



The Qimirluk Proposal:

An Open Gateway to Deliver the Promise of Broadband

Further Intervention by the SSI Group of Companies

**In Response to Telecom Notice of Consultation CRTC 2015-134
*Review of basic telecommunications services***

February 1, 2016

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Schedules

Schedule 1 – Lemay Yates Associates Inc. (“LYA”) Report, “Broadband is the New Basic: Implications for CRTC Subsidy Framework”, February 1, 2016

Schedule 2 – “Broadband and Economic Development”

1. Introduction and overview

1. The Commission's Basic Service Objective ("BSO") was established to ensure that Canadians in all regions of the country have access to affordable, high-quality telecommunications services.
2. With advancements in technology, there have been profound shifts in how Canadians have come to use and rely upon telecommunications. With these, the review of basic services initiated by Telecom Notice of Consultation CRTC 2015-134 ("TNC 2015-134"), is both timely and essential. This is a seminal proceeding, and the Commission is in a position to make new policy that will have positive impacts across Canada for decades to come.
3. SSi is headquartered in Yellowknife, Northwest Territories. Our operations are focused on providing telecommunications and other infrastructure solutions into remote and outlying areas, particularly northern Canada.
4. We are both a participant in and an eyewitness to the profound shift in telecommunications usage now underway. A decade ago, we were the first company to launch broadband service across Nunavut, under the "QINIQ" brand name.
5. We know the positive impact that broadband has had in remote and outlying areas, for education, for new business opportunities, for improved government service, and for cultural advancement. Broadband also provides a critically important platform for Northerners to be heard on issues of concern to them.
6. Many of the interventions to this proceeding offer similar observations into the positive impacts of broadband, and the reliance Canadians have come to have on affordable, high quality broadband service.
7. The Commission's BSO policy is in need of major reform – simply put, the objective no longer meets its objective:
 - Despite broadband being a must-have service that Canadians rely upon, it is not a part of the BSO; and
 - If broadband¹ were made part of the BSO, there are parts of the country where broadband is either unaffordable or unavailable, due to network capacity constraints caused by cost of backbone transport and/or the quality of the available network infrastructure.

¹ For "broadband" here, we refer to service that meets the Commission's target speeds of 5 Mbps download and 1 Mbps upload, with the targets to be actual speeds delivered, not merely those advertised.

8. With respect to Canada's North², the current BSO is still being met with technology from the late 1800s – copper lines that deliver limited service – and the out-dated technology is financially supported through a regulatory regime that harkens back to Theodore Vail's natural monopoly of the early 1900s.³
9. The time has come to modernise the BSO, and the current proceeding can achieve that.
10. Indeed, broadband is the service Canadians most need to participate meaningfully in the digital economy. It has become, as we have stated throughout this proceeding, the "new basic" telecommunications service – a must-have for all consumers, businesses and governments in Canada.
11. SSI's interventions in this proceeding are entitled: "*The Qimirluk Proposal: An Open Backbone to Deliver the Promise of Broadband*". Qimirluk means backbone, and that is the central focus of our proposals to reform the BSO.
12. As we describe, significant regulatory focus should be placed on improving the backbone transport into Canada's North. These are mostly satellite-served communities, where broadband is either inadequate or unavailable today.
13. The Commission already has before it an extensive record built as phase 1 of this proceeding; that includes extensive data and proposals from SSI. The Commission record will only grow larger with phase 2 of the proceeding, as the public intervenes to provide further detail on the telecommunications services necessary to participate meaningfully in the digital economy today.⁴

² The "North" includes the far North and mid-North of Canada, that is, the geographic areas including the three Northern Territories as well as the northern parts of the provinces, as depicted in the Commission's Satellite Inquiry Report, Figure 3.1. The report identifies 89 communities that are dependent on a "community aggregator" satellite backbone model for Internet, plus the existence of another 109 "disconnected" communities.

³ For a brief overview of Theodore Vail, natural monopoly and the introduction of the "universal service objective" in the United States, see Tim Wu, "*The Great American Information Emperors*", Slate, November 7, 2010, http://www.slate.com/articles/technology/technology/features/2010/the_great_american_information_emperors/how_theodore_vail_built_the_att_monopoly.html.

⁴ From the LYA Report at Schedule 1, paragraph 22:

We noted with interest the CRTC Press Release of January 19, 2016, which states that 15,000 Canadians participated in the online survey on Let's Talk Broadband, By comparison, the CRTC online survey Choicebook on television services garnered 6,300 respondents in addition to 1200 additional participants via a select panel in 2014⁴. Without presuming of the opinions expressed by the respondents to Lets Talk Broadband, we believe that the higher rate of response to the Let's Talk Broadband consultation should be seen as an indicator of the "essentiality" of broadband services as perceived by Canadian consumers.

14. Accordingly, we have prepared this latest intervention with the belief that less is more. We focus on two vital steps the Commission must take in the reform of the BSO:

- *One, change the policy focus:* Broadband must become the central component of the BSO; and
- *Two, change the mechanisms to implement the BSO policy:*
 - For satellite-served communities, a backbone assistance program (“BAP”), proposed by SSI in earlier submissions, should be established to allow open and affordable access to backbone connectivity and gateway service; an “Open Gateway Provider” receiving BAP funding will provide quality and affordable backbone connectivity and co-location services to all local service providers; and
 - As a second level of support, also proposed in earlier submissions, a Consumer Broadband Offer (“CBO”) should be established to provide consumers in high-cost serving areas with affordable and quality broadband service as part of the BSO;
 - And the regulatory framework for the BSO must be public, competitively neutral, and technology neutral.

15. There are also two Schedules included with the Intervention:

16. Schedule 1 is a report prepared by Lemay-Yates Associates Inc. (“LYA”) entitled “*Broadband is the New Basic: Implications for CRTC Subsidy Framework*”. This report builds on the July 2015 LYA Reports filed as part of SSI’s Phase 1 Intervention, and discusses implications from the key theme of this proceeding, that is, “Broadband is the new Basic”; and

17. Schedule 2 is an analysis prepared by SSI entitled “*Broadband and Economic Development,*” which provides analysis and insight from a variety of sources into the positive relationship between effective broadband access and economic development.

2. A dedicated strategy for identifiable needs

18. By focusing policy reform to develop solutions for identifiable areas of need - and SSI's proposals have focused on the underserved communities of Canada's North - the solutions become more manageable in size and scope, and easier to see and attain.
19. In the case of satellite-dependent communities, for example, the Commission in TNC 2015-134 cited from Commissioner Molnar's Satellite Inquiry Report that there are:
- "... roughly 18,000 households without access to broadband Internet service at the Commission's target speeds ... located in satellite-dependent communities in Yukon, the Northwest Territories, and Nunavut, as well as in certain remote areas of British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec."*⁵
20. Looked at another way, the Satellite Inquiry Report also identifies 89 communities that are dependent on a "community aggregator" satellite backbone model for Internet, plus the existence of another 109 "disconnected" communities.⁶
21. From either perspective, whether it is total households in satellite dependent communities, or the total number of unconnected and underserved satellite communities, the focus of policy reform is clear and identified, and the measures to deliver broadband as part of the BSO can be attained.
22. This also means that, in developing solutions to deliver an updated BSO to Canadians across a high quality telecommunications system, we should look beyond a "one-size-fits-all" approach for all areas of the country. SSI has noted in earlier evidence the practical reality in many underserved areas of the country, particularly Canada's North, requires unique solutions.⁷

⁵ TNC 2015-134, par. 30.

⁶ Satellite Inquiry Report, pages 17-19.

⁷ In this regard, please see the response provided by Lemay-Yates Associates Inc. to SSI(CRTC)14Aug15-1, which provides, in part:

Objectives and minimum requirements for enhancement to broadband services need not, and should not, be identical across the country. While we believe that a unique objective should be in place for all communities that are linked by fibre optic backhaul facilities, a different objective is required for satellite communities reflecting current satellite facilities as well as upcoming enhancements. Broadband service quality for satellite communities in Canada can be enhanced as soon as coverage and service from high – throughput satellites becomes available in these communities.

[...] we believe that a tiered approach to setting broadband service quality objectives or requirements is actually the best approach to ensure all Canadians, wherever they reside, receive access as quickly as feasible to the best broadband service quality possible.

23. The call for a focused or dedicated strategy for the North was also made by Qikiqtaaluk Corporation, a key northern stakeholder participating in this proceeding:

Without a dedicated strategy to address the communications infrastructure deficit, the residents of the North are in danger of being left behind even as their territories lead Canada in GDP growth through increased development – development that benefits Canada, but may not benefit northerners without strategic investments in Communications infrastructure.⁸

24. Specific to the North, there is a high cost for backbone transport, attributable to the small population, great distances and remote locations of most communities. The challenge of the North is that there is little economy of scale in transport, and the backbone cannot be looked at as a business case as would be done in most other parts of Canada.

25. Other parties in this proceeding have recognised that the unique situation in the North calls for unique solutions. Québecor Media stated, for example:

Québecor Média reconnaît qu’il existe des conditions particulières dans le Grand Nord canadien qui font en sorte qu’un programme de subvention de réseaux de télécommunication dans cette région puisse être assorti de modalités parfois différentes de celles qui existent ailleurs au pays. Les propositions de SSI ont le mérite de cibler les coûts récurrents de capacité satellitaire tout en demeurant cohérent avec les principes de neutralité technologique et de concurrence inter-fournisseurs, ce qui pourrait constituer une approche intéressante.⁹

26. Consistent with SSI’s Phase 1 Intervention, and our submissions in earlier proceedings to address communications needs for the North¹⁰, we have prepared this latest intervention with a focus on two vital steps the Commission must take in the reform of the basic service objective (“BSO”).

27. To be certain, new approaches to the regulatory framework and the BSO must not single-mindedly focus on ILECs, but rather take full account of all stakeholders. In looking at broadband as the core element of the BSO, and more particularly as the Commission considers changes to the obligation to serve, the basic service objective, and the local service subsidy regime, it is essential to keep in mind that in many if not most areas of the country, the ILEC is not the broadband “incumbent”.

See also the Report prepared by Lemay-Yates Associates Inc., “Broadband is the New Basic: Implications for CRTC Subsidy Framework” at Schedule 1 to this Further Intervention.

⁸ Qikiqtaaluk Corporation, Phase 1 Intervention to TNC 2015-134, July 13, 2014, page 4.

⁹ Response to Québecor Média(SSi)14août2015-1.

¹⁰ For example, to cite from TRP 2013-711: “SSI stated that broadband must be recognized as an essential service in the North and proposed an assistance program to fund transport infrastructure that would allow all service providers in the North to gain open and affordable access to transport.” We continue to maintain that position.

3. Change the Policy Focus: Broadband is already the New Basic

28. The record of this proceeding serves to reinforce a new reality: broadband has become essential to daily life in Canada.

3.1. Broadband as an essential service

29. A number of parties to this proceeding have underscored how vital access to quality and affordable broadband is for Canadians to participate meaningfully in the digital economy.

30. Qikiqtaaluk Corporation noted in its Phase 1 Intervention:

Basic service offerings need to include "fair access" to affordable reliable broadband as an essential service, particularly in satellite reliant remote and underserved regions of the North.¹¹

31. Another key stakeholder in this regard is the Yukon Government. In a February 2013 Intervention to the CRTC as part of the review into northern communications needs, the Yukon Government stated:

Access to broadband has become more important than basic voice access, especially in the North, where the capabilities of advanced services have the potential to overcome the disadvantages of distance and remoteness.¹²

32. The Yukon Government provided an eloquent elaboration on this statement in response to a SSI interrogatory:

The Yukon Government continues to believe that the statement quoted accurately and effectively represents the reality today.

It is useful to note that the emphasis is on access to broadband, not on broadband service. Yukon would suggest that the technological capabilities and the diversity of customer applications available through modern broadband access transcends any traditional definition of services. Describing, or worse still prescribing, a catalogue of features to define a service is self-limiting, and likely to be rapidly overtaken by new capabilities or new demands.

The current capabilities of broadband access—let alone the near term possibilities—have enabled Northerners to come closer than ever to erasing the disadvantages of distance and

¹¹ Qikiqtaaluk Corporation, Phase 1 Intervention to TNC 2015-134, July 13, 2014, page 6.

¹² Yukon Government February 6, 2013 Intervention to Telecom Notice of Consultation 2012-669, "Review of Northwestel Inc.'s Regulatory Framework, Modernization Plan, and related matters", paragraph 66.

remoteness. Throughout history, communication has served as a substitute for presence, with the gap between sender and receiver slowly narrowing from news carried by messengers or foot, then by horseback, through trains, vehicles and aircraft as technology improved transportation.

The full duplex communication by telephone was a dramatic step forward in bridging distances, and now the capabilities offered by broadband represent a further quantum leap. Two-way video (science fiction less than a generation ago) is ubiquitous; telepresence is delivering health, education and government services to communities without the requirement of physical transport; and the prospect of further advance, perhaps something like virtual reality, could be the next application to bring individuals, business and communities closer together than ever before.

The Yukon Government submits that the focus for this proceeding must be on enabling the possibilities for the future, not on alleviating or even rectifying deficiencies from the past.¹³

33. SSI also posed interrogatories to other parties in this proceeding who are either from or familiar with the North. And the responses provided a similar recognition of the essential nature of broadband. These included responses from the Government of the Northwest Territories¹⁴, the Kativik Regional Government,¹⁵ the First Mile Connectivity Consortium,¹⁶ the Forum for Research and Policy in Communications,¹⁷ and the Affordable Access Coalition.¹⁸
34. In revising the BSO, we recall our earlier position that for the North, the BSO policy and perspective must look beyond the consumer retail services market. Local governments, aboriginal organizations and businesses serving local satellite-served communities cannot individually afford the backbone capacity needed to deliver reliable and affordable telecommunications services of high quality.¹⁹
35. On this point, we cite again the position of the Yukon Government:

¹³ YG(SSi)14AUG15-9.

¹⁴ "The GNWT's position is that access to local telephone service and to high speed Internet service are both essential to Northerners[...]," Response to GNWT(SSi)14AUG15-11.

¹⁵ "The KRG agrees that broadband access has become as important as voice access. To the end user, both Internet and telephone remain vital tools", Response to KRG(SSi)14AUG15-5.

¹⁶ Response to FMCC(SSi)14Aug15-3.

¹⁷ "FRPC respectfully submits that access to broadband will be as important as basic voice access when all households not only have access to, but are also able to subscribe to, broadband service," FRPC(SSi)14AUG15-4.

¹⁸ "With reference to its own submissions in this proceeding, the AAC has emphasized that the importance of telecommunications services for Canadians, especially home broadband Internet access, is no longer in question. Broadband access is essential to participation in the digital economy which in turn is essential to civic involvement and to everyday life." Response to AAC(SSi)14Aug15-10

¹⁹ See also the response to SSI(CRTC)14Aug15-2.

Yukon would also recommend that subsidized broadband be made available to Northern businesses, many of which are small operations that would contribute to the growth of the economy if their businesses were enabled by affordable high speed access.

Yukon would further note that the proposed approach of providing subsidized broadband capacity provides benefits to consumers, businesses, governments and others, which is a strong justification for committing to this subsidy support.²⁰

36. That said, access to assisted broadband service must come with efforts by the recipients to reduce the amount of assistance needed.
37. In this regard, we advocate that efforts be made to encourage all local service providers and end-users in satellite-served communities to share backbone infrastructure. This will increase economies of scale, lower retail costs, and drop barriers to entry for competitive suppliers.

3.2. Evolving the Subsidy System: voice as an “App” or subset of broadband service

38. In evolving the existing BSO policy and system of subsidies, broadband must be viewed as “basic” first and foremost, not as an afterthought.
39. The current BSO, national contribution mechanism, obligation to serve and local service subsidy regime all focus strictly (or stubbornly) on providing significant financial support:
- To an exclusive “subsidy monopoly”, the incumbent local phone company (“ILEC”);
 - Using only one type of out-dated technology, wireline copper;
 - To deliver a very limited range of services, being principally voice and dial up Internet.²¹
40. The anachronistic nature of the current situation has been acknowledged by the Commission in TNC 2015-134:

²⁰ Response to YG(SSi)14AUG15-2.

²¹ We again refer here to Tim Wu, from “*The Great American Information Emperors*”, Slate, November 7, 2010, and his assessment of how Theodore Vail, the head of AT&T in the United States at the start of the 20th century, was able to encourage the transition from a competitive telecommunications market into a regulated monopoly for his own firm:

In 1907, J.P. Morgan and other New York investors took control of the firm and installed Vail as president. At the time, the firm was struggling and widely seen as falling behind hundreds of “independents” that arose in the 1890s and 1900s to challenge Bell’s early monopoly, which had been derived from Alexander Bell’s patent. Rather like Steve Jobs coming back to Apple, Vail’s return to Bell at age 62 would change everything.

The new slogan Vail announced upon his arrival said it all: “ONE SYSTEM, ONE POLICY, UNIVERSAL SERVICE”.

The meaning of the word universal here is important to understand. This was not universal as in, say, universal health care. Rather, it was something more akin to one universal church. It was a plan that called for the elimination of all heretical hookups and the grand unification of telephony.

Canadians are reducing their dependency on wireline voice services, both residential and business, in favour of mobile wireless and broadband Internet services [e.g. voice over Internet Protocol (VoIP), email, text, and other data services].²²

41. With broadband at the core of a revised and modernised BSO policy, the Commission must also revise and modernise the contribution system and local service subsidy regime that serve to support delivery of the BSO.
42. Changes need to reflect the fact that in broadband, the ILEC has no natural monopoly, and it is also not the broadband “incumbent”: the ILEC was not first to market and is still not the largest broadband service provider in many markets.
43. A revised BSO policy must place broadband as “basic” first and foremost, not as an afterthought. From that the Commission can evolve the existing contribution mechanism and system of subsidies. As we have noted, a key item is how to fund these mechanisms and how much funding is needed.
44. In this regard, we refer to section 3.7 of SSI’s July 14, 2015 Intervention, *Evolving the Subsidy System: The Commission can play a leadership role in the North*, and the related report at Schedule 3 of the intervention, prepared by Lemay Yates Associates and entitled “*Evolving the Subsidy System in Northwestel’s Operating Territory.*”
45. One way for the Commission to enable funding of Broadband as Basic would be to evolve the existing primary exchange service and service improvement plan (“PES + SIP”) subsidy regime to redirect funds to broadband. This would go a long way – perhaps all the way - to addressing the needs of the North and to meeting the new BSO with broadband as its most important element.
46. With respect to evidence on this issue submitted by other parties as part of this proceeding, we refer to the February 1, 2016 Report prepared by Lemay Yates Associates Inc., “*Broadband is the New Basic: Implications for CRTC Subsidy Framework*”, at Schedule 1 of this Further Intervention. The LYA Report notes:

24. A number of interveners including Bell Canada go to great lengths to show how well Canada is doing overall with broadband penetration and usage of Internet-based services and applications.

25. Even though phone service is an important Internet “app”, Bell Canada still returns to the argument that traditional wireline phone service needs to be subsidized in high cost areas, namely Bands G and H1.

²² TNC 2015-134, par. 7.

26. However, broadband is not only increasingly used by Canadians to supplant or replace traditional phone service, but using broadband for phone service is a better overall use of technology and investment as the costs to support a voice service over a broadband connection are lower than the costs of supporting or providing Plain Old Telephone Service (POTS, as it used to be referred to) using obsolete technologies.²³

47. And further on in the same LYA Report:

45. Clearly, the ability to use the Internet to make phone calls as being an important application. Phoning has become an “app”, be it for voice or video calls.

46. The wireline voice-centric, POTS based, Basic Service Objective is obsolete and should not be subsidized any further in any area of the country.²⁴

48. SSI agrees with this conclusion from the LYA Report. We propose that there should be a transition period to phase-out the existing voice subsidy regime. New mechanisms put on place to provide assistance to broadband will by necessity also provide assistance to voice services, given that broadband provides a platform for the delivery of voice.

3.3. Broadband as a driver of economic development

49. One final note on the importance of changing the BSO policy focus toward broadband, particularly for the North: better broadband access and augmented communications infrastructure will allow the North to contribute even more to Canada’s greater overall wealth.

50. We have previously noted that the North plays an important role in the Canadian economy, and much of the region is growing faster than the country on average. But for the economic growth and economic contributions to continue, significant infrastructure investment – particularly communications infrastructure – is needed.

51. Reports, studies and academic papers have, for more than two decades now, expounded on the benefits that broadband has on the economy and economic development. Economic theory reviews extensively the benefits that investments in communications infrastructure and the improved transfer of information have on the economy.

²³ Lemay Yates Associates Inc. Report, “Broadband is the New Basic: Implications for CRTC Subsidy Framework”, February 1, 2016.

²⁴ Ibid.

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52. In terms of broadband, not only does it improve economic development through better – ie, more technologically advanced, higher quality and higher performing - communications capabilities, broadband also acts as one of the basic infrastructure building blocks upon which any economy grows.
53. For those looking at the issue – governments, universities, researchers, major technology groups and communications companies – broadband is identified as one of the most important factors to participate fully and effectively in today’s economy. In short, broadband availability and cost have major implications on all economies, and especially economies in development.
54. We know qualitatively and quantitatively that broadband penetration has a direct and positive impact on Gross Domestic Product growth, and that it delivers productivity and efficiency gains for firms. And, as mentioned above, we also know that Canada’s northern economies, in particular Nunavut, are developing at a rapid pace, but need investment in infrastructure if the growth is to be sustainable.
55. Schedule 2 to this Further Intervention is entitled “*Broadband and Economic Development*”, with the intent to add helpfully to the analysis on the public record, we provide extracts and insight from a variety of influential voices describing the positive relationship between broadband access and economic development.
56. As noted in the Schedule, like electrical, water, sewer, or road infrastructure, broadband is a basic foundation upon which a modern economy and society grows. Broadband, or the Internet as a whole, is considered by most to be a “General Purpose Technology” (GPT); but further, that broadband happens to be a GPT with considerable impact on the economy.

4. Change the mechanisms to implement the BSO policy

57. While the first step in BSO reform is to change the policy focus and make broadband the central component of the BSO, the next step is to change the mechanisms to implement the BSO policy.
58. In this regard, SSI has submitted detailed proposals for a “two-level” approach, focusing on two separate but complementary funding mechanisms, operating at two different levels.
59. The first, the Backbone Assistance Program, or BAP, is specifically aimed to provide assistance for the development of backbone connectivity and open gateway facilities in satellite-served communities. The BAP enables local service providers to obtain affordable backbone and co-location services, which in turn allow for the delivery of quality and affordable broadband services to all end-users in the community.
60. The second level mechanism, the Consumer Broadband Offer, or CBO, is aimed to ensure a level of affordability for a basic broadband service package made available to Canadians.

4.1. Technology and Competitive Neutrality

61. And the *sine qua non* of BSO policy reform, which has broad support by the parties to this proceeding, is for any revised regulatory framework to be public, transparent, competitively neutral, and technology neutral.
62. For further analysis of this key aspect, particularly vis-à-vis the evidence provided by other parties to this proceeding, we refer the Commission to section 3 of the LYA Report at Schedule 1 of this intervention, “*Subsidies for Broadband on a Technology and Competitive Neutral Basis*”. The Report notes:

53. Subsidizing broadband only deployment, while eliminating traditional POTS subsidy, would support greater investment in a superior technology, while addressing the needs for broadband as well as phone services in remote and northern regions of Canada.

54. There is substantial evidence on the public record of this proceeding from both the Canadian and American experiences to date that broadband subsidies awarded on a competitive and technology neutral basis yield the best results for consumers and businesses.²⁵

²⁵ Lemay Yates Associates Inc. Report, “*Broadband is the New Basic: Implications for CRTC Subsidy Framework*”, February 1, 2016.

4.2. Qimirluk: focus on the Transport

63. The Commission has identified the need to focus on the transport in reviewing the communications needs for satellite-served communities:

*“The Commission stated that transport infrastructure would need to be addressed to ensure that broadband Internet services are available at its target speeds. It also considered that, without its intervention, the digital divide between communities that rely on terrestrial transport infrastructure versus those that rely on satellite transport infrastructure will likely continue to exist.”*²⁶

64. We agree, and we cannot state this often enough: for the North to receive better broadband and participate meaningfully in the digital economy, regulatory focus must be on augmenting the capacity and reducing the cost of backbone into the communities. Critical and integral to an augmented backbone is the deployment of open gateway facilities in the communities that enable competing local service providers to deliver quality communications services to end-users.²⁷

65. On this point, we highlight and are aligned with the comments of Qikiqtaaluk Corporation, discussing the need for fair access in the North:

Further, consideration should be given it to establish a dedicated satellite payload (possibly HTS) for satellite reliant regions of the north for more cost efficient bandwidth management, providing an affordable backbone for services that would be available to other potential service suppliers beside the incumbents.

*This approach could also extend to the encouragement of sharing terrestrial infrastructure, such as backhauls, towers and buildings in the communities.*²⁸

66. Tied to this, the bottleneck in the North is the backbone transport IN and OUT of a community. It is not the last-mile systems WITHIN the community. The high cost of data transport in satellite-served communities of the North means that the capacity and features of new last mile systems are not being fully taken advantage of or leveraged.

²⁶ TNC 2015-134, par. 26.

²⁷ We refer the Commission here to SSI’s July 14, 2015 Intervention to this proceeding, and in particular section 3.2, “*The PowerComm Hub: an open gateway facility incarnate*”.

²⁸ Qikiqtaaluk Corporation, Phase 1 Intervention to TNC 2015-134, July 13, 2015, page 7.

67. From a regulatory perspective, developing a framework to implement a revised BSO policy around a gateway facility creates a clear demarcation between backbone connectivity and local access. Commission rules and regulations concerning backbone transport and co-location can accordingly apply readily to an “end-point” at the gateway facility.

4.3. Two-levels of assistance mechanisms: enable competition and empower the consumer

68. Other parties to this proceeding that are either from or have involvement with the North have also submitted “two levels” of assistance mechanisms, similar to SSi. That is, proposals for mechanisms to be established that allow, first, for the development of affordable and open backbone transport into remote and high-cost serving areas and, second, to ensure affordability of a basic broadband service offering for Canadians.

69. Notably, in its Phase 1 Intervention as part of this proceeding, the Yukon Government states:

The Government of Yukon recommends adoption of a basic broadband subsidy that would allow extension of high-speed access to communities in all regions of Canada at comparable prices, and the establishment of a transport subsidy that would allow the necessary infrastructure investments to be made.

The subsidy programs would be designed to incorporate the operation of market forces wherever possible, with the end goal of enabling competition.²⁹

70. In response to an SSi Interrogatory as to the consistencies between SSi’s proposed BAP and CBO with the Yukon’s two level assistance proposals, the Yukon Government stated:

There is a strong similarity between the SSi subsidy proposal and the approach recommended by the Yukon Government. Treating the two elements of the subsidy plan separately, as both proposals do, is appropriate and necessary to achieving the policy goals. Yukon believes that the SSi approach of allowing for the operation of market forces while maintaining an oversight role for the Commission is likewise comparable.

One area where the Yukon proposal differs is in the support for community or stakeholder involvement in the identification or initiation of projects, recognizing that the priorities of market-driven providers may not always coincide. Yukon would suggest however that the involvement of the Commission as described in the SSi approach, may address this.

Finally, the Yukon Government proposal may go further in the measures proposed to encourage competitive supply with the idea of sunset provisions for subsidies.³⁰

²⁹ July 14, 2015 intervention of the Yukon Government, paragraphs 7 and 8.

³⁰ Response to YG(SSi)14AUG15-1.

71. In its response to a similar interrogatory, the Government of the Northwest Territories stated:

While the GNWT looks forward to their further vetting during the Proceeding it believes that the structure of the proposed Backbone Assistance Program and Consumer Broadband Offer are with some modification broadly consistent with the GNWTs subsidy proposals in this proceeding.³¹

72. Support also came from the Forum for Research and Policy in Communications:

Yes, FRPC would support a regulatory framework to establish backbone support and access, provided this framework addresses our concerns about equitable service quality and pricing in the context of affordability for remote areas. We note that rural and remote communities' access to modern telecommunications was addressed in Commissioner Molnar's 2014 Satellite Inquiry.

The Inquiry addressed SSI's model, noting that it was supported by three telecommunications companies and the Chiefs Council serving six First Nations.³²

73. With respect to proposals for "two level" assistance mechanisms, we also refer to the July 14, 2015 interventions of the Nunavut Broadband Development Corporation and the Affordable Access Coalition and, with respect to a backbone assistance program, the intervention of Qikiqtaaluk Corporation.

74. While some interventions to this proceeding question whether there is a need for broadband assistance programs going forward, we disagree. We refer here again to the LYA Report at Schedule 1 to this intervention, and in particular section 4, entitled "High Cost Service Areas Require Subsidies for Broadband". The LYA Report notes:

55. Xplornet argues that the BSO should not be extended to broadband Internet at all, affirming (at para. 21) that: "100% access to broadband service is now a reality". If that were the case, which it is not, there would indeed be no need for the CRTC's proceeding at all.

56. We would argue that this is not the case. The performance and cost of broadband services varies significantly between northern and remote areas of Canada with what is available in most areas of Southern Canada.

57. Our conclusion is based on analyses conducted by LYA comparing both consumer monthly costs and wholesale backhaul costs, a key entrant to provide broadband services. [...]

³¹ Response to GNWT(SSi)14AUG15-6.

³² Response to FRPC(SSi)14AUG15-2.

64. Considering that monthly data usage by Canadian households is at close to 100 GB, growing in the range of 40% per annum, without signs of decrease at the moment, the very significant difference in Internet transit costs between southern regions of Canada and the remote and northern regions indicates that it is not economically feasible to offer the same quality and performance of broadband service to consumers in northern and very remote regions, compared to services offered in southern Canada.³³

75. That there is a need for assistance in the delivery of quality and affordable broadband, with a particular focus on the need for of a dedicated strategy for the North, has come across clearly in many of the interventions provided as part of this proceeding.

³³ Lemay Yates Associates Inc. Report, “Broadband is the New Basic: Implications for CRTC Subsidy Framework”, February 1, 2016.

5. Conclusions: the time has come to implement change

76. SSi once again applauds the Commission for initiating this review of those basic telecommunications services that Canadians need to participate fully in the digital economy. This can prove to be a seminal proceeding.
77. The basic service objective exists to ensure that all Canadians have access to affordable, high-quality telecommunications services. The record of this proceeding aligns with a consensus around the globe: broadband is already the “new basic”. It is a service required for meaningful participation in today’s digital economy. The time has come to modernize the BSO and this is the proceeding to do just that.
78. Today’s BSO does not support delivery of affordable broadband access to Canadians in remote and outlying regions of the country. Rather, today’s BSO serves to provide support exclusively for “subsidy monopolies”, for ILECs to deliver limited services across out-dated infrastructure – services that could themselves be delivered more cost effectively and efficiently over broadband systems.
79. Specific to the North, the Commission has stated that the regulatory framework has failed to produce expected benefits of choice, reliability and innovation for northern consumers. As the “old ways” of doing things do not work, it is clear that a new and truly holistic approach is needed to meet the communications needs of Northerners going forward.
80. From this proceeding, the BSO policy must be modified to be relevant in today’s digital economy. And the policy must, at the very least, support the participation of those dependent on the BSO in a globally connected and highly-competitive economy.
81. Not only should the BSO policy be modified to have broadband at its core, the mechanisms put in place to support delivery of the BSO must be modified, and there needs to be a dedicated strategy to address the identifiable needs of the North and other remote and satellite-served communities.
82. In this regard, SSi has proposed two levels of support mechanisms be created to assist delivery of a broadband-centric BSO: first, the backbone assistance program (BAP), which delivers backbone connectivity and access to an open gateway facility into satellite-served communities; and, as a second-level mechanism, the consumer broadband offer (CBO) to provide end-users in high-cost serving areas with affordable, high-quality broadband.

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83. Each of these mechanisms and the regime supporting them – and any other new BSO-support mechanisms the Commission implements – must be open, transparent, competitively neutral and technology neutral in order to enable competition, innovation, and more affordable service, all for the maximum public benefit.
 84. The importance of broadband in the economy is well known and Canadian Governments and policy makers have been supportive of broadband development across Canada, especially for Canadians in remote northern communities. But more must be done, and a new regime must be put in place to provide longer-term and sustainable support. This can be achieved with changes to the Commission’s own regulatory framework and the contribution mechanisms to support delivery of broadband as part of the BSO.
 85. In sum, the outcome of this proceeding must be a new, modern and broadband-centric BSO, with implementation mechanisms in place to ensure that all Canadians have access to the communications services that support their full participation in the digital economy today and into the future.
 86. Delays in BSO policy reform will only serve to deepen the digital divide between North and south, harming economically and socially the residents of Canada’s North and other remote and satellite-served communities.
 87. The distance of the gap between broadband-supplied and “broadband-not” communities is widening at an increasing rate, meaning the work required to bridge the gap becomes harder and harder with every passing day.
 88. The time for action is now. It is our imperative, as service providers, regulators, governments, business and citizens, to improve broadband penetration, access and affordability to the North and other remote and satellite-served communities in order to ensure all Canadians are full participants in the digital democracy.

Schedule 1

Lemay Yates Associates Inc. (“LYA”) Report, “Broadband is the New Basic: Implications for CRTC Subsidy Framework”, February 1, 2016

(Filed as separate document)

Schedule 2

"Broadband and Economic Development"

(Filed as separate document)

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