies, Acres International and Kinetrics, where he led a number of engineering projects associated with asset valuation, process optimization and technology integration for transmission and distribution companies.

Mr. Richmond professional experience also spans a variety of progressively senior management roles with Toronto Hydro and Ontario Hydro – then a vertically integrated utility operating generation, transmission, and distribution assets. The projects and programs in Mr. Richmond's mandate included distribution system construction, system planning, design and construction of distribution station equipment, and many others, culminating in the role of Vice President, Station and Engineering Services at Toronto Hydro which he occupied between 1998 and 2001.

Mr. Richmond's participation in the current Manitoba Hydro rate proceeding will bring multifaceted experience in the areas of managing large-scale projects, utilities asset management, regulatory design and oversight of effective capital investment review frameworks.

Statement of Qualification – Douglas Gotham

Dr. Douglas J. Gotham has a PhD in Electrical Engineering from Purdue University and has been employed by the University for 23 years. He is an expert in load forecasting, system planning, and utility operations. He has particular experience within the Midcontinent Independent System Operator marketplace.

Dr. Gotham is the Director of the State Utility Forecasting Group at Purdue University. State Utility Forecasting Group is an independent research and analysis group, established by the Indiana General Assembly, funded by the state government through the Indiana Utility Regulatory Commission, and dedicated to providing forecasts of electricity consumption, production, and prices for eight utilities in the state. The State Utility Forecasting Group is in the process of preparing the fourth in a series of independent long-term forecasts.

Dr. Gotham has served as an advisor to a number of boards and committees, including as an engineering and modeling expert for the Eastern Interconnection States Planning Council. He regularly serves as an instructor on forecasting and utility planning for the Institute of Public Utilities at Michigan State University. He has testified in several legislative and regulatory hearings in the state of Indiana.

Dr. Gotham testified before the Manitoba Public Utilities Board in 2014 regarding the load forecast and export price projections in the Needs For And Alternatives to proceeding.

Dr. Gotham will rely on his expertise in load forecasting, electricity markets, and the Midcontinent Independent System Operator marketplace in this proceeding relating to Manitoba Hydro.

Statement of Qualification – Dr. Janice Compton

Dr. Janice Compton holds a PhD from Washington University in St. Louis (2005). She joined the University of Manitoba in 2005 and is Associate Professor in the Department of Economics. Her areas of academic expertise include labour economics, applied econometrics, applied microeconomics, household economics and migration. She has published papers in highly ranked labour economics and household economics journals, and has contributed to a volume on Household economics.

Dr. Compton's expertise in applied microeconomics and econometrics, and household economics is especially relevant to studying the impact of hydro rate increases on Manitoban families and the Manitoba economy. These fields focus on the changing behavior of households in reaction to policy and market signals (prices), and the effects of such policy changes on outcomes such as employment, household structure, and spending patterns. The methodologies used in these fields are advanced statistical techniques, primarily regression analysis.

Prior to entering academia, Dr. Compton worked at Statistics Canada and the Federal Ministry of Finance. She has worked extensively with large, national datasets and microsimulation models. Her expertise in labour economics, quantitative data analysis and econometrics, and social policy will be utilized for this analysis.

Statement of Qualification – Dr. Wayne Simpson

Dr. Wayne Simpson has a PhD from the London School of Economics (1977) and is a Full Professor in the Department of Economics at the University of Manitoba, where he has taught since 1979. His areas of academic expertise include labour economics, applied econometrics, applied microeconomics, quantitative methods, and economic and social policy analysis.[1] He has authored or co-authored three books and more than fifty peer-reviewed articles on these and related topics, including two papers on the impact of risk on the behaviour of the firm. He is currently on the editorial board of *Canadian Public Policy*, Canada's foremost peer-reviewed academic journal for economic and social policy, and the executive council of the Canadian Economics Association. He was a 2014 recipient of the McCracken award for the development and analysis of economic statistics from the Canadian Economics Association. Dr. Simpson has published and taught in the area of urban and regional economics and has expertise in the determination of the regional impact of decisions by firms and governments

Dr. Simpson expertise in applied microeconomics and econometrics are especially relevant to this hearing on Manitoba Hydro rates. Applied microeconomics is the study of the behavior of individual agents (e.g., firms and households) in the market using modern theory and empirical methods. It seeks to apply the analysis to practical problems such as risk management and investment strategies. Applied econometrics uses specific statistical techniques, particularly regression methods, to analyze and predict economic behavior and apply it to practical social problems.

In addition to his academic career, Dr. Simpson has worked at the Bank of Canada, the federal Department of Labour, and the Economic Council of Canada. He has also served as a consultant to the private sector and government, primarily in the areas of labour economics and policy evaluation. In recent years, he has served as an expert advisor to Prairie Research Associates (PRA) Inc. and Human Resources and Skill Development Canada as well as to CAC Manitoba through the Public Interest Law Centre.

Wayne Simpson has significant extensive experience provided expert evidence at the Public Utilities Board including at the 2014 Needs for and Alternatives to Review of Manitoba Hydro's Preferred Development Plan, the 2007-2008 and 2016 hearings to determine maximum fees for payday loans and the 2007, 2010, 2013, 2014 and 2016 Manitoba Public Insurance Rate Applications on the Rate Stabilization Reserve and investment strategy. He also provided written evidence in the 2013 payday loan review.

Wayne Simpson will rely on his expertise in applied econometrics, applied microeconomics, and social policy application and analysis in this proceeding.

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1 His professional expertise in applied microeconomics and applied econometrics provides a foundation for the analysis of issues related to the management of risk by firms and to the assessment of risk using modern economic and statistical techniques. His expertise also provides a framework to assess the contributions of equities, bonds and interest rates to investment risk.