



THOMPSON
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November 24, 2022

EMAIL AND REGULAR MAIL
publicutilities@gov.mb.ca

Public Utilities Board
400-330 Portage Avenue
Winnipeg, Manitoba R3C 0C4

Attention: Rachel McMillin, Associate Secretary

Dear Sirs/Mesdames:

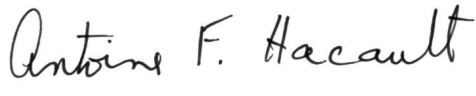
Re: Manitoba Hydro 2023/24 and 2024/25 General Rate
Application – Applications for Intervener Status
Our Matter No. 0194440 AFH

We acknowledge receipt of your November 16, 2022 letter to us and the invitations set out at page 1 of that letter.

We attach the Intervener Application together with the attached information and CVs. We thank the PUB for giving us the opportunity to provide input with respect to the MFRs, issues and process.

Yours truly,

THOMPSON DORFMAN SWEATMAN LLP

Per: 

Antoine F. Hacault*

AFH/av

cc: Board Counsel (all via e-mail)
Manitoba Hydro
Assembly of Manitoba Chiefs
CAC
City of Winnipeg, General Service Small / General Service Medium
Manitoba Keewatinowi Okimakanak Inc.

*Services provided through A. F. Hacault Law Corporation

INTERVENER APPLICATION FORM

Application re Hearing:			
Name of Prospective Intervener (Organization Name or Individual):			
Prospective Intervener Contact Information			
Organization or Individual Address:			
Organization Contact Person(s) (if applicable):			
Contact Information:	Business:		Other Phone:
	Fax Number:		Email:
Representative Contact Information:			
Counsel or Representative Name(s):			
Organization (if different from above) :			
Address (if different from above):			
Contact Information (if different from above):	Business:		Other Phone:
	Fax Number:		Email:
Counsel Seniority:			
Years of Experience	_____ Years	Tariff Rate	\$ _____
Also representing (if applicable):			

Additional Information

(For organizations only) Please describe the mandate of your organization and provide a description of the membership, including the number of members. Please also confirm whether the organization's intervention in this proceeding is supported by a resolution of the governing body, if any. Please enclose the resolution, if any, with your Application, along with supporting documentation of your mandate and membership

Please state your reasons for intervening in this proceeding:

Please state how you are directly affected by the Board's decision in this matter:

Please explain whether and how you represent a substantial number of ratepayers that are otherwise not represented on issues that are within the scope of this proceeding:

Please describe your experience, information, or expertise relevant to this matter that would contribute to the Board's decision making, including any other prior interventions in regulatory matters before this Board or other decision-makers:

Please list the key issues you intend to address in the proceeding. Please be specific.		
Do you intend to participate fully and actively, including attendance at hearings, submission of evidence, and testing of evidence and cross examination of witnesses? If yes, please describe your intended participation.		
Do you intend to request an award of costs for your participation? Please explain how you meet the criteria for an award of costs.		
Do you intend to retain experts or consultants? If yes, please attach copies of the <i>curriculum vitae</i> for any expert and/or consultant, as well as the following:		
Expert Consultant #1:		
Name:	Experience	Evidence to be provided on issues in scope:
	_____Years	
Telephone #:	Tariff Rate:	
	\$_____	
Address and Email:	Firm or Organization:	Brief explanation of experience relevant to evidence to be provided:

Expert Consultant #2:		
Name:	Experience:	Evidence to be provided on issues in scope:
	_____Years	
Telephone #:	Tariff Rate:	
	\$_____	
Address and Email:	Firm or organization:	Brief explanation of experience relevant to evidence to be provided:
Expert Consultant #3:		
Name:	Years of Experience:	Evidence to be provided on issues in scope:
	_____Years	
Telephone #:	Tariff Rate:	
	\$_____	
Address and Email:	Firm or organization:	Brief explanation of experience relevant to evidence to be provided:

Do you intend to provide evidence from witnesses other than experts and/or consultants? If yes, please provide:	
Witness #1:	
Name:	Evidence to be provided on issues in scope:
Email:	Brief explanation of relevant experience and/or knowledge to issues in scope:
Address and Phone number:	
Do you intent to seek approval for any other form of participation or provision of evidence, including for which you intend to seek an award of costs? If yes, please provide details and an explanation of the relation to issues in scope in the proceeding.	

Additional Information - Attachment

(For organizations only) Please describe the mandate of your organization and provide a description of the membership, including the number of members. Please also confirm whether the organization's intervention in this proceeding is supported by a resolution of the governing body, if any. Please enclose the resolution, if any, with your Application, along with supporting documentation of your mandate and membership.

The Manitoba Industrial Power Users Group (MIPUG) is an association of large energy consumers working together on key matters of common priority related to electricity supply and rates in Manitoba. The association's priority concerns relate to the reliability of electricity supply and delivery to customers, reasonableness of utility revenue requirements and appropriateness of rate class cost allocations, which in turn are used to establish electricity rates. MIPUG members seek rates that are reasonable and appropriate, fair and equitable, while remaining stable and predictable in the short, medium, and long-term. The MIPUG members desire independent and transparent reviews of Manitoba Hydro's electric rate applications by an arms-length regulator as assurance that electricity costs and measures sought by Manitoba Hydro are reflective of reasonable costs for the efficient provision of electricity.

MIPUG member companies are substantial users of electric power in Manitoba Hydro's General Service Large (GSL) rate classes (including all three voltage subclasses). Collectively these customer rate classes purchase approximately 8,000 GWh of power annually, accounting for about 35% of Hydro's domestic energy sales. MIPUG members operating within these rate classes account for nearly 20% of domestic energy sales.

MIPUG members include:

- Amsted Rail - Griffin Wheel Company;
- Canada Kraft Paper Industries Ltd.;
- CTD Group (Integra Castings);
- Chemtrade Logistics Inc.;
- Enbridge Pipelines Inc.;
- ERCO Worldwide;
- Gerdau Long Steel North America – Manitoba Mill;
- HyLife Foods
- Koch Fertilizer Canada ULC;
- Maple Leaf Foods;
- Roquette Canada Ltd.
- J.R. Simplot Company
- TransCanada Energy; and
- Winpak Ltd.

Beyond members proper, MIPUG has ongoing engagement on energy matters with other industrial stakeholders and associations that are not members of MIPUG. These parties have an active interest in energy matters, are impacted in a similar manner as MIPUG members, and often are aligned with MIPUG in matters of priorities and positioning related to electric rates.

To that end, the MIPUG intervention since the 1980s, has always technically had the membership base as the “client”. However, these interventions have also represented the broader interests of industrial power users, including GSL rate class consumers generally (both commercial and industrial) and the energy impact on provincial competitiveness for industrial consumers, both broadly and generally. These users include future industrial users, non-members. and, of course, the complementary interests of non-industrial users of power where these users have a similar interest in competitive rates and a well-run, appropriately managed, and properly capitalized utility.

MIPUG does not operate with a formal governing body, however four members presently act as an executive leadership team for the group: Dale Bossons, Director of Manufacturing at Chemtrade Electrochem Inc.; Kelly Simonson, Managing Director at Koch Fertilizer Canada; Morgan Curran-Blaney, Vice-President Manufacturing – Fresh Port at Maple Leaf Foods Inc; and Rob Sternat, Environment Manager, Gerdau Manitoba. MIPUG is an informal association and does not pass resolutions.

Please state your reasons for intervening in this proceeding:

Fundamentally, MIPUG intervenes to ensure that Manitoba Hydro electric rates reflect an efficiently operated electric utility with rates designed to reflect appropriately allocated costs for serving each customer class. MIPUG companies invest in the long term and are important economic contributors to Manitoba. As such, they require stable and predictable rates over the long-term to maintain their competitive market position and establish the business case for further sustaining capital and additional investment in the Province. Periodic and timely reviews by an independent and transparent regulator provide assurances as to whether rates are fair and reasonable, stable and predictable.

Given the extended period since Manitoba Hydro last filed a comprehensive rate application and participated in a thorough and transparent review before an independent regulator (aside from expedited interim rate reviews), MIPUG’s priorities for this proceeding relate to significant changes in the Crown Corporation’s circumstances, arising from recent COVID pandemic disruptions, rise in post-pandemic inflation/interest rates, completion of major capital projects, which are now fully in-service, along with substantive changes in export markets and anticipated changes to Manitoba Hydro’s export revenues. A recently released strategic plan citing a changing energy landscape in Manitoba that is anticipated to drive changes in consumer consumption behavior over the next decade with accompanying risks for capacity constraint in the Manitoba Hydro generation, transmission, and distribution system raise questions about capital spending activities and related planning for future supply and reliability of energy delivery.

Pending changes arising from recently enacted legislation amending the Manitoba Hydro and Public Utilities Board Acts, that also grant Government further authority to independently establish financial targets, rate caps, and planning activities for Manitoba Hydro raises questions about the influence that Government may have on rates and rate setting. Comments raised in the

Legislative Assembly by the Government on November 23rd in respect to pending changes for fees incurred by Manitoba Hydro for water rentals and provincial debt guarantee fees speak to further changes in Manitoba Hydro's circumstances within next three to five years, raising additional questions about the relevance of the 20-year financial scenario filed by the Crown Corporation.

MIPUG will strive to establish whether Manitoba Hydro is applying best practice in respect to depreciation. ELG and accelerated depreciation have been contentious topics since 2015. Manitoba Hydro has had ample opportunity to engage Interveners of Record on this matter outside of the hearing process but has chosen not to do so in the ensuing years. It would have been MIPUG's preference to address this outside of the regulatory process and develop a consensus on best practice for Manitoba Hydro. A failure to do so, will unfortunately increase costs for addressing this matter within this proceeding. Unfortunately, this Application represents the first opportunity to do address this matter since 2015.

Export sales remain an important source of revenue for Manitoba Hydro going forward, remains a prominent component of the 20-year financial scenario filed in this Application. The most recent 2021/22 Interim Rate Application highlighted the sensitivity of these revenues to variabilities of water flows, natural gas prices, renewables, and related export market volatility, which is continuing to evolve with the influence of climate change action. This variability cannot be viewed without the context of Manitoba Hydro's continuing mandate to provide firm and reliable supply for existing domestic load and anticipated future load growth. MIPUG is highly concerned by the constraints that Manitoba Hydro appears to be seeking in respect to this discussion and encourages the Crown Corporation to seek avenues that allow for open and transparent conversations through mechanisms that preserve the necessary confidentiality for commercially sensitive information. Do so in a timely manner, will enhance the efficiency of this proceeding.

The absence of long-term financial projections over the past six years, that address changes in Manitoba Hydro circumstances, has raised questions about the long-term financial stability of Manitoba Hydro and led to inquiries about whether current rates remain just and reasonable. MIPUG will seek to establish whether Manitoba Hydro has responded adequately to directives in prior PUB Orders and taken reasonable measures to address changes in its circumstances, as outlined by its strategic plans, short, medium, and long-term forecasts and projections.

At its last intervention in the 2019/20 GRA, MIPUG did not plan to review in detail, methodological or long-term matters that have been deferred by the PUB until Manitoba Hydro's next GRA filing (as listed in PUB correspondence to Manitoba Hydro and past interveners dated November 21, 2018). The setting of rates by Government legislation in the interim and absence of a Manitoba Hydro GRA filing in that timeframe, raises the profile of those matters, as considerations for MIPUG to seek resolution on in this review. The most recent rate review and setting of interim rates that came into effect on January 1, 2022, are also subject to confirmation in this hearing. The interim review conducted in November/December of 2021 followed an expedited process that focused on drought conditions prevalent in the lead-up to that proceeding. Subsequent changes in water levels after that review, raise questions about risks associated with drought conditions and measures undertaken by Manitoba Hydro to mitigate such risks.

Please state how you are directly affected by the Board’s decision in this matter:

Board decisions coming out of this proceeding will establish whether the 3.6% interim rate increase effective January 1, 2022, is approved, while also considering whether Manitoba Hydro’s requested 3.5% annual rate increases for 2023/24 and 2024/25 are just and reasonable. MIPUG members, as General Service Large customers of Manitoba Hydro, are directly impacted by rates for electricity, which increase individual operating costs with each successive rate increase. The rate increases under consideration in this hearing reflect a cumulative 11.0% rate increase for Manitoba Hydro’s industrial customers. MIPUG members, as industrial enterprises, are often not able to pass along increased costs for their products, with market prices often set by commodity markets, economic and/or contract conditions.

Additionally, the Board’s decision will establish a baseline against which future rate proceedings unfold in Manitoba. The absence of regular comprehensive rate reviews over the past six years has created uncertainty regarding future rate projections. MIPUG members and other industrial consumers, who often operate under long-lead planning cycles and forward-looking projections for evaluating investment decisions, want to ensure timing considerations and predictability in rate setting are reviewed transparently to ensure that rates remain stable and predictable in the short, medium and long-term.

Please explain whether and how you represent a substantial number of ratepayers that are otherwise not represented on issues that are within the scope of this proceeding:

MIPUG’s fourteen(14) members collectively purchase over 4,000 GWh of electricity annually, accounting for approximately 18 - 20% of domestic electricity sales, and about 50 percent of General Service Large class consumption in Manitoba. More broadly, MIPUG works as a group to represent the interests of the three GSL classes (including both industrial and commercial sector companies), which make up approximately 35% of Manitoba Hydro’s total domestic sales, as well as broadly representing the general priorities for energy among industrial power users from all rate classes generally.

There are no other intervenors in this proceeding representing the interests of large power users, either industrial or commercial. Prior proceedings have generally had limited representation for industrials in the General Service Small and Medium rate classes.

Please describe your experience, information, or expertise relevant to this matter that would contribute to the Board’s decision making, including any other prior interventions in regulatory matters before this Board or other decision-makers:

MIPUG has intervened in every Manitoba Hydro hearing since the late 1980’s, including both Interim and General Rate Applications, Centra Gas Acquisition, 2006 and 2015 Cost of Service Methodology reviews and the Needs For and Alternatives To (NFAT) review. MIPUG was also an active participant as the PUB addressed the Coalition Application for a Status Update Review of Manitoba Hydro in 2021 and provided feedback to the Board on Manitoba Hydro application for Combined Electric and Natural Gas GRA hearings, which led to further information and review of regulatory costs incurred by the Board, Interveners and Manitoba Hydro.

The InterGroup team of experts, comprised of Mr. Patrick Bowman, Mr. Dale Friesen, and Mr. Jeff Crozier, support MIPUG’s intervention with a broad range of interdisciplinary knowledge and

expertise. The experts proposed for this intervention have extensive regulatory experience, along with direct utility and industry experience relevant to this GRA. Their respective areas of expertise support a broad and comprehensive examination of the key priorities relevant to MIPUG and the Board in this proceeding. Their CV's accompany this application, along with the Intervener Application form that provides additional information regarding their specific focus in this proceeding. MIPUG is also proposing a placeholder (subject to further discussion at the December 5th pre-hearing conference) for two additional expert resources addressing depreciation and export markets. These topics areas require highly specialized areas of expertise that come at a significant cost, and MIPUG will be requesting the Board's consideration for full cost recovery if these two additional expert resources are approved.

While MIPUG's intervention in this application is focused on a Manitoba Hydro specific context, many MIPUG member companies are involved in similar groups dealing with rate matters in other jurisdictions and have intervened as such, including but not limited to BC, Quebec, Ontario, and Alberta. In some instances, MIPUG's proposed expert witnesses have also intervened in proceedings on behalf of large industrials in those jurisdictions. Mr. Bowman, Mr. Friesen, and Mr. Crozier have testified in regulatory proceedings representing a broad cross-section of energy consumers (including utilities) in other jurisdictions, addressing topics that are of priority in this proceeding. An added benefit to their involvement in this proceeding, is their strong understanding of the Manitoba context for this GRA review.

MIPUG's legal counsel and expert witnesses have extensive experience gained through these reviews before the Manitoba PUB and similar reviews in other jurisdictions, which is further expanded through prior and current experience working with industrial customers and electric utilities on energy matters across Canada.

Please list the key issues you intend to address in the proceeding. Please be specific.

While the PUB has yet to rule on the specific scope of review for this GRA, MIPUG intends to focus its intervention on key economic and market influences and related financial conditions that impact Manitoba Hydro's costs and revenues, considering the material change in circumstances cited earlier.

MIPUG will be meeting with the Consumers Association of Canada (CAC) to cooperatively establish a key issue list applicable to a broad and comprehensive review of Manitoba Hydro's rate proposals that focuses on whether current and requested rates remain just and reasonable in the context of Manitoba Hydro's current and projected circumstances. This issue list will reflect many of the concerns raised in the prior Coalition Application for a Status Update of Manitoba Hydro. The issues list from MIPUG's intervener application in that proceeding (attached) identifies matters related to revenue requirements, strategic plans, financial targets, finance expense, debt management strategies, operating, maintenance and administration expense, depreciation, amortization and regulatory deferrals, load and revenue forecasts, export sales, hydrology, capital spending, major capital projects, cost-of-service methodology, rate design and the role of medium to long-term projections for determining whether rates are just and reasonable, stable and predictable. Those issues remain front and centre for this GRA proceeding. The extensive Minimum Filing Requirements approved by the Board for the current GRA proceeding build on key issues raised by the prior Coalition Application and subsequent Interim Rate Application filed

by Manitoba Hydro in November 2021. MIPUG also plans to consider whether Manitoba Hydro has reasonably addressed prior PUB directives.

MIPUG Counsel and Expert Witnesses will work collaboratively with the Consumers Association of Canada to refine the attached key issues list arising from the Coalition Application (attached to this application) in advance of the pre-conference hearing scheduled for December 5, 2022. MIPUG is committed to an efficient and comprehensive framework for review of Manitoba Hydro's GRA filing, which will avoid duplication while addressing critical questions raised in this intervener application. This diligence has been demonstrated in past proceedings where MIPUG and the Consumer's Coalition and Consumers Association of Canada have worked closely on areas of mutual concern.

There remains a degree of uncertainty regarding the second phase of Manitoba Hydro's application, which will not be filed until December 21st. Key priorities for Phase 2 of this filing, which includes cost allocation, cannot be addressed until this portion is filed by Manitoba Hydro.

Do you intend to request an award of costs for your participation? Please explain how you meet the criteria for an award of costs.

Yes, MIPUG intends to request an award of costs for participation. Per the PUB's Intervener Cost Policy, Section 3.0, the eligibility criteria for when the Board may award costs to any intervener who has:

- (a) made a significant contribution that is relevant to the proceeding and contributed to a better understanding, by all parties, of the issues before the Board;
- (b) participated in the hearing in a responsible manner and cooperated with other Interveners who have common objectives in the outcome of the proceedings in order to avoid a duplication of intervention;
- (c) represented interests beyond their sole business interest; and
- (d) a substantial interest in the outcome of the proceeding and represents the interests of a substantial number of ratepayers.

Regarding part (a), MIPUG has proven in past interventions that its intervention is focused on matters directly impacting Manitoba Hydro rates, and in doing so, provides a significant contribution to the Board's review of Manitoba Hydro's rate applications. MIPUG intends to focus its intervention in this proceeding in a manner that makes a relevant contribution for consideration of whether Manitoba Hydro current rates remain just and reasonable, considering the substantial change in the Crown Corporation's circumstances.

For part (b), MIPUG is coordinating with the Consumers Association of Canada and other Interveners of Record in this proceeding, as expressed above.

For part (c) MIPUG's interests are not solely related to members' business interests, but also ensuring the long-term sustainment of all Manitoba industry and ratepayers generally. Its intervention will balance impacts on the Manitoba economy, in both the short- and long-term, with the interests of Manitoba Hydro. MIPUG's interests are not on setting the lowest rates possible

but on maintaining reliable electricity service at predictable rates that are set based on the cost of service, ensuring that Manitoba Hydro remains a financially sustainable and reliable supplier of critical energy resources for Manitobans and Manitoba industry.

For part (d) MIPUG's membership includes a substantial number of industrial customers (currently 14 members) representing many different industry segments operating across Manitoba. Member operations in Manitoba reflect the priorities of the industrial enterprises operating in the chemical, food processing, agriculture, manufacturing, steel processing, pipeline, forestry and paper sectors. MIPUG members are often located in rural communities and are generally among the largest employers within their respective communities. MIPUG members have a substantial interest in the outcome of the proceeding and MIPUG's intervention is coordinated with other stakeholders to ensure that its representative of not only MIPUG members, but also the interests of industrial consumers generally and all three General Service Large customer classes (both industrial and commercial).

As noted earlier, MIPUG has included a placeholder in this Intervener Application for two specialized experts related to depreciation and export markets. If approved, MIPUG will seek full cost recovery for these experts, given their highly specialized knowledge and expertise, and ability to add to the Board's knowledge and understanding of these topic areas.

Budget for Intervention

As the specific scope and process for this hearing has not yet been finalized, MIPUG is unable to submit a draft budget for consideration by the PUB at this time. MIPUG Counsel will be participating in the pre-hearing conference scheduled for December 5th after which, a budget will be prepared for submission to the Board by the date agreed during the pre-conference hearing.

The anticipated budget for MIPUG's intervention will include a base budget for discovery, preparation of evidence, and scheduled days for oral hearings and final argument. The base budget assumes that Manitoba Hydro will file thorough and complete responses to the minimum filing requirements (MFRs) and subsequent information requests. It is also based on the premise that Manitoba Hydro will act cooperatively and constructively towards the achievement of an efficient and thorough review in a manner that is consistent for an efficient General Rate Application review that has not been undertaken in over five years.

As noted earlier, MIPUG intends to include high-specialized resources specific to two topic areas addressing depreciation and export markets. Given the specialized nature of these resources, these services are in high demand and therefore quite costly. It is anticipated that MIPUG will seek full cost reimbursement for these resources if approved.

MIPUG is concerned that Manitoba Hydro's prior communications to the Board in respect of confidential information may further increase its costs for intervention. If Manitoba Hydro's filings are incomplete or materially redacted, requiring additional inquiry and research on the part of MIPUG, it is expected that the costs for its intervention will also increase.

Finally, actions taken by Manitoba Hydro, which may require MIPUG counsel to pursue motions are both time consuming and costly for interveners. It is expected that such motions, if required, will add considerably to the overall costs for participation in this hearing. It is not reasonable for ratepayers intervening in a hearing be held responsible for costs related to motions arising from actions undertaken by Manitoba Hydro, who holds relevant documentation relating to rates that

is not available to ratepayers or stakeholders. This privilege represents a condition of information asymmetry that has been recognized by the Board, puts interveners at a disadvantage in a process that is meant to support a fair and transparent review of Manitoba Hydro. Based on prior experience, an estimate has been provided for costs associated with pursuing motions necessary to achieve the desired outcomes of this review.

Manitoba Hydro 2021/22 Status Update Hearing Consumers Coalition and MIPUG

Consumers Coalition and MIPUG joint proposed Key Issues List for assessment of whether current rates are just and reasonable.

1. Revenue Requirements

- Update on projected net income/retained earnings levels and budgeted rate increases in the short to medium-term
- Approach to setting electric revenue requirements if MH is not able to produce an Integrated Financial Forecast (IFF) consistent with Order 69/19, Directive 7 or medium to longer-term financial projections that are similar to an IFF
- Implications (revenue requirement and retained earnings) of Government mandated electric rate increase of 2.9% effective December 1, 2020
- Implications of 1 - 3 years of 2.5% annual electric rate increases, should they be imposed as announced by the Manitoba Government in July 2021.

2. Corporate Strategic Plan

- Update on the new MH strategic plan, including changes in operations and risk analysis undertaken by MH since Order 69/19
- Implications for load forecasts, capital forecasts and revenue requirements arising from revised corporate goals & strategies and current assessments of major risks

3. Financial Targets

- Update on traditional financial targets that have been used by the PUB to assess revenue requirement levels
- Update on MH review of financial targets since Order 69/19 – including implications of revised financial targets on revenue requirements and required retained earnings levels
- Update on Order 59/18 Directive 9 & Order 69/19 Directive 9 (rule-based regulation/role & sufficiency of financial reserves) – as well as progress on a longer-term rate strategy since Order 69/19

4. Finance Expense & Debt Management Strategy

- Update on average interest rates for new borrowings, interest rate forecasts & financing cost projections
- Current debt management strategy & interest rate policy/guidelines
- Use of the expanded (\$1.5 billion) short-term borrowing authority in the MH Act

- Update on current credit ratings and financial market conditions

5. Operations, Maintenance & Administration (OM&A) Expenses

- Organizational structure changes & operational plan – Order 59/18 Directive 12
- Staffing level changes and resulting impacts to levels of service provided by MH.
- Cost containment initiatives since Order 69/19 (including VDP/staffing levels & Supply Chain management) – Order 59/18 Recommendation 4
- Update on OM&A target setting & detailed OM&A budgets – including Order 69/19 Directive 8 (provision of detailed OM&A budgets with next GRA) and response to PUB findings from pages 23 to 24 of Order 69/19 that OM&A targets should be reduced by \$22 million for rate-setting purposes and COVID 19 pandemic

6. Depreciation Expense & Methodology, Amortization and Regulatory Deferral Accounts

- Compliance with Order 59/18, Directives 17, 19, 20, 22 and 23
- Update on next Depreciation Study & potential implications for revenue requirements
- Additions and amortization period of the Major Capital Deferral Account – Order 69/19 Directive 2

7. Domestic Revenues, Load Forecast & Hydrology

- Updates to Load Forecast – including impacts of COVID 19 and economic downturn and projections for longer-term load changes.
- Order 59/18 recommendations to MH re: load forecasting methodology – Order 59/18 Directive 11
- Update on current water/reservoir conditions – and implications for net income and retained earnings levels. Impact if drought conditions are prolonged.
- Update on resource planning (development of an Integrated Resource Plan) and related supply and demand levels

8. Export Revenues

- Update on export revenues and export prices, including net income and retained earnings implications of recent export contracts and changes in export prospects/strategies since Order 69/19.
- Impact of new MMTP transmission inter-connections on export strategy and pricing.
- Impact of the recent changes in market pricing experienced over the past 3 to 6 months, along with projections for future market pricing.

9. Capital Expenditures & Business Operations Capital

- Changes to the Capital Expenditure Forecast (CEF) since Order 69/19
- Changes to the Demand Side Management (DSM) forecast expenditures since Order 69/19
- Prioritization of business operations capital – Order 59/18 Recommendations 1 and 2
- Update on progress towards implementation of a corporate asset framework and associated asset management/condition/prioritization initiatives - including Order 59/18 Directive 14

10. Major Capital Projects

- Update on in-service dates and capital cost projections for all major capital projects (in-progress or completed)
- Major capital projects revenue requirement updates since Order 69/19
- Order 59/18 recommendations to MH re: capital project planning – Order 59/18 Directive 15 and Recommendations 5, 6, 7 and 8

11. Cost of Service Study (COSS) & Rate Design

- PCOSS21 Study with assumptions, output & rate-setting implications – Order 69/19 Directive 11, Order 59/18 Directive 5 (zone of reasonableness) and compliance with COSS Directives 24, 25, 26 and 27 from Order 59/18
- PCOCC21 scenarios incorporating current in-service and capital cost projections of major capital projects, including Keeyask generating station
- Update on rate design directives from Order 59/18 – net metering rate/Solar Energy Program (Directives 7 and 30), declining block general service rates & rate differentiation in the GSS non-demand class (Directive 28 – as well as Directive 10 from Order 69/19) and time-of-use rates for GSL customers (Directive 29)

12. Compliance with Prior PUB Directives

- General status of MH compliance with PUB directives from Orders 59/18 and 69/19 – as well as prior PUB Orders

13. Role of Medium to Long-Term Forecasts and Projections in Determining Whether Rates Are Just and Reasonable

- Forecasted changes arising in the medium to long-term
- Risk factors in the medium to long-term

PATRICK BOWMAN
Principal Consultant
Bowman Economic Consulting Inc.

161 Rue Hebert
Winnipeg, Manitoba
R2H 0A5 CANADA

AREAS OF EXPERIENCE:

- Utility Regulation and Rates, including Depreciation
- Project Development and Planning
- Utility Resource Planning

EDUCATION:

- MNRM (Master of Natural Resources Management), University of Manitoba, 1998
- Bachelor of Arts (Human Development and Outdoor Education), Prescott College (Arizona), 1994

PROFESSIONAL EXPERIENCE:

Bowman Economic Consulting Inc., Winnipeg, Manitoba

2020 – current – Principal Consultant

Conduct consulting assignments as Principal Consultant of new economic consulting firm, focused on utility regulation.

Member, Society of Depreciation Professionals

InterGroup Consultants Ltd., Winnipeg, Manitoba

1998 – 2022 – Research Analyst/Consultant/Principal/Senior Associate

Utility Regulation

Conducted research and analysis for regulatory and rate reviews of electric, gas and water utilities in eight Canadian provinces and territories and international. Prepared evidence and expert testimony for regulatory hearings. Assisted in utility capital and operations planning to assess impact on rates and long-term rate stability.

Project Development, Socio-Economic Impact Assessment and Mitigation

Provide support in project development, local investment opportunities or socio-economic impact mitigation programs for energy projects, including northern Manitoba, Yukon, and NWT. Support to local communities in resolution of outstanding compensation claims related to hydro projects.

Government of Northwest Territories, Yellowknife, Northwest Territories

1996 – 1998 Land Use Policy Analyst

Conducted research into protected area legislation in Canada and potential for application in the NWT. Primary focus was on balancing multiple use issues, particularly mining and mineral exploration, with principles and goals of protection.

Patrick Bowman - Experience in Utility Regulatory Proceedings

Utility	Proceeding	Work Performed	Before	Client	Year	Oral Testimony
Yukon Energy Corporation	Final 1997 and Interim 1998 Rate Application	Analysis and Case Preparation	Yukon Utilities Board (YUB)	Yukon Energy	1998	No
Manitoba Hydro	Curtailable Service Program Application	Analysis, Preparation of Intervenor Evidence and Case Preparation	Manitoba Public Utilities Board (MPUB)	Manitoba Industrial Power Users Group (MIPUG)	1998	No
Yukon Energy	Final 1998 Rates Application	Analysis and Case Preparation	YUB	Yukon Energy	1999	No
Westcoast Energy	Sale of Shares of Centra Gas Manitoba, Inc. to Manitoba Hydro	Analysis and Case Preparation	MPUB	MIPUG	1999	No
Manitoba Hydro	Surplus Energy Program and Limited Use Billing Demand Program	Analysis and Case Preparation	MPUB	MIPUG	2000	No
West Kootenay Power	Certificate of Public Convenience and Necessity - Kootenay 230 kV Transmission System Development	Analysis of Alternative Ownership Options and Impact on Revenue Requirement and Rates	British Columbia Utilities Commission (BCUC)	Columbia Power Corporation/Columbia Basin Trust	2000	No
Northwest Territories Power Corporation (NTPC)	Interim Refundable Rate Application	Analysis and Case Preparation	Northwest Territories Public Utilities Board (NWT PUB)	Northwest Territories Power Corporation (NTPC)	2001	No
NTPC	2001/03 Phase I General Rate Application	Analysis and Case Preparation	NWT PUB	NTPC	2000 - 2002	No - Negotiated Settlement
Newfoundland Hydro	2002 General Rate Application	Analysis, Preparation of Intervenor Evidence and Case Preparation	Board of Commissioners of Public Utilities of Newfoundland and Labrador (NLPUB)	Newfoundland Industrial Customers	2001 - 2002	No
NTPC	2001/02 Phase II General Rate Application	Analysis, Preparation of Company Evidence and Expert Testimony	NWT PUB	NTPC	2002	Yes
Manitoba Hydro/Centra Gas	Integration Hearing	Analysis and Case Preparation	MPUB	MIPUG	2002	No
Manitoba Hydro	2002 Status Update Application/GRA	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2002	Yes
Yukon Energy	Application to Reduce Rider J	Analysis and Case Preparation	YUB	Yukon Energy	2002 - 2003	No
Yukon Energy	Application to Revise Rider F Fuel Adjustment	Analysis and Case Preparation	YUB	Yukon Energy	2002 - 2003	No
Newfoundland Hydro	2004 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	NLPUB	Newfoundland Industrial Customers	2003	Yes
Manitoba Hydro	2004 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2004	Yes
NTPC	Required Firm Capacity/System Planning hearing	Analysis, Preparation of Company Evidence and Expert Testimony	NWT PUB	NTPC	2004	Yes
Nunavut Power (Qulliq Energy)	2004 General Rate Application	Analysis, Preparation of Intervenor Submission	Nunavut Utility Rate Review Commission (URRC)	NorthWest Company (commercial customer intervenor)	2004	No
Qulliq Energy	Capital Stabilization Fund Application	Analysis, Preparation of Intervenor Submission	URRC	NorthWest Company	2005	No
Yukon Energy	2005 Required Revenues and Related Matters Application	Analysis, Preparation of Company Evidence and Expert Testimony on all areas of Revenue Requirement, including Depreciation	YUB	Yukon Energy	2005	Yes
Manitoba Hydro	Cost of Service Methodology	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2006	Yes
Yukon Energy	2006-2025 Resource Plan Review	Analysis, Preparation of Company Evidence and Expert Testimony	YUB	Yukon Energy	2006	Yes
Newfoundland Hydro	2006 General Rate Application	Analysis, Preparation of Intervenor Evidence	NLPUB	Newfoundland Industrial Customers	2006	No - Negotiated Settlement
NTPC	2006/08 General Rate Application Phase I	Analysis, Preparation of Company Evidence & Expert Testimony on all areas of Revenue Req, COS and Rate Design, incl Depreciation	NWT PUB	NTPC	2006 - 2008	Yes
Manitoba Hydro	2008 General Rate Application	Analysis, Preparation of Company Evidence and Expert Testimony	MPUB	MIPUG	2008	Yes
Manitoba Hydro	2008 Energy Intensive Industrial Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2008	Yes
Yukon Energy	2008/2009 General Rate Application	Analysis, Preparation of Company Evidence and Expert Testimony	YUB	Yukon Energy	2008 - 2009	Yes
FortisBC	2009 Rate Design and Cost of Service	Analysis and Case Preparation, Support to Legal Counsel	BCUC	BC Municipal Electrical Utilities	2009 - 2010	No
Yukon Energy	Mayo B Part III Application	Analysis, Preparation of Company Evidence	YUB	Yukon Energy	2010	No
Yukon Energy	2009 Phase II Rate Application	Analysis, Preparation of Company Evidence and Expert Testimony	YUB	Yukon Energy	2009 - 2010	Yes
Newfoundland Hydro	Rate Stabilization Plan (RSP) Finalization of Rates for Industrial Customers	Analysis, Preparation of Intervenor Evidence	NLPUB	Newfoundland Industrial Customers	2010	No
Manitoba Hydro	2010/11 and 2011/12 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2010 - 2011	Yes
NTPC	Bluefish Dam Replacement Project	Analysis, Preparation of Company Evidence and Expert Testimony	Mackenzie Valley Land and Water Board	NTPC	2011	Yes
Newfoundland Hydro	Depreciation Methodology	Analysis, Support of Expert Witness, Advisor to Legal Counsel	NLPUB	Newfoundland Industrial Customers	2012	No
NTPC	2012/14 General Rate Application	Analysis, Preparation of Company Evidence & Expert Testimony on all areas of Revenue Req, COS and Rate Design, incl Depreciation	NWT PUB	NTPC	2012	Yes
Manitoba Hydro	2012/13 and 2013/14 General Rate Application	Analysis, Preparation of Intervenor Evidence & Expert Testimony on all areas of Revenue Req, COS and Rate Design, incl	MPUB	MIPUG	2013	Yes

Patrick Bowman - Experience in Utility Regulatory Proceedings

Utility	Proceeding	Work Performed	Before	Client	Year	Oral Testimony
Manitoba Hydro	Needs For and Alternatives To Investigation	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2014	Yes
Manitoba Hydro	2015/16 General Rate Application	Analysis, Preparation of Intervenor Evidence & Expert Testimony on all areas of Revenue Req, COS and Rate Design, incl	MPUB	MIPUG	2015	Yes
Newfoundland Hydro	Amended 2013 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	NLPUB	Newfoundland Industrial Customers	2015	No - merged into 2015 General Rate Application
Newfoundland Hydro	2015 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	NLPUB	Newfoundland Industrial Customers	2015	Yes
Manitoba Hydro	2016 Cost of Service review	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2016	Yes
Chestermere Utilities Inc.	2017 Rate Increase Request	Analysis, Preparation of Rate Review	City of Chestermere City Council	City of Chestermere City Council	2016	Presentation to Council
Newfoundland Hydro	2017 General Rate Application	Pre-Filed Testimony and Negotiated Settlement, including Depreciation	NLPUB	Newfoundland Industrial Customers	2017 - 2018	No - Negotiated Settlement
Altalink Management Limited	2017-18 General Tariff Application	Analysis, Support of Consumer Advocate during Negotiated Settlement Process on Depreciation matters	Alberta Utilities Commission (AUC)	Alberta Utilities Consumer Advocate (UCA)	2016 - 2017	No - Negotiated Settlement
ATCO Pipelines	2017-18 General Rate Application	Analysis, Preparation of Intervenor Evidence on Depreciation matters	AUC	UCA	2016 - 2017	No - Written Process only
Manitoba Hydro	2017/18 and 2018/19 General Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2017 - 2018	Yes
ATCO Pipelines	2017-18 GRA Review and Vary	Analysis and Case Preparation for SCADA Depreciation	AUC	UCA	2017 - 2018	No
ATCO Pipelines	2019-20 General Rate Application	Analysis, Preparation of Intervenor Evidence including Depreciation	AUC	UCA	2018 - present	No - Written Process only
Altalink Management Limited	2019-21 General Tariff Application	Analysis, Support of Consumer Advocate during Negotiated Settlement Process on depreciation matters, Preparation of Intervenor Evidence and Expert Testimony	AUC	UCA	2018 - present	Yes
ATCO Pipelines	Kepphills Transmission Facilities Assessment	Analysis, Preparation of Intervenor Evidence	AUC	UCA	2018 - 2019	No - Written Process only
Manitoba Hydro	2019/20 Electric Rate Application	Analysis, Preparation of Intervenor Evidence and Expert Testimony	MPUB	MIPUG	2019	Yes
Chestermere Water, Wastewater, Stormwater and Solid Waste Utility	2019 Rate Request	Analysis, Preparation of Rate Review	City of Chestermere City Council	City of Chestermere City Council	2019	Presentation to Council
ATCO Electric Distribution	Distribution Depreciation	Analysis and Case Preparation	AUC	UCA	2019	No
AltaGas	Distribution Depreciation	Analysis, Preparation of Intervenor Evidence	AUC	UCA	2019	No - Written Process only
ATCO Gas	Distribution Depreciation	Analysis, Preparation of Intervenor Evidence	AUC	UCA	2019	No - Written Process only
Nalcor Energy, Newfoundland and Labrador Hydro	Muskat Falls Rate Mitigation Hearing	Analysis, Preparation of Intervenor Evidence and Expert Testimony. Included Depreciation Rate Mitigation Options	NLPUB	Newfoundland Industrial Customers	2019	Yes
Kinder Morgan Canada (Jet Fuel) Inc.	2019 Tariff Filing Application	Review pipeline tolling application on revenue requirement and depreciation, prepare interrogatories and draft issues for evidence	BCUC	Vancouver Airport Fuel Facilities Corporation (VAFFC)	2019 - 2021	No
BC Hydro	Fiscal 2020 to 2021 Revenue Requirements Application	Analysis, Preparation of Intervenor Evidence	BCUC	Association of Major Power Consumers of BC	2019-2020	Yes
FortisAlberta	Town of Fort Macleod RCN-D Valuation Application	Analysis, Preparation of Intervenor Evidence on Depreciation and Valuation matters	AUC	UCA	2019-2020	No - Written Process only
Manitoba Public Insurance	2021 General Rate Application	Review insurer evidence, draft IRs and prepare evidence on regulatory and rate setting principles	MPUB	Taxicab Coalition	2020	Yes
ATCO Gas	2020 Cost of Service and Phase II Application	Analysis, Preparation of Intervenor Evidence	AUC	UCA	2020	No - Written Process only
Chestermere Water, Wastewater, Stormwater and Solid Waste Utility	2021 Rate Request	Analysis, Preparation of Rate Review	City of Chestermere City Council	City of Chestermere City Council	2020	Presentation to Council
ATCO Pipelines	Acquisition of Pioneer Pipeline	Review evidence, draft IRs. Evidence TBD	AUC	UCA	2020	No - Written Process only
ATCO Electric Transmission	2020-2022 GTA Depreciation Expert	Analysis, Preparation of Intervenor Evidence on Depreciation	AUC	UCA	2020-2021	No - Written Process only
Direct Energy Regulated Services (DERS)	2020-2022 DRT and RRT Application	Analysis, Support of Consumer Advocate during Negotiated Settlement Process	AUC	UCA	2021	No - Negotiated Settlement
AltaLink Management Ltd.	2022-23 General Tariff Application, and Review and Variance Application	Analysis, Support of Consumer Advocate during Negotiated Settlement Process, Preparation of Intervenor Evidence on Depreciation Matters.	AUC	UCA	2021-2022	No - Written Process only
Manitoba Hydro	2021 Interim Rate Application, Review and Variance Application	Analysis, Support of Intervenor position	MPUB	MIPUG	2021	No
NTPC	2022/23 General Rate Application, Interim Rate Application, and Taltson Hydro Major Project Permit Application	Analysis, support preparation of utility filing, responses to information requests. Anticipated to be witness on matters of revenue requirement, rate design and depreciation	NWT PUB	NTPC	2022	TBD
Nelson Hydro	Cost of Service and Rate Design Proceeding and 2022 Revenue Requirements proceeding	Support to Nelson Hydro on preparation of Cost of Service model and specified studies	BCUC	Nelson Hydro	2020-2022	No
Epcor Distribution and Transmission Inc (EDTI)	EDTI Phase II Distribution Tariff AUC proceeding 27018	Analysis, Preparation of Intervenor Evidence	AUC	UCA	2022	No - Written Process only
Newfoundland Hydro	Electrification, Conservation and Demand Management	Analysis, Preparation of Intervenor Evidence	NLPUB	Newfoundland Industrial Customers	2021-2022	TBD
Centra Gas Manitoba	2021 Cost of Service Methodology	Analysis, Preparation of Intervenor Evidence	MPUB	Industrial Gas Users of Manitoba (IGU)	2021-2022	Pending
BC Hydro	Fiscal 2022 to 2025 Revenue Requirements Application	Analysis, Preparation of Intervenor Evidence, primarily focused on depreciation	BCUC	AMPCBC	2022	Yes



InterGroup

CONSULTANTS

DALE FRIESEN, P.Eng. *SENIOR CONSULTANT*



AREAS OF EXPERIENCE:

- Account Management and Utility Engagement
 - Economic Development and Utility Rates
 - Demand-Side Management Programming
 - Efficient Energy Utilization and Rate Optimization
 - Renewable Resources and Climate Action
 - Energy Performance Standards Development
-

EDUCATION:

- Bachelor of Science (Mechanical Engineering) – University of Manitoba (Graduated 1986)
-

PROFESSIONAL EXPERIENCE:

INTERGROUP CONSULTANTS LTD., WINNIPEG, MANITOBA

2019 – Present – Senior Consultant

Ongoing Client Engagement

Manitoba Industrial Power Users Group (MIPUG) and Industrial Gas Users (IGU) (2019-Present):

Executive level responsibility for industrial stakeholder engagement with Manitoba Hydro and Efficiency Manitoba on topics relevant to energy supply and delivery, energy utilization, alternative rate options, energy efficiency and demand response programming targeting large industrial customers representing about 20% of Manitoba electric and natural gas consumption.

Lead facilitator and technical resource for large industrial clients during engagements with the Manitoba Government aimed at addressing the impacts for proposed legislation applicable to the scope and authority granted to the Manitoba Public Utilities Board (PUB), rate setting and rate/capital/resource planning reviews. Work undertaken on behalf of MIPUG and IGU clients (and industry generally) includes a review of impacts applicable to regulations establishing mandates and targets for Crown Corporations (Manitoba Hydro and Efficiency Manitoba) and specifying the scope and authority for independent and transparent review and approval of utility rates and rate setting practice, determination of financial targets for utilities, review and approval of integrated resource plans (IRP) and major capital projects (greater than \$200 Million).

Additional services include intervention at utility proceedings before the Manitoba Public Utilities Board and assessments for short and long-term rate impacts of proposed legislation and utility rate applications, along with engagement of other stakeholders (Chambers of Commerce, Industry Associations, and other ratepayer groups) to assess commonality and agreement on key matters of priority to industrial consumers.

Recent Regulatory Proceedings

For Manitoba Industrial Power Users Group (MIPUG) – Manitoba Hydro Application for Combined Electricity and Natural Gas GRA Proceedings (2022): Provided comment and feedback to the Manitoba Public Utilities Boards after review of Manitoba Hydro’s application, representing the position of large industrial companies operating in Manitoba. Feedback considered the current status of electric and natural gas GRA reviews, nature and complexity of outstanding matters in respect to both GRA processes, relative scale of electric and natural gas proceedings, review of regulatory costs, and complementary nature of electric and natural gas proceedings.

For Manitoba Industrial Power Users Group (MIPUG) – Manitoba Hydro 2021 Interim Rate Application (2021): Providing technical expertise and support to MIPUG for its intervention into the Manitoba Public Utilities Board (PUB) review of Manitoba Hydro’s 2021 Interim Rate Application. Participated extensively in this expedited written proceeding, including discovery, preparation of and response to information requests, preparation of written evidence and final argument. The expedited nature of the proceeding focused on the severe drought conditions present during the summer of 2021 and resulting impact on export revenues, which negatively impacted Manitoba Hydro’s financial position.

For Manitoba Industrial Power Users Group (MIPUG) – Manitoba Hydro Status Update (2021): Providing technical expertise and support to MIPUG for its intervention into the Manitoba Public Utilities Board (PUB) review of Manitoba Hydro initiated through an application from the Consumers coalition to determine whether rates are just and reasonable. Identified as an expert witness in the proceeding to testify on matters related to load forecasts (including DSM), domestic revenue projections, cost-of-service, rate design, customer impacts, operating, maintenance and administrative expense, hydrology, and capital expense as key inputs for determining whether rates are just and reasonable, in the context of the Manitoba Hydro strategic plan, resource plan, export forecasts and domestic consumption forecasts.

Recent Client Experience

Canadian Kraft Paper (2022):

Review of climate change actions proposed by client to establish potential funding partners and identify federal and provincial funding programs relevant to the activities proposed by Canadian Kraft Paper. Assisted with the development of a Request for Proposal to identify resources for completion of pre-feasibility study to support technical and financial assessments of proposed climate change actions to support internal capital approvals and applications for funding.

Chemtrade Logistics Inc (2020-Present):

Undertakings related to climate change targets mandated by Government, including review of alternative uses for by-product hydrogen streams and related opportunities for generating value-added benefit streams for client operations. Facilitation for Government engagement and negotiation of rates for hydrogen-enrichment of natural gas supplies.

Prior Regulatory Proceedings

For Alberta Utilities Consumer Advocate (UCA) – AUC DCG Credit Review (2020-2021): Provided technical expertise and support to the Utilities Consumer Advocate (UCA) for participation in an Alberta Utilities Commission (AUC) Distribution-Connected Generation (DCG) Credits proceeding examining credit payments provided through Distribution Facility Operator (DFO) tariffs in Alberta. Explored the inter-woven relationship between the DCG Credit mechanism, AESO transmission tariff (including Rider C charges and 12 Coincident Peak methodology) and Alberta Transmission Regulations to establish the nature and cause of increases in DCG Credit payments provided by distribution utilities over the past decade. Considered benefits accruing to distribution load customers from DCG relative to the costs imposed on load customers for wire costs (as mandated by transmission regulation) and DCG credit payments. Provided recommendations to the Commission for a fulsome review of the DCG Credit

mechanism, including consideration for ongoing proceedings related to transmission tariff updates, tariff design, review of transmission regulation, adjusted metering practices, substation fractioning and other related matters. Presented a proposal for grandfathering of payments provided under the existing DCG Credit mechanism.

For Alberta Utilities Consumer Advocate (UCA) – AUC Distribution Inquiry – Module One (2019-2020): Provided technical expertise and support to the Utilities Consumer Advocate (UCA) for participation in a Distribution Inquiry related to the timelines and impacts rising from the adoption of distributed energy resources (DER) in Alberta. Reviewed associated technical requirements for integrating emerging DER resources into the structure and operation of electric and natural gas distribution networks, along with potential implications for the safe, reliable and quality delivery of energy. Examined considerations for rate structure design and risks for cross-subsidization. Responsibilities included preparation of submission, materials and presentation of materials for technical conferences and review of submissions by participating parties.

For Manitoba Industrial Power Users Group (MIPUG) – Efficiency Manitoba Three-Year Plan Review (2019-2020): Provided technical expertise and support to MIPUG for its intervention into the Manitoba Public Utilities Board (PUB) review of the inaugural Three-Year Plan for Efficiency Manitoba, a newly formed Crown Corporation responsible for delivery of efficiency programming under the Efficiency Manitoba Act and related regulations. Appeared as an expert witness in the proceeding to testify on matters related to scope, deliverability, cost-effectiveness, savings assessments, rate impacts and other items.

MERIDIUM ENERGY, WINNIPEG, MANITOBA

2017 – Present (President)

Professional Engineer, Technical Consultant and Management Advisor providing independent guidance and services related to the efficient, productive, and economic use of renewable and non-renewable energy resources within homes, businesses, and communities for provincial, national, and international clients.

Extensive experience addressing factors influencing the adoption of emerging energy technologies, considering the intersection of technology, economics, and performance. Past experience includes a well-recognized 30-year utility background in Demand-Side Management (DSM) with direct Division/Director level responsibility for planning, development, delivery and promotion of energy efficiency programming supported by customer account management, economic assessments, utility rate analysis, codes and standards development, energy efficiency regulation, integration for customer-sited renewable energy projects and distributed generation. This extensive experience anchors expertise in the technical and commercial aspects of product development and business growth for new and emerging distributed energy resources.

Scope of work includes:

- Guidance on electric and natural gas utility engagement, energy utilization, rate optimization, utility service provisions, commercial/technical contracts and carbon tax assessments.
- Assessment of performance considerations for energy efficient equipment and high-performance buildings, including energy subsystems within industrial processes and commercial buildings.
- Evaluations of emerging technologies, including considerations for energy performance, product development, market adoption and business start-ups.
- Resource utilization for achievement of objectives supporting the sustainable, productive, and economic consumption of energy.

Ongoing work includes:

- VP Technology for EdgeEnergy, a Cincinnati-based startup developing products to support the deployment of electric vehicle DC Fast Charge (DCFC) infrastructure in regions with constrained utility service. Role includes primary responsibility for technology assessments, product development, supply chain management and production activities.
- Chair for CSA Group's Strategic Committee for Performance, Energy Efficiency and Renewables (SCOPEER), which serves as the national body with primary responsibility for the development of energy performance standards approved as National Standards of Canada for energy-consuming equipment and buildings. These standards are referenced in federal and provincial energy efficiency regulations and building energy codes.
- Technical and Management Support for development and commercialization of new motive power technologies capable of providing higher horsepower single-phase ratings for expanding commercial and agricultural applications in rural locations and supporting the adoption of DC rapid charge system in rural regions (Single-Phase Power Solutions – Cincinnati, OH).

Prior work includes:

- Assessment of Performance Benchmarking Tools for the measurement and reporting of energy performance in buildings from concept/design through to post-construction occupancy, supporting growth in the adoption of performance-based decision-making among building professionals.
- Business Case Development for a user-friendly, cloud-based energy modelling software tool to simulate energy performance and validate energy code compliance in less complex, small to medium-sized commercial buildings.
- Technical and advisory support for work undertaken by Red River College in respect to the College's National Sciences and Engineer Research Council (NSERC) funded Building Envelope Technology Access Centre (BETAC).
- Evaluation of Infrastructure Requirements for battery-powered, all-electric transit bus fleets being considered by North American and international transit authorities as a response to business and climate change mandates.

MANITOBA HYDRO, WINNIPEG, MANITOBA*2010-2017 – Division Manager, Industrial & Commercial Solutions*

Director-level responsibility for Manitoba Hydro's commercial and technical relationship with the 400-plus largest electric and natural gas consumers in Manitoba. Provided strategic guidance for economic development initiatives aimed at attracting and retaining commercial and industrial customers, including examination of alternative rate structures, renewable supply options and demand-side management programming intended to enhance the competitiveness of Manitoba's commercial and industrial customers.

Managed a Customer Service Division consisting of 25 plus account managers, economic development specialists and administrative staff, along with 35 - 40 engineers, technicians and energy-utilization specialists supporting residential, commercial and industrial DSM programming, renewable energy resources, electric and natural gas service inquiries, contractual commercial business relationships, demand-side management activities, power quality analysis, and renewable customer-sited, distributed generation.

Specific areas of accountability included:

- Divisional operations and fiscal management related to key and major account management, commercial and technical agreements, customer service policy, service reliability, power quality, service extensions and upgrades, alternative rate structures, energy efficiency, emerging technologies, and customer-focused residential, commercial, and industrial demand-side

management programs.

- Additional duties encompassed consultation and support for inputs in resource planning functions, including load forecasts, efficiency impacts, rate design and customer policy review, along with provision of technical support and witness testimony for public rate hearings and coordination of government interaction on energy conservation.
- Provided strategic leadership and oversight for Manitoba Hydro's collaboration with CSA Group and other industry associations on initiatives supporting Federal and Provincial objectives for sustainability and climate change action, such as the Pan Canadian Framework on Clean Growth and Climate Change.
- Relevant Projects and Activities undertaken in Respect to Northern Communities and Energy Efficiency.
 - ♣ Senior level responsibility and oversight for technical staff supporting development of demand-side management programs applicable to energy utilization, energy efficiency, demand response, and customer-sited renewable generation.
 - ♣ Senior level responsibility for development and implementation of Bioenergy Optimization Program supporting deployment of customer-sited renewable generation using biomass-to-energy pathways. A component of this work, included a \$6.0 Million project for Bioenergy Optimization Program Demonstrations, funded in part by the Canadian Government Clean Energy Fund. The project demonstrated five biomass-to-energy pathways across Manitoba and included a Remote Community Add-In component to assess opportunities for renewable biomass project in remote communities across Northern Manitoba and other jurisdictions in Canada.
 - ♣ Senior level responsibility and oversight for technical staff involved in a joint project between Manitoba Hydro, Red River College, and the University of Manitoba to investigate the feasibility of using solar troughs for concentrating solar energy in space and process heating applications.

MANITOBA HYDRO, WINNIPEG, MANITOBA

2008-2010 – Business Initiatives Manager

Developed non-regulated, for-profit initiatives designed to provide specialized energy-related services to large commercial and industrial customers using Manitoba Hydro's in-house technical and project management expertise, with specific emphasis on services related to the installation and maintenance of high voltage customer-owned equipment, power protection backup generators, etc.

Designed and implemented alternative utility rate structures to address the impact of the global downturn on Manitoba-based energy-intensive industrial operations during the 2008/09 global recession and oversaw the development of demand-side management initiatives aimed at improving the energy efficiency, productivity and competitiveness of Manitoba industries.

MERIDIUM POWER INC (MANITOBA HYDRO SUBSIDIARY), WINNIPEG, MANITOBA

1999-2007 – General Manager

Developed and implemented business plan for the formation and operation of a wholly owned Canadian subsidiary of Manitoba Hydro dedicated to the development and commercialization of innovative electric motor and generator technologies targeting agricultural, commercial and industrial applications.

Overall responsibility for operation and fiscal management of engineering, marketing/sales, service and support functions for a Canada-wide network of distributors and agents targeting markets requiring motive power for higher horsepower agricultural applications, such as irrigation, and battery-free power

protection for critical commercial/industrial applications requiring high quality uninterruptible service.

MANITOBA HYDRO, WINNIPEG, MANITOBA

1995-1998 – Senior Motor Systems Engineer

Developed, implemented and delivered industrial energy efficiency programs for large commercial and industrial customers in Manitoba, including provision of technical expertise to assist customer with design, procurement and operation of energy efficient electric motor systems and driven-equipment.

Worked actively with CSA Group to develop standardized test methods and minimum energy performance standards for electric motors and motor-driven systems adopted across North America by manufacturers and regulators.

MANITOBA HYDRO, WINNIPEG, MANITOBA

1992-1994 – Motor Program Engineer, Industrial Energy Management

Provided technical and administrative support for Manitoba Hydro's Industrial Power Smart High Efficiency Motors Program aimed at improving the energy efficiency of electric motors installed at commercial and industrial facilities in Manitoba. Led efforts to standardize energy efficiency test methods for motors.

Worked nationally with other Canadian utilities and global motor manufacturers to develop a coordinated approach to energy efficiency programming, resulting in Canada being the global leader in adoption of energy efficient electric motors.

PROFESSIONAL AFFILIATIONS/DEVELOPMENT:

Registered Professional Engineer – Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM).

CSA Committee Chairperson – National Strategic Committee on Performance, Energy Efficiency and Renewables (SCOPEER), CSA Group.

30 years experience in a variety of leadership positions as the chairperson for Technical Committees and Subcommittees developing energy performance standards for residential, commercial, and industrial equipment. SCOPEER facilitates the development of Standards Council of Canada (SCC) accredited CSA energy performance standards specifying test methods for determination of energy performance in equipment and systems, while also facilitating the implementation of minimum energy performance standards (MEPS) within energy efficiency guidelines, conservation programs and government energy efficiency regulation. The work of SCOPEER actively works with Federal and Provincial Governments and Industry to support the North American and global harmonization of energy performance standards for residential, commercial and industrial equipment (www.csagroup.org).

Advisory Board Member - Red River College, Building Envelope Technology Access Centre (BETAC).

BETAC is a Natural Sciences and Engineering Research Council (NSERC) funded Technology Access Centre that provides a multi-disciplinary environment to facilitate advancements in building envelope technology that provide for greater energy efficiency and durability, while addressing the intended occupancy, service life and related climatic conditions for buildings. It is intended to enhance the capability for local companies, particularly small and medium-sized enterprise to become more productive and innovative (www.rrc.ca/betac).

Construction Strategic Council Member - Red River College, School of Construction and Engineering Technologies.

The Construction Strategic Council works with Red River College to identify the needs of the construction industry and support the development of programming to facilitate the necessary skills and trades training required by the construction industry.

President / Executive Board Member – Winnipeg South End United Soccer Club (WSEU).

Elected volunteer board and managing executive position responsible for an annual budget approaching \$1.0 million and oversight of technical and administrative staff supporting youth soccer program development and delivery within the community. WSEU is the primary coordinator and facilitator for the development and delivery of soccer programming for more than 5,000 recreational and competitive youth soccer players from ages 4 to 17 in South Winnipeg. The District Association works closely with member Community Centres, youth leagues and other regional and provincial associations to champion youth soccer and provide accredited and sanctioning programming for youth and their families (www.wseu.ca).

Dale Friesen - Experience in Utility Regulatory Proceedings

Utility	Proceeding	Work Performed	Before	Client	Year	Oral Testimony
Manitoba Hydro	2010/11 and 2011/12 Rate Application	Preparation of Application Filing, Review and Response to Information Requests, Designated as Expert Witness - Time of Use Rates (TOU deferred by PUB)	Manitoba Public Utility Board	Manitoba Hydro (employee)	2010	No
Manitoba Hydro	2012/13 & 2013/14 Needs for Alternatives To (NFAT) Review	Preparation of Evidence, Review and Response to Information Requests, Designated as Expert Witness on Energy Efficiency, Load Forecasting - Top Consumers	Manitoba Public Utility Board	Manitoba Hydro (employee)	2012	Yes
Manitoba Hydro	2012/2013 & 2013/14 General Rate Application	Preparation of Application Filing, Review and Response to Information Requests, Support for Expert Witnesses, Final Argument	Manitoba Public Utility Board	Manitoba Hydro (employee)	2012	No
Manitoba Hydro	2014/2015 & 2015/16 General Rate Application	Preparation of Application Filing, Review and Response to Information Requests, Support for Expert Witnesses, Final Argument	Manitoba Public Utility Board	Manitoba Hydro (employee)	2014	No
Manitoba Hydro	2015/16 & 2016/17 General Rate Application - Interim Rate Increase for April 1, 2016	Preparation of Application Filing, Review and Response to Information Requests, Support for Expert Witnesses, Final Argument	Manitoba Public Utility Board	Manitoba Hydro (employee)	2015	No
Efficiency Manitoba	2019/20 - Initial Three-Year Plan	Case Preparation, Discovery, Preparation of Expert Evidence, Expert Testimony and Preparation of Final Argument	Manitoba Public Utility Board	Manitoba Industrial Power Users Group	2019	Yes
Alberta Utilities Commission Distribution System Inquiry	Module 1 - Emerging Technology Review	Case Preparation, Discovery, Preparation of Expert Evidence, Expert Testimony	Alberta Utilities Commission	Alberta Utilities Consumer Advocate	2020	No
Alberta Utilities Commission Distribution System Inquiry	Combined Modules 2 & 3 - Review of Regulatory Processes and Rate Impacts	Case Preparation, Discovery, Preparation of Expert Evidence, Expert Testimony	Alberta Utilities Commission	Alberta Utilities Consumer Advocate	2021	Yes
Fortis Alberta Inc.	Distribution-Connected Generation Credit Module For 2022 Phase II Distribution Tariff Application	Case Preparation, Discovery, Preparation of Expert Evidence, Preparation of Final Argument (written process)	Alberta Utilities Commission	Alberta Utilities Consumer Advocate	2021	No
WCSB Power Alberta Limited Partnership	Review and Variance of Decision 26090-D01	Case Preparation, Discovery, Preparation of Expert Evidence, Preparation of Final Argument (written process)	Alberta Utilities Commission	Alberta Utilities Consumer Advocate	2021	No
Manitoba Hydro	Consumer Coalition Application for an order Requiring a Manitoba Hydro Status Update Hearing	Case Preparation, Discovery, Preparation of Evidence and Designated Expert Testimony (written-process, hearing suspended in advance of oral testimony)	Manitoba Public Utility Board	Manitoba Industrial Power Users Group	2021	No
Manitoba Hydro	Application for 2021 Interim Electric Rate Increase	Case Preparation, Discovery, Preparation of Expert Evidence, Preparation of Final Argument (written process)	Manitoba Public Utility Board	Manitoba Industrial Power Users Group	2021	No
Manitoba Hydro	Application for Combined Electric and Natural Gas GRA Hearings	Preparation of Comments in Response to Regulator Request, Review of Information Responses (written process)	Manitoba Public Utility Board	Manitoba Industrial Power Users Group	2022	No
Centra Gas	2021 Cost of Service Study	Case Preparation, Discovery, Preparation of Evidence, Preparation of Final Argument (written-process)	Manitoba Public Utility Board	Industrial Gas Users	2022	No



InterGroup

CONSULTANTS



JEFF CROZIER

CONSULTANT

AREAS OF EXPERIENCE:

- Utility Rate Regulation
- Auto Insurance Rate Regulation
- Competitive Wholesale and Retail Electricity Markets

EDUCATION:

- Master of Arts - Economics, McGill University, 2005
- Bachelor of Commerce (Hons), University of Manitoba, 2003

PROFESSIONAL EXPERIENCE:

INTERGROUP CONSULTANTS LTD., WINNIPEG, MANITOBA

2020 – Present – Consultant, 2006 – 2008 – Research Analyst

Utility Regulation

For the Utilities Consumer Advocate (Alberta) (2021): As a member of the project team, participated in negotiated settlement process for the EPCOR Energy Alberta (EEA) Non-Energy Regulated Rate Tariff Application. Developed information requests, negotiating strategy and supporting analysis.

For the Utilities Consumer Advocate (Alberta) (2021): As a member of the project team, participated in negotiated settlement and hearing for the AltaLink Transmission GTA. Developed information requests, negotiating strategy and supporting analysis, evidence and closing submission themes.

For the City of Yellowknife (2021): As technical lead, prepare revenue requirement, cost of service analysis, and rate design for city's water and sewer utility operations. This project is ongoing.

For the Utilities Consumer Advocate (Alberta) (2020): As a member of the project team, co-authored evidence on bad debt forecast, deferral accounts and the economic outlook for 2021 for the ENMAX Energy Corporation 2021 Non-Energy Regulated Rate Tariff Application. Developed information requests, case strategy and closing submission themes.

For the Winnipeg Taxi Coalition (2020-2022): Led the intervention on Manitoba Public Insurance's 2021 and 2022 General Rate Applications. Prepared evidence and testimony, as required, on the relative riskiness of Taxi Vehicle for Hire insurance use, and issues with the credibility weighting approach to rate setting for vehicles for hire. Developed issues list, information requests, case strategy and closing submissions.

For the Consumers Association of Canada (Manitoba) (2020-2021): as a member of the project team, provided strategic guidance and research to support the intervention on Manitoba Public Insurance's 2021 and 2022 General Rate Applications. Developed information requests, case strategy and closing submission themes.

For the Utilities Consumer Advocate (Alberta) (2020): As a member of the project team, co-authored evidence on the capital forecast for the ATCO Pipelines 2021-2023 General Rate Application. Developed information requests, case strategy and closing submission themes.

For the Utilities Consumer Advocate (Alberta) (2020): As a member of the project team, review and provide support to the evidentiary submission on the implications for Performance Based Ratemaking of the anticipated broad-based adoption of Distributed Energy Resources.

For the Town of Hay River (2020): prepare revenue requirement, cost of service and rate design for the town water and sanitary sewer system.

For Manitoba Industrial Power Users Group (2008): Conducted a survey of inverted stepped rates offered by major electric utilities in North America, and a brief review of the literature on stepped rate design principles. Also conducted a survey of industrial power rate design in the Pacific Northwest, including a historical record of developments leading to the current methodology.

For Yukon Energy (2007): Involved in the preparation of regulatory filing documents related to business planning and year end actual outcomes. Directly involved in the maintenance and operation of a financial regulatory model used to produce the regulated operations year end results and forecasts.

For Industrial Customers of Newfoundland and Labrador Hydro (2007): Reviewed hydraulic forecasting methodology and assessed average annual hydraulic production estimates of Newfoundland Hydro. Also conducted research into the application of marginal cost price signals, through stepped rate design and time of use rates, for industrial customers in Newfoundland.

For Northwest Territories Power Corporation (2006): Involved in preparing analysis and documentation for matters related to regulatory filings, cost of service, and rate design. Specific attention to areas concerning load forecasting. Researched and prepared directive response regarding best practices for design of stand-by rates for self-generating customers.

Economic Valuations

For Western Copper and Gold (2021): Conducted a review and assessment of federal carbon tax obligations under the Output Based Pricing System (OBPS), for a potential copper and gold mine in Canada.

For Manitoba Industrial Power Users Group (2007): Conducted an economic impact assessment of Canexus operations on the Manitoba economy, assessing contributions to value added or GDP, employment, and labour income, including relevant multiplier analyses. Carried out a similar economic impact assessment for the proposed Keystone pipeline.

For Beverly and Qamanirjuaq Caribou Management Board (2007): Conducted an economic valuation of the estimated harvest of the Beverly and Qamanirjuaq caribou herds.

Socio-Economic Impact Assessment and Mitigation

For Denison Mines Corp (2021): As a member of the project team, conduct an economic baseline and impact assessment for a potential uranium mine in northern Saskatchewan. This project is ongoing.

For Nuclear Waste Management Organization (2021): As a member of the project team, conduct an economic baseline assessment of north western Ontario supporting the potential an impact assessment of a deep geologic repository for spent nuclear fuel. This project is ongoing.

For Manitoba Hydro (2007): Conducted a forecast of Pre-Project Training Outputs, and a supply and demand analysis of the work force for the Wuskwatim and Keeyask generating station construction projects. Forecasting involved the design and testing of a parameterized structural model, whose results fed into a supply and demand analysis to identify and quantify instances of oversupply and unmet demand. Produced a report of key findings, methodology and detailed results for internal review at Manitoba Hydro.

For Yukon Energy Corporation (2007): Conducted an analysis of economic Valued Environmental Components (VEC) for the environmental impact statement of the Carmacks-Stewart Transmission Line regulatory submission.

Management Support

For Atoskiwin Training and Employment Centre (2006): Conducted an analysis of existing business model, designed and generated an updated business model to facilitate transition of business activities from a public funding model to private enterprise model.

MANITOBA PUBLIC INSURANCE CORPORATION (MPI), WINNIPEG, MANITOBA

2016 – 2020, Director, Regulatory Affairs

Accountable for the overall delivery, performance, and outcomes of MPI before the Manitoba Public Utilities Board (PUB). In this capacity, direct and oversee and the development of the annual General Rate Application (GRA), drawing on all divisions in the corporation to prepare a revenue requirement application in excess of \$1 billion, including:

- Develop overall strategy and key messages for application
- Provide situation assessments and recommend approaches to executive
- Review, approve and prepare as necessary, application materials, procedural submissions, information requests/responses, and lines of cross examination
- Prepare CEO opening presentation, rebuttal evidence and closing arguments
- Network with the PUB and intervener counsel to improve regulatory efficiency

Additional strategic accountabilities included briefing and providing recommendations to the MPI Board of Directors on regulatory process and strategy, consulting and advising government on the regulatory framework for MPI, and advocating alternative approaches to price regulation to reduce the regulatory burden on the corporation.

Operational accountabilities included debriefing with PUB, interveners, and internal staff to improve processes and outcomes, and preparing and managing the expense budget for the Regulatory Affairs division, and the regulatory process overall.

UTILITIES CONSUMER ADVOCATE (UCA), CALGARY, AB

2014 – 2016 Manager, Regulatory Operations/ Senior Analyst

Accountable for the day to day operation of UCA regulatory interventions before the Alberta Utilities Commission and other authorities. Coordinating the efforts of staff, consultants and external counsel, including:

- Review of applications to determine consumer impacts and the need for consumer intervention;
- Assemble regulatory team for the intervention, and ensure appropriate resources are available;
- Review and approve regulatory filings, including information requests, evidence and argument prepared by staff, consultants, and external counsel;
- Review and approve procedural submissions, and guide activities on interlocutory matters;

- Ensure consistency between UCA positions in regulatory proceedings across various utilities; and
- Coordinate efforts and manage relationships with other consumer groups and interveners in Alberta.

Rate case specific accountabilities included preparing evidence of the UCA on Regulated Rate Options and Performance Based Regulation; participating in regulatory interventions UCA counsel and expert witnesses, and providing written and oral briefs to the UCA Advisory Board; and other Government of Alberta senior management.

Industry engagement accountabilities included representing the UCA interests on industry committees and through negotiated settlement processes; guiding strategic policy development to further small consumer interests through legislative, and government policy avenues; and sitting as a member of Alberta Treasury Board Macroeconomic Forecasting Committee.

ALBERTA MARKET SURVEILLANCE ADMINISTRATOR, CALGARY, AB

2009 – 2011 Electricity Market Analyst

As a member of the Market Monitoring Group, accountabilities included conducting real time and post hoc monitoring of the Alberta Interconnected Electric System Spot Market, to identify market events and anomalies in the functioning of the electricity market; developing new and existing surveillance tools to monitor market participant pricing strategies, market supply and demand, and other price setting factors in the electricity market.

Applied metrics to assess the market outcomes and the state of competition in the energy market, with study results published in Market Surveillance Administrator quarterly reports.

Presented findings of market events and outcomes to industry stakeholders, including the annual meeting of the international working group of electricity market monitors (EISG).

NATIONAL ENERGY BOARD, CALGARY ALBERTA

2008 – 2009, Electricity Market Analyst

Operational accountabilities included the review and processing of applications for electricity export permit applications and providing assessment and recommendations for approval of export permit applications.

Conducted general electricity market surveillance across Canada, including retail and wholesale price comparisons, compile import and export statistics, and prepare electricity market outlooks and forecasts.

Jeff Crozier - Experience in Utility Regulatory Proceedings

Utility	Proceeding	Work Performed	Before	Client	Year	Oral Testimony
Generic Proceeding on the Cost of Capital		Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2013	No
TransAlta	2013-2014 Transmission General Tariff Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2013	No
EDTI	Performance-Based Regulation Capital Tracker True-Up	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2014	No
Enmax Energy Corporation	2014-2015 Distribution Tariff Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2014	No
Fortis Alberta Inc.	Performance-Based Regulation Capital Tracker True-Up	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2014	No
AltaLink	2015-2016 General Tariff Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
ATCO Electric Transmission	2015-2017 General Tariff Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
ATCO Pipelines	2015-2016 General Rate Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
EDTI	2015-2017 General Tariff Application	Analysis, Case Strategy, and Case Preparation	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
Enmax Power Corporation	2015-2017 Distribution Performance-Based Regulation Application	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
EPCOR Distribution and Transmission Inc.	2015-2017 Transmission Facility Owner Tariff Application	Analysis, Case Strategy, and Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
Fortis Alberta Inc.	Asset Disposition	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
Fortis Alberta Inc.	Regulatory Treatment of Stranded Assets	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
Generic Proceeding on the Regulated Rate Tariff		Case Strategy, Case Preparation and Preparation of Evidence, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2015	No
ATCO Electric	Performance-Based Regulation Annual Rate Filing	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
EDTI	2016-2017 Performance-Based Regulation Capital Tracker Forecast	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
EPCOR Distribution and Transmission Inc.	Performance-Based Regulation Rate Adjustment Filing	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
Fortis Alberta Inc.	2016-2017 Performance-Based Regulation Capital Tracker Forecast	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
Fortis Alberta Inc.	Annual Rate Filing	Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
Generic Proceeding on Performance-Based Regulation Plans for Alberta Electric and Gas Distribution Utilities		Case Strategy and Preparation of Evidence	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
Generic Proceeding on the Cost of Capital		Case Strategy, Case Preparation, and Oversight	Alberta Utilities Commission	Utilities Consumer Advocate (Manager, Regulatory Operations)	2016	No
Manitoba Public Insurance	2016 General Rate Application	Analysis, Case Strategy, Case Preparation, Rebuttal Evidence, and Closing Submissions	Manitoba Public Utilities Board	Manitoba Public Insurance (Director of Regulatory Affairs)	2016	No
Manitoba Public Insurance	2017 General Rate Application	Analysis, Case Strategy, Case Preparation, Rebuttal Evidence, and Closing Submissions	Manitoba Public Utilities Board	Manitoba Public Insurance (Director of Regulatory Affairs)	2017	No
Manitoba Public Insurance	2018 General Rate Application	Analysis, Case Strategy, Case Preparation, Rebuttal Evidence, and Closing Submissions	Manitoba Public Utilities Board	Manitoba Public Insurance (Director of Regulatory Affairs)	2018	No
Manitoba Public Insurance	2019 General Rate Application	Analysis, Case Strategy, Case Preparation, Rebuttal Evidence, and Closing Submissions	Manitoba Public Utilities Board	Manitoba Public Insurance (Director of Regulatory Affairs)	2019	No
ATCO Pipelines	2021-2023 Generation Rate Application	Analysis, Case Strategy, IR Preparation, Intervener Evidence, and Issues for Closing Submission	Alberta Utilities Commission	Utilities Consumer Advocate	2020	No
Enmax Energy Corporation	Non-Energy Regulated Rate Option Application	Analysis, Case Strategy, IR Preparation, and Intervenor Evidence, Issues for Closing Submission	Alberta Utilities Commission	Utilities Consumer Advocate	2020	No
Manitoba Public Insurance	2020 General Rate Application	Analysis, Case Strategy, Case Preparation, Rebuttal Evidence, and Closing Submissions	Manitoba Public Utilities Board	Manitoba Public Insurance (Director of Regulatory Affairs)	2020	No
Manitoba Public Insurance	2021 General Rate Application	Analysis, Case Strategy, Preparation of Intervenor Evidence and Expert Testimony	Manitoba Public Utilities Board	Winnipeg Taxi Coalition	2020	Yes
Manitoba Public Insurance	2021 General Rate Application	Research and Analysis, Case Strategy, IR Preparation	Manitoba Public Utilities Board	Consumers Association of Canada	2020	No
AltaLink Transmission	General Tariff Application	Analysis, Case Strategy, Case Preparation, Intervenor Evidence, and Issues for Closing Submission	Alberta Utilities Commission	Utilities Consumer Advocate	2021	No
Distributed Energy Resource Generic Proceeding		Preparation of Evidence	Alberta Utilities Commission	Utilities Consumer Advocate	2021	No
EPCOR Energy Alberta (EEA)	Non-Energy Regulated Rate Tariff Application	Analysis, Case Strategy, Case Preparation, Intervenor Evidence, and Issues for Closing Submission	Alberta Utilities Commission	Utilities Consumer Advocate	2021	No
Manitoba Public Insurance	2022 General Rate Application	Analysis, Case Strategy, Preparation of Intervenor Evidence and Expert Testimony	Manitoba Public Utilities Board	Winnipeg Taxi Coalition	2021	No
Manitoba Public Insurance	2022 General Rate Application	Research and Analysis, Case Strategy, IR Preparation	Manitoba Public Utilities Board	Consumers Association of Canada	2021	No
Manitoba Public Insurance	2023 General Rate Application	Analysis, Case Strategy, Preparation of Intervenor Evidence and Expert Testimony	Manitoba Public Utilities Board	Winnipeg Taxi Coalition	2022	No



InterGroup

C O N S U L T A N T S

JOSH DYCK

RESEARCH ANALYST

EDUCATION:

- CFA® Program Participant (Passed Level I), CFA Institute, October 2020 – Present
 - Master of Arts (Economics), University of Manitoba, September 2017 – October 2018
 - Bachelor of Arts – Honors (Economics), University of Manitoba, September 2012 – June 2017
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PROFESSIONAL EXPERIENCE:

INTERGROUP CONSULTANTS LTD., WINNIPEG, MANITOBA

October 2021 – Present – Research Analyst

For Northwest Territories Power Corporation (NTPC) (2021-2022): Assisted with the preparation of the 2022 NTPC General Rate Application including revenue requirement calculations and the drafting of business cases for major capital projects. Assisted with the preparation of the 2022 Annual Report of Finances.

For the Yukon Energy Corporation (2022): Assisted with the drafting of interrogatories and hearing preparation for the YUB Submission and proceeding regarding the Atlin Hydro Expansion Project Electricity Purchase Agreement.

For the Saskatchewan Rate Review Panel (SRRP) (2022): Provided support in conducting a comprehensive review of the 2022 and 2023 SaskPower Rate Application including statistical analysis of economic and environmental factors; analysis of SaskPower's load forecast, resource planning, and energy efficiency programs; and a review of forecasted revenue.

For the Qulliq Energy Corporation (QEC) (2021): Provided support for the preparation of the 2022-23 QEC General Rate Application.

For Rural Municipality of Woodlands (2021): Assisted in the ratemaking process for water and wastewater services. Calculated revenue requirements and aided in designing utility rates.

Josh Dyck - Experience in Utility Regulatory Proceedings

Utility	Proceeding	Work Performed	Before	Client	Year	Oral Testimony
Northwest Territories Power Corporation	2022 General Rate Application	Analysis and Case Preparation	Northwest Territories Public Utilities Board	Northwest Territories Power Corporation	2021	No
Qulliq Energy Corporation	2022-23 General Rate Application	Case Preparation	Utility Rates Review Council of Nunavut	Qulliq Energy Corporation	2021	No
Rural Municipality of Woodlands	Water and Wastewater Utility	Analysis and Case Preparation	Manitoba Public Utilities Board	Rural Municipality of Woodlands	2021	No
SaskPower	2022 and 2023 SaskPower Rate Application	Analysis, Technical Review, and Report Drafting	Saskatchewan Rate Review Panel	Saskatchewan Rate Review Panel	2022	No
Yukon Energy Corporation	Atlin Hydro Expansion Project Electricity Purchase Agreement	Case Preparation and Interrogatory Drafting	Yukon Utilities Board	Yukon Energy Corporation	2022	No