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March 4, 2016

Ontario Energy Board
2300 Yonge Street
27th Floor
Toronto Ontario
M4P 1 E4

Attention: Kirsten Walli,
Board Secretary

Dear Ms. Walli:

Re: EB-2016-0004 - Application under the Ontario Energy Board's own motion to consider potential alternative approaches to recover costs of expanding natural gas service to communities that are not currently served

Please accept this submission from MoCreebec Eeyoud¹.

1) Background on MoCreebec

The MoCreebec Eeyoud is a community of "Y" dialect Cree that trace their routes to the East Coast of the James Bay. Members have been residing in Moose Factory and Moosonee for many generations. Having fallen through the cracks over the decades the MoCreebec Eeyoud people came together in the 1980s to form a Council and in the 1990s developed a Constitutional Framework that continues to guide them to this day. The MoCreebec Eeyoud community has always approached self-governance from the perspective that political and economic independence comes with personal responsibility and that accountability and long-term sustainable growth strategies are key to community development.

¹ Submission research was conducted by Dr. Don Richardson and Larry Sault of the indigenously owned firm, Anwaatin Inc. - www.anwaatin.com. Dr. Richardson has experience in Canada and internationally, including work for the World Bank and the UK Department for International Development, supporting Universal Service Funds and the extension of utilities to rural, remote and indigenous communities. Larry Sault, CEO of Anwaatin, is the former Grand Chief of the Iroquios and Allied Indians, and former Vice President, Canadian Executive Services Organization (CESO) Aboriginal Services with oversight of seven regional offices, budgets, staff and a mandate of assisting First Nations across Canada in developmental stages of growth within their communities.

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The MoCreebec Eeyoud is a “community within communities”. Membership is based in Moose Factory (the oldest English-speaking settlement west of Quebec) and Moosonee. These two communities have a combined population of approximately 5,000. The MoCreebec Eeyoud community consists of approximately 1,000. The community of Moosonee is considered a “hub” or transportation route for many of the more northerly and coastal communities on the Western James Bay.

Access to affordable housing and cost of living are two critical issues for the members of the MoCreebec Eeyoud community and the broader communities of Moose Factory and Moosonee. The majority of homes and some institutional buildings are heated with electricity and hydro bills are putting into question the viability of living here. Some buildings use propane but unlike most northern communities, wood is not commonly used for space heating.

2) Current Energy Demand

The following entities require significant heat energy:

- Weeneebayko General Hospital, Moose Factory – Fuel Oil Consumption in 2013 was 509,885 litres – roughly \$500,000 per year in fuel oil heating cost which could be reduced by about \$300,000 per year with natural gas, cutting greenhouse gas emissions by almost 30%.
- Moosonee Health Centre Site
- Northern Stores (Moosonee) – large grocery and home supplies store
- Great North Builders Supplies (Moosonee) – large building supplies store
- Moosonee and Moose Factory Arenas
- Moosonee Airport buildings, hangars and additional facilities
- Moose Factory Complex - retail and community centre containing a grocery store (Northern Stores), a restaurant, a Canada Post outlet, a pharmacy, and offices.
- Moose Cree Education Authority and Northern College satellite campus facility
- Ministik Public School (Moose Factory)
- Northern Lights Secondary School (Moosonee)
- Delores D. Echum Composite School – senior elementary and secondary school (Moose Factory)
- Cree Village Ecolodge (20 room accommodation building)
- Moose River Guest House
- MoCreebec Eeyoud Council Office Buildings and
- Other Storage and Infrastructure Buildings (including Moose Cree Public Works facility)

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MoCreebec is exploring a variety of energy supply alternatives to reduce energy costs, manage carbon emissions, develop renewable energy supplies and improve community wellbeing. Access to natural gas is one of several options MoCreebec is exploring. Having a secure, cost-effective, reliable and secure source of low-carbon energy to manage community heat load is part of MoCreebec's economic development strategy. MoCreebec recognizes that taking heating off the electricity grid is key to freeing the electricity grid to enable solar, wind, geothermal, and other renewable energy supplies.

3) MoCreebec Support for Alternative Approaches to Recover Costs of Expanding Natural Gas Service to Rural, Remote and First Nation Communities

Union Gas' application EB-2015-0179 seeks approval for new approaches to expanding rural, remote and First Nation access to natural gas. MoCreebec submits that new approaches to expanding access to natural gas in rural, remote and First Nation communities are necessary. MoCreebec further understands that this hearing connects directly to the Government of Ontario's desire to expand natural gas distribution systems to communities that do not have access to natural gas as soon as possible. It is important to MoCreebec, and First Nations across Ontario, that this hearing includes focus on the needs of First Nation communities that do not have access to natural gas – both reserves and communities that include substantial First Nation populations. First Nations must have the option of low-cost, low-carbon natural gas as part of their potential energy supply mix. Natural gas is available to the majority of Ontario's population – enabling a wide variety of low-carbon and renewable energy opportunities. First Nations should have those same opportunities.

MoCreebec wishes to acknowledge that Union Gas stands out among participants in that it has made substantial progress since 1989 in working to expand access to natural gas with First Nation communities in Ontario. Union Gas is unique among Ontario natural gas utilities in its attention to working and partnering with First Nations. MoCreebec hopes that this hearing will help other utilities, and the Board, understand the advantages of an inclusive approach to indigenous peoples with regard to providing natural gas service in Ontario.

MoCreebec understands that EB-2015-0179 includes potential expansion to or within six First Nations: Chippewas of the Thames First Nation, Kettle Point First Nation/Lambton Shores, Moraviantown First Nation, Nipissing First Nation / Jocko Point, Oneida First Nation, and Chippewas of the Saugeen First Nation. It is important to recognize that this hearing originates with an application that includes significant proposed natural gas services to First Nations. This hearing will also serve to draw attention to so many other First Nations that do not have access to natural gas.



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MoCreebec also wishes to acknowledge Union Gas' recently approved Demand Side Management (DSM) plans that includes an Aboriginal Program. This program is unique among natural gas utilities in Ontario, and should be adopted by all natural gas utilities that are approved to provide natural gas services to reserve communities. The program combines delivery of Union Gas' Home Weatherization and Furnace-End-of-Life Upgrade programs within Aboriginal reserves. Eligible Aboriginal reserve customers will receive free natural gas energy efficiency measures installed by Union representatives as well as a financial incentive to upgrade their existing furnace to an energy efficient furnace when it needs to be replaced. As part of the Aboriginal program, customers that do not have a carbon monoxide detector will receive one at no cost. Union Gas has also identified the Aboriginal segment within its service territory as a potential market for a low-income program. In its approval for this program, the Board said that it "finds it appropriate for Union to reach out to this sub-segment, with a steady annual budget, enabling Union to learn and tailor its promotion." MoCreebec submits that what Union Gas learns will also be of benefit to other natural gas utilities that may serve reserve communities.

Union Gas' efforts to assist First Nations with access to natural gas dates back to its work to create the Six Nations Natural Gas Company in 1989 - the first natural gas local distribution company (LDC) owned and built by a First Nation community in Canada. Fifteen years ago, in 2001, Union Gas and its partner Six Nations Natural Gas Company Limited were chosen by the Province of Ontario as the winner of its second annual Ontario Aboriginal Partnerships Award. At the time of the Award, the Honourable David Young, then Ontario's Attorney General and Minister Responsible for Native Affairs said, "This partnership has had a very positive ripple effect throughout the community. Ontario is working with Aboriginal communities and the corporate sector to build market-driven partnerships to support our mutual goal of Aboriginal self-reliance, entrepreneurship and the creation of long-term employment."

The Six Nations Natural Gas Company that Union Gas helped create serves as a model for other First Nation energy LDCs, and was a for-runner to the three electricity LDCs affiliated with the First Nations owned Five Nations Energy transmission line company along the western coast of James Bay – Fort Albany Power Company, Attawapiskat Power Corporation and Kashechewan Power Corporation. The Ontario Energy Board is familiar with these First Nation owned and operated LDCs.

Unfortunately, beyond Union Gas' pioneering work, there are few examples of serious efforts to expand natural gas to First Nation reserves that include tailored Aboriginal programs and partnership approaches. In Ontario, the reality that natural gas service is unavailable in so many First Nation communities, and communities with substantial off-reserve First Nation populations indicates that there is a systemic bias that prevents indigenous peoples from having equitable access to natural gas.

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MoCreebec has been unable to determine the full extent of unserved indigenous peoples across Ontario and submits that the Board would be well advised to rapidly assess the current situation and report to the Government of Ontario on the Board's efforts to expand natural gas distribution systems to First Nation reserves and communities with substantial indigenous populations that do not have access to natural gas, and further report on efforts to make sure those communities have access to natural gas as soon as possible.

4) Revenue Recovery – Universal Service Fund

MoCreebec submits that to expand natural gas service to unserved rural, remote and First Nation communities in Ontario, the Board should establish a Universal Service Fund. The Universal Service Fund would collect funds from all Ontario natural gas customers on a fair and equitable basis, and distribute those funds on a fair and equitable basis to any qualified utility which obtains a franchise and a leave to construct a community expansion from the Board. All utilities approved by the Board to provide natural gas service should collect funds using a universal formula, from each of their customers to put capital into the Universal Service Fund – a pool of funds available to all utilities to expand service to rural, remote and First Nation communities. The Universal Service Fund should cover both capital costs for expansion and circumstances where rural/remote/First Nation annual operating costs will be higher than the average community. The formula for collecting revenues, and the distribution of funds from the Universal Service Fund, can be reviewed annually to maximize benefits and service expansion, and minimize costs to all customers.

Where services are needed by rural, remote and First Nation communities, the Board can establish competitive Request for Proposal (RFP) mechanisms to select the utility that will provide the most cost-effective and highest quality of service to such communities, while drawing equitably from the Universal Service Fund. MoCreebec further submits that such a competitive process works for a variety of rural utility services around the world, will bring in new entrants that can include First Nation LDCs and LDC partnerships, and will accelerate the Government of Ontario's commitments to expand natural gas distribution systems to communities that do not have access to natural gas as soon as possible. A Universal Service Fund approach is in the public interest and will maximize the extension of natural gas services to numerous unserved First Nation communities.



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Universal Service Funds usually include the three following principles²:

- Availability: the level of service is the same for all users without geographical discrimination
- Affordability: for all users, the price of the service should not be a factor that limits service access
- Accessibility: all customers should be treated in a non-discriminatory manner with respect to the price, service and quality of the service, in all places, without distinction of race, sex, religion, etc.

Universal Service Funds must include defined and measurable objectives. In this case, MoCreebec submits that a primary objective would be to make sure that First Nation reserves and communities with substantial indigenous populations that do not have access to natural gas, have access to natural gas as soon as possible. A Universal Service Fund with clearly defined objectives will provide all participants, and the Government of Ontario, with confidence in the funding approach and will build support for the program.

A Universal Service Fund should also be technologically neutral. Technology for natural gas transportation is evolving rapidly, especially with advances in natural gas liquefaction and technologies for transporting liquid natural gas (LNG). As technologies evolve and are more rapidly deployed – for example the various configurations of Virtual Pipelines to truck or rail, and store and distribute, natural gas in North America, Australia, Europe, Asia and Africa³ – Virtual Pipelines stand to provide a competitive alternative to pipelines for communities that present distance, geophysical or “social license” challenges for traditional pipeline infrastructure. Various forms of Virtual Pipelines provide the ability to start natural gas services from small systems and progressively scale up as demand changes, or new communities and users come online. Scalability of Virtual Pipelines can support shortened project development timelines, scalable capital investments and a wide variety of participants. While physical pipelines are tied to the geographies they serve, the various forms of Virtual Pipelines are flexible to serve shifting demand wherever rail, road or port infrastructure permit.

² International Telecommunications Union, 2013. Universal Service Fund and Digital Inclusion For All Study. <https://www.itu.int/en/ITU-D/Conferences/GSR/Documents/ITU%20USF%20Final%20Report.pdf>

³ See: a) GE Power & Water, 2016. Delivering gas-fired power where no gas has gone before: Small gas networks for distributed power whenever and wherever it is needed. https://www.geoilandgas.com/sites/geog.dev.local/files/Brochure_virtual-pipeline_8pages_v06.pdf b) XNG, 2016. XNG Virtual Pipeline Case Studies, 2016. <http://xng.com/case-studies/>. c) Alaska Dispatch News, 2015. Juneau may look to Canadian natural gas to lower energy costs. <http://www.adn.com/article/20151127/juneau-may-look-canadian-natural-gas-lower-energy-costs>



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Understanding the extent of unserved indigenous peoples across Ontario is of particular importance in a province that is home to the TransCanada Mainline natural gas pipeline. Across the north of Ontario, many First Nation communities, and communities with substantial indigenous populations, are in proximity to this major Canadian natural gas transportation service built in 1958, but continue to lack access to natural gas despite efforts to convert part of this natural gas pipeline infrastructure to transport crude oil. It is difficult to understand how First Nations are supposed to accept the risks of converting natural gas pipelines to crude oil transport while never seeing benefits from the natural gas transported through the TransCanada Mainline. The Board has reviewed the Energy East project, but this review did not include reference to implications of the Energy East project for First Nations unserved by natural gas.

5) Natural Gas Service Scenario - Moose Factory – Moosenee LNG / Virtual Pipeline – Capital Costs

A pipeline option from the North/East of Sudbury Planning District to Moose Factory and Moosonee would be uneconomic. In the absence of other study data, MoCreebec relies on the Union Gas filing for EB-2015-0179 - Exhibit JT1.2 filed 2016-01-05 for indicative capital cost estimates for LNG / Virtual Pipeline natural gas access. MoCreebec provides the estimated capital scenario below for an LNG / “Virtual Pipeline” supply model for Moose Factory and Moosonee. If such an approach is feasible, the approach could be expanded to include additional service to Fort Albany, Attawapiskat and Kashechewan with additional LNG Trailers and additional Vaporization Stations in each community.

Physical pipelines to expand service to many rural, remote and First Nation communities can be expensive, challenging and time-consuming to build. Consequently, many prospective users do not have access to natural gas even though supplies are now plentiful and available at low-cost. Even where plans exist to get pipeline service, such access may be years away, resulting in higher energy costs every day for the energy user. Virtual Pipelines bridge this gap. Scalable and modular, Virtual Pipelines utilize rail, road or port shipment to provide the reliable and flexible augmentation of the physical pipeline network that is necessary to monetize natural gas for diesel, propane or fuel oil replacement, or any other fueling need. Using trucks, rail or water transport, commercial quantities of natural gas are delivered to customers that do not have access to physical pipelines, and Across the developed world, Virtual Pipelines enable cost-effective, efficient, and reliable transportation and delivery of natural gas.

Virtual Pipelines save customers a great deal of money. The cost per BTU of liquid fuels is substantially higher than that of natural gas, and this spread is expected to continue for years to come. Savings for



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Virtual Pipeline customers in similar circumstances in Alaska are estimated to be about 35 percent over home heating oil and about 35 percent over propane. End users receive gas to their buildings and facilities as if there was a pipeline directly connect to their community.

Typically trucks, and unloading systems are owned and operated by the LDC operator. The gas purchasing, trucking logistics, capital costs, and equipment maintenance are all handled by the LDC. The end-user needs to convert their equipment to run on natural gas – an investment that, in the case of Union Gas, could be covered in full or partially through its Board approved Aboriginal Program.

Estimated One Time Capital for Moose Factory / Moosenee Virtual Pipeline Natural Gas Service

Item	Estimated Capital Cost (millions)
LNG Trailers (4 @ 270,000) – to ship LNG from Hagar and load onto flatbed railcars and to Moose Factory by truck and ferry	\$1.1
Vaporization Stations (1 in Moose Factory, 1 in Moosonee @ \$1.27 million ea.)	\$2.5
Distribution mains, services, and metering equipment	\$18
TOTAL	\$21.6

A Virtual Pipeline to Moose Factory and Moosonee would make it possible for future expansion of similar natural gas service to Fort Albany, Attawapiskat and Kashechewan, including service to schools, hospitals and medical clinics, and service to industrial users such as mining companies.



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6) Additional Comments on Issues List

MoCreebec agrees with the Board that the draft Issues List should include the Government's proposed cap and trade program and how it may impact the OEB proceeding. OEB staff therefore proposes the addition of the following issues to address this gap:

- How will the Ontario Government's proposed cap and trade program impact an alternative framework that the Ontario Energy Board may establish to facilitate the provision of natural gas services in communities that do not currently have access?
- What is the impact of the Ontario Government's proposed cap and trade program on the estimated savings to switch from other alternative fuels to natural gas and the resulting impact on conversion rates?

Further this, MoCreebec supports the addition to the issues list of a) and b) below from comments from BOMA and the OSEA. These question will help the Board address facts related to costs, greenhouse gas emissions and other environmental impacts with respect to natural gas service, including the potential electricity benefits that many First Nations might see if natural gas is available to reduce electricity grid demand and free up electricity grid infrastructure to support further community deployment of renewable energy systems.

a) BOMA Issue #5

MoCreebec agrees with BOMA that the following should be included in the issues list: "What are the cost/benefit ratio and net environmental benefits of deploying technologies such as ground source heat pumps, solar thermal and solar photovoltaic instead of natural gas to replace electric water and space heating in these areas?" OSEA

b) OSEA

The OSEA commented that the Draft Issues List should be revised to include:

- what conditions to impose on natural gas distributors to assess sustainable energy technologies prior to filing applications to expand to new communities
- what conditions to impose on natural gas distributors to incorporate sustainable energy technologies based on meeting certain thresholds in the assessment process above, and



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- how the costs of incorporating or installing sustainable energy technologies shall be considered in the funding mechanism, given the overall environmental benefits that accrue to all customers and potential GHG emission reductions which will either potentially decrease the number of GHG emission credits required by the natural gas distributor or create GHG offset credits for the natural gas distributor.

Sustainable energy may include: (i) conservation, energy efficiency and demand management, (ii) renewable heat and electricity generation, (iii) high efficiency combined heat and power and district energy, (iv) energy storage, (v) green buildings, (vi) smart-grids, (vii) transportation that is powered by hydrogen, electricity, human or animal energy and other non-fossil fuels, and (viii) community, public and commercial ownership of these structures.

7) Summary

In summary, MoCreebec thanks the Ontario Energy Board for the opportunity to present this information and suggests that a Universal Service Fund is an appropriate, and proven, alternative approach to recover costs of expanding natural gas service to communities that are not currently served. Tied to technical neutrality, a Universal Service Fund will support a variety of new technical approaches suitable for economically expanding natural gas service to rural and remote communities and First Nations, supporting the Government of Ontario's desire to expand natural gas distribution systems to communities that do not have access to natural gas as soon as possible.

Respectfully,

For
Allan Jolly
A/Chief
MoCreebec Eeyoud

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