Nomination for Appointment to the
Integrated Resource Planning (IRP) Technical Working Group

To be submitted through the OEB's online filing portal by 4:45 pm on November 8, 2021. Please quote file number **EB-2021-0246**.

Contact Information

Nominee Name:	Dale Friesen, P.Eng.
Company Name:	InterGroup Consultants
Company Address:	300 - 259 Portage Avenue Winnipeg, Manitoba, Canada R3B 2A9
Position Title:	Senior Consultant
Department:	
Email Address:	drfriesen@intergroup.ca
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Please provide a short description for each of the following.

1. **Is this a self-nomination (Y/N)? If not, please indicate which individual(s)/organization(s) the nomination is made on behalf of, and whether the nominee has confirmed an interest in participating on the IRP Technical Working Group.**

Yes, this is a self-nomination.

Please note the attached CV for Mr. Dale Friesen, P.Eng., which supports responses provided to the questions within this form.

2. Nominee's Technical or Policy Experience With Natural Gas or Electricity IRP (utility system planning, experience with IRP solutions, cost-benefit analysis and comparison of IRP/facility solutions, etc.)

Dale Friesen is a 30 year participant in the energy sector having served in various capacities at Manitoba Hydro (electric and natural gas utility), industrial sector companies, and most recently, as an independent consultant representing ratepayers and other clients in regulatory proceedings and engagement of government on energy policy and rate matters. As a professional engineer, Dale has a strong background in energy utilization, energy efficiency, energy performance regulation, distributed energy resources and other activities that drive the demand and supply curve. In his roles at Manitoba Hydro, Dale had responsibility for the design and deliver of energy efficiency programming, including alternative resource identification, savings estimation and valuation (cost/benefit analysis with DCF), savings validation and integration into resource planning processes. Other responsibilities included key and major account management/economic development for major commercial and industrial users, where matters of policy, rates and service were addressed to ensure efficient utilization of utility infrastructure and obtain inputs necessary for resource planning activities.

3. Nominee's Knowledge of Ontario Context for Enbridge Gas IRP activities

(related work experience in Ontario, participation in OEB proceedings, etc.) ***{Note that the OEB will consider nominations for candidates with experience in IRP outside of Ontario}***

Dale is the National Chair for CSA Group's Strategic Committee for Performance, Energy Efficiency and Renewables (SCOPEER), which works closely with energy users, equipment manufacturers, energy utilities, energy regulators and other stakeholders from across Canada to develop energy performance standards (both electric and fuel burning) for energy consuming equipment, systems and buildings. CSA standards are frequently referenced in energy efficiency regulation, building energy codes, and legislation pertaining to energy policy and efficient utilization, both federally and provincially. Dale recently served as an independent expert for the Alberta Utilities Consumer Advocate in proceedings related to distributed energy resources and their anticipated impacts on the transmission/distribution system. Questions regarding decentralized of supply, energy storage and electrification of traditional gas and/or other fossil fuel loads were addressed.

4. Why do you believe that you/the nominee would be a valuable member of the IRP Technical Working Group?

Dale's extensive background in energy utilization and efficiency provides insight into the future of the energy demand curve. 30 years experience in the development of energy performance standards at CSA Group provides detailed insight into evolving consumption behavior and energy intensity (electric and natural gas) in residential, commercial and industrial sector consumers. His prior work at Manitoba Hydro and current work within the regulatory spectrum addresses key inputs for the IRP process, including considerations for load forecasts, assessments of energy efficiency savings and other alternative supplies such as RNG. Recent work surrounding climate change initiatives related to carbon pricing, electrification of transportation, space and water heating, along with integration of renewable natural gas and hydrogen-enrichment provides further insight into key factors affecting the inputs and outcomes of IRP processes addressing electric and natural gas systems supplying energy to consumers in Ontario and other jursidictions.

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 Generation and Carbon Output
- Energy Performance Standards Development
- Project Development and Resource Planning

EDUCATION:

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

PROFESSIONAL EXPERIENCE:

INTERGROUP CONSULTANTS LTD., WINNIPEG, MANITOBA

2019 – Present – Senior Consultant

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

Facilitation of industrial stakeholder engagement with Manitoba Hydro and Efficiency Manitoba in consideration of proposed rate programs and energy efficiency programming intended for application to industrial customers, representing about 20% of Manitoba electric and natural gas consumption.

Lead facilitator for large industrial clients during engagements with the Manitoba Government, Manitoba Hydro, and Efficiency Manitoba aimed at addressing the impacts for proposed legislation applicable to the scope and authority granted to the Manitoba Public Utilities Board (PUB). Work undertaken on behalf of MIPUG clients (and industry generally) includes a review of impacts applicable to regulations for 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), along with review and recommendations applicable domestic capital and operating plans for Manitoba Hydro (electric and natural gas) and Efficiency Manitoba.

Additional services include intervention at utility rate proceedings and assessments for short and long-term rate impacts for 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.

For Manitoba Industrial Power Users Group (MIPUG) – Manitoba Hydro Review (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.

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.

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.

Prior experience includes a well-recognized 30-year background in Demand-Side Management (DSM) with 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 and prior work includes:

- 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.
- 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 - Steering Committee on Performance, Energy Efficiency and Renewables (SCOPEER), CSA Group.

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 supports 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).