FOLLOW UP TO

TELECOM REGULATORY POLICY 2011-771

NORTHWESTEL INC.

NETWORK MODERNIZATION PLAN FOR YEARS 2013 TO 2017

3 JULY 2012

Table of Contents

ATTACHMENTS

1.0 EXECUTIVE SUMMARY

E1. Pursuant to paragraphs 40 and 41 of Telecom Regulatory Policy CRTC 2011-771, *Northwestel Inc. – Review of regulatory framework,* 14 December 2011 ("TRP 2011-771" or the "Decision"), Northwestel Inc. ("Northwestel" or the "Company") hereby files a comprehensive plan to modernize its network infrastructure (the "Modernization Plan" or "Plan").

E2. While the Modernization Plan deals with a strategy to enhance the Company's telecommunications infrastructure in the North, consistent with TRP 2011-771, it is more than just a telecommunications Modernization Plan. As technologies converge, with the lines of distinction between telecommunications and broadcasting becoming ever more blurred, the importance of wireline and wireless high speed internet ("HSI") as a critical service enabler for many services has become very clear.

E3. The key impact of Northwestel's Modernization Plan will be the expansion of wireless broadband HSI service throughout the North. Every Northern community serviced by the Company will join Southern Canada in being able to access HSI and with it a vast array of new-media broadcasting content. With a modern and robust broadband infrastructure and new wireless switches being deployed in its network, Northwestel obtains the ability to deliver a variety of enhanced telecom and HSI services to all its customers, including ones in the most remote communities in its territory.

E4. On 16 March 2012, BCE announced that it had signed a definitive agreement to acquire all of the assets and shares of Montreal-based Astral for total consideration of approximately $3.38 billion. The Astral public benefits funding available from that acquisition provides a timely and strategic opportunity to achieve significant and tangible public benefits in the most remote and costly to serve parts of the country. With the Astral funding component of the Modernization Plan, Northwestel will be in a position to deliver the same types and levels of services to remote Northern communities as are now available in the largest urban markets in Southern Canada.

E5. While this Modernization Plan deals with a strategy to enhance the Company's telecommunications infrastructure in the North, consistent with TRP 2011-771, a decision pursuant to the *Telecommunications Act*, it is in fact more than just a telecommunications

Modernization Plan. As technologies converge and once clear lines of distinction between telecommunications and broadcasting become ever more blurred, the critical importance of wireline and wireless high speed Internet ("HSI") as a critical service enabler for many services has become very clear. For example, the increasing prevalence of "over-the-top" broadcasting activities has transformed how many Canadians access broadcasting content, especially among the younger age groups. Advances in smartphones, tablets and Wi-Fi technology are completely re-writing how people actually watch their favourite programs. Consumers increasingly view broadcasting as a non-linear, interactive moveable feast, and expect to be able to watch the game or their favourite television series on their tablet or smartphone, whenever they want, whether in or out of the home. Further, they do not just passively watch it, they interact with it through a multitude of social media outlets and other online options, all facilitated by the Internet. Finally, a number of Canadian broadcasters offer Canadian programming online, something that is not available to all Canadians who live in the North through traditional broadcasting systems. Broadband is the key that unlocks this interactive capability, which does not exist on traditional linear broadcast platforms.

E6. The Astral proposal is designed to bring (or improve) broadband to the North in order to ensure that Canadians in the North can interact with and experience Canadian television programming to the same extent as Canadians in Southern Canada – all achieved through the roll-out of a wireless network that has the spin-off benefit of improving telecommunications in the North and modernizing Northwestel's network in a manner requested by the Commission, without applying to the CRTC for any rate increases to Northern customers.

E7. The spin-off benefit of the Astral component of the Modernization Plan, over the next 5 years, will deliver:

- Critical advancements in wireless services;
- Upgrading and expansion of HSI;
- Timely switch replacements;
- Expansion of enhanced calling features; and
- Upgrading transport.

E8. Although the Astral Component of the Plan is clearly driven by the broadcasting benefits, this submission is made in response to a CRTC direction under the *Telecommunications Act*. As such, the remainder of this document will focus on the telecommunications aspects of the proposal, including as it relates to the Astral public benefits.

E9. In designing the Modernization Plan, the Company considered the relative size of the communities throughout its operating territory, the services and technologies currently available in each community and the most cost-effective and efficient approach for delivering a broad service platform to each community over the next five years and beyond. For communities with a population over 700, where a switch replacement is required, a wireline switch will be deployed and the Modernization Plan will provide voice, ECF, broadband and wireless services using separate platforms. For communities with a population under 700, the Modernization Plan is based on deploying wireless switches and wireline services would be replaced with fixed wireless services.

E10. Under the Modernization Plan, the Company will also be able to extend the Basic Service Objective (BSO) across its entire operating territory using a fixed wireless solution. This is consistent with the many regulatory precedents for using a fixed wireless solution as the least cost technology in implementing the BSO, in remote or costly to serve locations. There will also be the added benefit in the North that Internet service will be high speed and not dial-up. The Company's ability to deliver the Modernization Plan and to extend the BSO is premised on the continued receipt of its existing contribution subsidy.

E11. The primary drivers of the Modernization Plan are the Commission's findings in TRP 2011-771 in regard to ECF and network infrastructure, as well as the primary customer demands in the North and the Company's customer service objectives. The Modernization Plan will also satisfy the overarching objective of bringing the availability and breadth of telecommunications and broadcasting services in the North closer to service levels in Southern Canada.

E12. The Modernization Plan consists of two main pieces, a Base Component (the "Base Component") and an Astral Component (the "Astral Component"), with each piece delivering a certain level of service, such as wireless, HSI and ECF to Northerners. While such an approach

is intended to facilitate better understanding by the reader, the Company notes that the Modernization Plan itself does not easily separate into two discrete pieces. All the pieces build on each other and form a robust, integrated Modernization Plan that is intended to deliver a suite of services comparable to those services offered in Southern Canada.

E13. In addition to the services identified above, which are possible with the benefits of the Astral Component of the Plan, the basic foundation of the Modernization Plan is the Base Component, whereby the Company will undertake significant investments in the areas of:

- Backbone and fibre diversity;
- Business systems evolution;
- Satellite voice replacements;
- SR500 system upgrades;
- Fuel storage system upgrades; and
- Wholesale Connect Service availability.

Wireless

E14. Today, only 16 of 96 Northern communities have access to next-generation 3G/4G wireless and only a further 26 have 2G (i.e., CDMA). A majority (54) of the Northern communities currently have no access to wireless services.

E15. In the Base Component, 33 additional communities will see the deployment of 3G/4G wireless. With 16 existing communities, the deployment to an additional 33 communities will result in a total of 49 communities having access to 3G/4G wireless after the Base Component is implemented.

E16. In the Astral Component, an additional 47 communities will see the deployment of 3G/4G wireless. This includes 27 communities that were previously unserved and 20 communities that were previously served by CDMA (i.e., 2G). Combined with the Base Component, the Astral Component will ensure that all 96 communities in the North are served with 3G/4G.

High Speed Internet

E17. Today, 63 northern communities have some form of HSI service either through cable, DSL or 4G wireless from the Company. The Company's HSI plans are based on upgrading wireline Internet services in communities with populations greater than 700 and using wireless access to deliver HSI to communities with less than 700 in population.

E18. In the Base Component, the Company will enhance its cable plant in 6 cable communities, provide FTTN and utilize ADSL2+ in 11 other communities and provide 3G/4G wireless in 34 communities for a total of 51 communities benefiting from the Base Component.

E19. In the Astral Component, the Company will be able to deliver HSI to an additional 45 communities that would not otherwise be possible. The 3G/4G wireless rollout will ensure that every Northern community will have access to HSI service at a minimum of 5 Mbps download and 1 Mbps upload by the end of the Modernization Plan.

Switch Upgrades

E20. The average age of the switches in the Company's network is 17 years. At the end of the Modernization Plan, the average switch age will be 5 years. Tithe Company will be investing in 21 new wireline switches and 60 wireless switches over the next five years, which will support ECF and HSI services.

E21. In the Base Component, 54 communities will see a switch replacement over the next five years. The Astral Component will deliver switch upgrades in 27 communities by the end of 2017.

Enhanced Calling Features

E22. By the end of 2012, 26 of the Company's 96 communities will not have access to ECF, such as call display, call waiting and others. In the Base Component, 13 communities will receive ECF over the next five years. In the Astral Component, one of the beneficial by-products would be to extend ECF to the final 13 communities, resulting in all 96 communities in Northwestel's operating territory having ECF by the end of the Modernization Plan.

Transport Upgrades and Backbone Diversity

E23. The Company's Modernization Plan also includes funding to support both transport upgrades and backbone diversity. Total funding is (#) with (#) in the Base Component and (#) in the Astral Component. In respect to transport upgrades, the Company will spend (#), with (#) in the Base Component and (#) in the Astral Component. In regard to additional fibre routes and/or diversity projects, the Base Component includes (#) over the next five years.

Business Systems Evolution

E24. As part of the Modernization Plan, the Company will spend (#) to upgrade and increase its ability to deliver services to its customers and replace unsupported systems.

Satellite Voice Replacements

E25. The Company also has plans to replace its aging satellite voice network at a cost of (#) in the Modernization Plan, in order to improve service quality and to achieve greater capacity.

SR500 Wireless Voice Systems

E26. In the Modernization Plan, the Company plans to replace the aging SR500 systems over the next five years, at a total cost of (#).

LNI and LNP

E27. One of the additional benefits of the Modernization Plan is that it will more readily accommodate the new local competition regime brought in by the Commission in TRP 2011-771. The switch upgrades will result in all communities getting all the network components necessary to support LNP, such as CCS7.

Fuel Storage Systems

E28. Over the period of 2011-2014, the Company will spend (#) on fuel storage upgrade activities, with (#) spent by the end of 2012, leaving (#) to be spent in the Modernization Plan.

Wholesale Connect Service

E29. As a result of the upgrades to the Company's transport and backbone network in the Modernization Plan, 27 communities will be added to Wholesale Connect and 1 Type C community will be upgraded to a Type B community. Once the Modernization Plan is completed, Wholesale Connect will be available in 57 of 58 terrestrial communities. This is a significant improvement enabling competitors to access the transport network.

Funding

E30. In respect to funding the Modernization Plan, the Company proposes to continue with (#) capital intensity ratio. Assuming forecasted revenues do occur, this results in incremental capital expenditures, as compared to the average of the last five years, in the cumulative amount of (#), for a total of $233 million. The base cap ex will increase from an average over the past five years (up to 2011) of just over (#) to almost (#) at the end of the Modernization Plan, excluding any incremental spending from the Astral funding.

E31. Approval of the Company's Modernization Plan, which is premised on the one-time opportunity offered by the Astral public benefits funding, would result in an additional investment of $40 million over four years, without applying to the Commission for rate increases. With this funding, the Company would be in a position to deliver the same types and levels of service to its customers in the more remote Northern communities, which are available in the urban markets in Southern Canada.

Next Steps

E32. In respect to the next steps, under the existing price cap framework, Northwestel does not require any approvals to proceed with the Modernization Plan, with the exception of the Astral funding component, which of course is subject to Commission approval. However, given the far-reaching benefits that the Astral Component offers Northerners across the Company's operating territory; the Company's plans are premised on the implementation of the full Modernization Plan, starting in 2013.

E33. As Northwestel understands the current regulatory regime, except for the Astral public benefits funding component of the Modernization Plan, no approvals are required from the Commission for any of the capital investments contemplated in the Modernization Plan.

E34. The Company submits that the most appropriate Commission process would be for the Commission to solicit comments from the public this Summer on the Modernization Plan. Those comments can then form part of the record of the TNC that the Commission will issue in 2013 on the holistic review.

E35. The Company notes that the most critical element in the Modernization Plan is the Astral public benefits funding, or Astral Component, with its ambitious and extensive plans for wireless and HSI in the North. The Company requests approval of the Astral public benefits funding to be deployed in the fashion contemplated herein, in order to proceed with the full Modernization Plan in a timely and integrated fashion.

2.0 BACKGROUND – TRP 2011-771

2.1 TRP 2011-771 Findings

1. This filing is made by Northwestel Inc. ("Northwestel" or the "Company") pursuant to paragraphs 40 and 41 of Telecom Regulatory Policy CRTC 2011-771, *Northwestel Inc. – Review of regulatory framework,* 14 December 2011 ("TRP 2011-771" or the "Decision"), wherein the Commission directed the Company to develop and file within six months of the date of the Decision, a comprehensive plan to modernize its network infrastructure (the "Modernization Plan" or "Plan").

2. In TRP 2011-771, the Commission concluded that the Company had "failed to make the necessary investments in its network as evidenced by the company's aging infrastructure and the unavailability of services in many remote communities comparable to those provided in the rest of Canada"[1] and that the "age of Northwestel's equipment is likely affecting the quality and

[1] Telecom Regulatory Policy TRP 2011-771, paragraph 27.

reliability of its services…"[2]. The Commission also noted that the Company had failed to meet the required monthly standards across all QoS indicators 29 times during the period 2007 to 2010.[3] At the same time however, the Commission acknowledged that Northwestel's overall capital spending had been in line with industry standards during the most recent five years while under price cap regulation.[4]

3. Based on a perceived causal link between the Company's level of network investment, and what was seen as poor service quality, the Commission determined that it was necessary to increase its regulatory oversight, and directed Northwestel to develop and file a comprehensive plan to modernize its network infrastructure. Specifically, the Commission stated:

> 40. …the Commission directs Northwestel to develop and file within six months of the date of this decision a comprehensive plan to modernize its network infrastructure. The plan is to address how Northwestel intends to update its infrastructure in a timely manner to ensure that northern customers receive telecommunications services, both regulated and forborne, comparable to those available to Southern Canada in terms of choice, quality, and reliability as well as how the company intends to fund or finance the costs to modernize its network.
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> 41. The plan should include the amount of capital to be invested (by location/community, if applicable) and the purpose of the investment. This information is to be provided for the total company, and broken down between regulated and forborne services (e.g. local, long distance, Internet, and wireless). Further, the company is also to identify any of its non-telecommunications services (e.g. cable operations) that utilize its telecommunications infrastructure, as well as any contribution expected from these non-telecommunications services.
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> 42. Upon receiving Northwestel's modernization plan, the Commission will initiate a process to provide parties the opportunity to comment on the plan.[5]

[2] Telecom Regulatory Policy TRP 2011-771, paragraph 26.
[3] Telecom Regulatory Policy TRP 2011-771, footnote 4.
[4] Telecom Regulatory Policy TRP 2011-771, paragraph 37.
[5] Telecom Regulatory Policy TRP 2011-771, paragraphs 40-42.

2.2 Enhanced Calling Features

4. In the proceeding resulting in TRP 2011-771, Northwestel proposed a two-year service improvement plan ("SIP") to provide enhanced calling features ("ECF") to the final 29 communities served by the Company that did not have such services. The Commission denied Northwestel's SIP funding request, but nonetheless stated that it "expects Northwestel will make the enhanced calling features available to… six communities [Burwash Landing, Enterprise, Gjoa Haven, Tsiigehtchic, Wekweeti, and Whati] within six months of the date of this decision". [6] The Company has already completed a switch upgrade in Gjoa Haven which has enabled ECF in that community. In its 3 April 2012 letter to the Commission, the Company advised that in its view it was more appropriate, and in the best interests of all parties, to address the ECF upgrade for the five remaining communities as part of the broader Modernization Plan.

5. The Commission also stated that in the Modernization Plan Northwestel should include the details of the provision of ECF to the final 23 communities, and as well how the Company planned to replace its aging SR500 radio systems, which was also the subject of a separate SIP proposal that the Commission also denied.

2.3 Preparing for Local Competition

6. In TRP 2011-771, the Commission also found that "it would be appropriate to implement facilities-based local competition throughout Northwestel's operating territory at this time".[7] The Commission directed the Company to "provide local number portability in Fort Nelson, Inuvik, Iqaluit, Whitehorse, and Yellowknife within six months of a request by a competitive local exchange carrier (CLEC), or a proposed CLEC, to offer local service in these locations".[8] The Commission determined that Northwestel would be responsible for the costs to implement local competition, including local number portability ("LNP"), except where the timing of required switch upgrades/replacements was advanced from the timing in the Modernization Plan to accommodate a competitor's schedule. In that case the competitor would be responsible for any incremental costs incurred by Northwestel to finance such upgrades/replacements earlier than scheduled in the Plan.

[6] Telecom Regulatory Policy TRP 2011-771, paragraph 96.
[7] Telecom Regulatory Policy TRP 2011-771, paragraph 51.
[8] Telecom Regulatory Policy TRP 2011-771, paragraph 59.

7. To date, the Company has received CLEC local network interconnection ("LNI") requests in three communities. The Company filed its LNI tariffs on 2 April 2012. Until those tariffs are approved, Northwestel can not start its provisioning activities for LNI. Northwestel will provide LNP in the aforementioned communities of Whitehorse, Yellowknife, Inuvik and Iqaluit by 6 September 2012 and in Ft. Nelson by 14 September 2012.

8. In the Decision, the Commission also ordered that the Company's tariffs for local interconnection and component unbundling be filed within 90 days of the Decision, which was done on 2 April 2012, later amended on 20 April 2012.

2.4 Public Comment and Holistic Review

9. The Commission noted that upon receiving Northwestel's Modernization Plan, it would initiate a process to provide parties with the opportunity to comment on the Plan.[9]

10. Further, the Commission determined that it would undertake "a holistic review of Northwestel's regulatory framework and all of the company's telecommunications services, to ensure that the benefits of such a regime can be properly realized by subscribers"[10] (the "Holistic Review"). It is within this context that Northwestel is pleased to provide the details of its Modernization Plan.

3.0 MULTIPLE OBJECTIVES

11. In designing this Modernization Plan, Northwestel has considered, and attempted to balance, various competing interests and demands. For example, in the Decision the Commission indicated that the Company had not invested sufficiently in its network infrastructure, even though it noted that in recent years the Company has experienced levels of capital spending consistent with industry standards. Northwestel is therefore expected to increase its capital spending, at the same time that the Commission, customers and governments have all indicated that they do not want rate increases.

[9] Telecom Regulatory Policy TRP 2011-771, paragraph 42.
[10] Telecom Regulatory Policy TRP 2011-771, paragraph 30.

12. As noted above, the Company has attempted to balance competing demands for different types of services within the realities of a finite capital budget. For example, while the Commission has expressed a strong desire for the continued expansion of ECF, the services overwhelmingly demanded by Northwestel's customers, and by the Territorial governments, are wireless and broadband expansion and enhancements. In addition to meeting growth demands, the Company must also maintain sufficient capital spending to ensure that regular maintenance is properly funded; network diversity can be implemented, while at the same time gearing up for the commencement of local competition.

13. Another major consideration for Northwestel is to ensure that money is well spent, on investments that will not only accommodate rapidly changing technology, but also provide sustainable service and revenues for many years to come. In this regard, the Company must seek to "future-proof" its network infrastructure so that scarce capital resources are not squandered on equipment and technologies that may quickly become obsolete in just a few short years. Instead, the Company must anticipate and plan for a future whereby whatever products and services may be developed by the Company or its competitors, its network infrastructure and service platforms, which will be IP-enabled, will be flexible and robust enough to readily accommodate all customer market demands and choice of competitor suppliers.

14. These seemingly incompatible demands have required Northwestel to be very creative and disciplined in finding an overall solution, and in designing an effective Modernization Plan that attempts to satisfy its many stakeholders.

15. The Modernization Plan will see the Company commit to a capital spending level of (#) of operating revenues (i.e., the capital intensity level) for the duration of the 5-year Plan, and assuming forecasted revenues do occur, this results in incremental capital expenditures, as compared to the average of the last five years, in the cumulative amount of (#), for a total of $233 million. Coupled with that, Northwestel also proposes to incorporate external funding to deliver enhanced broadcast services to Northerners. The Modernization Plan is in fact a broad and visionary integrated strategy to invest in broadband to deliver both enhanced telecom and broadcast services to Northern Canada, on a par with those currently enjoyed by Southern Canadians, through the use of $40 million of the Astral public benefits. Furthermore, these service enhancements will be delivered through advanced IP

switch technology that will not only immediately allow achievement of the Basic Service Objective ("BSO") and wireless expansion, but also ensure that long term benefits continue to accrue to Northerners for many years to come.

4.0 BROADCASTING BENEFITS

16. While this Modernization Plan deals with a strategy to enhance the Company's telecommunications infrastructure in the North, consistent with TRP 2011-771, a decision pursuant to the *Telecommunications Act*, it is in fact more than just a telecommunications Modernization Plan. As technologies converge and once clear lines of distinction between telecommunications and broadcasting become ever more blurred, the critical importance of wireline and wireless high speed Internet ("HSI") as a critical service enabler for many services has become very clear. For example, the increasing prevalence of "over-the-top" broadcasting activities has transformed how many Canadians access broadcasting content, especially among the younger age groups. Advances in smartphones, tablets and Wi-Fi technology are completely re-writing how people actually watch their favourite programs. Consumers increasingly view broadcasting as a non-linear, interactive moveable feast, and expect to be able to watch the game or their favourite television series on their tablet or smartphone, whenever they want, whether in or out of the home. Further, they do not just passively watch it, they interact with it through a multitude of social media outlets and other online options, all facilitated by the Internet. Finally, a number of Canadian broadcasters offer Canadian programming online, something that is not available to all Canadians who live in the North through traditional broadcasting systems. Broadband is the key that unlocks this interactive capability, which does not exist on traditional linear broadcast platforms.

17. For example, Isuma Productions, Inc (Isuma) is a 75% Inuit-owned independent production company that produces independent community-based media, films, TV and Internet programming, to preserve and enhance Inuit culture and language. Part of its production inventory is restricted to Isuma TV, which is only available over the Internet. The infrastructure that Northwestel is proposing in this Plan will permit broader access to this locally produced content by Inuit, and indeed, by all Canadians.

18. Consumers are also watching more content online than they ever did in the past. According to Nielsen's global survey of multi-screen media usage, watching video content on computers has become just as common as watching video content on television among online consumers. More than 80 percent of Internet respondents in 56 countries reported watching video content at home on a computer (84%) or on TV (83%) at least once a month. By contrast, in 2010, more online consumers reported watching video content on TV (90%) than on a computer (86%) in a month-long period.[11]

19. A growing number of Anglophone and Francophone Canadians are adopting new media broadcasting. The adoption rates of Anglophones for video on demand, Internet video, and video on a cell phone are 15%, 51% and 9%, respectively and 17%, 49% and 4% respectively for Francophones. More Canadians are watching television programming online. Of those viewing online TV, Anglophones spend 2.6 hours per week and Francophones spend 1.5 hours per week in such an activity.[12]

20. The key impact of Northwestel's Modernization Plan will be the expansion of wireless broadband HSI service throughout the North. Every Northern community serviced by the Company will join Southern Canada in being able to access HSI and with it a vast array of new-media broadcasting content. The Modernization Plan will dramatically transform the delivery of interactive broadcast content in the North, and bring that region very much into the 21st century world of broadcast and new-media. With this modern broadband infrastructure, Northwestel also obtains the ability to deliver a variety of enhanced telecom and HSI services.

21. Although the Astral Component of the Plan is clearly driven by the broadcasting benefits, this submission is made in response to a CRTC direction under the *Telecommunications Act*. As such, the remainder of this document will focus on the telecommunications aspects of the proposal, including as it relates to the Astral public benefits.

22. In a nutshell, the Astral proposal is designed to bring (or improve) broadband to the North in order to ensure that Canadians in the North can interact with and experience Canadian television programming to the same extent as Canadians in Southern Canada – all achieved

[11] http://blog.nielsen.com/nielsenwire/global/global-report-multi-screen-media-usage
[12] http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2011/cmr.htm

through the roll-out of a wireless network that has the spin-off benefit of improving telecommunications in the North and modernizing Northwestel's network in a manner requested by the Commission, without applying to the CRTC for any rate increases to Northern customers.

5.0 CONFIDENTIALITY

23. In preparing this Modernization Plan, Northwestel has been very aware that virtually the entire submission consists of highly sensitive competitive information. The Plan lays bare a five year road map explicitly showing how much the Company plans to spend on its strategic capital investments, when, where, and on what services and technologies. Nothing could be more confidential, as it is simply the most competitively sensitive information the Company possesses. This type of information would be invaluable to the Company's competitors.

24. The Companies approach to confidentiality in this submission is generally as follows: The total capital expenditures (CAPEX) of the entire Modernization Plan is placed on the public record, but the capital intensity ratio and the expected revenue targets that the CAPEX is based on, along with the breakdown of capital expenditures in any individual year, is provided to the Commission in confidence. The total number of communities receiving upgrades of various services (e.g., wireless, Internet or ECF) is placed on the public record, but the plan for any specific community, including the date upon which it will be upgraded, is provided in confidence to the Commission.

25. Therefore, pursuant to section 39 of the Act, certain information including detailed costs, demand, partnership arrangements, and future service offerings in this Modernization Plan and 7 attachments is being provided in confidence to the Commission. Release of this information on the public record would allow existing and potential competitors to formulate more effective business plans and marketing strategies with which to compete with the Company. Such disclosure would therefore prejudice the Company's competitive position and cause specific direct harm to the Company. An abridged version is provided for the public record.

6.0 NORTHWESTEL'S VISION AND COMMITMENT TO THE NORTH

6.1 Northwestel's Profile and Presence in the North

26. Northwestel is the incumbent local telephone service provider in Canada's North. The Company serves a population of 116,000 in 96 communities, 72 of which are considered "remote" communities. These communities are scattered across approximately 4 million square kilometers of territory. The Company has (#) NAS across the North, as well as Internet, cable TV, wireless and data services in certain communities.

27. The Company is the largest private sector employer of permanent residents in the North. With (#) employees, in 2011 it spent (#) million on salaries, benefits and other compensation. In 2011, the Company also had annual capital expenditures over (#) million and expenditures on goods and services totaling (#) million.

28. Northwestel has recently won awards for, among other things, its achievements as one of Canada's Top 100 diversity employers and for energy conservation and awareness in the Arctic. The Company is also heavily involved in sponsoring and providing other support to Northern charities in such areas as health care, higher education, sporting events and Northern culture. In 2011 Northwestel provided annual contributions of over $580,000 in cash and in-kind donations to community groups, including a multi-year contribution of $250,000 to the 2012 Arctic Winter Games. The Company also works to promote local artists through its annual Directory Art Cover Contest, recycling by rewarding participating local schools through direct financial donations that benefit students and as well is a major contributor to the Hospital Foundations in the North.

29. By any measure, Northwestel is a leading economic contributor to Canada's North, investing in its people, communities and services.

6.2 Strong Commitment to Quality of Service

30. In TRP 2011-771, the Commission stated that it had concerns with the quality and reliability of Northwestel's services, and that the Company's quality of service reports filed

during the recent price cap period indicated that problems occurred consistently.[13] The Commission also concluded that the age of the Company's equipment was likely a contributing factor to these perceived poor service results.

31. Northwestel addressed these issues in its Part 1 Application, filed on 3 April 2012, to modify the quality of service regime applicable to the Company (the "Quality of Service Application"). In the Quality of Service Application, the Company demonstrated that, contrary to the impression left by the Commission's comments in the Decision, the Company's quality of service results during the most recent price cap period were comparable to the results achieved under rate of return regulation between 2002 and 2006, when the Commission approved capital spending. When adjusted for the quality of service indicator that applies to servicing "remote" locations, which is unique to Northwestel, the Company's quality of service results were comparable to the results of other ILECs. Furthermore, there is no correlation between the age of Northwestel's switching equipment and the frequency of service outages. It is not Northwestel's intent to repeat those arguments in detail here.

32. Suffice to say Northwestel has succeeded in delivering quality of service results in the far North comparable to, and in some cases better than, the results seen at other Southern ILECs that operate in more hospitable regions.

6.3 Achievement of Southern Standards is only Possible through External Funding

33. As noted above, the Commission concluded that the Company had "failed to make the necessary investments in its network as evidenced by the company's aging infrastructure and the unavailability of services in many remote communities comparable to those provided in the rest of Canada"[14]. In the Modernization Plan, the Company was requested to "address how Northwestel intends to update its infrastructure in a timely manner ***to ensure that Northern customers receive telecommunications services, both regulated and forborne, comparable to those available to Southern Canada in terms of choice, quality, and***

[13] Telecom Regulatory Policy TRP 2011-771, paragraph 26.
[14] Telecom Regulatory Policy TRP 2011-771, paragraph 27.

reliability as well as how the company intends to fund or finance the costs to modernize its network."[15] (emphasis added).

34. This certainly suggests that the Commission considers it necessary that Northwestel invest in its network to ensure that remote communities have services that are comparable to those provided in Southern Canada. While this is certainly desirable on many levels, and Northwestel would very much like to achieve this service objective as part of its normal capital spending plans, it is quite simply uneconomic and therefore unachievable without some form of external funding. The Company also notes that this is a very dramatic departure from past regulatory policy.

35. In previous decisions, the Commission had recognized the relatively high costs associated with achieving the BSO in remote areas, and on several occasions denied SIP funding requests from Northwestel to complete ECF expansion throughout the North precisely because it was not cost effective.[16]

36. By the time of the proceeding resulting in TRP 2011-771, Northwestel had reduced the number of communities without ECF from 67 in 2000 to 29 in 2011. All of this (except for four communities funded in Telecom Decision CRTC 2003-39) was accomplished through economic spending, or where equipment was being replaced for service-related reasons and the addition of ECF could be done at a reasonable incremental cost. Note however, it took eleven years to accomplish. The provision of ECF to all Northwestel customers continues to be a desirable objective, and in the proceeding resulting in TRP 2011-771, Northwestel sought a final push to complete this work, requesting SIP funding of $2.6 million. The Commission once again refused funding.

37. What this history clearly shows is that Northwestel has diligently and continuously advanced towards the goal of the provision of ECF to all remote communities within its serving territory, despite the Commission's repeated findings that such an investment was not justified on a cost basis. This is an example of where Northwestel has sought to bring its customers

[15] Telecom Regulatory Policy TRP 2011-771, paragraph 40.
[16] See for example Decision CRTC 2000-746, *Long-distance competition and improved service for Northwestel customers, at paragraph 25;* and Telecom Decision CRTC 2003-39, *Northwestel Inc. – Initial annual review of supplemental funding*, at paragraphs 77-80.

services comparable to Southern Canada, but the uneconomic nature of such an investment has been an impediment to achieving service parity. The achievement of this objective will now be even more challenging with the introduction of local competition, which has now been permitted by the Decision.

38. The magnitude of the challenge of providing telecommunications services to all remote communities served by Northwestel, at a level comparable to Southern Canada, is considerable. Northwestel serves approximately (#) NAS, in 96 communities, distributed across approximately four million square kilometers of the most inhospitable territory in Canada. While over 40% of Northwestel's customers are located in two communities (Whitehorse and Yellowknife), all other customers are distributed over the remaining 94 communities, 70% of which have fewer than 500 customers. In 2011, the 72 remote communities served by the Company[17] had combined NAS of (#), averaging only (#) NAS per community. The remaining five communities that the Commission expected Northwestel to service with ECF within six months of the Decision have an even smaller average NAS base. In extreme contrast, Southern Canada enjoys much higher population densities, a much milder climate, a longer construction season, generally reliable and punctual transportation, and of course far lower operating costs per NAS.

39. This leads one to conclude that, if the Company is to achieve this new "universal service parity objective", the Modernization Plan must assume the involvement of external funding. Northwestel strongly feels that all funding options for the accomplishment of this universal service standard must be considered, including funding from sources other than normal revenues and contribution. Take for example the increasing popularity of public-private partnerships ("Three-P" partnerships), where all levels of government have cooperated with private companies to achieve mutually beneficial service arrangements for the greater public good. Such arrangements have been used from coast to coast in Canada, and Northwestel has been involved in its share. For example, the Company has previously partnered with the Yukon Government on a significant initiative to bring wireless services to that region. In addition, Industry Canada has provided funding for broadband expansion.

[17] In paragraph 44 of Decision CRTC 2000-746, a remote community was defined as:
- there are fewer than two full-time technicians based there; and
- the community is accessible only by air, or a technician traveling to the community by road would normally take three hours or more for the round trip from where the technician is normally based.

40. (#)

(#).

41. (#)

(#).

42. At this particular point in Canada's history, when the climate of the North is changing, and the region is becoming more and more strategic for resource development and national security, the use of Three-P partnerships seems to be a perfect long term fit to drive economic development in the North and to protect our Arctic sovereignty. One can hardly find a better case for the use of Three-P arrangements than for the future cooperative expansion and modernization of the North's telecommunications and broadcasting infrastructure. However, while the Company plans to continue to explore such arrangements, the timing and scope of Three-P funding arrangements is sporadic and unpredictable, and therefore could not be incorporated into Northwestel's Modernization Plan

(#). This being said, the Commission must recognize that it is unrealistic and unreasonable to expect Northwestel to carry the full financial burden of uneconomic infrastructure modernization in the North. In light of these harsh funding realities, Northwestel has worked closely with its parent company, BCE Inc. ("BCE"), to develop a Modernization Plan which leverages the public benefits funding package associated with BCE's proposed acquisition of Astral Media Inc. ("Astral").

6.4 Seizing Opportunities

43. On 16 March 2012, BCE announced that it had signed a definitive agreement to acquire all of the assets and shares of Montreal-based Astral for total consideration of approximately $3.38 billion. Astral's business comprises specialty and pay television channels, radio stations, digital media properties, and out-of-home advertising platforms in Quebec and across the rest of Canada.

44. In Public Notice CRTC 1993-68, *Application of the Benefits Test at the Time of Transfers of Ownership or Control of Broadcasting Undertakings*, 26 May 1993, as updated in Public Notice CRTC 1999-37, *Building on Success – A Policy Framework for Canadian Television*, 11 June 1999, the Commission established certain public benefits obligations that apply to transfers of ownership or control of broadcasting undertakings. These obligations generally require the setting aside of funds equivalent to 10% of the value of television assets and 6% of the value of radio assets included in the transaction for public benefits.

45. In developing its strategy to achieve the greatest customer benefits under its Modernization Plan, Northwestel considered every possible opportunity to tap available funding sources. The timing of the Astral transaction has made public benefits funding available at the same time that Northwestel was seeking to find ways to finance an ambitious and costly capital undertaking to expand and upgrade telecommunications and broadcasting infrastructure in the North.

46. Northwestel and BCE both believe that the Astral public benefits funding provides a timely and strategic opportunity to achieve significant and tangible public benefits in the most remote and costly to serve parts of the country. The spin-off benefit of the Astral component of the Modernization Plan is that Northwestel will be able to deliver the same types and levels of service to remote Northern communities as are now available in the largest urban markets in Southern Canada. Specifically, with the Astral funding, over the next 5 years the Modernization Plan will deliver:

- Advanced wireless and wireless broadband services to all Northerners;

- High-speed Internet to all Northerners, meeting or exceeding the minimum target speeds of the Commission of 5 Meg download and 1Meg upload[18];
- Enhanced calling features to all Northerners;
- A comprehensive switch replacement plan that will see the average age of Northwestel's switches reduced from 17 years to less than 5 years; and
- Transport Upgrades.

47. In addition, it is significant that under the Modernization Plan, the Company will achieve the BSO across its entire operating territory, with the added benefit that Internet service will be HSI, not dial-up. This significant milestone will be accomplished largely through the use of fixed wireless technology. In the Company's view, whether the BSO is achieved by wireline or wireless is not important, as long as the BSO can be delivered to all Canadians.

48. This Modernization Plan is very aggressive, but it reflects Northwestel's desire to deliver the most possible benefits to the residents of the North in as short a timeframe as possible. However, absent the Astral funding, this very ambitious and far reaching Modernization Plan cannot be achieved.

49. Approval of BCE's proposed uses of the Astral public benefits funding is the subject of a separate regulatory proceeding currently before the Commission. Northwestel respectfully requests that the Commission carefully weigh the considerable public benefits that would be realized through the proposed use of $40 million of Astral pubic benefits funding as part of the Modernization Plan. The Company reiterates that the expansion and upgrading of telecommunications and broadcasting infrastructure in the far North is a very capital intensive undertaking which for many communities cannot be economically justified. Such circumstances demand bold vision and choices to realize that which would not otherwise be possible. The Company strongly urges the Commission to approve the Astral funding component of the Modernization Plan as contained in BCE's public benefits filings.

[18] Telecom Regulatory Policy CRTC 2011-291, page 76.

6.5 The Technological Solution for Northwestel's Network

50. In designing its Modernization Plan, the Company considered the relative size of the communities throughout its operating territory, the existing services and technologies available in those communities and the most cost-effective and efficient approach for delivering a broad service platform to each community over the next five years and beyond.

51. For communities with a population of 700 or more, the Modernization Plan will provide voice, enhanced calling features, broadband, and wireless services using separate platforms. For communities with a population of less than 700, a single platform, a wireless one, will be used to provide the same suite of services. This will allow the Company to cost effectively provide all Northerners with all the services that their counterparts in large Southern cities enjoy, and to a great extent, provide them with more services than their rural Southern counterparts.

Voice Services

52. The Modernization Plan will provide a wireline switch in 36 communities with a population of more than 700, providing enhanced calling features. In the 60 communities with a population of less than 700, enhanced calling features will be provided by a wireless switch**.**

Broadband Services

53. In 6 terrestrial communities with cable plant, the Company will upgrade the plant to allow for (#) download and (#) upload internet data speeds, using DOCSIS 3.0 technology.

54. In 11 terrestrial communities with a population of more than 700, the Company will upgrade the wireline DSL infrastructure to allow for (#) download and 1Mbps upload speeds, utilizing fibre to the node (FTTN) and ADSL 2+ technology. In 41 terrestrial communities with a population of less than 700, the Company will provide wireless broadband capable of 5Mbps download and 1Mbps upload speeds. In all 38 satellite communities, (19 of which have populations of greater than 700 with the remaining 19 being below 700) the Company will install wireless infrastructure to provide wireless broadband Internet speeds capable of 5Mbps download and 1Mbps upload.

Wireless Broadband Services

55. The wireless infrastructure is capable of providing data speeds up to 42 Mbps and higher as technology evolves. However, the major limitation on what the Company can offer subscribers in any given community is the costs of backhaul transport capacity, particularly in satellite communities.

Transport Network

56. The Company's Modernization Plan also includes funding to support both transport upgrades and backbone diversity. These upgrades will include a combination of installing new fiber, upgrading fiber electronics for higher capacity, upgrading microwave radio systems, and increasing the satellite transponder capacity.

57. Some communities are connected by fibre, others by high speed microwave or by lower capacity microwave and the remaining 38 served by satellite. In the Modernization Plan, a number of communities on low capacity microwave will be upgraded to high capacity microwave and some high capacity microwave communities will be upgraded to fibre. In Section 8, the Company provides details of its transport plan and the impact on the availability of Wholesale Connect.

58. As a result of these investments in transport, total terrestrial transport capacity will increase from (#) to (#) Gbps.

59. Northwestel will also be adding satellite transponder capacity for its 38 satellite served communities. Unlike terrestrial served communities, satellite capacity is not dedicated to a specific community as it is shared between all satellite served communities. However, the average amount of capacity per community will increase under the Modernization Plan.

60. The Modernization Plan will also upgrade 5 fibre electronic systems and 6 microwave radio systems. It will also install a new fiber facility from Stewart Crossing to Dawson, enabling turn up of a fibre system between Whitehorse and Dawson City.

61. The Company has set aside a further (#) in the Modernization Plan to invest in additional fiber routes that expand bandwidth or provide transport diversity. For the reasons set out in Section 8.6, at this time the exact routes are not defined.

62. The Modernization Plan also expands "survivability" to all 96 communities. The term "survivability" refers to the ability of a community to maintain local calling even in the case of a transport backhaul failure. Currently 89 of the 96 communities have survivability. However, there are 7 small communities that do not; meaning that if the backhaul goes down today to one of these communities, local phone service in that community ceases to work. With the Modernization Plan, these communities will receive a switch that will allow local calls, including for emergency services, to continue to work even if the backhaul is lost. As such, upon completion of the Modernization Plan, all 96 communities will have survivability.

Satellite Voice and SR-500 Fixed Wireless Upgrades

63. As further discussed in Section 8.9, in the Modernization Plan, the Company plans to replace the aging SR500 systems over the next five years, at a total cost of (#).

64. The Company also plans to replace its aging satellite voice network, in order to improve service quality and to achieve greater capacity. The Time Division Multiplexing (TDM) Telephone Earth System (TES) Hughes voice system that currently delivers meshed voice to the Company's satellite communities is manufacturer discontinued. The Modernization Plan will replace this system with an IP satellite meshed voice network in 38 communities, including 3 that will be replaced in 2012 (and therefore are not part of the Modernization Plan).

6.6 Using Fixed Wireless to meet the Basic Service Objective

65. The Company has determined that for many small communities a fixed wireless solution is the most effective and cost efficient way of preserving and extending the Company's ability to offer the BSO throughout the North. The fixed wireless switch chosen by the Company to serve its Northern communities is manufactured by (#)

(#).

6.6.1 Regulatory Precedents

66. It has long been recognized that the BSO is technology neutral and can be satisfied with a number of technologies, including fixed wireless. For example, in Telecom Decision CRTC 2005-29, *Request by Societe en commandite Telebec to annex part of Bell Canada's serving territory in order to provide telephone service to Lac Gagnon, Quebec.* ("Decision 2005-29"), Telebec sought to extend the BSO into a sector of Lac Gagnon that it would annex from Bell Canada. The project was based on Telebec serving both sectors in Lac Gagnon on a more economic basis than would occur with Bell Canada serving one sector and Telebec serving the other. Telebec indicated that there would be an overall cost savings of $608,000 that would be attributable to the installation of a single wireless system for both sectors and that the technology was code division multiple access (CDMA) radio.

67. In approving the annexation of territory, the Commission stated that:

> "Telebec plans to provide service to Lac Gagnon using CDMA radio, which is the least-cost technology and the same technology that Bell Canada had planned to use in its territory"[19].

The Commission approved the annexation of territory and also permitted Telebec to include the Lac Gagnon project in its SIP.

68. Other examples of using fixed wireless to satisfy the BSO are illustrated by Telecom Decision CRTC 2002-34, *Regulatory Framework for second price cap period*, 30 May 2002 ("Decision 2002-34") and by Bell Canada's SIP tracking reports that were filed on an annual basis, pursuant to Decision 2002-34. In Decision 2002-34, the Commission noted that:

> "Bell Canada submitted that it used the least-cost wireline or fixed wireless technology in estimating the up-front cost of serving each locality. Wireline technologies were used where the unserved locality was close to existing wireline facilities. Fixed wireless technologies were used where the unserved locality was close to an existing radio tower or where the locality was remote and could not be served in a cost-effective way by wireline facilities".[20]

[19] Telecom Decision CRTC 2005-29, paragraph 18.
[20] Telecom Decision CRTC 2002-34, paragraph 822.

69. In approving various SIP proposals in Decision 2002-34, the Commission noted that:

> "Based on its examination of the Aliant Telecom, Bell Canada and TELUS SIPs, the Commission finds that, as required by Decision 99-16, they: (i) use least-cost technology; (ii) provide a tracking plan; and (iii) generally comply with the BSO, subject to the modifications discussed below relating to Internet access and/or CMS".[21]

It is noteworthy that the Commission endorsed the use of least-cost technology, which in Bell's case was fixed wireless, and that the Commission as well noted that the SIPs generally comply with the BSO, with the only modifications applying to Internet access and/or CMS.

70. Subsequent to Decision 2002-34, Bell Canada filed various SIP tracking reports in the mid-2000s. For example, in its 2005 SIP tracking report, Bell Canada stated that:

> "The Georgian Bay and surrounding area constitute a major region where the provision of service via wireless has proven to be the most cost-effective option. This area which covers approximately 3,500 square kilometres and contains a total of 38 localities with over 1,700 premises is served by eight different exchanges. These 38 localities have been consolidated into 19 larger localities for ease of managing the provision of wireless service for this vast area. The Company has determined that the most cost-effective means of provisioning service in these localities is through the use of CDMA, rather than wireline service, which was the choice of technology identified in the Company's original SIP roll-out. Consequently, consistent with the Commission's directive to incorporate least-cost technology in the Company's SIP, the Company plans to deploy service in these areas via wireless technology, in many cases, utilizing existing towers in the Company's wireless network. [22]

71. Given the precedents set by Telebec in Lac Gagnon and Bell Canada in Georgian Bay, it is clear that fixed wireless has been deployed on several occasions to satisfy the BSO and all these occasions have been endorsed by the Commission.

72. It is also noteworthy that the CRTC Vice-Chair of Telecommunications has publicly acknowledged the appropriateness of deployed fixed wireless to achieve the BSO as recently as last April:

> "We are also in the process of introducing local telephone competition in the North, as well as in rural and remote areas. The incumbent

[21] Telecom Decision CRTC 2002-34, paragraph 839. Note that CMS (Call Management Services) refers to switch-based features.
[22] Bell Canada 2005 SIP Tracking Report, filed 31 March 2005.

> companies will still need to offer basic telephone service to residents, though they can now meet this obligation using wireless technology**".**[23]

6.6.2 Equal Access

73. In regard to equal access, in Decision CRTC 2000-746, the Commission approved Northwestel's plan to install equal access facilities in Yellowknife, Whitehorse, Iqaluit, Inuvik and Fort Nelson by 1 January 2001. The Commission approved the plan, subject to an annual review of equal access progress and expenditures. In conducting these reviews, starting in 2002, the Commission concluded that no further roll-out of equal access was necessary.

74. In the Modernization Plan, there is no planned capital expenditure to extend equal access capabilities into the remote communities. This is consistent with the Commission's ruling in Decision 2000-746, and as well recognizes that the switches that will be deployed are wireless ones and they do not lend themselves to equal access functionality.

6.6.3 Features Not Available with Fixed Wireless

75. Under a fixed wireless solution, there are some features that are not available, primarily dial-up Internet and facsimile. The Company's Modernization Plan will result in the delivery of HSI to 100% of the Northern population, consistent with the Commission's objectives of providing HSI access service to all Canadians. When this goal is achieved, it will overcome all the inherent difficulties presented to customers who would otherwise have to use dial-up Internet in accessing a multi-media world. With the widespread availability of HSI, the inability of fixed wireless services to accommodate dial-up services really becomes moot.

76. A fixed wireless solution is also unable to process facsimile transmissions. Again, with the broad platform of services offered by HSI, including email transmissions and accompanying Word and PDF file documents, the need for facsimile is also be supplanted by the options offered by a broadband solution.

6.6.4 The Migration Proposal

[23] Leonard Katz, April 27, 2012, to the National Symposium of the Law Society of Upper Canada, Ottawa, Ontario.

77. As the Company introduces wireless switches into its network over the course of the Modernization Plan, there will be a migration period in each community to move customers from a wireline switch to the wireless one. The migration period itself has not been determined at this time but it must be sufficiently long for both the Company and the customer to get fully familiar with the operations and features of a wireless switch. Customers will be encouraged to migrate to the wireless switch so that they can enjoy features, such as ECF, and the broadband platform of services, such as HSI, that would not be available on the wireline switch. At some point in time following this migration period and after ample experience has been gained by the Company and the customer, Northwestel will turn down and de-commission its DMS switches that have been replaced by wireless ones.

6.6.5 The PES Tariff continues to apply

78. The Company also identifies that the transition of its network to a wireless model in the remote communities would have no impact on the regulatory regime that applies today. The tariffs for PES continue to apply and the Company identifies that fixed wireless services are not forborne.

6.6.6 Continued Reliance on Contribution to Meet the BSO

79. The Company's Modernization Plan is a capital investment plan to provide the network switches and supporting infrastructure to deliver wireless and broadband to the North. The Company has approximately (#) residential NAS in High-Cost Serving Areas, in 94 communities, dispersed across approximately 4 million sq. kilometers of the most inhospitable territory in Canada. The Company's operating costs in serving this vast territory on a daily basis are considerable and subsidies are still required. The Company's ability to deliver the Modernization Plan is premised on continued receipt of its existing contribution subsidy.

7.0 PRIMARY DRIVERS AND OBJECTIVES

80. The primary drivers of the Modernization Plan are the Commission's directives in TRP 2011-771, as well as major customer demands in the North and the Company's customer service objectives.

81. In TRP-2011, the Commission was concerned about the age of Northwestel's equipment and switches, and how age may impact the quality of services offered to the Company's customers. The Commission was also concerned about the availability of ECF in a number of remote communities. In regard to HSI services, while the Commission did not give any express direction in TRP 2011-771, it is clear from the public record of other proceedings that the Commission views the availability of HSI throughout rural and remote parts of Canada as a key regulatory objective.[24] Wireless availability is similarly of paramount importance.

82. From the customer perspective, most of the inquiries and interventions in the proceeding leading up to TRP 2011-771, were focused on the issues of wireless and HSI availability and not features or service quality per se. When parties made comments about quality of service in the North, it really meant that customers in the North wanted similar speeds and access to HSI and 3G/4G wireless services as those offered in the southern parts of Canada. That sentiment was echoed as well by the local government bodies who wanted HSI and wireless services in all rural and remote communities in Northern Canada.

83. From a customer service perspective, the Company can not lose sight of its primary objective of maintaining service integrity and high reliability across its vast territory. Northwestel's operating territory has the lowest population density of any serving area in Canada. The harsh climate shortens the construction season, limits access to some communities to specific time windows, and consequently impacts service results in the very remote areas. The costs of providing service are high and prices in most areas do not come close to covering provisioning or repair costs. Given these conditions, maintaining a high quality telecommunications infrastructure on a day-to-day basis is critical in serving the Canadian North.

84. In addition to the primary drivers described above, Northwestel also has social and environmental responsibilities and must operate in accordance with environmentally sound business practices and in compliance with Federal and Territorial fuel storage regulations. As a result of the Company's broad operations across the North, the Company is subject to varying regulations by territory, which depend as well upon Crown land or Aboriginal land ownership status or claims. There were also changes in the Federal regulations in 2009 (to be

[24] For example, see Obligation to Serve, Telecom Regulatory Policy 2011-291.

implemented over a transition period), and the Company is working closely with Federal regulators to ensure that it is compliant in all these matters.

85. In the Modernization Plan, the Company will demonstrate how the Commission's regulatory objectives can be achieved, in conjunction with satisfying the market demands of the customer and the Company's customer service goals and objectives. The Modernization Plan will ensure that all Northern communities have access to HSI and 3G/4G wireless services by the end of 2017. As well, the Modernization Plan will satisfy the overarching objective of bringing the Company's availability and breadth of services in the North closer to service levels in southern Canada. By modernizing its network switches and network infrastructure, the Company will further enable an enhanced platform to facilitate customer choice of competitive local telecommunications suppliers in the North.

8.0 STRUCTURE AND DETAIL OF THE MODERIZATION PLAN

8.1 *Overview of the Modernization Plan*

86. In this section, Northwestel describes the structure of the Modernization Plan, its integrated nature and the various service components of the Plan. Because the Company's telecommunications and broadcasting infrastructure and services are critically important in the North, the Modernization Plan is intended to deliver more services, more robust services and more extensive coverage throughout the Company's serving territory. The Modernization Plan is a comprehensive one and is aimed at delivering 4G wireless, faster Internet, more up-to-date network infrastructure and enhanced calling features to the Company's customers, over the time period of 2013 through 2017.

87. In order to more fully explain the Modernization Plan, the Company will describe it herein as having two main pieces, a Base Component (the "Base Component") and an Astral Component (the "Astral Component"), with each piece delivering a certain level of service, such as wireless, HSI and ECF to Northerners. While such an approach is intended to facilitate better understanding by the reader, the Company notes that the Modernization Plan itself does not easily separate into two discrete pieces. All the pieces build on each other and form a

robust, integrated Modernization Plan that is intended to deliver a suite of services comparable to those services offered in Southern Canada.

88. The key components of the Company's Modernization Plan include major enhancements in the following service areas:

- Critical advancements in wireless services;
- Upgrading and expansion of HSI;
- Timely switch replacements;
- Expansion of enhanced calling features; and
- Upgrading transport.

89. A full and extensive delivery of these major enhancements to all Northerners will be dependent on the Commission's approval of the public benefits offered as a result of the Astral acquisition by BCE. In particular, in the remote communities, the Company will expand its 4G wireless platform as a means of delivering a full suite of services to its customers.

90. In addition to the service enhancements noted above, which are only achievable under the Astral Component, the basic foundation of the Modernization Plan is the Base Component, whereby the Company will undertake significant investments in the areas of:

- Backbone and fibre diversity;
- Business systems evolution;
- Satellite voice replacements;
- SR500 system upgrades;
- LNI and LNP;
- Fuel storage systems; and
- Wholesale Connect Service.

8.2 Wireless

91. Providing a high quality wireless service is a major challenge in the remote areas of Northwestel's territory. Commercial deployment of next-generation wireless services to most northern communities cannot be done in an economically justified manner, given the very small population base of these communities. It is simply too expensive and there are no simple solutions to this dilemma.

92. Today, only 16 of 96 Northern communities have access to next-generation 3G/4G wireless and only a further 26 have 2G (i.e., CDMA). A majority (54) of the Northern communities currently have no access to wireless services.

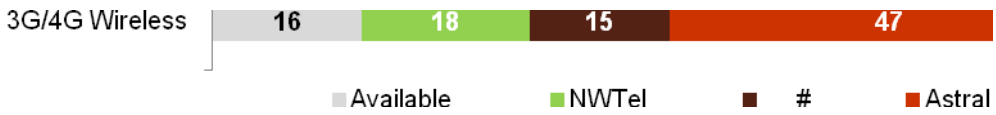
93. In the Base Component, 33 additional communities will see the deployment of 3G/4G wireless, 18 solely from the Company's capital investment and 15 from the joint
(#). With 16 existing communities, the deployment to an additional 33 communities will result in a total of 49 communities having access to 3G/4G wireless after the Base Component is implemented.

94. In the Astral Component, an additional 47 communities will see the deployment of 3G/4G wireless. This includes 27 communities that were previously unserved and 20 communities that were previously served by CDMA (i.e., 2G). Combined with the Base Component, the Astral Component will ensure that all 96 communities in the North are served with 3G/4G.

95. At the end of the five year period, by 2017, all Northern communities will have access to advanced 3G/4G wireless services. Such an outcome should address the concerns that were expressed about Northwestel's service quality in the proceeding leading up to TRP 2011-771. In addition, by leveraging its investments in wireless, the Company will be in a position to meet the basic service objective in all communities with a population of under 700. Over time, the Company will also be in a position to effect a transition from legacy wireline Primary Exchange Service (PES) to wireless PES.

96. Chart 1 below illustrates the number of communities that will gain access to 3G/4G wireless services and the sources of funding for the investments, with the largest increment being the 47 communities benefitting from the Astral Component.

Chart 1: Wireless Expansion - Number of communities and source of funding



97. See Attachment 1 for a detailed table showing the delivery of wireless services, 3G or 4G, for each of the Company's 96 communities, under the Base Component and the Astral Component, and the projected CAPEX by community.

8.3 High Speed Internet (HSI)

98. The availability of HSI services in the North is also a major challenge for the Company, and was one of the concerns in respect to service quality expressed in the proceeding leading up to TRP 2011-771. Consumers and businesses alike are seeking better HSI connectivity, access and speeds.

99. Today, 63 northern communities have some form of HSI service either through cable, DSL or 4G wireless from the Company. The Company's HSI plans are based on upgrading wireline Internet services in communities with populations greater than 700 and using wireless access to deliver HSI to communities with less than 700 in population.

100. In the Base Component, the Company will enhance its cable plant in the 6 cable communities (by upgrading to DOCSIS 3.0 and by node splitting the systems that already have this technology) to provide (#) service, at a cost of (#). The schedule for the cable system upgrades is shown in Table 1 below:

Table 1

(#)

(#)

101. Also in the Base Component, in 11 communities without HFC and currently served by ADSL, the Company will provide FTTN and utilize ADSL2+ to provide an (#) service, at a cost of (#). The schedule for the communities targeted for DSL upgrades are shown in Table 2 below:

Table 2

(#)

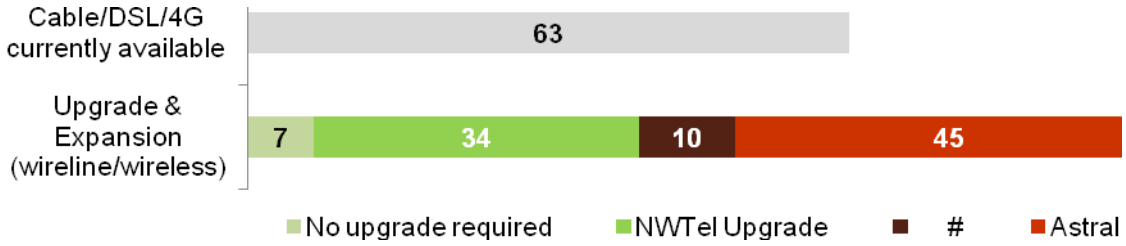
(#)

102. In addition to the communities being upgraded with cable or ADSL2+ and FTTN, a total of 34 communities will be served by 3G/4G wireless, for a total of 51 communities in the Base Component receiving HSI. Of the 51 communities, 34 will benefit solely from the Company's investment and 10 from the (#), with 7 already having 3G/4G wireless.

103. In the Astral Component, the Company will be able to deliver HSI to an additional 45 communities that would not otherwise be possible. The 3G/4G wireless rollout will ensure that every Northern community will have access to HSI service at a minimum of 5 Mbps download and 1 Mbps upload by the end of the Modernization Plan.

104. Chart 2 below illustrates the number of communities that will get access to or see significant upgrades in broadband services and the sources of funding for the investments, with the largest increment being the 45 communities benefitting under the Astral Component.

Chart 2: HSI Expansion - Number of communities and source of funding



105. In respect to the various technologies that will be deployed by the Company to provide HSI to all 96 communities by the end of the Modernization Plan, a break-down by underlying technology is shown in Chart 3 below:

Chart 3: HSI by Underlying Technology

(#)

(#)

106. See Attachment 2 for a detailed table showing the delivery of HSI, for each of the Company's 96 communities, under the Base Component and the Astral Component, with associated CAPEX[25].

8.4 Switch Upgrades

107. The average age of the switches in the Company's network is 17 years. At the end of the Modernization Plan, the average switch age will be 5 years. The Company will be investing in 21 new wireline switches and 60 wireless switches over the next five years, which will support ECF and HSI services.

[25] Note that the CAPEX listed for any one community in Attachment 1 cannot simply be added to the CAPEX listed for that community in Attachment 2 due to common equipment and common funding between the two projects (i.e., the cost of a piece of equipment used in Attachment 1 to provide wireless service may be repeated as a cost in Attachment 2 to provide HSI to that community, if that equipment is used in the performance of both functions).

108. Accelerating the timing of switch replacements under the Modernization Plan, in comparison to the plan filed in the proceeding leading up to TRP 2011-771, will help ensure that the Northern communities become virtually future proof, whereby the switches would be capable of supporting all the new and advanced IP services that could be coming down the pipe from the Company or from competitive carriers. This would practically eliminate the risk of falling behind on the type and scope of services offered by the southern ILECs.

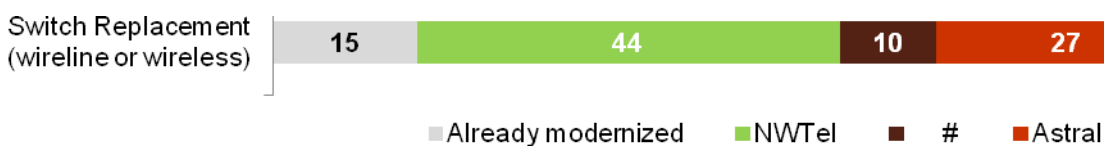
109. The Company notes that it has already undertaken some investments in switch modernizations in recent years. From 2007 until the end of 2012, Northwestel will have replaced 7 switches. For example, as identified in the Company's letter of 3 April 2012, Northwestel replaced the switch serving Gjoa Haven in June 2012 at a cost (#). In addition to Gjoa Haven, three other communities have or will receive new switches in 2012.

110. In the Base Component, 54 communities will see a switch replacement over the next five years, 44 solely from the Company's investment and 10 from the (#).

111. The Astral Component will deliver switch upgrades in 27 communities by the end of 2017, offering access to a larger suite of services, including newer IP services, from the Company.

112. Chart 4 below illustrates the number of communities that will undergo a switch replacement over the next five years and the sources of funding for the investments.[26]

Chart 4: Switch Replacement - Number of communities and source of funding



[26] 15 switches are already modernized or fully supported and support all enhanced calling features.

113. Of the switches that serve the remaining 15 communities that are not part of the Modernization Plan, twelve communities have relatively new switches, and three communities have switches that are older than 20 years. Those three switches are in Fort Nelson, Inuvik and Yellowknife, all of which are running smoothly, have not caused any operational problems and are vendor supported up to 2018. The Company sees no need to upgrade them at this time. Northwestel has invested considerably in these switches over the past ten years to accommodate equal access and long distance competition, and in 2012 to accommodate local competition.

114. See Attachment 3 for a detailed table showing the Company's switch upgrade plans, for each of the 96 communities, under the Base Component and the Astral Component, along with the associated CAPEX.

8.5 Enhanced Calling Features

115. By the end of 2102, 26 of the Company's 96 communities will not have access to ECF, such as call display, call waiting and others. Northwestel is moving forward with its plans to extend ECF to additional communities without any rate increases.

116. In the Decision, the Commission noted its expectation that the Company would provide ECF to six communities within six months of the date of TRP 2011-771. As identified earlier, the Company has replaced the switch serving Gjoa Haven in 2012 as part of its normal switch replacement program, which will provide ECF to that community.

117. For the other five communities who requested ECF in the proceeding leading to TRP 2011-771, this will be provided in the Modernization Plan, according to the following schedule, as shown in Table 3 below:

Table 3

ECF Upgrade Schedule

Community	Target Date	Residential NAS
Whati	(#)	(#)
Tsiightchic	(#)	(#)
Burwash Landing	(#)	(#)
Enterprise	(#)	(#)

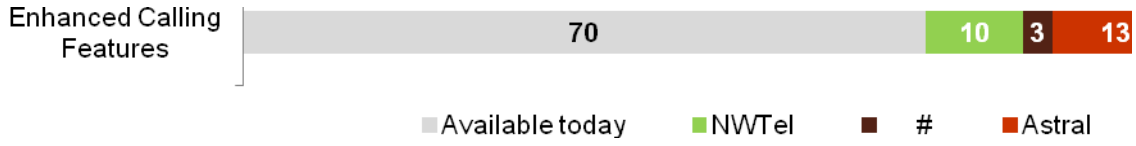
Wekweti (#) (#)

118. In 2012, Northwestel will extend ECF to two other communities (#) and (#)) in addition to Gjoa Haven, Nunavut, leaving 26 communities without ECF at the start of the Modernization Plan. In the Base Component, 13 communities will receive ECF over the next five years, 10 solely from the Company's investment and 3 from the (#). These next generation switches provide all the contemporary voice services (e.g., call display and call forwarding) that are commonly found in larger markets.

119. Should the Astral Component be approved, one of the beneficial by-products would be to extend ECF to the final 13 communities (including Burwash Landing and Wekweti), resulting in all 96 communities in Northwestel's operating territory having ECF by the end of the Modernization Plan.

120. Chart 5 below illustrates the number of communities that will receive ECF over the next five years and the sources of funding for the investments.

Chart 5: ECF Upgrades - Number of communities and source of funding



121. See Attachment 4 for a table of the Company's ECF plans and the projected completion dates under the Base Component and the Astral Component for each of the 26 communities that do not presently have ECF.

8.6 Transport Upgrades and Backbone Diversity

122. The Company's Modernization Plan also includes funding to support both transport upgrades and backbone diversity. Total funding is (#) with (#) in the Base Component and (#) in the Astral Component.

123. In respect to transport upgrades, the Company will spend (#), with (#) in the Base Component and (#) in the Astral Component. The expenditures in the Astral Component will be further allocated as (#) to terrestrial upgrades and (#) to satellite upgrades.

124. See Attachment 5 for a table showing the Company's planned transport upgrades for terrestrial routes. As identified in Section 6.5 above, satellite capacity is not allocated on a community basis.

125. In regard to additional fibre routes and/or diversity projects, the Base Component includes (#) over the next five years. This capital allocation will be deployed to provide an increased level of diversity and redundancy in the Company's fibre optic routing to help protect communities from service interruption. The Company is reserving these funds for potential opportunities that may present themselves to diversity routes or extend fibre as appropriate. Depending on the project selected, there may nevertheless still be a need for funding from other external sources or partnerships.

8.7 Business Systems Evolution

126. As part of the Modernization Plan, the Company will spend (#) to upgrade and increase our ability to deliver services to our customers and replace unsupported systems.

127. Northwestel as a full communications service provider must continually invest in upgrading its IT business systems. A portion of the spending noted above is required to modernize customer service processes and systems. Examples of this improvement are integrating multiple call centre customer care systems and multiple billing systems into single systems. This improves service by giving customers "one stop" shopping, simplifying contact with the Company, as opposed to the customer having to deal with multiple calling agents because the existing IT systems do not handle more than one line of business.

128. The Company will also be upgrading its Enterprise Resource Management (ERP) system, which manages access to information on financial transactions and resources. The current system is discontinued and will become unsupported.

129. The funding associated with the Company's business systems all falls into the Base Component and is not dependent on the Astral Component.

8.8 Satellite Voice Replacements

130. The Company also has plans to replace its aging satellite voice network at a cost of (#) in the Modernization Plan, in order to improve service quality and to achieve greater capacity. The TDM TES Hughes voice system that currently delivers meshed voice to the Company's satellite communities is manufacturer discontinued. The existing system is subject to more frequent hardware failures due to aging parts, spares are becoming scarce and existing support arrangements will end in (#) by which time the Company will replace the TDM TES Hughes voice system with an IP satellite meshed voice network in 35 communities.

131. All of the initiatives in respect to satellite voice replacement are in the Base Component. None are in the Astral Component.

132. See Attachment 6 for a list of communities benefiting from the satellite voice replacements.

8.9 SR 500 Wireless Voice Systems

133. In the proceeding leading up to TRP 2011-771, the Company proposed to replace its aging SR500 (subscriber radio) access network using SIP funding. The SR500 systems provides wireless voice service in the Halfway River Valley and other rural areas of Northern British Columbia. Northwestel noted that the SR500 systems do not comply with Industry Canada's Spectrum Utilization Policy and some of the frequencies are in a block that has been reallocated by Industry Canada. The equipment is manufacturer discontinued and unsupported. In TRP 2011-771, the Commission denied the Company's request for SIP funding to replace the SR500 systems in Blueberry Farms, Zeke, Pink Mountain and Colt Creek., BC.[27]

[27] The Commission also denied SIP funding for Upper Halfway, BC, which the Company will complete in 2012.

134. In the Modernization Plan, the Company plans to replace the aging SR500 systems over the next five years, at a total cost of (#). All of the potential initiatives are in the Base Component. None are in the Astral Component.

135. The schedule for replacement of the SR500 systems in specific communities is shown in Table 4 below:

Table 4

Schedule for SR500 Replacements

(#)

(#)

8.10 Local Network Interconnection (LNI) and Local Network Portability (LNP)

136. One of the additional benefits of the Modernization Plan is that it will more readily accommodate the new local competition regime brought in by the Commission in TRP 2011-771. The Commission noted that only the switches in Fort Nelson, Inuvik, Iqaluit, Whitehorse and Yellowknife currently support CCS7 signaling and would support LNP once software upgrades are completed. Therefore, at this time, only those five communities have to be provisioned with LNP software, within six months of a competitor request. In respect to the other switches, the Commission noted the lower populations in those communities and the substantial costs that would be incurred by Northwestel to provision LNP.

137. Northwestel notes the advantages to further competitive developments offered by its Modernization Plan. The switch upgrades will result in all communities getting all the network components necessary to support LNP, such as CCS7. Should LNP be required by competitors at a future date, the primary remaining costs would be in the area of processes and activities in the Carrier Services Group and additional IT development work, all of which could result in the

need for a further exogenous factor filing[28] to recover these additional local interconnection costs, but these would be relatively small in comparison to the costs being incurred to upgrade the switches to be able to accommodate CCS7. In any event, by modernizing its switches over the next five years, the Company is laying the groundwork to support further competitive expansion in the future.

8.11 Fuel Storage Systems

138. In addition to its telecommunications obligations, Northwestel must also uphold its environmental responsibilities in the North.

139. Since 2011, Northwestel has undertaken the process of upgrading its fuel storage systems, in keeping with the environmental regulations in Northern Canada, particularly in regard to some changes in Federal regulations. The required changes, which were subject to a transition period, were in the area of heightened protection in the area of leak detection and secondary containment for fuel storage systems. As a result, the Company has been upgrading its fuel storage systems across its operating territory to ensure it is fully compliant with all applicable regulations.

140. Over the period of 2011-2014, the Company will spend (#) on fuel storage upgrade activities, with (#) spent by the end of 2012, leaving (#) to be spent in the Modernization Plan. Upgrade activities will include implementing a secondary containment and remote leak detection system in (#) prime power sites and (#) secondary power sites.

141. All the work described above in fuel storage upgrades is in the Base Component. There is no funding associated with the Astral Component.

8.12 Wholesale Connect Service

[28] Northwestel filed a Part 1 Application, dated 22 June 2012, seeking approval for the recovery of local competition start-up costs.

142. On 8 March 2012, Northwestel filed Tariff Notice 883, to introduce a new backbone service for competitors, known as Wholesale Connect Service, with nominal interim rates of $1. Also on that date, SSi Micro Ltd. (SSi) filed a letter of support for the technical requirements of the service, without prejudice to its full review of the final rate structure to be filed by the Company. On 3 April 2012, in Telecom Order CRTC 2012-203, the Commission approved on an interim basis the Company's Tariff Notice 883.

143. On 22 May 2012, Northwestel filed Tariff Notice 883A, which amended Tariff Notice 883 to provide appropriate rates, which was supported by an economic study and accompanying costs.

144. Wholesale Connect Service is a terrestrial Layer 3 Internet Protocol Virtual Private Network Wide Area Network solution with Class of Service (CoS) options. This service is available to wholesale customers in thirty of Northwestel's operating communities that are served by fibre and/or high capacity (OC-3 and above) microwave radio transport facilities. Wholesale Connect provides competitors with high-quality backbone connectivity, allowing the transport of communications traffic across the Company's IP backbone network between competitor's selected Points-of-Presence ("PoPs"), which in turn enables competitors to provide their own end-users with telecommunications services.

145. Wholesale Connect is currently available to 30 communities that are currently served by fibre or high capacity microwave. The 30 communities have been categorized into four distinct types or bands (Type A, Type B, Type C and Breakout Communities) based on location and underlying transport and network facilities. Type A communities are Core IP Point of Presence (PoP) communities served by fibre transport. Type B communities are served by fibre transport facilities, backhauled to Type A communities. Type C communities are served by a hybrid of high capacity digital microwave radio and fibre, backhauled to Type A communities. As a result of the upgrades to the Company's transport and backbone network in the Modernization Plan, 27 communities will be added to Wholesale Connect and 1 Type C community will be upgraded to a Type B community. Once the Modernization Plan is completed, Wholesale Connect will be available in 57 of 58 terrestrial communities (excluding Keno City which is served by a low capacity microwave and has fewer than 20 full-time residents). This is a significant improvement enabling competitors to access the transport network.

146. See Attachment 7 for a list of communities that will benefit from the backbone connectivity offered by Wholesale Connect.

9.0 FUNDING OF THE MODERNIZATION PLAN

9.1 Base Component of the Modernization Plan and Capital Intensity

147. Northwestel operates exclusively in Canada's North. Being uniquely tied to this region, over its many years of operation the Company has made various significant commitments to this area. For example, one demonstration of this commitment can be seen when one considers the amount of capital expenditures made in the region by Northwestel. Further, while the Commission acknowledged that the Company's "overall capital spending …appears to have been in line with industry standards during the five years under price cap regulation"[29], under the Modernization Plan, Northwestel continues to invest (#) of operating revenues in capital spending. This compares favourably to many other ILECs, including for example, Bell Canada, which reported capital intensity of 15.7% in 2011 and 16% in 2010[30], and TELUS, which reported capital intensity of 18% in 2011 and 2010[31].

148. The Company proposes to continue with (#) capital intensity under the Modernization Plan. This is noteworthy when one factors in that Northwestel's revenues are also projected to increase over this period. Assuming forecasted revenues do occur, this results in incremental capital expenditures, as compared to the average of the last five years, in the cumulative amount of (#), for a total of $233 million. The base cap ex will increase from an average over the past five years (up to 2011) of just over (#) to almost (#) at the end of the Modernization Plan, excluding any incremental spending from the Astral funding. The base cap ex of the Company in the Modernization Plan is shown in Table 5 below:

[29] Telecom Regulatory Policy TRP 2011-771, paragraph 37.
[30] See BCE Inc.'s 2011 Annual Report, p. 49.
[31] See TELUS' 2011 Annual Report, p. 68.

Table 5

Cap Ex in Base Component

(#)

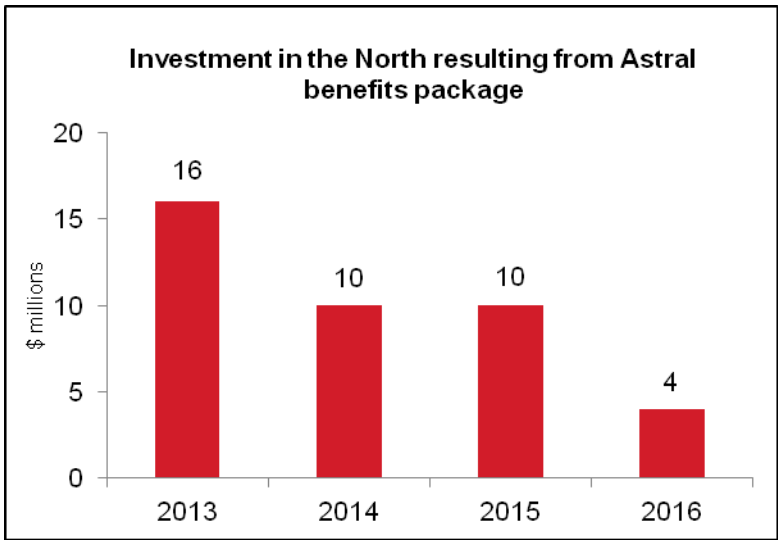
9.2 Astral Component of the Modernization Plan

149. As described earlier, on 16 March 2012, BCE announced that it has signed an agreement to acquire all the assets and shares of Astral. The Modernization Plan includes an allocation of $40 million from BCE, Northwestel's parent company, from the Astral public benefit funding, which would be designated to allow the roll-out of next generation wireless broadband services in the North, thereby improving infrastructure to access broadband content through the Internet. Approval of the Company's Modernization Plan, which is premised on the one-time opportunity offered by the Astral public benefits funding, would result in an additional investment of $40 million over four years, without applying to the Commission for rate increases. With this funding, the Company would be in a position to deliver the same types and levels of service to its customers in the more remote Northern communities, which are available in the urban markets in Southern Canada.

150. Table 6 below illustrates the additional spending by Northwestel that would accrue to its customers, subject to Commission approval of the Astral Component.

Table 6

Additional Investment from Astral Component



151. The additional investment afforded by the Commission's approval of the Astral Component, overlaid on the Base Component, is shown in Table 7 below.

Table 7 ($ millions)

Capital Expenditures – Base Component Overlaid With Astral Component

	2013		2014		2015		2016		2017	
Base Component		(#)		(#)		(#)		(#)		(#)
Astral Component	16.0		10.0		10.0		4.0		0.0	
Grand Total		(#)		(#)		(#)		(#)		(#)

152. A substantial piece of the Astral Component, in the amount of $16 million alone, would accrue to Northwestel's customers in 2013, in order to help accelerate the expansion and upgrading of services in the North.

153. The Modernization Plan is a very aggressive one, but it reflects the Company's desire to deliver the most possible benefits to the residents of the North in as short a timeframe as possible. Without the Astral Component, this very ambitious and far reaching goal is not possible.

154. Approval for BCE's proposed uses of the Astral public benefits funding is the subject of a separate regulatory proceeding currently before the Commission. Northwestel requests that the Commission carefully weigh the considerable public benefits that would be realized through the proposed use of $40 million of Astral public benefits funding as part of the Modernization Plan.

10.0 PROCESS AND NEXT STEPS

10.1 Legal Framework

155. The Modernization Plan is an ambitious undertaking to broadly expand and enhance Northwestel's infrastructure in the North. In reviewing TRP 2011-771, and seeking to understand what the Commission was seeking in this Modernization Plan, it quickly became apparent to Northwestel that this exercise would by necessity entail a mixture of regulated and forborne services, as well as shared infrastructure used to provide both telecommunications and broadcasting services. Against this backdrop, the Company is now operating under a price cap framework under which it has responsibility to determine its own capital program, which will remain in place until the end of 2013. Unlike rate of return regulatory regimes, where the Commission had authority to dictate which capital expenditures would be considered reasonable for rate-setting purposes, price cap regulation focuses on what prices can be charged for services, and in theory, allows other market forces to influence where scare capital is invested to produce the most productive results.

156. Under the existing price cap framework, Northwestel does not require any approvals to proceed with the Modernization Plan, with the exception of the Astral funding component, which of course is subject to Commission approval. However, given the far-reaching benefits that the Astral Component offers Northerners across the Company's operating territory; the Company's plans are premised on the implementation of the full Modernization Plan, starting in 2013.

10.1.1 Authority Regarding Non-regulated Services

157. While the Modernization Plan includes regulated, forborne and non-telecom components, significant parts of the Modernization Plan consist of "shared infrastructure" investments that will be used to deliver all types of services. For example, infrastructure that is generally considered forborne (e.g. wireless switches) will be used creatively to deliver both forborne as well as regulated services (e.g., calling features). As is generally the case with various aspects of Northwestel's network infrastructure, many components of the Modernization Plan cannot be easily or accurately delineated and assigned to a specific regulatory category. This type of network configuration sometimes makes it difficult, if not impossible, to meaningfully differentiate between what specific network assets are regulated versus forborne, or dedicated to telecom versus broadcast services. The Modernization Plan has been designed to simply deliver the maximum benefits to the most people in the most cost effective manner.

158. The Commission requests that the Modernization Plan "identify any of its non-telecommunications services (e.g. cable operations) that utilize its network infrastructure, as well as any contribution expected from these non-telecommunications services".[32] This distinction between telecommunications versus non-telecommunications services, and how revenues from one service may cross-subsidize the other does not conveniently align with the reality of how Northwestel actually operates. For example, the Company's cable assets are not held in a separate legal entity, but instead they form part of Northwestel's combined assets, and they are not operated separately from the rest of the Company. All assets are operated together under a unified operation plan overseen by Northwestel's management team. The revenues derived from the Company's cable operations are consolidated with the revenues earned in all of the other parts of the business, and are used to pay the business's consolidated expenses. Similarly, Northwestel's capital plans are developed for the entire business, using the revenues earned from its consolidated operations. Revenues from one business line are not segregated and assigned to any specific expenses or investments associated with that business line. Therefore the question of how Northwestel's non-telecommunications assets are expected to contribute to the Company's network infrastructure may be premised on a misunderstanding of how the Company actually operates.

[32] Telecom Regulatory Policy TRP 2011-771, paragraph 41.

159. While the Commission's findings in TRP 2011-771 and its directions as to what is to be included in the Modernization Plan cover regulated, forborne and non-telecom services, Northwestel submits that the Commission has no clear authority to make orders respecting forborne and non-telecom services. Indeed, the Company notes that any form of re-regulation of forborne services (including investment requirements) would likely require a major proceeding with industry participation to consider and debate the manner, scope and timing of any such proposed re-regulation. Similarly, any attempt to regulate shared infrastructure and operations would require a new regulatory framework (e.g., the creation of a split rate base), which would necessitate a major proceeding, and which could unduly complicate and delay implementation of the Modernization Plan, and the delivery of its significant benefits to the residents of the North.

10.1.2 Authority to Request the Filing of the Modernization Plan

160. The Company fully accepts that the Commission has the right to ask for information regarding forborne services, and accordingly Northwestel has provided, to the best of its ability, all requested information in this Modernization Plan filing in response to the Commission's request. However, as Northwestel understands the current regulatory regime, except for the Astral public benefits funding component of the Modernization Plan, no approvals are required from the Commission for any of the capital investments contemplated in the Modernization Plan. Northwestel would therefore note for the record that it reserves the right to formally challenge any order of the Commission to the extent that it purports to regulate any non-regulated services or infrastructure.

10.2 Process for Soliciting Comments on the Modernization Plan

161. In TRP 2011-771, the Commission stated that "upon receiving Northwestel's modernization plan, the Commission will initiate a process to provide parties the opportunity to comment on the plan."[33] While it is clear that the Commission plans to solicit comments from the public on the Modernization Plan, the nature and the process of that proceeding is not clear. Further, in TRP 2011-771, the Commission also stated that:

[33] Telecom Regulatory Policy TRP 2011-771, paragraph 42.

> "The Commission determines that it will undertake a holistic review of Northwestel's regulatory framework, and all of the company's telecommunications services, to ensure that the benefits of such a regime can be properly realized by subscribers. This review will include an examination of a modernization plan for Northwestel's network infrastructure…"[34]

162. The Company expects that the holistic review will likely get underway in 2013 pursuant to a Telecom Notice of Consultation (TNC), in anticipation of the expiration of Northwestel's current price cap period at the end of 2013. As such, the Company submits that the most appropriate process would be for the Commission to solicit comments from the public this Summer on the Modernization Plan. Those comments can then form part of the record of the TNC that the Commission will issue in 2013 on the holistic review.

163. From the Company's perspective, it is not seeking nor expecting the Commission to approve or reject or alter the Modernization Plan. For the reasons outlined above, that is not a power the Commission has absent a change of regulatory regime. Further, even under a new regulatory regime, the Commission cannot approve the Modernization Plan as it relates to forborne or non-telecom services. However, clearly the Commission has the power and the Company seeks its approval for the Astral component of the Modernization Plan filed as part of the Astral licence transfer application now before the Commission.

164. While the precise scope of the holistic review is currently unknown, Northwestel certainly accepts that as part of this review, the Commission may consider the Modernization Plan, as well as any comments concerning the Plan received from interested parties under the planned public consultation, in helping the Commission decide on the appropriate regulatory framework for Northwestel for 2014 and beyond.

165. The Company notes that the most critical element in the Modernization Plan is the Astral public benefits funding, or Astral Component, with its ambitious and extensive plans for wireless and HSI in the North. The Company requests approval of the Astral public benefits funding to be deployed in the fashion contemplated herein, in order to proceed with the full Modernization Plan in a timely and integrated fashion.

[34] Telecom Regulatory Policy TPR 2011-771, paragraph 30.