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VIA COURIER AND RESS

June 17, 2016

Ms. Kristen Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto ON M4P 1E4

Attention: Board Secretary

RE: EB-2016-0004
Natural Gas Expansion Generic Proceeding

ARGUMENT-IN-CHIEF

Northern Cross Energy Limited ("NCE") is an intervenor in this proceeding.

Please find attached NCE's Argument-in-Chief for the above noted proceeding. This argument is filed pursuant to the Ontario Energy Board's (the "Board") Procedural Order No. 3 (dated May 30, 2016).

NCE has structured its argument to respond to what it deems the "key issues" and has also submitted an attachment that is structured to respond to the issues that are identified in the Board's approved Issues List as defined in Schedule B to the Procedural Order No.2.

Should you have any questions on the above or would like to discuss the document in more detail, please contact me at (519) 436-9010.

Respectively,

David A. McLean

David McLean, P.Eng.
Vice President

Argument-in-Chief
Of
Northern Cross Energy Limited

Introduction

Northern Cross Energy Limited's ("NCE") appreciates the opportunity to participate as an intervenor in this important proceeding. The decisions that are made as a result of this hearing will have important consequences in the evaluation of the expansion of Ontario's natural gas integrated gas systems, customers' energy choices and efficiency achievements.

NCE's argument herein addresses only the key issues in this proceeding that have a direct impact on its interests, but will offer ideas on a generic path forward for the Ontario Energy Board ("OEB" or "Board") supervision of natural gas system expansion. NCE has also submitted Attachment 1 that addresses the Board's approved Issues List.

South Bruce Request For Information Process

It is NCE's understanding that the specifics of any given franchise negotiation and subsequent agreement are not issues being considered by the Board as part of this generic expansion hearing. This includes the South Bruce franchise agreement Request For Information ("RFI"). With this understanding of the hearing having limited issues, NCE participated in this proceeding by monitoring the evidence and other parts of the proceeding as an intervenor, but did not submit its own evidence or produce a panel of witnesses.

NCE agrees with Presiding Member Quesnelle that the proper place to discuss the South Bruce RFI process issues is at the EPCOR franchise hearings EB-2016-0137, 0138 and 0139 for the three 3 South Bruce municipalities (*Transcript Volume 7, p. PDF 97, line 12 thru p. PDF 98, line 15)*. NCE is therefore planning to actively participate in the three anticipated franchise hearings, with the understanding that it is not too late to effectively adduce evidence that will be weighed and decided upon by the Board.

While the specifics of any particular franchise agreement are not being considered in this proceeding, NCE believes that the Board expressed interest in determining if an RFI process was useful; NCE has therefore commented herein on this limited issue in a generic way based on our RFI experience in the South Bruce RFI process.

NCE is one of the three proponents noted in this proceeding competing to install and operate the South Bruce natural gas distribution system. NCE was a participant in the South Bruce RFI process. NCE agrees with Dr. Murphy that the South Bruce RFI was open to all proponents and that no particular technical or business method for responding was prescribed by South Bruce (*Transcript Volume 3, p. PDF 202, line 11 thru 25).* NCE submits that the process was intended to be a pre-qualification of the proponents as demonstrated by the title of the process “Request For Information”. It is the experience of the NCE team members that this type of inquiry is usually followed up by a Request For Proposal ("RFP") where the party issuing the RFP provides a consistent framework for judging the competing proposals. An RFP is often followed by a Request For Quote ("RFQ") where the specifics of the proposal are contractually determined.

NCE submits that a normal RFP stage in a normal process typically includes the outline of the criteria that will be used by the issuing party. This allows proponents to attempt to meet those criteria and for the evaluators to objectively judge the competing proposals as well as the weighting that those criteria will be given during the evaluation process. This did not transpire in the South Bruce process; NCE submits that this should be the basis of an OEB-approved evaluation process for future franchise competitions.

NCE further submits that a new and comprehensive OEB-approved evaluation process should be applied to all franchise competitions, including the South Bruce franchise competition before the natural gas distribution franchise agreements are considered for approval by the Board in EB-2016-0137, 0138 and 0139. The ongoing proposed South Bruce expansion project, which has repeatedly attracted provincial interest over many years, is the second most significant project under consideration in this proceeding. It represents 4,764 of the 9,692 total new customers (30 Qualifying Projects with no CIAC at PI=0.4 @ 9,289 customers, plus the villages of Ripley and Lucknow @ 403 customers), which Union Gas Limited ("Union") expects to connect through this program *(Union Evidence in EB-2015-0179, p. PDF 104, "Opportunity*

Assessment Summary, column Potential Customers, rows 29, 54 and Total of 30 Qualifying Projects with no CIAC at PI=0.4"). It is second only to Enbridge Gas Distribution Inc.'s ("EGDI") Fenelon Falls & Bobcaygeon project at 5,485 new customers, which EDGI expects to connect through this program *(EGDI Evidence in EB-2016-0004, p. PDF 27, "Table 4: Preliminary Profitability Analysis, column 7, row 1).*

NCE fundamentally disagrees, on the basis of basic public interest considerations, with the South Bruce panel. During questioning by Mr. Smith *(Transcript Volume 3, p. PDF 243, line 27 thru p. PDF 250, line 26)* the South Bruce panel suggested that the RFI process and resulting outcome should not be submitted to the OEB because of the confidential nature of the evaluation. It is NCE's position that the submission of any RFI, RFP and/or RFQ process (confidential or otherwise) and resulting outcomes, which affect the public and involve substantial new infrastructure, should be available to facilitate Board scrutiny. This evaluation should particularly be undertaken when an application for Franchise Approval and the issuance of a Certificate of Public Convenience and Necessity is submitted, and is there is a legislative obligation to conduct that evaluation in a quasi-judicial tribunal forum, which tests the evidence surrounding economics, facilities and rates.

NCE submits that it is one of the Board's core responsibilities to set just and reasonable rates and, therefore, it and the public should be privy to the entire body of information available that would aid in that decision.

Mr. Quesnelle has ruled that certain elements of the South Bruce franchise selection process may be useful to the Board in determining a generic recommendation *(Transcript Volume 3, p. PDF 262 line 9 thru 26).* In response to that observation, NCE notes that it was a condition of participating in the South Bruce RFI process that it was obliged to sign a confidentiality agreement, which it did. NCE submits that this requirement restricted disclosure of important information that was needed to evaluate the public interest application components at the OEB. NCE submits that a competitive process involving public institutions that are committing public funds should be fair, consistent and transparent. NCE submits that the South Bruce RFI process was flawed and failed to meet this test. NCE expressed these concerns at the outset of the South Bruce RFI process.

<u>Need for Funding for Uneconomic Projects</u>

NCE submits that the current rules governing the expansion of natural gas service in Ontario as prescribed under EBO 188 continue to be a just and reasonable way of balancing sustainable economic growth of the distribution systems within the province. NCE cites the expert testimony of London Economics International LLC ("LEI") *(Union Evidence, p. PDF 51, Section 2.3 and p. PDF 54, Section 3.1)* as the rationale that supports this belief. Specifically, in the first paragraph following LEI's Figure 4 found on p. PDF 56, LEI describes its "Natural gas expansion ratepayers" category and states:

> "As shown above [referring to Figure 4, Natural gas expansion ratepayers] funding expansion costs exclusively through new customers strongly aligns with the principle of cost causation and avoidance of cross subsidies. It is also

administratively simple to implement and easy to communicate to customers."

NCE submits that this accurately describes the province's current "expansion system" guidelines under EBO 188 that have been in place and have worked well since 1998.

However, NCE submits that a number of developments over the last few years raise issues that respectfully should be considered by the Board in redefining the rules under which natural gas expansion takes place. These include the:

- Ministry of Energy's *Long-term Energy Plan* introduced in 2013
- subsequent letter from the Minister of Energy to the Chair of the OEB in February 2015, citing the Natural Gas Access Loan and Natural Gas Economic Development Grant
- announcement in April 2015 by the Minister of Employment, Economic Development and Infrastructure of the Government of Ontario setting aside $200 million for the Natural Gas Access Loan and $30 million for the Natural Gas Economic Development Grant, to facilitate expansion of the natural gas into un-served communities in Ontario *(EPCOR Evidence p. PDF 6 thru 7, Section A.3 – Government Policy Favours Expansion, items 7 thru 10)* and the convening of this proceeding.

NCE submits that the Ontario government has made it clear that it is important to address the notion of extending natural gas service to un-served communities. If this significant shift in provincial policy is to be realized, NCE submits that the current tests under EBO 188 need to be modified or relaxed and funding must be made available to make these projects economic.

LEI on page 54 of Union's Evidence states:

> "Historically expansion programs in Ontario were frequently considered uneconomic due to the utility's inability to recover the total costs incurred in expanding the network. Setting a requirement for rural customers to fund the total costs of expansion would not provide customers with sufficient incentive to switch from current energy and heating sources, and also limits a utility's ability to recover its cost of investment."

This is addressed and confirmed by the Union witness panel *(Transcript Volume 6, p. PDF 11, line 23 thru p. PDF12, line 13).* It is also addressed and confirmed by EGDI in its evidence *(EGDI Evidence for EB 2016-0004, p. PDF 25, item #71).*

Preferred Funding Mechanism

NCE submits that if an initiative to serve un-served communities with natural gas is to be implemented, it should be open to all competent competitors and should not be restricted to the existing natural gas utilities operating in the province. NCE concurs with the evidence put forward by Dr. Yatchew *(EPCOR Evidence p. PDF 13, line 15 thru p. PDF 15, line 2, Section B3 – The Board's Support of Competitiveness, Sections 24 thru 28).* He concludes Section B3 with the observation:

> "Competitive processes are widely recognized as good public policy as they generate alternatives and inject market discipline. In settings such as this one, where competition 'in the market' is not possible, competition 'for the market'

provides a meaningful alternative".

It is clear from the evidence of both Union *(Union Evidence in EB-2015-0179, Exhibit A, Tab 1, Appendix D)* and EGDI *(EGDI Evidence in EB-2016-0004, p. PDF 7, response to Issue #4 and #4(a))* that un-served communities contemplated in the provincial policy directions cited above cannot be economically served under the EBO 188 rules. Both Union and EGDI have put forward funding mechanisms that support their respective expansion target communities using what LEI describes as Internal Utility Cross-subsidization. *(Union Evidence in EB-2016-0004, p. PDF 44, Figure 1)*

Union rejects the notion that LEI's Jurisdiction-wide Cross-subsidization is an acceptable, or even legal, means to generate funding for uneconomic natural gas distribution projects in Ontario *(Union Evidence in EB-2016-0004, p. PDF 3, line 16 thru p. PDF 4, line 15),* but does believe that LEI's Internal Utility Cross-subsidization model is an acceptable means to support Union's suite of uneconomic system expansion projects *(Union Evidence in EB-2015-0179, p. PDF 7, line 10 thru p. PDF 8, line 12).*

Similarly, EGDI rejects the notion that the Board has the authority to order "cross company subsidization" and believes that this approach has no merit *(EGDI Evidence in EB 2016-0004, p. PDF 3 Issue #2 and p. PDF 4, Issue #3)* but does believe that LEI's Internal Utility Cross-subsidization model is acceptable and generally follows Union's proposal with a few notable exceptions *(EGDI Evidence in EB-2016-0004, p. PDF 18, item #51 thru p. PDF 19, item #55).*

Both Union and EGDI support an upper limit for contributions to this initiative from their respective existing customers not to exceed $2.00 per customer per month *(Union Evidence in EB-2015-0179, p. PDF 8, lines 14 – 18 and EGDI Evidence in EB-2016-0004, p. PDF 19, item #58).* Union explains the rationale for the $2.00 per month per customer ceiling and confirms that it is reasonable *(Transcript Volume 6, p. PDF 154, line 1 thru p. PDF 155, line 27).*

NCE submits that 'Jurisdiction-wide Cross-subsidization' is a better model to promote competition and creativity for natural gas expansion in Ontario. To achieve the optimum economic expansion possible, NCE submits that Union and EGDI cannot be allowed to collect and administer their own expansion funds. This would create a significant, anti-competitive barrier to entry and would inhibit other potential service providers, including the municipalities themselves, from participating in the market. This opinion is supported by Dr. Yatchew in his oral testimony *(Transcript, Volume 7, p. PDF 55 line 23 thru p. PDF 56, line 4).*

Internal Utility Cross-subsidization relies on the existing natural gas utilities' respective customer bases to back-stop any revenue shortfall. It shields their respective shareholders from any financial risk incurred due to variances from each project's forecasted outcomes, such as capital cost, the number of customer attachments or the rate of those attachments *(Union Evidence in EB-2015-0179, p. PDF 11, lines 14 - 15)*.

As advanced by Dr. Yatchew *(Transcript Volume 6, p. PDF 178, line 28 thru p. PDF*

180, line 11 and Transcript Volume 6, p. PDF 199, line 12 thru p. PDF 200, line 10), NCE agrees and submits that Jurisdiction-wide Cross-subsidization will promote competition from a wider range of proponents and will bring creativity to the implementation of this new government initiative such as new stand-alone rates, the integration of [local] storage [and local production] and the introduction of shareholder risk into the financing mix. Just as competition is the preferred provincial model where possible in the Ontario electricity sector over the last 15+ years, so it ought to be, where possible and on a level playing field, in the natural gas sector, as measured against the financially viable gas industry, and rational expansion of natural gas infrastructure objectives set out in the *OEB Act*.

<u>Jurisdiction-wide Cross-subsidization Funding Mechanism</u>

NCE submits that a Jurisdiction-wide Cross-subsidization model should be adopted and an associated fund should be established to support any natural gas expansion program. NCE refers to the associated fund as the “Established Fund”. The Established Fund should be administered by the Board. This may take the form of the Board’s direct oversight, or it may be delegated to an independent third party that NCE has referred to as the “Fund Administrator”. NCE fully agrees with Dr. Yatchew’s suggestion that a province-wide fund should be established *(EPCOR Evidence, p. PDF 15, lines 8 – 12).*

The funds that flow into the Established Fund should be collected from all of the existing natural gas customers in the province. Union has suggested that a charge of $2.00 per customer per month would be a reasonable amount and would not cause a significant burden on these customers *(Transcript Volume 6, p. PDF 154, line 1 thru p. PDF 155, line 27)*. NCE notes that others have supported this suggestion but submits that another amount, in the same order of magnitude, may be more appropriate after further study (e.g. perhaps an amount within the range of $1.00 to $3.00 per customer per month should be considered based on the specific needs of the Expansion Program).

NCE respectfully disagrees with Dr. Yatchew's approach that the amounts contributed by the existing customers should be on a volumetric basis (i.e. the amount charged should be levied based on the volumes consumed by an individual customer for large industrial customers or by the average consumed by the general service rate customers) *(EPCOR Evidence p. PDF 15, line 8 thru line 30, Items 29 thru 32)*. NCE submits that the "very small price distortions" cited by Dr. Yatchew in his oral testimony *(Transcript Volume 6, p. PDF 186, line 1 thru 19 and p. PDF 197, line 20 thru p. PDF 198, line 21)* is more applicable to the general service rate customers who currently enjoy a significant annual cost advantage over competitive fuels. But the large commercial and industrial customers are much more price sensitive and have the resources and scale to convert to other energy forms or even leave the province if a significant volumetric based levy is imposed. According to Dr. Yatchew, that amount could be in the order of $40 million per year allocated to the large commercial and industrial customers if his volumetric model is implemented *(Transcript Volume 7, p. PDF 23, line 4 thru p. PDF 25, line 4)*. Alternatively, NCE suggests that a uniform levy of nominally $2.00 per month per customer will generate $81.6 million per year (i.e. 3.4 million customers X $2.00 per customer X 12 months per year) for the Established

Fund.

NCE supports the concept that the Ontario government funds comprised of the $30 million Natural Gas Economic Development Grant and the $200 million Natural Gas Access Loan announced in April 2015 should also be deposited in this fund and administered by the Fund Administrator *(EPCOR Evidence p. PDF 7, line 5 thru 10)*.

Allocation of the Established Fund

The Established Fund should be allocated to those projects that prove to be the most economic relative to the other projects being considered at the time. This allocation process should take place every six months, or at least annually, (similar to the routinely scheduled grid connection tests, into which electricity generators are required to file their proposals). A key criterion in terms of the relative economics should be the amount of money required from the Established Fund. This would encourage potential customers and/or municipalities and/or private investors to contribute funds to make the project more economical and would alleviate the concern that the existing Ontario natural gas utility shareholders are to remain “risk free” in this process. This would not preclude them from continuing the current practice of holding their shareholders “risk free”, but the consequence would be that their projects may be less economic compared to other competitors that are not constrained by this practice.

The economics of any given project being considered by the Board should be determined from time-to-time through the application of a standard test that ranks each project on a number of weighted criteria. The most heavily weighted criterion should be the capital cost of the project relative to the revenue generated by the number and type of customers that are being served. From time-to-time (e.g. every 6 months or at least annually) the Board, in cooperation with the Fund Administrator, would then consider the relative ranking of the group of projects being considered at that time. NCE refers to this as the "Evaluation Session". NCE submits that this process could be implemented with administrative ease and cost effectiveness.

NCE submits that a Profitability Index ("PI") of 1.0, inclusive of the capital amount required from the Established Fund, would be required for each project competing for funds from the Established Fund. Such access would be granted on a case-by-case basis and tested in a hearing before the Board where the Fund Administrator would apply a standard test approved by the Board, that weights the attractiveness of each project relative to the others that are in the pool of projects put forward for consideration at that time. The key criterion would be that those projects with higher natural PI's (i.e. the PI achieved before access to any of the Established Funds) and, therefore, requiring fewer resources from the Established Fund, would be seen as more attractive candidates for expansion. However, the Board should have some discretion to apply non-economic criteria to determine which projects are funded as well as the composition of the loan and grant components.

The Established Fund should be comprised of loan and grant portions similar to the current Government of Ontario allocation of its $230 million fund. It should include a very low interest rate (e.g. 0%) for the loan portion with a very long amortization period to reflect the expected life of the pipeline asset (e.g. 50 years).

In the event that a project proponent wishes to service a new community but does not wish to participate in this program (i.e. access the Established Fund) with the other projects under consideration at that time, then the current OEB expansion tests, as prescribed by the OEB under EBO 188, should continue to be available to that proponent. This way smaller projects can be addressed as long as their PI is 0.8 or greater and the rolling portfolio PI is equal to or greater than 1.1 for that proponent.

During each Evaluation Session the Board would compare the ranking of the projects in the group to each other and the ones that have the highest ranking (i.e. require the least amount from the Established Fund) would be pre-qualified. The pre-qualified projects would then be approved by the Board and allowed to proceed to subsequent phases of the regulatory process including the franchise hearing and certificate of public convenience and necessity, the rate hearing and the leave-to-construct hearing. The number of projects that the Board approves at any given Evaluation Session will be subject to the capital available in the Established Fund at that time.

The remainder of the projects would be rejected at that Evaluation Session but could re-enter the Board’s evaluation process for consideration at a subsequent session.

<u>Granting of Natural Gas Franchise Rights by Municipalities</u>

The first step to being considered at any Evaluation Session would be the granting of the franchise rights to distribute natural gas by the municipality. If it is important to substantially maintain the current system of the granting of natural gas distribution franchise rights by municipalities and the subsequent approval of those agreements by the Board, then the process used to select the franchisee by the municipality among the competitors for the franchise rights should be clear, consistent and transparent.

The same criteria need to be considered and weighted consistently by each municipality and the municipalities should be required to share their decision-making process and the resulting outcome with the OEB at the time the franchise application is made to the Board, with the prior understanding and expectation that the municipality's decision may not be endorsed by the Board. The Board must retain the ability to reject the recommended franchisee or modify the agreement, with reasons, if it feels that the public interest is not being served.

NCE submits that the creation of the Established Fund, the means to access the Established Fund and the administration of the Established Fund ought to be codified in the OEB Act and/or Regulations. In addition, the municipal regulations may need to be amended to codify the evaluation methodology that municipalities employ when considering and awarding natural gas franchises. This would allow for harmonization with the OEB so a consistent and transparent process is created that allows information and the resultant outcomes concerning the award of municipal franchises to flow from the municipality to the OEB in a manner that will aid the OEB in its consideration and approval of the municipality's recommendation that is consistent with other municipal natural gas franchises across the province.

NCE is particularly concerned about this process given the statements of Dr. Murphy regarding the need to enter into the South Bruce RFI process *(Transcript Volume 3, p.*

PDF 201, line 28 thru p. PDF 202, line 8). In his oral testimony Dr. Murphy stated that:

> "The second was an offer by Northern Cross Energy, and they had their own combination of capital expenditures, customers, forecast and demand and so on. They treated it as a stand-alone operation. They did not have a customer base. They did not have to go through the EBO 188, so they determined independent stand-alone rates, and those rates were basically substantially higher than could be supported by the market if in fact you're trying to place -- if you're trying to encourage conversions."

Although NCE is precluded from disclosing the contents of its RFP response to the South Bruce RFI solely due the Confidentiality Agreement ("CA") it was required to enter into, NCE can demonstrate the approach that it consistently took to addressing the South Bruce opportunity through the submission of a proposal it made to the South Bruce evaluation committee on May 12, 2014 that supported the $70.2 million capital expenditure cited by South Bruce in its evidence. This proposal was made almost one full year before the RFI CA was entered into on April 13, 2015. NCE has included this proposal as Attachment 2.

This is a complex issue and depends on the numerous variables, assumptions and forecasts that are required for this type of projection. To that end NCE is providing the presentation it made to the South Bruce evaluation committee on May 12, 2014 as Attachment 2 that details these variables, assumptions and forecasts and puts in to context NCE's concerns with the South Bruce testimony.

NCE submits that the proposal found in Attachment 2 encompasses the key criteria that should be addressed by any proponent wishing to compete for the franchise rights for a jurisdiction and should include:

- A market assessment including the customer attachment rate
- A gas supply plan and associated capital costs
- A preliminary rate design by customer class including project funding
- A revenue forecast showing how those revenues adequately support the project financing, the annual operating and maintenance costs and the financial return for the project.
- A competitive fuel analysis that demonstrates how the potential customers will benefit from their switch to natural gas.

In the South Bruce evidence in this proceeding, the South Bruce municipalities did reference certain amounts that were in the public domain long before the CA was executed. Specifically, South Bruce submits:

> "The approach & competitive solicitation process undertaken by the Municipalities to facilitate the expansion of Natural Gas services to Southern Bruce County" dated March 21, 2016, cites that the NCE capital cost to construct and operate our proposed system was $70.2 million".

The evidence then goes on to conclude that:

> "Financial projections using these estimates would be substantially higher than those charged by Union or NRG, another natural gas distribution company of similar size and the location to that being proposed for Southern Bruce. Notwithstanding these rates consumers could realize savings over existing costs

using alternative fuels such as electricity, oil or propane" *(South Bruce Municipalities Report Evidence, p. PDF 5, Section - The Northern Proposal, 2nd paragraph)*.

NCE believes that it is important to note the following facts about the NCE proposal that may be useful to this proceeding:

1. The NCE rates were "stand-alone" and required no CIAC.
2. The rates included no government or other non-proponent funding to "reduce" the capital cost that had to be financed for the project.
3. The rates reflected the cost recovery for this new system and delivered a typical rate differential between residential and small commercial customers, commercial and institutional customers and industrial customers.
4. The rates resulted in substantial savings to residential and small commercial customers and were competitive to the commercial and industrial customers. The conclusion regarding the commercial and industrial competitiveness was based on the opinion of 2 key potential customers who were consulted. One of those customers was Greenfield Specialty Alcohols Inc.
5. The project did not require any upstream reinforcement of Union Gas' transmission system due to the utilization of local storage.
6. NCE's preferred corporate structure was a Municipal Services Corporation ("MSC") formed by the South Bruce municipalities and operated, to the degree the municipalities wished, by NCE.

NCE agrees that its rates could be higher than those proposed hypothetically by Union Gas, but *only because* all the costs that Union would incur to service the South Bruce customers are not included in the rates proposed for the South Bruce customers. Instead, some of the costs are allocated to the current Union Gas system customers (*emphasis added*). Certainly the rates proposed by NCE were not so high as to render them outside of the South Bruce municipalities' consideration.

In addition, NCE submits that a primary consideration regarding the adequacy of the proposed rates is the projected annual savings a potential customer using an alternative fuel would realize compared to the cost that the potential customer would incur to convert to, and operate with, natural gas. In Attachment 2 the savings would yield a simple payback of approximately 1 year for a propane customer with a new forced air and water heating system *(Transcript Volume 6, p. PDF 97, line 22 thru p. PDF 105, line 18)* to approximately 4 years using the weighted average conversion cost of $4,068 *(Union Evidence for EB-2015-0179, p. PDF 24, Exhibit A, Tab 1, Table 2).*

As a result of the May 12th meeting, NCE committed to undertakings to find other partners if the South Bruce municipalities chose not to form an MSC, to confirm that select potential commercial and industrial customers found these rates competitive and to consider an additional capital program to aid potential customers in converting to natural gas.

Regarding this proceeding, it is clear that the Board is not interested in the details of any particular project evaluation, but the Board appears to be interested in any observations that would facilitate the approval of Community Expansion processes in the future. NCE offers the following points to support the context of Attachment 2, as a consideration in these proceedings:

1. The relative capital cost differentials of the proposals that the South Bruce communities considered are significant. In NCE's experience, especially when dealing with a competitive process that is being conducted by a body representing the public, lowest capital cost is typically a dominant criterion, if not the dominant criterion.
2. The process should not be secret. The variables, assumptions and forecasts, and then how these inputs are treated by each proponent, should be available to, and likely of interest to, a broader group than just the municipal evaluation committee, especially when the outcome is the award of a municipal franchise agreement and the subsequent involvement of the Board in approving that franchise and then evaluating and approving the natural gas distribution system that is ultimately put in place.
3. The type of information that is required by each competing proponent should be the same. Having a reasonable level of rate and cost information from some and less information available from others does not lend itself to an objective analysis.

Cost of Upstream Reinforcement

In determining the capital cost for a project, one of the biggest factors may be the cost of any upstream reinforcement to provide adequate gas supply. In NCE's view this includes transmission, storage and distribution mains reinforcement. This situation is most likely to occur if the project is larger. Currently, the two major natural gas distributors in Ontario are dominant in providing this service with Union being particularly well positioned in southwestern Ontario.

NCE concurs with Dr. Yatchew in his discussion regarding available information that is needed by all competitors when bidding on an expansion project *(EPCOR Evidence, p. PDF 20, line 13 thru 27, Sections 49 & 50)*. Union has an integrated corporate and utility structure that includes transmission, storage and distribution. In this role they have unprecedented “market influence”, as Union is the only Ontario utility that could historically provide the required package of integrated gas supply services. In doing so, Union requires full disclosure of a competitor’s delivery strategy information so they can complete their “analysis”. They also control the evaluation process and the timing of that process which NCE’s submits provides Union with a significant (and unfair) advantage. The information Union obtains and gains from this process can further their corporate interests, while undermining a competitor’s position. This is a significant barrier to entry for new service providers and somehow needs to be addressed through the regulatory process.

Contrary to Union’s evidence on this subject *(Union Evidence in EB-2016-0004. p. PDF 9, line 18 thru p. PDF 12, line 21),* and Dr. Yatchew’s opinion of how this process should unfold, NCE submits that any projects that require access to the Established Fund to reach a PI of 1.0 should include all of the costs to complete the project, including (*emphasis added*) all upstream reinforcement costs needed to facilitate the proponent's project. The concept of a [Reinforcement] Advancement Charge *(Union Evidence in EB-2016-0004, p. PDF 9, line 18 thru p. PDF 12, line 12)* and the idea of treating upstream distribution system reinforcements differently than transmission (and potentially storage) system reinforcements *(Transcript Volume 6, p. PDF 55, line 22 thru p. PDF 59, line 16)* should be abandoned for this program, as it distorts the ability to transparently analyze the costs that will be incurred for a specific project.

NCE concurs with Dr. Yatchew when he describes the rules that need to be established for a new distributor and the existing utilities regarding the upstream services *(EPCOR Evidence p. PDF 21. Line 13 thru 19, Section 53)*. NCE submits that this methodology will result in the expansion project proponent being told by the upstream utility that either the required upstream capacity is available and no reinforcement is required or the upstream utility providing the gas supply delivery service for the project will require "upstream reinforcement" under the defined proponent's conditions including the reinforcement cost and the associated project schedule. The information provided by the upstream utility should be accurate enough to be included in the project proponent's capital budget estimate for the project, at an accuracy level that would be consistent with any standardized competitive bidding process that is implemented by the Board and administered by the municipality without any evaluation fee being charged by the upstream utility for that information.

The above recommendation in this submission is vital if price and cost transparency is to be available to competing proponents, prospective municipalities and the Board, in the public interest.

NCE concurs with Dr. Yatchew's expert opinion regarding new market entrants:

> "… in my view, this Board should promote, as far as it can, competition for franchises and to try to minimise or reduce the barriers to entry as far as possible." *(Transcript Volume 6, p. PDF 178, line 28 thru p. PDF 180, line 11 and Transcript Volume 7, p. PDF 62, line 12 thru p. PDF 65, line 3).*

Dr. Yatchew goes on to say:

> "So those are facilities that are under utilized if there are more customers, and also keeping in mind that DSM efforts have tended to reduce the per customer usage rates, then all kinds would benefit downstream from there, as long as the upstream facilities are being used at higher capacity, for storage, so there are -- there are those potential benefits." *(Transcript Volume 6, p. PDF 199, line 12 thru p. PDF 200, line 10)*

NCE submits that this type of methodology will promote competition from a wider range of proponents and will bring creativity to the implementation of this new government initiative, including new stand-alone rates, the integration of [local] storage [and local production] into distribution systems and the resultant better utilization of existing upstream infrastructure.

The Board should consider ways to separate the transmission and storage functions from the distribution functions of the two current dominant utilities in the province to provide a level playing field for all project proponents, including the existing distribution divisions of those dominant utilities.

Environmental Considerations

NCE supports the observation made by Dr. Yatchew *(EPCOR Evidence, p. PDF 8, line 18 thru 23, Section 14)*:

> "For purposes of the present discussion, the important point is that Government policies which price carbon provide an effective mechanism for capping total carbon generation in the Province and ensuring that hydrocarbons, mainly oil and natural gas, are dedicated to their best and most needed uses. Carbon pricing does not preclude, and indeed may promote increased use of natural gas in some sectors at the same time that hydrocarbon use in other sectors declines".

NCE submits that the promotion of local natural gas production in the province will significantly reduce the Greenhouse Gas ("GHG") emissions from natural gas that is imported from other jurisdictions such as western Canada or northeastern United States by eliminating the fuel required, and the subsequent GHG emissions, to run the stripping plants, the non-conventional "fracking" operations and the compression plants that are required to deliver this gas to Ontario.

NCE concurs with EGDI regarding the benefits of renewable natural gas ("RNG") by employing the production and storage of hydrogen created [via the electrolysis process] and fuelled by excess, renewable off-peak electrical power as a way of "greening" the natural gas that is consumed in Ontario *(EGDI Evidence in EB-2016-0004, p. PDF 12, Section "Greening the Natural Gas Supply" and Transcript Volume 4, p. PDF 80, line 8 thru 22).*

NCE submits that expansion projects that employ elements of RNG should be given preferential weighting in the municipal franchise RFI/RFP/RFQ evaluation process and by the Board when it is considering the various projects in any Evaluation Session.

ALL OF WHICH IS RESPECTFULLY SUBMITTED by:

NORTHERN CROSS ENERGY LIMITED

ATTACHMENT 1

Northern Cross Energy Limited
Response to EB-2016-0004 Issues List
Cost Recovery Mechanisms for Rural and Remove Community Expansion Projects
2016.06.17

<u>Preamble</u>

Northern Cross Energy Limited ("NCE") is a Canadian Controlled Private Corporation with offices in Ontario and Alberta and the majority of its operating assets located in the Township of Ashfield-Colborne-Wawanosh ("ACW") in the northern part of Bruce County, Ontario. ACW is adjacent to, and south of, the proposed South Bruce Distribution System that is made up of the communities of Kincardine, Huron-Kinloss and Aaran-Elderslie (collectively referred to as the "South Bruce communities").

NCE has been in business since 1984 and began providing a local ACW customer with locally produced gas in 1988, initially by building a new pipeline connection to 1 of our 5 production pools located in ACW. This area had not historically had access to pipelines for production or distribution use. Since 1988 NCE has expanded its operation to include natural gas production from all 5 of our ACW pools, has grown its natural gas pipeline system to approximately 42 km (26 miles) and has added a bi-directional feed with Union Gas Limited ("UGL") at a delivery point just south of Wingham near the intersection of London Road and Belfast Road. All of NCE's pools are "conventional" natural gas resources. NCE is a prime example of how production and distribution facilities can be integrated and locally produced gas can serve local gas customers.

When NCE started work on expanding its pipeline system to interconnect with the UGL system expansion near Wingham in 1997, UGL and NCE entered into discussions as to how the those pipelines might also be used to provide gas service to Lucknow and parts of ACW. With this objective in mind, UGL and NCE cooperated in the design and construction of 17 km of NPS 6 plastic line that was installed and is currently operated by NCE, with the intent that UGL would utilize this pipeline to service these new loads. Specifically, the pipeline design was changed to incorporate UGL's distribution system materials and installation specifications and UGL sent its own inspectors to witness construction. See the attached map showing NCE's existing system.

Initially the new pipeline was used to deliver locally produced natural gas to the UGL system for transportation to Ontario customers. More recently the custody transfer station was modified to accommodate a bi-directional flow to allow UGL transported gas to be delivered to an end use customer on the NCE system during the grain-drying season. Unfortunately, UGL did not pursue providing service to Lucknow and ACW despite discussions with NCE over several years and despite the fact UGL obtained the distribution franchise rights for ACW.

Interest in providing gas service to ACW and South Bruce has now been revived, due in no small part to NCE initiatives, and several parties including EPCOR Utilities Inc. ("EPCOR"), UGL and NCE submitted proposals to provide this service.

As a result of the production from the 5 NCE local gas pools and the construction of associated pipeline and infrastructure, many landowners, businesses and other ACW stakeholders have benefited from NCE's investment through the payment of royalties, taxes and employment of contract and full-time employees.

Of course, the natural gas in the pools is a finite resource and some of the pools are nearing depletion.

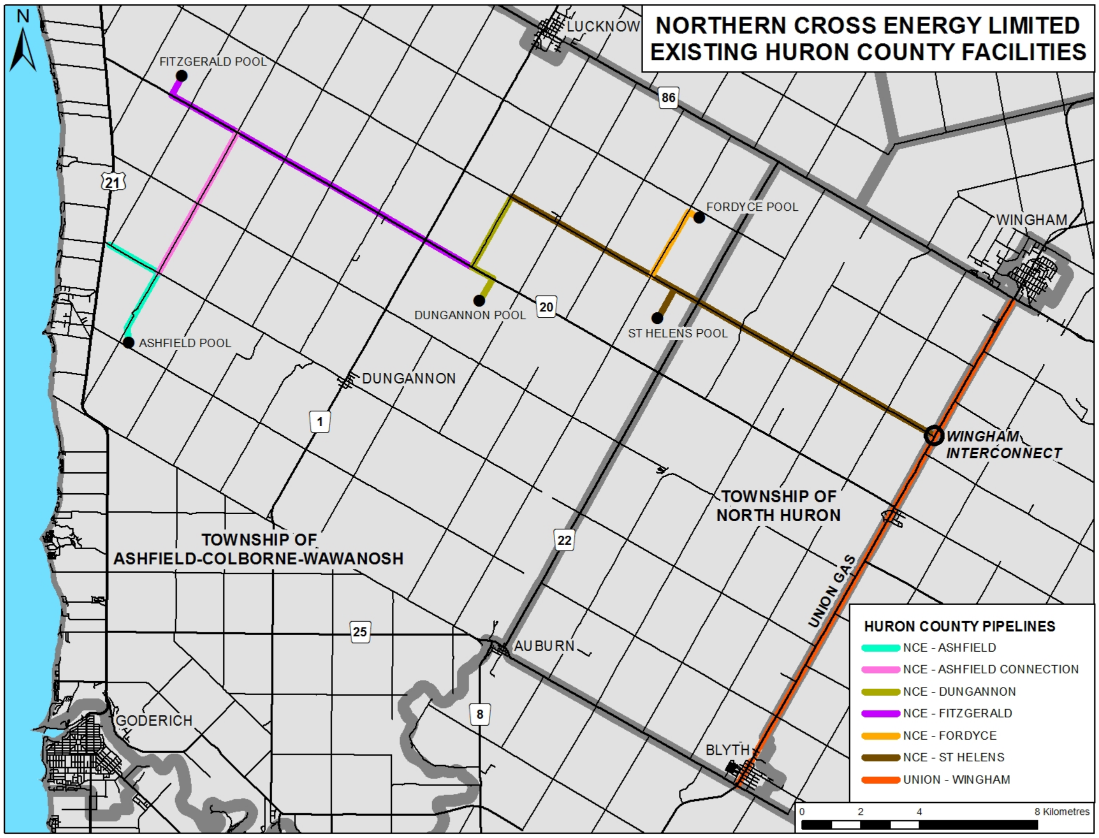
It is NCE's intention to continue to make these assets used or useful. We believe the best way to do this is to convert one or more of these pools from production to storage pools to support the distribution of natural gas to the local communities. To that end we have completed significant geological and geophysical investigations and have determined that 3 of the 5 production pools are excellent candidates for conversion. NCE is preparing to submit a Storage Application to the Ontario Energy Board (the "OEB" or the "Board") to convert 1 of its 5 pools from production to storage.

Based on the recent announcements centered on the provincial government's Climate Change Action Plan, NCE is modifying its application to include the geological storage of hydrogen in that pool.

NCE further believes that significant new local natural gas production could be developed in this area using conventional recovery methods. NCE started as an exploration and production company and is anxious to pursue such activity in this area assuming a pipeline system is located nearby that can economically accept the gas. Although this may seem like an obvious criteria, it is NCE's experience, both directly and through other fellow Ontario Petroleum Institute ("OPI") members, that there are significant issues associated with this activity including the capital cost UGL imposes to design and install a custody transfer station interconnecting with UGL and the price of the gas that is paid to the producer after UGL's deemed transportation to and from their Dawn plant.

It is NCE's belief that the utilization of existing natural gas assets and resources in Ontario aligns well with the province's energy and environmental policies. It provides significantly more economic benefits to Ontario residents, the local communities, distribution utilities and their customers. Utilizing existing assets should be given priority over expanding UGL's pipeline network and its resulting rate base increase. These points are discussed in more detail in Appendix 1, NCE's responses to the EB-2016-0004 Issues List that is set out in Procedural Order #2 and 3.

NCE is a longstanding member of OPI and supports its stated positions regarding the issues addressed in EB-2016-0004.


NORTHERN CROSS ENERGY LIMITED
EXISTING HURON COUNTY FACILITIES
N
LUCKNOW
FITZGERALD POOL
86
21
FORDYCE POOL
WINGHAM
DUNGANNON POOL
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ST HELENS POOL
ASHFIELD POOL
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1
WINGHAM INTERCONNECT
TOWNSHIP OF NORTH HURON
TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH
22
UNION GAS
25
AUBURN
8
GODERICH
BLYTH
HURON COUNTY PIPELINES
NCE - ASHFIELD
NCE - ASHFIELD CONNECTION
NCE - DUNGANNON
NCE - FITZGERALD
NCE - FORDYCE
NCE - ST HELENS
UNION - WINGHAM
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APPENDIX 1

Issues # 1

Does the OEB have the legal authority to establish a framework whereby the customers of one utility subsidize the expansion undertaken by another distributor into communities that do not have natural gas service?

The Ontario Energy Board (the "OEB" or the "Board") has the responsibility and authority to set just and reasonable rates. Northern Cross Energy Limited ("NCE") believes that the OEB has the legal authority to establish this framework in accordance with the guiding objectives for natural gas under the OEB Act and in particular to facilitate the rational expansion of the transmission and distribution facilities. However, to the best of NCE's knowledge, the concept of having one utility's customer base subsidize the expansion of another utility's system to service communities that do not have access to natural gas service is unprecedented.

Issue # 2

Based on a premise that the OEB has the legal authority described in Issue #1, what are the merits of this approach? How should these contributions be treated for ratemaking purposes?

The merits of this approach allow the creation of a fund that is comprised of relatively modest contributions from a large number of existing customers that can then be applied to a number of projects that are uneconomic according to the current tests that the OEB applies. These funds, and the facilities that they support, should be treated as a Contribution-In-Aid-to-Construction ("CIAC") toward the project and would not be included in any utility's rate base that accesses these funds.

Issue # 3

Should the OEB consider exemptions or changes to the EBO 188 guidelines for rural and remote community expansion projects?

a. *Should the OEB consider projects that have a portfolio profitability index (PI) less than 1.0 and individual projects within a portfolio that have a PI lower than 0.8?*

NCE submits that if expansion into communities that are currently not serviced is a priority, then it is more reasonable to develop a fund administered by the OEB (the "Established Fund"), or a third party designated by the OEB to oversee the Established Fund (the "Fund Administrator"), for which the OEB would ensure an equitable distribution among the proponent utilities. The Established Fund should be made up of contributions from all existing Ontario natural gas customers, it should be available to all proponent service providers and should be allocated according to the merits of each individual proposal. NCE submits that a rate of $2.00 per customer per month, as Union Gas has suggested, is a reasonable level of contribution.

This suggests that a Profitability Index ("PI") of 1.0 would be required for each project competing under this OEB administered program (the "Program") and any projects that do not achieve a PI of 1.0 would be allowed to access the Established Fund to reach a PI of 1.0. Such access would be granted on a case-by-case basis and tested in a hearing before the Board where the Fund Administrator would apply a standard test approved by the Board, that weights the relative attractiveness of each project relative to the others that are in the pool of projects put forward for consideration at that time (the "Evaluation Session"). These Evaluation Sessions would take place from time-to-time. NCE suggests that a reasonable time frame is every 6 months but in any event not less than once per year.

The key criterion would be that those projects with higher natural PI's and, therefore, requiring fewer resources from the Established Fund, would be given more favourable treatment. However, the Board should have some discretion to apply non-economic criteria to determine which projects are funded as well as the composition of the loan and grant components.

The Established Fund should be comprised of loan and grant portions similar to the current Government of Ontario allocation of its $230 million fund. It should include a very low interest rate (e.g. 0%) for the loan portion with a very long amortization period to reflect the expected life of the pipeline asset (e.g. 50 years).

In the event that a project proponent wishes to service a new community but does not wish to participate in this program with the other projects under consideration at that time, then the current OEB expansion tests, as prescribed by the OEB under EBO 188, should continue to be available to that proponent. This way smaller projects can be addressed as long as their PI is 0.8 or greater and the rolling portfolio PI is equal to of greater than 1.1.

b. *What costs should be included in the economic assessment for providing natural gas service to communities and how are they to be determined and calculated.*

All costs associated with serving each project should be included in the economic assessment. This would include any market assessment and engineering design costs, the costs of any upstream reinforcement required by the upstream utility to serve the new load, the costs of the distribution mains and service networks including all stations and other appurtenances, the costs of connections, the operating costs of the system, the regulatory, legal and other compliance costs and the cost of a customer conversion assistance program if required.

These costs should be determined using a model that calculates the required revenue in each year using the existing rates of the service provider (or new rates for a new service provider) as the base and then increased to account for the additional cost the project would incur for supplemental financing annually until the project specific loan is fully retired with the goal of reaching a positive contribution margin for the project at the end of the customer capture forecast period. For small projects this may be a period of 2 to 3 years and for larger projects a period of 10 years or more may be required.

A critical element that needs to be addressed is the ability of an integrated utility providing transmission, storage and distribution services to compete for these funds. It is NCE's experience that such an entity has significant flexibility in determining the need for upstream reinforcement depending on the outcomes it desires by allocating costs and revenue between transmission and distribution systems and the associated classification of the transmission reinforcement costs or the distribution mains reinforcement costs as either project specific or general system reinforcement. All distribution projects under this program should be required to compete equally and be subject to consistent and timely information from the upstream utility. This includes the distribution division of the two dominant Ontario natural gas utilities.

c. *What, if any, amendments to the EBO 188 Guidelines would be required as a result of the inclusion of any costs identified above?*

For projects competing under the Program, the individual project PI of 0.8 would be eliminated, as would the rolling portfolio PI of 1.1, and each project would have to have a PI of 1.0. This could be achieved through the project proponent accessing the Established Fund noted in Issue # 3(a) above and/or it could be reduced or "bought down" with "at risk" capital supplied by the project proponent, contributions from the municipality or new customers, or a combination of these funding elements.

d. What would be the criteria for the projects/communities that would be eligible for such exemptions? What, if any, other public interest factors should be included as part of this criteria? How are they to be determined?

NCE submits that the prevailing thinking in Ontario leans toward large natural gas utilities as the only entities capable of distributing natural gas to new communities. The large utilities cite factors such as the size and experience of the company, the ability to respond to abnormal events and the overall competence of the corporation. They generally suggest that only they are capable of providing those services. But at what cost to the ratepayer?

NCE suggests that other entities are equally capable of providing these services and perhaps more economically.

Ontario has excellent oversight of these services through the OEB, the Ministry of Natural Resources ("MNR") and the Technical Standards and Safety Authority ("TSSA") and the various regulations, codes, standards and guidelines that are enforced by these entities. As long as the distribution service proponent commits to, and complies with, these rules then competition should be promoted when developing these projects. NCE currently operates under the oversight of the OEB, TSSA and MNR and recent assessments from both TSSA and MNR resulted in minor non-conformances that were easily rectified. NCE has not had a significant abnormal event since it began operations in 1988.

NCE further notes that local production and local storage is treated as an unsecure source of natural gas by the large utilities. This is an unreasonable position. In fact, local production contributes to reducing the environmental footprint of the natural gas that is consumed in Ontario by avoiding the fuel, and the resulting greenhouse gas ("GHG"), that is required to run the stripping plants, unconventional "fracking" operations and compression plants that bring western Canadian and northeastern and mid-western United States gas to Ontario. Local production should be promoted not subordinated to these other sources of natural gas.

Local production and local storage helps to minimize the size of the transmission and distribution mains required to serve a distribution system. It also boosts the load factor of the existing pipelines by leveling the throughput requirements between summer and winter. Local production and storage should be promoted as a reliable and secure source of supply in the planning of any distribution system's operation.

The basic premise for embarking on this program of bringing natural gas to un-served communities is to boost those communities' economic competitiveness. Promoting local production and local storage achieves this goal and puts significantly more wealth into the target community when compared to just installing "more pipe". This is achieved through the development of jobs to design, install and operate the systems, through the initial capital and the ongoing operating expenditures and through the payment of royalties and taxes to the rural the communities that we're trying to help in the first place, that stays in those communities.

Determining the benefit of each application should still be done on a project-by-project basis but any funding programs that are put in place to support local distribution, production and storage would be treated as a CIAC and should not be included in the rate base of the company.

NOACC suggested the addition of the following issues which would fall under expansion of Issue # 3. The OEB accepts the issues as suggested by NOACC and will add them accordingly.

NOACC Additional Issue #1
Should there be exemptions to certain costs being included in the economic assessment for

providing natural gas service to rural and remote communities? If so, what are those exemptions and how should they be considered by the Board in assessing to approve rural and remote expansion projects?

NCE believes that all of the project costs should be accounted for in each application and no costs should be excluded. Please see our response to Issue #3(b).

<u>NOACC Additional Issue #2</u>

Should the economic, environmental and public interest components in not expanding natural gas service to a specific rural and remote community be considered? If so how?

NCE agrees that the benefit of providing natural gas to a community should be considered in light of the costs of continuing with the current energy supply situation.

NCE has not developed a detailed mechanism for ranking the projects that the Established Fund would contribute to but, directionally, continuing a community's current energy supply situation has a cost associated with it. This cost should be quantified and the net present value of the benefit between continuing the current situation versus the new energy supply situation should be considered as one indicator of the value of this project relative to the others under consideration at the time.

NCE submits that the higher the "energy density" of the new project the more benefit should be attributed to this project. This component of value for the project would be a way to factor in the number of new natural gas customers, their relative energy usage by customer class and the type of energy that's displaced. For example, a project that is attaching 300 new residential customers and displacing propane that is currently supplied via truck by a local propane supplier in southwestern Ontario may have a lesser value than a project that would attach 5,000 new customers in a more remote location where the majority are residential and small commercial customers using #2 fuel oil or diesel but they have an industrial anchor load, even though the capital cost of the two projects could be significantly different.

<u>Issue # 4</u>

Should the OEB allow existing natural gas distributors to establish surcharges from customers of new communities to improve the feasibility of potential community expansion projects? If so, what approaches are appropriate and over what period of time?

NCE would view this as one mechanism for the required contribution from the Established Fund to be "bought down" by the proponent to improve the position of the project in the pool of projects being considered at that time. If a community values natural gas service and is willing to contribute to the project then that commitment should be valued by all parties.

Community contributions can be made in many forms ranging from the municipality making a contribution on behalf of the whole community to the individual customers who benefit from the service making that contribution. The duration of the contribution should be on a case-by-case basis allowing communities and groups of customers to make individual decisions about the form of the contribution with the goal of moving the attractiveness of the project higher up in the pool of projects being considered.

This mechanism should not be restricted to existing natural gas distributors but should be available to all project proponents.

Issue # 5
Are there other ratemaking or rate recovery approaches that the OEB should consider?

There are undoubtedly other approaches that can be employed but NCE believes its suggestion is workable and promotes competition between all projects and all proponents for those projects. Regardless of the approach that is adopted, the OEB should always strive to approve the least cost alternative for any individual project.

Issue # 6
Should the OEB allow for the recovery of the revenue requirement associated with community expansion costs in rates that are outside the OEB approved incentive ratemaking framework prior to the end of any incentive regulation plan term once the assets are used and useful?

NCE has no comment on this issue.

Issue # 7
Should the OEB consider imposing conditions or making other changes to Municipal Franchise Agreements and Certificates of Public Convenience and Necessity to reduce barriers to natural gas expansion?

NCE believes that the OEB should retain the current interpretation that allows multiple franchise agreements within one municipality to encourage the greatest level of economic expansion within a given municipality with the view of acknowledging the dispersed nature of residences, farms, and businesses within many rural communities.

Multiple franchisees would allow for the creation of gas co-ops to economically serve un-serviced areas, or would allow a natural gas producer to service customers close to their gas well if those customers are not served by the utility with the current franchise agreement for that franchise area. The Board can ensure that there is no duplication of facilities among different utilities operating in a municipality by establishing specific service areas under the Certificate of Public Convenience and Necessity.

Depending on the size of the co-op system and range of customers, a local natural gas producer could use their gas well as a "quasi-storage" system, storing gas in the wellbore to augment the flow capabilities over short period of time. For larger co-op type systems, a natural gas company could also use its natural gas reservoir as a load balancing mechanism for the local system, minimizing any supply capacity constraints on the utility's transmission system to the area.

Issue # 8
What types of processes could be implemented to facilitate the introduction of new entrants to provide service to communities that do not have access to natural gas. What are the merits of these processes and what are the existing barriers to implementation? (e.g. Issuance of Request for Proposals to enter into franchise agreements)

NCE supports competition for franchises and Request For Proposals ("RFP's") are one way to judge the relative value of each proponent. However, the RFP process should be standardized, fair and transparent and should include a letter of intent by each responder to provide service within a specified period of time at the specified cost noted in the RFP if they are selected.

The intent would be to ensure that each proponent conducts a consistent level of analysis and design prior to the submission of their response to the RFP and that the decision to award the franchise is based on the more objective results of a standardized criterion function-type analysis and not on some promise that the proponent will carry out additional analyses in the future if they are selected that may or may not result in providing service to that municipality.

OEB Additional Issue # 1

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 provisions of natural gas services in communities that do not currently have access?

The displacement of fuels with higher greenhouse gas emissions is a factor in determining the value of a project. The higher the displacement the more credit should be given to that project. That value should be quantified by referencing the Ontario cap and trade program.

As noted in Issue #3(d) above, local production and storage should be included in this greenhouse gas benefit assessment. The value of the local production and storage should be reflected by giving the producer the cost of the natural gas paid by the local customer less the cost of accepting and transporting this gas to the nearest user. In Union's case, the deemed cost of transporting this gas to and from their Dawn Hub should be abandoned in favour of promoting a more realistic and environmentally friendly alternative at a price that promotes more local exploration and production.

The ability to provide Renewable Natural Gas ("RNG") to a project should also be a criterion in determining the relative attractiveness of that project.

OEB Additional Issue # 2

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 the conversion rates?

See Additional Issue #1 above. The cap and trade program will impose new costs on the energy end user with higher GHG emitting fuels being treated less favourably. Depending on the fuel being displaced, it will either make the conversion more attractive, as in the case of propane and #2 heating oil, or less attractive as in the case of electricity. However, the relative cost of using electricity as a space and water heating fuel in Ontario, when compared to natural gas, is still very significantly in favour of natural gas.

OEB Additional Issue # 3

How should the OEB incorporate the Ontario Government's recently announced loan and grant programs into the economic feasibility analysis?

See Issue #3(a) above. The existing $230 million Ontario fund should be included in the new Established Fund.

OEB Additional Issue # 4

Should the Municipal Franchise Agreement approval process be accompanied by a selection process? Who should conduct the process and what should be the selection criteria be? How would the needs of large users be considered?

See Issue #8 above. If granting a Municipal Franchise Agreement is an element of the expansion project, then the criteria used by each municipality should be clear, consistent and transparent. The criteria used, and the associated weighting of those criteria, should be approved by the Board. The franchise award evaluation process should be conducted by the municipality. All of the information compiled via this process should be available to the Board, including the reasons for the selection of the successful franchisee.

The key criteria that should be addressed by any proponent wishing to compete for the franchise rights for a jurisdiction should include:

- A market assessment including the customer attachment rate.
- A gas supply plan and associated capital costs.
- A preliminary rate design by customer class including project funding.
- A revenue forecast showing how those revenues adequately support the project financing, the annual operating and maintenance costs and the financial return for the project over the first 10 years of the project.
- A competitive fuel analysis that demonstrates how the potential customers will benefit from their switch to natural gas.
- A statement from the proponent about their commitment to comply with the required codes, standards and guidelines imposed by the province.

The large users should be considered through specific consultation with those unique customers to define their needs. The needs would then be addressed via developing a large commercial/industrial rate class that would take into account annual volume, demand and load factor. Contract terms would then be used to develop a rate that is acceptable to all parties. Finally, conversion funding or other assistance would be layered on to the analysis if needed.

These customers should not be treated separately in the overall distribution system design.

OEB Additional Issue # 5

What if any changes to the OEB's jurisdiction would be helpful in allowing the OEB to foster the rational expansion of natural gas service in Ontario?

See Issue #3(a) above. NCE submits that the creation of the Established Fund, the means to access the Established Fund and the administration of the Established Fund ought to be codified in the OEB Act and/or Regulations. In addition, the municipal regulations may need to be amended to codify the evaluation methodology that municipalities employ when considering and awarding natural gas franchises. This would allow for harmonization with the OEB so a consistent and transparent process is created that allows information and the resultant outcomes concerning the award of municipal franchises to flow from the municipality to the OEB that will aid the OEB in its consideration and approval of the municipality's recommendation in a manner that is consistent with other municipal franchises across the province.

OEB Additional Issue # 6

In addition to submissions on how the to incorporate the load and grant programs into the economic feasibility analysis, the OEB would welcome submissions on how the disbursement of these funds might relate to the OEB's approval of expansions.

See Issue #3(a) above.

Northern Cross Energy Limited

EB-2016-0004

ARGUMENT-IN-CHIEF

ATTACHMENT 2

NORTHERN CROSS

Northern Cross Energy Limited

Natural Gas Distribution System Proposal

For Servicing Huron-Kinloss, Arran-Elderslie, Kincardine and Ashfield-Colborne-Wawanosh

Utilizing the Existing Northern Cross Energy (NCE) System Assets

NCE Presentation

1. Overview of Northern Cross Energy.
2. Review of proposed System.
3. Review of proposed Construction Phases:
    i. Phase 1 - Existing System Expansion to Lucknow & Ripley
    ii. Phase 2 – Dornoch Delivery Point to Bruce Power
    iii. Phase 3 – Join Phases 1 & Phase 2 at Kincardine.
4. NCE Proposal

Disclaimer

Except for the capital cost number that Northern Cross Energy Limited (NCE) has quoted in its Proposal, all other numbers contained in this presentation are NCE's estimates only, have been developed by NCE using its resources and are provided for illustrative purposes only.

NCE does not warrant the accuracy of any of the information in this presentation.

NCE accepts no responsibility whatsoever arising in any way from any and all uses of, or reliance on, the information contained in this presentation.

Confidential Information

The information provided by Northern Cross Energy Limited (NCE) in this presentation is Confidential and is provided for the internal use of the Township of Huron-Kinloss, the Municipality of Arran-Elderslie, the Municipality of Kincardine and the Township of Ashfield-Colborne-Wawanosh.

The contents of this presentation shall not be shared with any other party without the consent of NCE.

What has Changed Since NCE's January 14th and April 15th Presentations?

1. NCE's customer estimates were modified as follows:

Customer Class	**Previous Est.**	**New Est.**	**Explanation**
No. of Residential	6232	4513	Excel formula error between tabs in financial model **BUT this number was not used in other calculations.** Aligned with Union Gas attachment rate for "customers along main pipeline route".
Commercial	480	498	Aligned with Union Gas attachment rate for "customers along main pipeline route".
Grain Drying	6	6	
Industrial	5	5	

What has Changed Since NCE's January 14th and April 15th Presentations?

2. The annual Cost of Gas has increased from $6,946,109 to $7,059,000 to reflect an increase in annual sales.

3. The annual Operation & Maintenance Cost has increased from $500,000 to $2.5 million to reflect the Kincardine Group's estimate of the integrated operation (e.g. Admin & General, Customer Sales & Service, Pipeline Operations) versus just the cost of Pipeline Operations that NCE originally included.

What has Changed Since NCE's January 14th and April 15th Presentations?

4. The annual debt repayment charge has decreased from \$3,678,300 to \$2,729,000 primarily due to a reduction in the long term debt interest rate from 5% to 3% based on the Kincardine Group's forecast for financing long term municipal debt.
5. The gas rates have been revised to solve for a nominal annual Contribution Margin of \$500,000:

Customer Class	Previous Rate	New Rate
Residential	\$0.419530/m3	\$0.461907/m3
Commercial	\$0.284278	\$0.320651
Grain Drying	\$0.284278	\$0.320651
Industrial	\$0.260970	\$0.274390

What has Changed Since NCE's January 14th and April 15th Presentations?

6. The Booster Compressor has been moved to Phase 1 and added approximately 3.2 km of NPS 6 high pressure steel line from the Booster Compressor to Dungannon Pool has been added to facilitate storage pool injection and withdrawal immediately using only 1 compressor. This added $1,157,300 to Phase 1 and $489,300 in capital to the overall project for the new 6" steel pipe.

Northern Cross Energy Limited

- NCE was incorporated in Alberta in 1984 and carries on business primarily in Ontario.

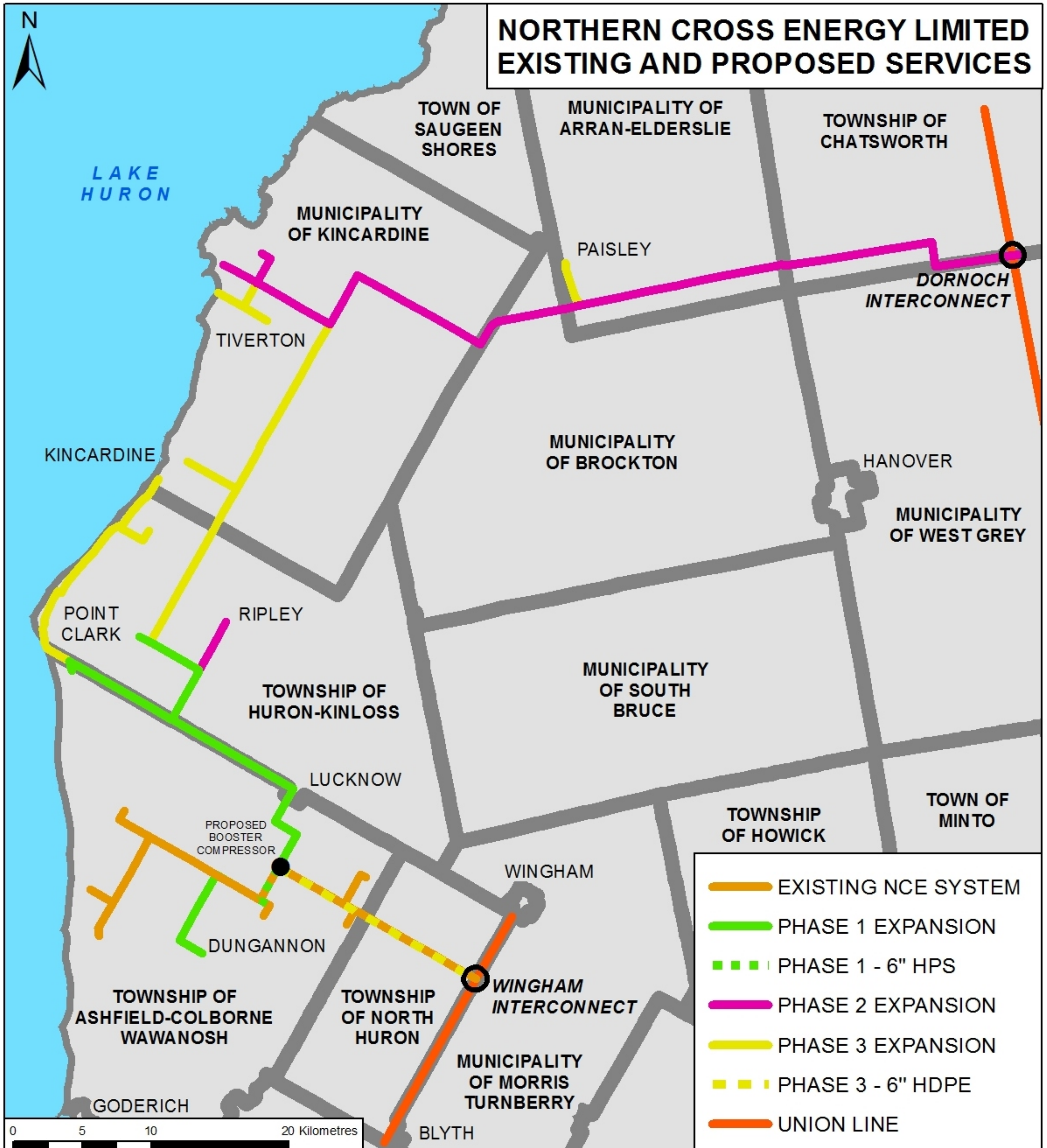
- It is a Canadian controlled private corporation, CCPC

- NCE and its affiliates have produced gas in Huron County since 1988, initially exclusively to WG Thompson & Sons and later for delivery to the Union Gas system.

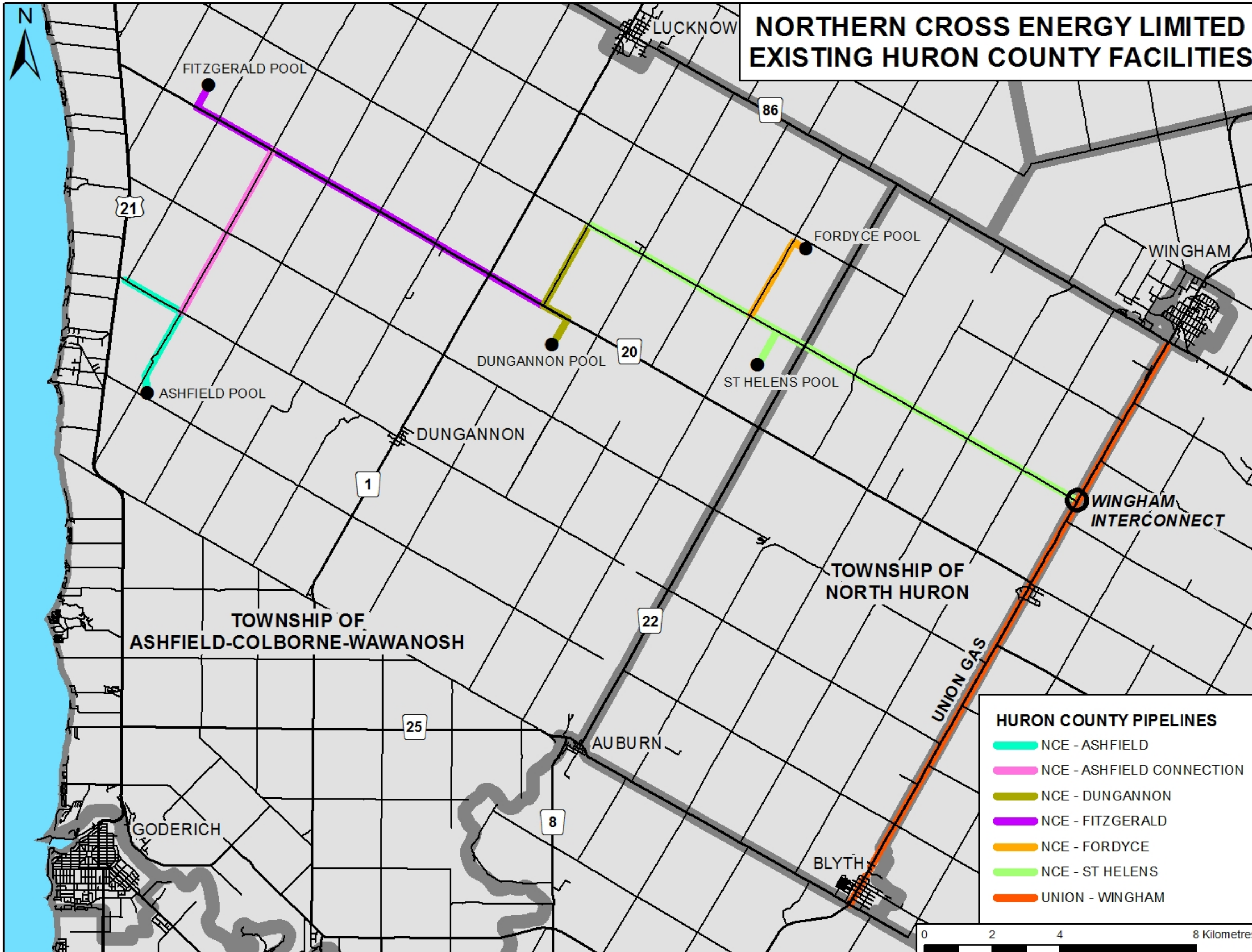
- NCE has operated without a serious incident for more than 25 years and maintains a good reputation with regulatory authorities and the local community.

Northern Cross Energy Limited

- The Union interconnect is now 2 way allowing delivery and receipt of gas as necessary
- Ontario assets include 5 natural gas production pools, 50km of gathering and transmission pipelines, gas compression and processing facilities, a gas fired cogeneration facility and an operations base, all located southeast of Kincardine
- Northern Cross (Yukon) Limited is an affiliated company which is active in oil and natural gas exploration in the Yukon. An Asian multinational is a major shareholder.



Pipeline Routing Proposal: Wingham and Dornoch Delivery Points


NORTHERN CROSS ENERGY LIMITED
EXISTING HURON COUNTY FACILITIES
N
LUCKNOW
FITZGERALD POOL
86
21
FORDYCE POOL
WINGHAM
DUNGANNON POOL
20
ST HELENS POOL
ASHFIELD POOL
DUNGANNON
1
WINGHAM INTERCONNECT
TOWNSHIP OF NORTH HURON
22
TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH
UNION GAS
25
AUBURN
8
GODERICH
BLYTH
HURON COUNTY PIPELINES
NCE - ASHFIELD
NCE - ASHFIELD CONNECTION
NCE - DUNGANNON
NCE - FITZGERALD
NCE - FORDYCE
NCE - ST HELENS
UNION - WINGHAM
0
2
4
8 Kilometres

Pipeline System: Key Metrics

Pipeline

- Storage Pool Line – 3.2 km of NPS 6 HP steel main with MOP of 3,447 kPa
- HDPE Plastic Main – 64.4 km of NPS 8 with MOP of 993 kPa
- HDPE Plastic Main – 114.3 km of NPS 6 with MOP of 933 kPa
- HDPE Plastic Main – 27.4 km of NPS 4 with MOP of 933 kPa
- MDPE Plastic Distribution – NPS 1.25 to NPS 2 with MOP of 552 kPa
- MDPE Plastic Main (Existing NCE System) – 50.0 km of NPS 6 & NPS 4 with MOP of 690 kPa

Pipeline System: Key Metrics

Capital Cost

- All Engineering, Material, Installation, Testing and Project Management
- $70,216,400
- 3 Phases
- Target completion for all mains November 2017

Pipeline System: Key Metrics

Gas Supply

- 100% Load Factor from Union Gas Limited (UGL) – 104, 800 m3/d (38,248,170 m3/y)
- 76,490 m3/d from Wingham and 28,320 m3/d from Dornoch
- Maximum Storage Volume from NCE – 3,608,170 m3

Pipeline System: Key Metrics

Residential Sales

- Communities of Chesley, Paisley, Tiverton, Inverhuron, Kincardine, Point Clark, Amberley, Ripley, Lucknow, Dungannon
- Number of Customers – 4,513
- Annual Volume – 10,223,740 m3
- Unit Cost - $0.461907/m3
- Revenue – $4,722,400 per year

Pipeline System: Key Metrics

Commercial Sales

- Number of Customers - 498
- Annual Volume – 5,639,440 m3
- Unit Cost - $0.320651/m3
- Revenue – $1,808,300 per year

Grain Drying Sales

- Number of Customers - 6
- Annual Volume – 2,500,930 m3
- Unit Cost - $0.320651/m3
- Revenue – $801,900 per year

Pipeline System: Key Metrics

Industrial Sales

- Number of Customers - 5
- Annual Volume – 19,884,070 m3
- Unit Cost - $0.274390/m3
- Revenue – $5,456,000 per year

Pipeline System:
Key Lifetime Metrics

Revenue

- $12,788,600 per year
- $639,430,000 over 50 years

Cost of Gas

- $7,059,000 per year
- $353,000,000 over 50 years

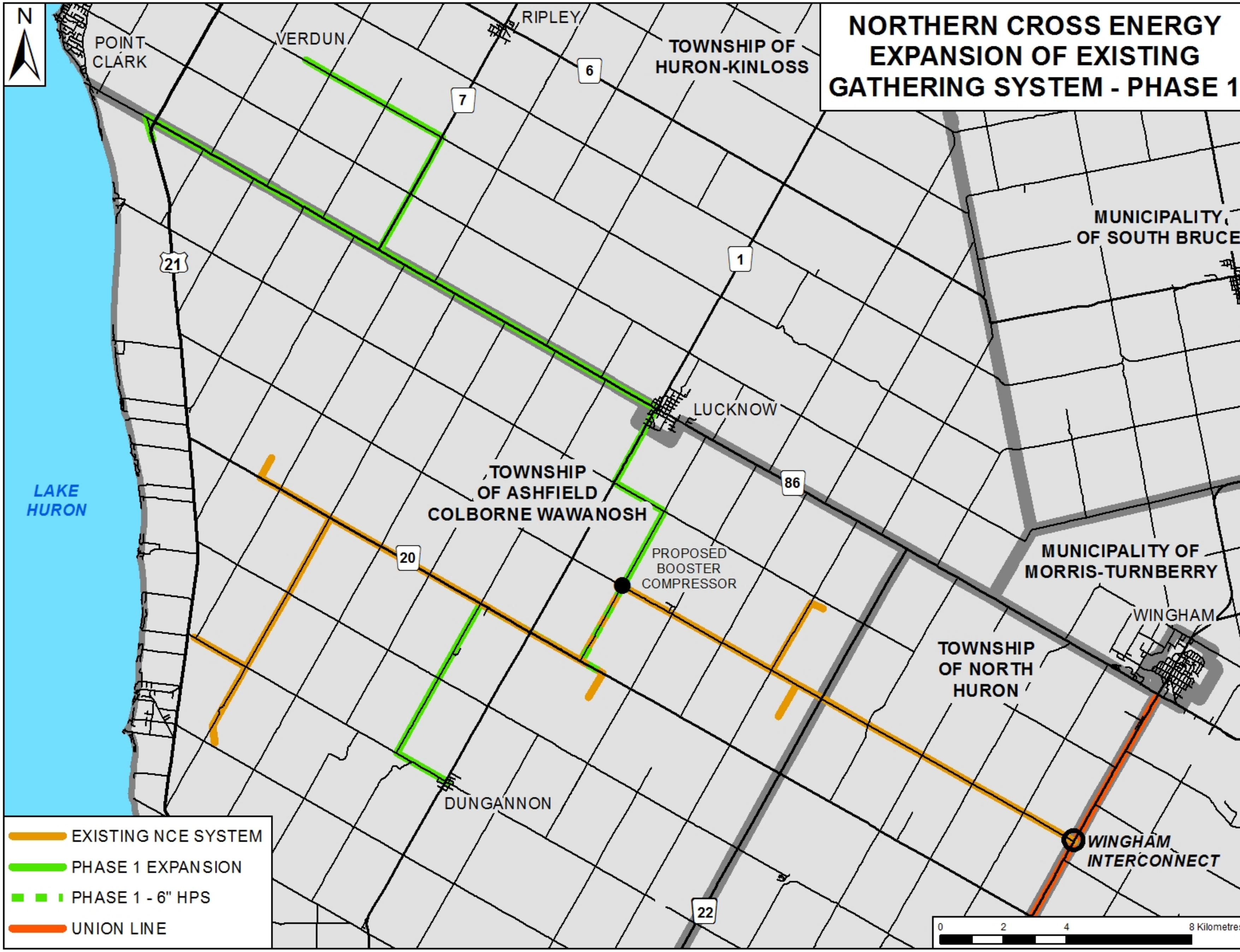
Pipeline System:
Key Lifetime Metrics

Operating and Maintenance

- $2,500,000 per year
- $125,000,000 over 50 years
- Based on "Kincardine Group" estimate

Capital Debt Service

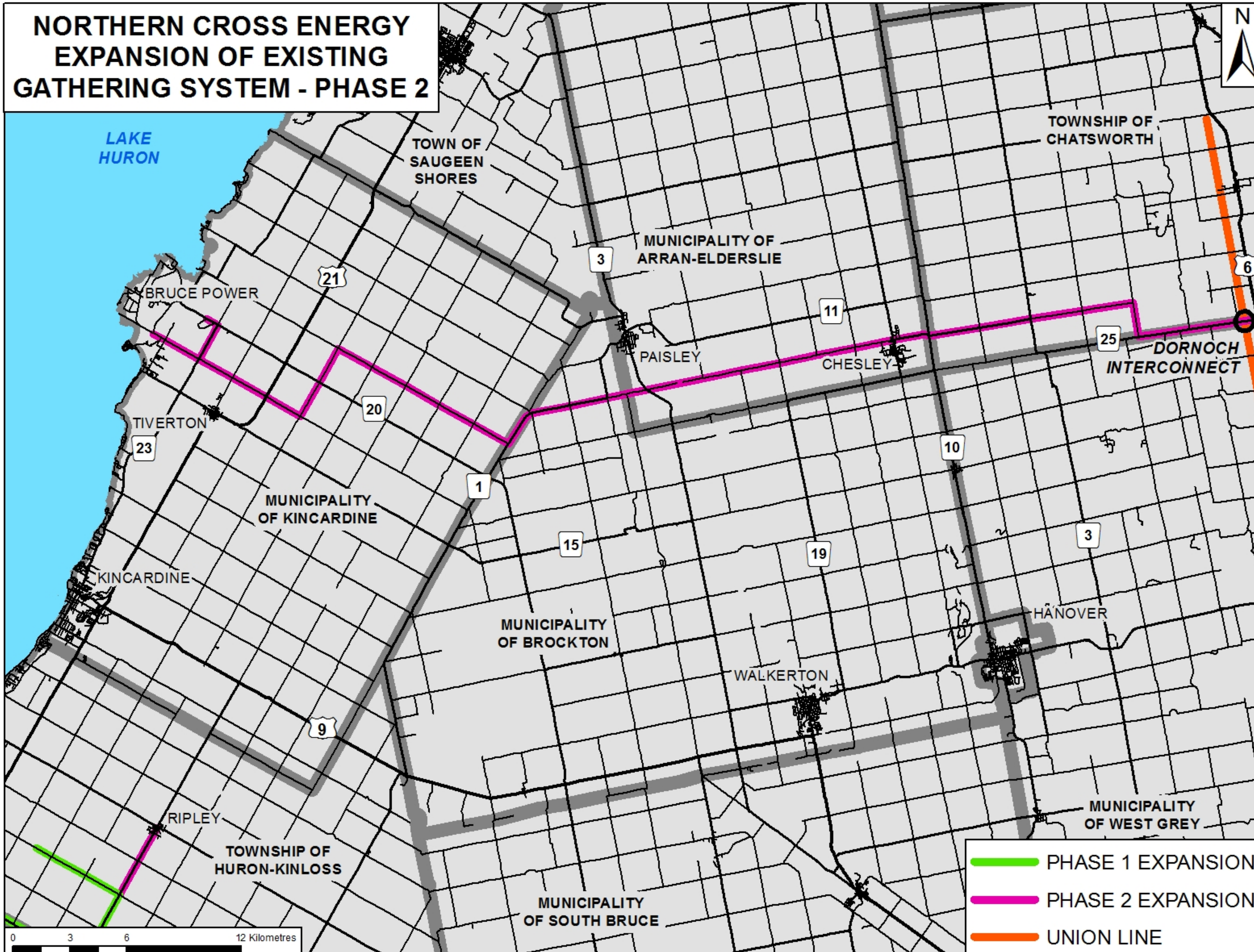
- 3% interest rate (Kincardine Group)
- 50 year amortization period
- $2,729,000 annual payment


NORTHERN CROSS ENERGY
EXPANSION OF EXISTING
GATHERING SYSTEM - PHASE 1
N
POINT CLARK
VERDUN
RIPLEY
TOWNSHIP OF HURON-KINLOSS
6
7
21
1
MUNICIPALITY OF SOUTH BRUCE
LUCKNOW
LAKE HURON
TOWNSHIP OF ASHFIELD COLBORNE WAWANOSH
86
PROPOSED BOOSTER COMPRESSOR
20
MUNICIPALITY OF MORRIS-TURNBERRY
WINGHAM
TOWNSHIP OF NORTH HURON
DUNGANNON
WINGHAM INTERCONNECT
22
EXISTING NCE SYSTEM
PHASE 1 EXPANSION
PHASE 1 - 6" HPS
UNION LINE
0
2
4
8 Kilometres

Key Phase 1 Metrics

- Phase 1 enters service in September 2015 and the following metrics are realized in the next 12 months
- Phase 1 only services 5 of the 6 grain drier loads
- Phase 1 includes the Booster Compressor and Storage Pool line to Dungannon Pool

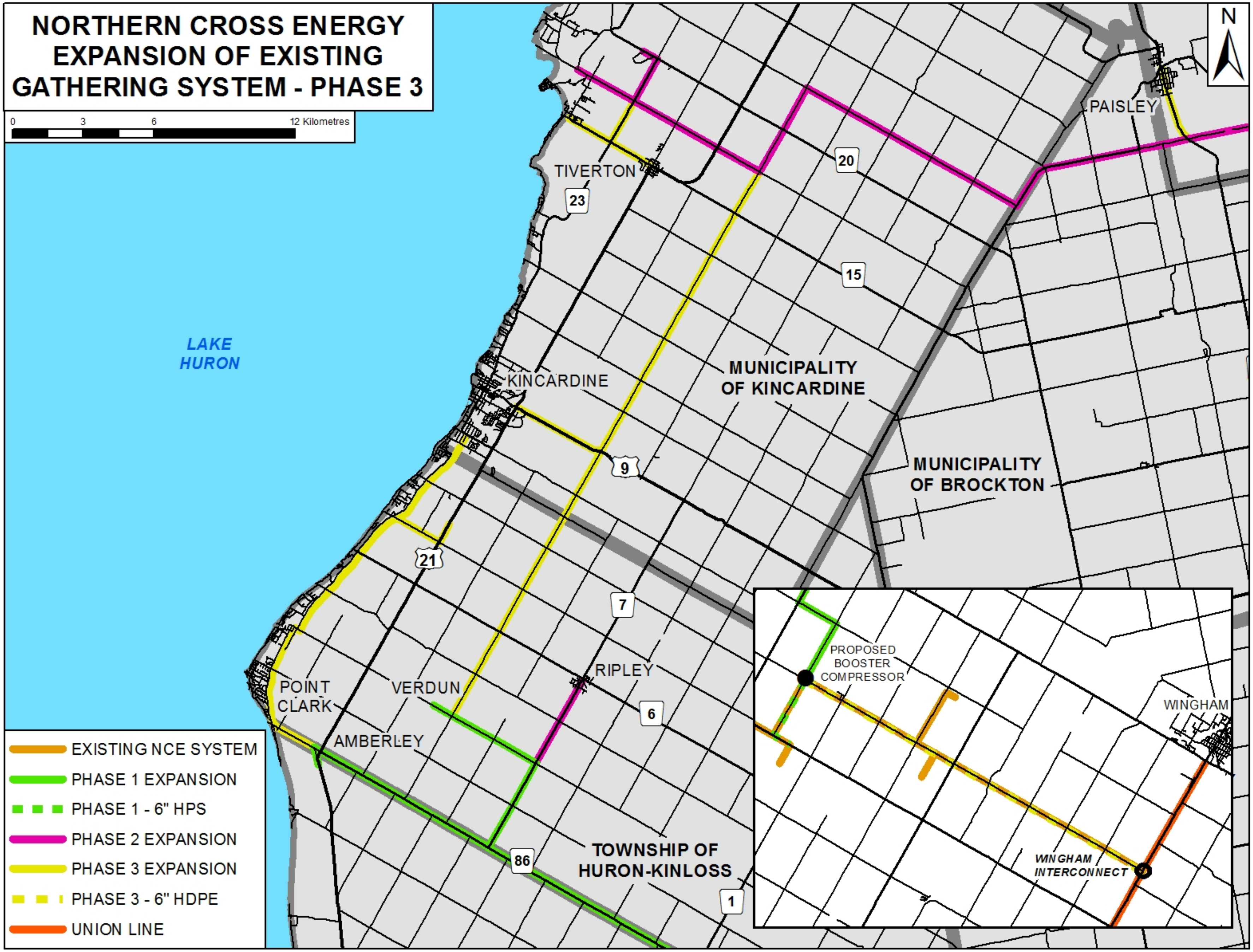
Revenue	Cost of Gas	Annual Debt Service Cost	Annual O&M Cost	Contribution Margin
$651,200	$550,400	$503,000	$50,000	-$452,200


NORTHERN CROSS ENERGY
EXPANSION OF EXISTING
GATHERING SYSTEM - PHASE 2
N
LAKE HURON
TOWN OF SAUGEEN SHORES
TOWNSHIP OF CHATSWORTH
MUNICIPALITY OF ARRAN-ELDERSLIE
BRUCE POWER
PAISLEY
CHESLEY
DORNOCH INTERCONNECT
TIVERTON
MUNICIPALITY OF KINCARDINE
KINCARDINE
MUNICIPALITY OF BROCKTON
HANOVER
WALKERTON
RIPLEY
TOWNSHIP OF HURON-KINLOSS
MUNICIPALITY OF SOUTH BRUCE
MUNICIPALITY OF WEST GREY
3
21
11
6
25
20
23
10
1
15
19
3
9
0
3
6
12 Kilometres
PHASE 1 EXPANSION
PHASE 2 EXPANSION
UNION LINE

Key Phase 2 Metrics

- Phase 2 enters service in September 2016 and the following metrics are realized as a cumulative effect for Phases 1 & 2 in the next 12 months
- Phases 2 only services 1,000 MCFD of the 2,152 MCFD anticipated from the 5 industrial loads

Revenue	Cost of Gas	Annual Debt Service Cost	Annual O&M Cost	Contribution Margin
$3,487,300	$2,343,800	$813,400	$100,000	$230,000

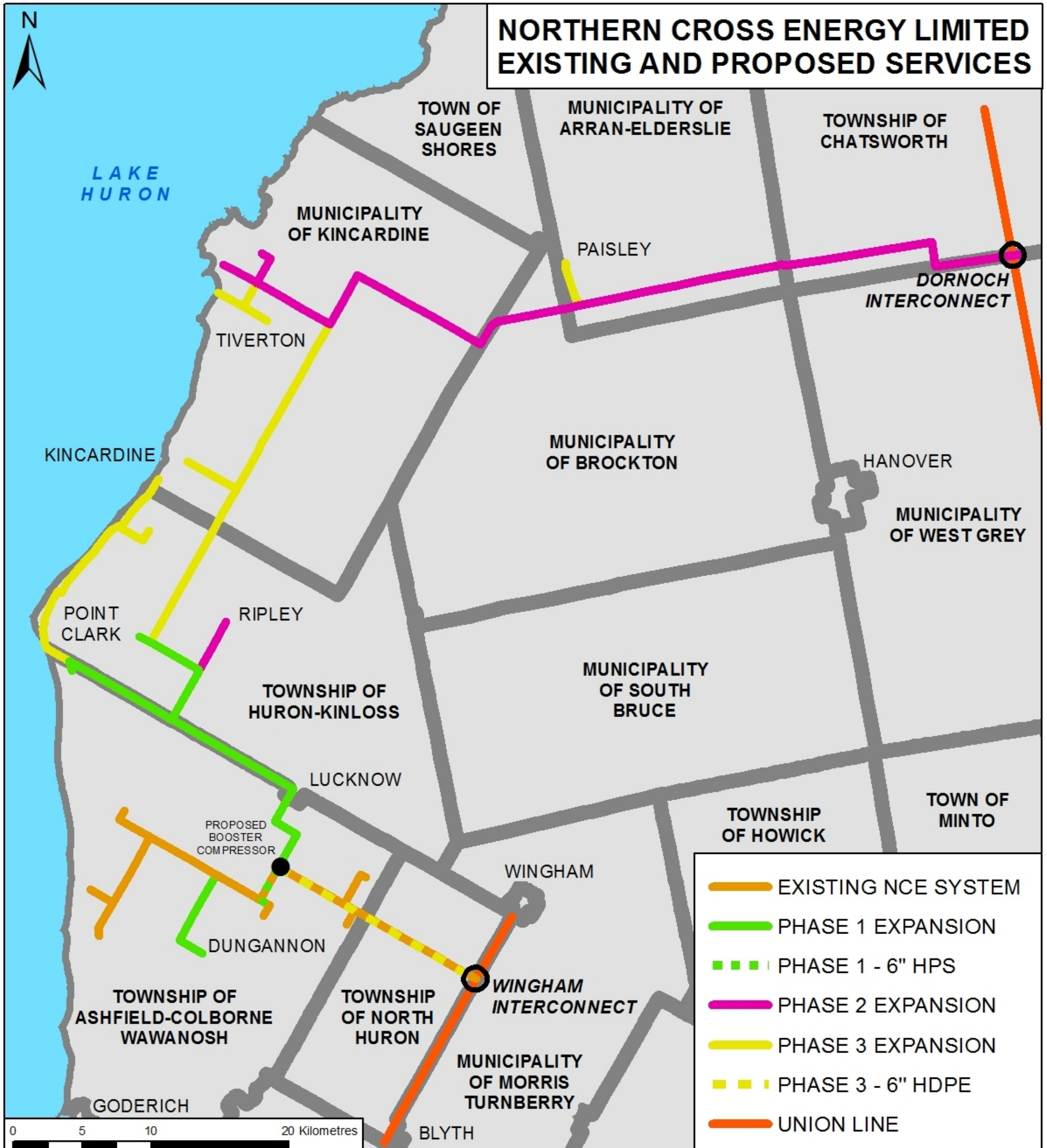


NORTHERN CROSS ENERGY
EXPANSION OF EXISTING
GATHERING SYSTEM - PHASE 3
0
3
6
12 Kilometres
N
LAKE HURON
TIVERTON
PAISLEY
KINCARDINE
MUNICIPALITY OF KINCARDINE
MUNICIPALITY OF BROCKTON
POINT CLARK
VERDUN
RIPLEY
AMBERLEY
TOWNSHIP OF HURON-KINLOSS
20
23
15
9
21
7
6
86
1
PROPOSED BOOSTER COMPRESSOR
WINGHAM
WINGHAM INTERCONNECT
EXISTING NCE SYSTEM
PHASE 1 EXPANSION
PHASE 1 - 6" HPS
PHASE 2 EXPANSION
PHASE 3 EXPANSION
PHASE 3 - 6" HDPE
UNION LINE

Key Phase 3 Metrics

- Phase 3 enters service in September 2017 and the following metrics are realized as a cumulative effect of Phases 1, 2 & 3 in the next 12 months
- Phases 3 only services the remainder of the grain drier and industrial loads
- All pipeline mains, major stations, storage connections and Union Gas interconnects are completed by the end of Phase 3

Revenue	Cost of Gas	Annual Debt Service Cost	Annual O&M Cost	Contribution Margin
$6,257,900	$4,123,500	$1,165,900	$500,000	$468,600



Pipeline Routing Proposal: Wingham and Dornoch Delivery Points

Key Total Project Metrics

- The Total Project is complete in 2027 (10 years) when the all of the anticipated residential and small commercial loads are forecasted to be connected

Revenue	Cost of Gas	Annual Debt Service Cost	Annual O&M Cost	Contribution Margin
$12,788,600	$7,058,900	$2,729,000	$2,500,000	$500,700

Competitive Fuel Analysis

Competitive Fuel Assumptions	Energy Content	Unit Price (All-in Cost)
Natural Gas	1,010 BTU/CF	$13.08/MCF
Propane	109,888 BTU/Gal (Cdn)	$0.60/L
#2 Heating Oil	166,332 BTU/Gal (Cdn)	$1.37/L
Electricity	3,413 BTU/kWh	$0.20/kWh

Fuel	$/MCF	$/m3	$/GJ	Annual Cost *
Natural Gas	13.08	0.461907	12.40	$1,046
Propane	25.07	0.885336	23.76	$2,006
#2 Heating Oil	37.82	1.335525	35.85	$3,025
Electricity	59.19	2.090076	56.10	$4,735

* Competitive Comparison Annual Cost based on typical Residential Customer Consuming 80 MCF/Year (2,265.4 m3/y) for their space heating, water heating, laundry and cooking needs.

Competing Natural Gas Proposal Analysis

	Union Gas	Greenfield Ethanol	Northern Cross Energy
Initial Capital	$110,451,000	TBD	$70,216,400
All-in Gas Cost			
$/MCF	TBD	19.57	13.08
$/m3	TBD	0.691104	0.461907
$/GJ	TBD	18.55	12.40
Aid-to-Construction	$93,757,000	TBD	0.00
MNG Asset Value in 2027	0.00	TBD	$70,216,400
Annual Contribution Margin	0.00	TBD	$500,000

Northern Cross Energy Limited

Natural Gas Distribution System

Development Proposal

Proposal

1. That the interested municipalities form the new Municipal Natural Gas company (MNG) and that MNG be able to **demonstrate** that it can secure “municipal” financing to support its business plan.

2. That MNG enter into an agreement with NCE to allow NCE to become a 10% equity participant in MNG and in return NCE will provide its Existing Gathering System to MNG and an additional $3,500,000 in new assets **OR** MNG will acquire the Existing Gathering System by May 1, 2015 for an estimated value $3,500,000.

Proposal (cont'd)

3. In the event NCE becomes an equity participant in MNG, NCE and MNG will negotiate a commercially acceptable return on investment for NCE consistent with other infra-structure based model Pubic-Private Partnerships.

4. NCE is willing to expand its Existing Gathering System consistent with the proposed Phase 1 work (construction of the mains and storage line only) and the attachment of the specified grain driers with a target completion date of November 1, 2014 **IF** MNG will agree to acquire this new pipe coincident with the acquisition of the Existing NCE Gathering System. Estimated at an additional $9,742,000 (less $3,500,000 if NCE becomes a 10% equity shareholder in MNG).

Proposal (cont'd)

5. This expansion will include servicing the Grain Drying loads at Thompson – Port Albert (improved service), Snobelen – Dungannon, Snobelen – Lucknow, Snobelen – Ripley (Verdun) and P&H - Amberley. It will also include the booster compressor and the Dungannon Pool storage line.

6. This expansion will exclude the installation of any Distribution System.

Proposal (cont’d)

7. That MNG enter into a long term Gas Supply contract with Union Gas at Wingham and Dornoch consistent with the gas supply requirements detailed in this presentation.

8. That MNG enter into an exclusive long term (e.g. 20 year) storage and/or gas supply contract with NCE to supply the storage needs of MNG consistent with #6 above and any future storage or gas supply needs that MNG may require over the life of the agreement.

9. That NCE be considered for future natural gas facilities expansion work that MNG may enter into from time to time.

What’s Next?

1. Agree on the construction phases so NCE can continue discussions with Union Gas about delivery commitments and “aid-to-construction” versus storage development.

2. Based on the construction phases, refine the engineering, permitting and project management estimates.

3. Refine the Industrial Load profiles.

Questions?