

JUL 14 2015

Mr. John Traversy
Secretary General
Canadian Radio-television
and Telecommunications Commission
OTTAWA ON K1A 0N2

Dear Mr. Traversy:

**Intervention of the Government of the Northwest Territories regarding Telecom
Notice of Consultation 2015-134, Review of basic telecommunications services,
File number: 8663-C12-201503186**

1. The Government of the Northwest Territories (GNWT) wishes to be considered as an intervener with respect to the referenced Notice of Consultation. As the representative of the residents of a Territory recognized by the Commission to face unique obstacles in the provision of telecommunications services, and having actively participated in CRTC telecommunications regulatory proceedings for over twenty years the GNWT believes it is uniquely equipped to assist the CRTC in addressing the issues now before it. For those reasons the GNWT also wishes to appear at the public hearing to be held next April 2016.
2. The GNWT's designated representatives are:

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and

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3. In the comments that follow we address each of the questions posed by the Commission in TNC 2015-134. We note that we anticipate that as other parties file their proposals we may wish to expand or modify our own proposals.

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Question 1(a) Canadians are using telecommunications services to fulfill many social, economic, and cultural needs in today's digital economy. Explain how telecommunications services are used to meet these needs. For example, uses may include e-commerce (i.e. the online purchase and trade of products or services), e-banking and/or telephone banking, e-health or telehealth services, telework, and distance education. Which of these uses of telecommunications services are the most important to ensure that Canadians meaningfully participate in the digital economy?

4. The use of telecommunications services by individuals, businesses, other organizations and government is so ubiquitous that attempting to enumerate an exhaustive list is a daunting task and many alternative taxonomies could be developed. In 2007, for example, Statistics Canada¹ identified the following uses, which though slightly dated, provide a useful indication of the extent to which Canadians rely on Internet use:

- email
- viewing news or sports
- instant messaging
- obtaining weather reports or road conditions
- searching for government information
- listening to Internet radio
- communicating with government
- downloading or watching television programs
- searching for medical or health information
- downloading or watching movies
- education, training or school work
- researching community events
- travel information or making travel arrangements
- researching other specific matters
- searching for employment
- general browsing for fun or leisure (surfing)
- electronic banking
- contributing content or participating in discussion groups (blogging, message boards, posting images)
- researching investments
- making online telephone calls
- playing games
- selling goods or services

¹ **Business Special Surveys and Technology Statistics Division Working Papers Intensity of Internet Use in Canada: Understanding Different Types of Users** by Catherine Middleton (Ryerson University), Ben Veenhof (Statistics Canada) and Jordan Leith (Ryerson and York Universities). <http://www.statcan.gc.ca/pub/88f0006x/2010002/part-partie1-eng.htm>

- obtaining or saving music
 - ordering goods or services
 - obtaining or saving software
 - window shopping for goods or services
5. An alternative taxonomy was recently employed by the FCC² who stated that the average US household has 7 Internet connected devices and identified the following principal areas of Internet use that require high speed capacity:
- Video Applications - including video streaming, video on demand, IPTV, video games and video conferencing.
 - Data Applications - including web browsing and data transfers in telecommuting.
 - Voice Applications - including VOIP
 - Social Networking
 - Cloud Computing
 - Machine to Machine Transfers - including smart meters, video surveillance, health care monitoring, and asset tracking.
6. Whatever classification is used, one thing is clear, today the Internet permeates our lives and we increasingly rely upon it for an ever expanding range of uses that not only include social and recreational activities but access to educational, health, employment search, business and governmental services.
7. This reliance exists for individuals and is equally true for business and other organizations including government who increasingly depend upon it to assist in the production process, to communicate with customers and suppliers, and to deliver end products or services. For example, the GNWT's Health and Social Services Department has implemented a number of enterprise information systems that push the limits of the GNWT's bandwidth. Systems like Digital imaging (DIPACS) for x-rays and mammography, and video conferencing services for tele-speech, tele-psychiatry, post-operative consultations and even Alcoholics Anonymous meetings are proving to be very successful, while other applications such as EMR (Electronic Medical Records) struggle with the limited redundancy and bandwidth limitations of the satellite communities, yet we have already seen a number of instances where these systems and technologies are changing and saving lives.

² US Federal Communications Commission, 2015 Broadband Progress Report and Notice of Inquiry on immediate action to accelerate deployment, February 4, 2015. Paras 29 and following.

<https://www.fcc.gov/document/fcc-finds-us-broadband-deployment-not-keeping-pace-0>

8. In northern Canada the population is small and dispersed, communities are remote, the terrain is rugged and the climate is challenging. The Internet can offer the only practical way to rapidly access many services without long and difficult travel from communities, many of which have only partial, if any, road access. In this context online education and health services offer perhaps the most important examples. Applications such as video conferencing and streaming of online classes require that individual users have access to much greater bandwidth than is available through Internet services currently offered in many northern communities.

Question 1(b) Canadians are using telecommunications services to fulfill many social, economic, and cultural needs in today's digital economy. Explain which telecommunications services are most important to support these needs and uses. What characteristics (e.g. capacity, mobility, high speed, and low latency) should these telecommunications services have?

9. The demands that each of the activities discussed in the response to 1(a) places on an Internet connection varies widely. At one end of the spectrum sending a short e-mail without attachments requires minimal capacity³ while closer to the other end online education can require significant amounts of both speed and usage. In a typical online learning situation for example, a student may be required to download and upload files such as course assignments or reading materials, watch and listen to recorded or live presentations, participate in live meetings and discussions using services such as Skype, and use a variety of other web based tools.
10. It is also true that a single Internet connection may be used for multiple purposes and by multiple users at the same time. For example, a Rogers web page⁴ recommends its Rogers Internet 30 service with speeds of up to 30 Mbps download and 5 Mbps upload with a 100 GB monthly allowance for a family of two while suggesting its Rogers Ignite 100 service with speeds of up to 100 Mbps download and 30 Mbps upload, with unlimited usage, for a family of four.
11. The speeds offered and usage levels provided accordingly rank high on the list of important characteristics. Other important characteristics include service reliability and the avoidance of outages. Low latency is most important for real time video and audio applications including video conferencing and VOIP.

³ On its website Northwestel suggests its DSL service with download speeds of 5 Mbps and a 40 GB usage allowance is "perfect for users who like to check their emails, read news or surf the web for a little bit of shopping". <http://www.nwtel.ca/personal/internet/packages> accessed on 4 June, 2015.

⁴ <http://www.rogers.com/consumer/internet>, accessed on 4 June, 2015.

Question 1(c) Canadians are using telecommunications services to fulfill many social, economic, and cultural needs in today’s digital economy. Identify and explain the barriers that limit or prevent Canadians from meaningfully participating in the digital economy (e.g. availability, quality, price, digital literacy, and concerns related to privacy and security). Identify which segments of the Canadian population are experiencing such barriers.

12. In the Northwest Territories the key barriers that inhibit more widespread use of the Internet are the lack of availability of high speed service, the limited usage allowances attached to service, and the high prices charged.

13. With regard to availability, in all of the NWT’s terrestrial communities, high speed Internet is offered by Northwestel at a minimum at 5 Mbps/.512 Mbps which satisfies the current CRTC 5/1 target with respect to download but not upload speeds. In Norman Wells, service over cable is offered at 16/1, and higher speeds will be introduced under Northwestel’s Modernization Plan. In Fort Smith, service over cable is offered at 16/1, and in Yellowknife, service is offered at 100/5. Service at 15/1 is offered in four communities (Behchoko, Fort Simpson, Hay River and Inuvik) but in 15 other NWT communities, Northwestel has put plans to offer 15/1 service scheduled under the Modernization Plan, on hold, due to its dissatisfaction with the CRTC Decision to lower its proposed terrestrial Internet service rates.

14. In the NWT’s 10 satellite communities, Northwestel offers services at 2.5 Mbps download / .384 Mbps upload speed and its current Modernization Plan has no provision to increase these speeds. In fact, it is anticipated that speeds may be reduced following the termination of Federal broadband program funding in 2017.

15. Prices and usage allowances for Northwestel residential cable, DSL, and satellite plans as of June 2015 are:

Service	Monthly Price (\$)	Download Speed (Mbps)	Upload Speed (Mbps)	Usage Allowance (GB)	Additional Data Charge (per GB)
Cable Internet 100	\$139.95	100	5	300	\$2.50
Cable Internet 50	\$110.95	50	2	200	\$2.50
Cable Internet 16	\$79.95	16	.768	110	\$2.50
Cable Internet 5	\$62.95	5	.384	40	\$2.50
Cable Internet 1	\$41.95	1	.256	10	\$2.50
DSL Internet 15	\$119.95	15	1	200	\$3.00
DSL Internet 5	\$89.95	5	.512	125	\$3.00
DSL Internet 2	\$64.95	2.5	.384	40	\$3.00

Service	Monthly Price (\$)	Download Speed (Mbps)	Upload Speed (Mbps)	Usage Allowance (GB)	Additional Data Charge (\$ per GB)
DSL Internet Lite	\$41.95	.768	.128	10	\$3.00
DSL Satellite Lite	\$41.95	.768	.128	10	\$3.00
DSL Satellite 2	\$64.95	2.5	.384	40	\$3.00

16. These tariffs include rates that are significantly above those charged in southern Canada and place a clear constraint on service affordability even when subject to unacceptably low speeds and usage allowances. This is particularly the case in satellite communities where incomes are far below the territorial or national average.

17. It should also be noted that, while Northwestel is the largest provider of Internet services in the Northwest Territories, it is not the only one. The other large ISPs are SSI Micro and Ice Wireless. Neither of these service providers, however, provide high speed internet at existing CRTC target speeds and, like Northwestel, charge prices significantly higher than are available in southern Canada. Xplonet advertises service with speeds up to 5 Mbps download and 1 Mbps upload, but the service has a usage allowance of only 20 GB and a monthly price of \$64.99, but the company is not taking on any new NWT customers at this time. Furthermore, it should be noted that a common theme of many of the interventions received to date from the general public in this Proceeding indicate that actual speeds often fail to match advertised maximum speeds.

Question 1(d) Canadians are using telecommunications services to fulfill many social, economic, and cultural needs in today's digital economy. Identify and explain any enablers that allow Canadians to meaningfully participate in the digital economy (e.g. connected devices and applications).

18. In the context of the Northwest Territories, additional enablers include: trusted, secure, reliable, and mobile digital services, and, applications that allow for use of, translation and/or sharing of content in Aboriginal languages.

Question 1(e) Canadians are using telecommunications services to fulfill many social, economic, and cultural needs in today's digital economy. As Canada's digital economy continues to grow and evolve during the next 5 to 10 years, which telecommunications services are Canadians expected to need to participate meaningfully? Specify how your responses to parts a) through d) above would change based on your answer.

19. As the digital economy grows and evolves the GNWT anticipates that Canadians' reliance on Internet service will expand and that speed and capacity requirements will substantially increase. We do not believe it is possible to forecast what specific new uses will materialize, but a few of the many possibilities include: the "Internet of things" whereby physical items are Internet connected, enhanced participatory democracy, and expanded virtual reality applications. Because of this the GNWT believes that not only should new high speed Internet targets be established in this Proceeding but that the CRTC should expect that there will be a need periodically update the targets.
20. Current Internet capabilities in the NWT are already significantly below what is available in southern Canada. Failure to now move forward aggressively to rectify this situation will make it harder for the NWT to ever reach parity with service capabilities in southern Canada.

Question 2. The Commission's current target speeds for broadband Internet access service are a minimum of 5 Mbps download and 1 Mbps upload, based on uses that consumers should reasonably expect to make of the Internet. Are these target speeds sufficient to meet the minimum needs of Canadians today? If not, what should the new targets be and what time frame would be reasonable to achieve these new targets?

21. The GNWT does not believe the existing targets are adequate. Simply watching one high definition movie can in some cases require capacity well in excess of this amount⁵ as can a 7 or 8 person skype online group video session for online learning⁶. A significantly higher minimum target is clearly appropriate when it is recognized that there are often multiple members of a household using the Internet at any time and that the uses made of the Internet are growing daily.

22. In the United States a new benchmark target Internet speed of 25 Mbps download and 3 Mbps upload for all Americans was recently established by the FCC who stated:

We take the needs of multiple users into account when considering what level of service is necessary to be considered advanced telecommunications capability. We consider, too, the services that providers are offering today, as well as the services that American consumers are choosing. With these factors in mind, we find that, having "advanced telecommunications capability" requires access to actual download speeds of at least 25 Mbps and actual upload speeds of at least 3 Mbps (25 Mbps/3 Mbps).⁷

23. This target replaced the previous target of 4 Mbps download and 1 Mbps upload that had been established by the FCC in 2010.

⁵ <http://entertainment.howstuffworks.com/fast-internet-connection-for-streaming-hd-movies.htm>

⁶ <http://elearningindustry.com/bandwidth-schools-bandwidth-need>

⁷ US Federal Communications Commission, 2015 Broadband Progress Report and Notice of Inquiry on immediate action to accelerate deployment, February 4, 2015. Para 3. .
<https://www.fcc.gov/document/fcc-finds-us-broadband-deployment-not-keeping-pace-0>

24. Similarly in Europe a new target of 30 Mbps download has been established by the European Commission which states:

*New services such as high definition television or videoconferencing need much faster Internet access than generally available in Europe. To match world leaders like South Korea and Japan, Europe needs download rates of 30 Mbps for all of its citizens and at least 50% of European households subscribing to Internet connections above 100 Mbps by 2020. The Digital Agenda aims to turn this ambition into reality by stimulating investments and proposing a comprehensive radio spectrum plan.*⁸

25. In describing the current Proceeding, the CRTC stated that its purpose is “to ensure that Canadians have access to world-class telecommunications services that will allow them to participate actively in the digital economy”⁹. The US and European plans provide a compelling guideline as to the targets that the CRTC should establish.

26. The GNWT believes that a high speed Internet target of 25 Mbps download and 3 Mbps upload by 2020 should replace the existing 5/1 target. The GNWT also recommends that a minimum usage allowance of 100 GB be established, this level being one which is currently provided to 50% of all Canadians and which percentage is growing annually.¹⁰ As well, the GNWT considers that the target speeds should refer to actual speeds which are normally available and not simply to advertised speeds which may be occasionally, if ever, achieved.

⁸ <http://ec.europa.eu/digital-agenda/en/our-goals/pillar-iv-fast-and-ultra-fast-internet-access#Article>

⁹ <http://news.gc.ca/web/article-en.do?nid=968189>

¹⁰ CRTC 2014 Communications Monitoring Report, Figure 5.3.1.

<http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2014/cmr.htm>

Question 3. Which services should be considered by the Commission as basic telecommunications services necessary for Canadians to be able to meaningfully participate in the digital economy? Explain why.

27. The term “basic service” is not defined in the Telecommunications Act and while the Commission identified in Telecom Decision 99-16 the services it then considered to be basic it did not explicitly provide a set of detailed criteria that a service must satisfy to be so considered. Rather, it stated at paragraphs 23 and 24 of the Decision that:

23. Incumbent local carriers continue to improve service to their customers. These improvements, in turn, raise Canadians' expectations of what should constitute basic service. However, the Commission found evidence that some companies provide lower levels of service in high-cost areas.

24. The Commission considers that the level of service now available to the vast majority of Canadians should be extended to as many Canadians as feasible in all regions of the country. Accordingly, the Commission is hereby establishing the following basic service objective for local exchange carriers:

**Individual line local service with touch-tone dialling, provided by a digital switch with capability to connect via low speed data transmission to the Internet at local rates;*

**Enhanced calling features, including access to emergency services, Voice Message Relay service, and privacy protection features;*

**Access to operator and directory assistance services;*

**Access to the long distance network; and*

**A copy of a current local telephone directory.*

28. This would seem to suggest that any service that “is now available to the vast majority of Canadians” should be considered as basic.

29. However, the Commission went on at paragraphs 26 to 29, to say:

26. During the Proceeding, several groups representing consumer interests suggested that basic service should include a telephone line capable of local and interexchange data transmission at a modem speed of 28.8 kb/s or higher. Several carriers noted that it would be difficult to provide any guarantee of data transmission rates. They added that such network changes are prohibitively expensive and provide almost no additional revenue to offset the costs.

27. The Commission considers that the benefits of upgrading the local network must be balanced against the subscribers' ability to pay for these upgrades. For a higher level of basic service, subscribers would have to pay more and costs to provide the service in remote areas would increase. These costs could, in turn, affect subsidy rates levied on profitable markets, which would distort the competitive nature of those markets.

28. The Commission expects that, over time, competitive pressures and improvements in network technology will permit basic service to include faster transmission speeds.

29. In light of these considerations, the Commission will not include line speed as part of the basic service objective.

30. In other words the CRTC considered that a service should not be considered basic if, even though available to the vast majority of Canadians, to extend its availability to all Canadians would yield insufficient benefits to outweigh associated costs. A basic service is thus one which is (a) available to the vast majority of Canadians and (b) would yield significant net benefits (after costs) if extended to all other Canadians.¹¹ According to this criteria, and based on the discussion for Questions 1 and 2, it is clear that high speed Internet should be considered a basic service made available to all Canadians subject only to possible cost limitations.

31. More fundamentally however, the GNWT believes that high speed Internet is a basic service in the sense of being essential to participate in twenty first century economic and social life including with respect to both health and education, and that ALL Canadians should be assured affordable access to such service.

32. As to the appropriate speed of high speed Internet to be considered as part of basic service we would note that at p.184 of the 2014 CRTC Communications Monitoring Report it states:

In 2013, Canadians were subscribing to higher-speed Internet access services than in 2009. In 2009, the most common plans were those with download speeds of 5 to 9 Mbps, representing 42.6% of all subscriptions. Plans with lower speeds attracted 37.8% of all subscriptions, and plans with higher speeds represented 19.6% of subscriptions. Four years later, the most common plans were still those with download speeds of 5 to 9 Mbps.

¹¹ In Telecom Regulatory Policy CRTC 2014-187 the CRTC supplemented the definition of a basic service to include a feature to allow Canadians with disabilities to access basic service.

However, the percentage of subscribers to these plans declined to 32.8%. Interestingly, in 2013, the percentage of subscribers to lower-speed plans less than 5 Mbps declined to 10.3%, while the percentage of subscribers to higher-speed plans greater than 9 Mbps almost tripled to 56.9% since 2009. (p 184 CMR 2014, emphasis added)

33. The majority of Canadians in other words were, in 2013, **subscribing** to high speed Internet plans with download speeds in excess of 9 Mbps and the percentage is increasing significantly year over year. Furthermore this statistic refers only to actual subscriptions. In terms of availability the percentage of subscribers with access to these speeds would be much higher. Data from Ookla indicates average Internet speeds being used by Canadians are 30.8 Mbps download and 7.7 Mbps upload.¹² The GNWT would encourage the CRTC, as part of this Proceeding, to collect further data concerning the **availability** of different speeds to assist in determining what speeds should be included in the definition of basic service.
34. At this point our preliminary thoughts, which are elaborated on in our response to Question 2, are that a download speed of 25 Mbps and an upload speed of 3 Mbps should be included in the definition of basic service and that the usage allowance for such service should be 100 GB.

Question 3(a) Explain whether the underlying technology (e.g. cable, digital subscriber line, fibre, fixed wireless, mobile wireless, and satellite technology) should be a factor in defining whether a telecommunications service should be considered a basic service.

35. In Decision 99-16 the CRTC stated, at paragraph 25, that

The basic service objective is independent of the technology used to provide service, and may change over time as service expectations evolve.

36. The GNWT agrees that the underlying technology used should play no role in defining whether or not a service is basic if the same service with the same functionality can be provided using different technologies. However care should be taken to recognize that in some cases the underlying technology used to provide a service can alter the service provided in important ways. For example local service provided over a cell phone is not the same as local service provided over a landline.

¹² <http://www.netindex.com/download/2,7/Canada/>. Referenced data accessed on 10 June, 2015. Data

Cell phone service allows calls to be made and received from many different locations while landline service can only be used in a single stationary location. Landline service allows multiple users in a family to share a single service with a single phone number, while cell phone service requires separate subscriptions for each family member.

Question 3(b) Identify, with supporting rationale, the terms, conditions, and service characteristics under which basic telecommunications services should be provided. Should any obligations be placed on the provider(s) of these services? If so, what obligations and on which service provider(s)?

37. Rules relating to terms, conditions and service characteristics for residential local service have already been established.
38. Terms and conditions that would need to be established for high speed Internet service, if identified as an additional basic service, would include minimum download and upload speeds and an associated minimum usage allowance, together with a requirement that actual speeds meet or exceed the specified minimums.
39. In areas such as Northwestel's, where there is insufficient competition to ensure that all users can obtain the specified basic service it will be essential to establish an obligation to serve with respect to this basic service component. From a practical perspective we believe this obligation to serve should rest with the incumbent, Northwestel but that the company should be freed of the obligation with respect to any specific user, where it demonstrates that another provider is providing or is willing to provide service subject to the terms and conditions specified in the obligation to serve.

Question (c) What should be the prices for basic telecommunications services and how should these prices be determined? Provide rationale to support your answer.

40. In the case of residential local telephone service the CRTC has already established a price ceiling of \$30 a month adjusted by the rate of inflation.¹³ This rate appears to have been struck based largely on finding a threshold which was only marginally above the highest rate charged in all but a few areas. The GNWT does not at this time have the underlying data that would be necessary to determine what would be the equivalent threshold rate for high speed Internet service. A very rough estimate taken from a limited review of online advertised non-promotional rates suggests that for 25/3 high speed Internet with a usage allowance of 100 GB an appropriate maximum might be in the order of \$70. Any charges for excess usage should be minimal.

¹³ Some rates, including those charged by Northwestel, were already slightly above \$30 at the time this policy was adopted and have remained at such higher levels subject to inflationary increases.

41. The GNWT would also support the establishment of a maximum rate for a basic level of high speed Internet services used by small business, though at this time is not recommending a specific numeric level. While the current submission focuses on the residential sector, the GNWT notes that to impose a maximum rate on charges to small business for a specified level of high speed Internet service would likely require some form of price subsidy support similar to that recommended here for residential high speed Internet service.

Question 4. Can market forces and government funding be relied on to ensure that all Canadians have access to basic telecommunications services? What are the roles of the private sector and the various levels of government (federal, provincial, territorial, and municipal) in ensuring that investment in telecommunications infrastructure results in the availability of modern telecommunications services to all Canadians?

42. In the NWT, market forces, supplemented by government funding, have to date failed to ensure that high speed Internet service is provided throughout the territory either at the target speeds established in TRP 2011-291 or at the minimum level proposed in this document.
43. In the NWT's 10 satellite communities, Northwestel offers services at a 2.5 Mbps upload and .384 Mbps download speed and its current Modernization Plan has no provision to increase these speeds.
44. In all of the NWT's terrestrial communities, high speed Internet is offered by Northwestel at a minimum at 5 Mbps/.512 Mbps speeds which satisfies the CRTC 5/1 target with respect to download but not upload speeds. In Norman Wells, service over cable is offered at 16/1 and higher speeds will be introduced under the Modernization Plan. In Fort Smith, service over cable is offered at 16/1 and in Yellowknife service is offered at 100/5. Service at 15/1 is offered in four communities (Behchoko, Fort Simpson, Hay River and Inuvik) but in 15 other NWT communities, Northwestel has put plans to offer 15/1 service scheduled under the Modernization Plan, on hold, due to its dissatisfaction with the CRTC Decision to lower its proposed terrestrial Internet service rates.
45. Service to a number of communities is also provided by SSi Micro and Ice Wireless. Neither of these service providers, however, provide high speed Internet at existing CRTC target speeds and, like Northwestel, charge prices very significantly higher than are available in the South. Xplornet offer service with advertised speeds up to 5 Mbps download and 1 Mbps upload but it should be noted that a common theme of many of the interventions received to date from the general public in this Proceeding indicate that actual speeds often fail to match advertised maximum speeds.
46. In total, at most seven NWT communities have service available that meet the CRTC 5/1 target.¹⁴ Only one community, Yellowknife, meets the proposed 25/3 target. Furthermore, the rates for services meeting either the existing or proposed target significantly exceed the level suggested in our response to Question 3.

¹⁴ We say "at most" because actual speeds provided by service providers may not reflect advertised maximum speeds so cannot be considered to be satisfying the existing CRTC target. For example, Xplornet advertises service but is not taking on new customers in the NWT (source: phone call on July 9, 2015). More generally, in light of the issues associated with latency and service outages, the GNWT believes satellite service should only be considered an acceptable means of achieving high speed Internet targets where no alternative technology is available in a community.

47. While telecommunications is a federal responsibility, the GNWT believes that all governments can assist in ensuring the extension of high speed Internet services. Federally, some funding to extend high speed Internet has been received under various connectivity programs. The GNWT itself is investing in \$82M to construct the Mackenzie Valley Fibre Link that will increase transport capacity connecting communities along and nearby the route. But despite this, high speed Internet service at the suggested speeds and rates is mostly unavailable in the Northwest Territories and as discussed in our response to Question 5 we are recommending that the CRTC now intervene to correct this situation.

Question 5. What should be the Commission's role in ensuring the availability of basic telecommunications services to all Canadians? What action, if any, should the Commission take where Canadians do not have access to telecommunications services that are considered to be basic services?

48. Section 7 of the *Telecommunications Act* sets out Canada's telecommunications policy objectives as including:

- *to facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions:*
- *to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada: and*¹⁵
- *to respond to the economic and social requirements of users of telecommunications services.*

49. The Act goes on to establish the various powers of the CRTC may use to achieve these objectives. Among these is section 46.5 (1) which states that:

The Commission may require any telecommunications service provider to contribute, subject to any conditions that the Commission may set, to a fund to support continuing access by Canadians to basic telecommunications services.

50. The CRTC has to date established two separate subsidies to achieve the above objectives in northern Canada where market forces could not be relied upon to do so:

- The first is an ongoing subsidy to fund the Service Improvement Plan undertaken by Northwestel between 2001 and 2006 to further the basic service objective established in Telecom Decision 99-16 by extending service to unserved communities, upgrading Northwestel's switching and transport network, and rolling out toll free Internet access throughout Northwestel's territory.¹⁶

¹⁵ In discussing rural broadband development Rajabiun, & Middleton, *Journal of Rural and Community Development* 8, 2 (2013) 7–22 9, state that " Extending access to telecommunications infrastructure in rural and remote communities has been a historical policy priority for both national and provincial governments (Babe, 1990; Winseck, 1997). Although Canada has not adopted a statutory universal broadband obligation, Section 7.b of the 1993 Telecommunications Act (Canada, 1993) provides a legal basis for policies that promote rural connectivity by stating that one objective of telecommunications policy should be "to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada." (Available at <http://www.jrcd.ca/viewarticle.php?id=1140&layout=abstract>)

¹⁶ The SIP was first approved in Telecom Decision 2000-746. Following that annual review proceedings were held to monitor and modify the SIP.

- The second is a subsidy to fund the costs incurred in providing residential local service where costs are in excess of the rates charged.

Both of these subsidies are financed through the National Contribution Fund (NCF) established pursuant to section 46.5 of the Telecommunications Act.

51. The GNWT submits that if high speed Internet service is designated a basic service, as proposed by the GNWT, then the same rationale¹⁷ supporting these existing subsidies would support the provision of new subsidies, financed through the NCF, to (a) finance the construction of new facilities required to support the service and (b) subsidize the costs of service provision where they are in excess of affordable rate levels. Such subsidies would, as in the case of local service, only be established in regions where market forces would not result in attainment of the above noted objectives.
52. Because the costs of providing telecommunications services in Canada are higher in the North than in any other region the need for such subsidies here will be the greatest. The GNWT believes that without such further subsidies it will not be possible to satisfy the objectives noted at the outset of the response to this question. The GNWT is accordingly heartened that the CRTC is holding the current Proceeding and hopes that it will lead to the creation of such new subsidies which will allow Northerners the chance, that otherwise would be lacking, to fully participate in the digital economy.

¹⁷ A complementary rationale for the provision of a high speed internet subsidy is found in TRP 2014-187 which established an annual subsidy, capped at \$30 million, to establish a nation Video Relay Service finding that it would be unjustly discriminatory to fail to do so.

Question 6. In Telecom Regulatory Policy 2011-291, the Commission stated that it would closely monitor developments in the industry regarding the achievement of its broadband Internet target speeds to determine whether regulatory intervention may be needed. What action, if any, should the Commission take in cases where its target speeds will not be achieved by the end of 2015?

53. As part of this Proceeding the CRTC should require all ILECs to submit a report outlining the extent and other circumstances of any failure to meet the target and the plans currently in place to address the failure. The review of these reports should both inform and be informed by the findings of the current Proceeding. The specific Decisions taken by the Commission in connection with submitted plans will depend in part upon the more general decisions it takes in this Proceeding. Possible Decisions with respect to individual plans could include directing specific ILECs to invest in Service Improvement Programs to address the failure. Alternatively should the Decisions in this Proceeding establish a new mechanism, such as a competitive bidding subsidy process to extend service, this could address any deficiencies identified in the reports of specific ILECs.

Question 7. In Telecom Regulatory Policy 2013-711, the Commission stated its intention to establish a mechanism, as required, in Northwestel's operating territory to support the provision of modern telecommunications services. Such a mechanism would fund capital infrastructure investment in transport facilities (e.g. fibre, microwave, and satellite), as well as the cost of maintaining and enhancing these facilities. The Commission considered that this mechanism should complement, and not replace, other investments from the private sector and governments, including public-private partnerships.

a) Explain, with supporting rationale, whether there is a need for the Commission to establish such a mechanism in Northwestel's operating territory. As well, explain whether there is a need for such a mechanism in other regions of Canada.

b) What impact would the establishment of such a mechanism have on private sector investment and government programs to fund the provision of modern telecommunications services?

54. The Proceeding leading to TRP 2013-711 represented the most intensive review the CRTC has ever undertaken of investment and services in the North. During that Proceeding the GNWT urged the CRTC to establish new subsidies that would allow all Northerners affordable access to high speed Internet at CRTC target speeds. In the Executive Summary to its final argument the GNWT stated that:

(The) CRTC 5/1 Mbps target speed for Internet access should be extended by Northwestel to all satellite communities.

And

A new High Speed Internet (HSI) Service Extension Subsidy for extending 5/1 Mbps CRTC target speed Internet to unserved communities should be introduced with a competitive bidding process used to select the service provider for each community. A new HSI Rate Subsidy to lower the price of 5/1 Mbps target speed Internet service to levels comparable to those in southern Canada should be introduced. The subsidy should be fully portable and should be made available on a per customer basis in the same manner as the existing local residential service subsidy.

55. While the CRTC declined in TRP 2013-711 to require Northwestel to extend high speed Internet at 5/1 speeds to satellite communities or to immediately introduce a subsidy for high speed Internet it did state, in its introduction, that:

The Commission considers that investing in transport upgrades, particularly in communities served by satellite services, is an important priority for telecommunications development in the North and is required to meet the growing demands of northern Canadians.

*Although the implementation of Northwestel's Modernization Plan will contribute to achieving these objectives, the Commission is of the view that it will not be possible for Northwestel alone to deliver the telecommunications services needed by Canadians across the company's vast operating territory. Accordingly, the Commission will launch in 2014 1) an inquiry on satellite transport services offered in Canada, and 2) a Proceeding in which, among other things, **it intends to establish a mechanism to fund infrastructure investment in transport facilities in Northwestel's operating territory.** This mechanism would complement other investments from the private sector and governments, including public-private partnerships. **(Emphasis added)***

56. Since that Decision the situation in the North has not significantly improved. While speeds available in most places in Canada continue to increase, in northern satellite communities they remain at 2.5 Mbps download and .384 Mbps upload or less. And while terrestrial communities then having speeds of 5 Mbps download and .512 Mbps upload were to be upgraded to 15/1 speeds Northwestel has now put these plans on hold so most terrestrial communities remain at speeds below even the 5/1 target established in 2011.
57. Furthermore the GNWT notes that rates in the North remain very significantly above those in the South and raise serious affordability concerns.
58. The GNWT thus continues to submit that new subsidies are necessary to address this situation in northern Canada and, as discussed in the response to Question 5, should be funded through the NCF.
59. With respect to the impact of these new subsidies on private sector investment and government programs, further subsidies funded through the NCF will allow for expanded use of Internet services in the North including with respect to e-commerce, online banking, the delivery of entertainment services and a host of other activities referred to in our response to Question 1. Overall, that should have a stimulative effect with respect to private sector economic investment. Furthermore there should be no direct impact on government programs to fund service provision as the new subsidies are being proposed as an addition to rather than as a substitute for existing programs.

Question 8. What changes, if any, should be made to the obligation to serve and the basic service objective?

60. This issue was extensively discussed in TRP 2011-291 with respect to the basic service objective as it then existed. There the Commission found that in regulated exchanges ILECs should be subject to both the basic service objective and an obligation to provide residential local service as market forces could not be relied upon to satisfy the basic service objective in such exchanges.

61. For forborne exchanges, the Commission found the basic service objective to be unnecessary as:

competition continues to be strong and pervasive across most areas, thereby allowing market forces to work and making it unnecessary to insist upon the basic service objective to protect the interests of consumers.(para 45)

62. However, because competitive alternatives are not available for some customers, the CRTC concluded that, in forborne exchanges, the obligation to serve should continue to apply to the ILECs and that a \$30 price ceiling on residential local rates should be applied.

63. The CRTC also declined to place an obligation to serve upon competitors as their presence was limited in regulated exchanges while in forborne exchanges it found:

imposing this obligation on competitors would be unduly duplicative and would not be a minimally intrusive means of achieving the policy objectives underlying the obligation to serve.(para 47)

64. In the current Proceeding the GNWT is recommending that the basic service objective be amended to include high speed Internet service with minimum speeds of 25 Mbps download and 3 Mbps upload, a minimum usage allowance of 100 GB, and subject to an affordable price ceiling currently suggested to be in the area \$70. We suggest that initially, the basic service objective should apply in both regulated and forborne exchanges because:

- high speed internet is a relatively new service
- the current subscriber penetration of high speed internet service is not as high as for local service
- service at the proposed target speeds is currently not even available in most Northern communities
- except in Northwestel's territory, Internet service is not regulated.

65. In considering how the obligation to serve for this new component of the basic service objective should be imposed, the GNWT sees no need to modify the existing rules that apply to residential local service. Accordingly, the obligation to provide high speed Internet at the specified minimum speeds would be applied to ILECs in both regulated and forborne exchanges.¹⁸ Where rates are not regulated, prices would be subject to the maximum price ceiling we have tentatively suggested be set in the \$70 monthly range. We see no reason to apply the obligation to non-ILECs for the same reasons as in the case of residential local service.

Question 9. Should broadband Internet service be defined as a basic telecommunications service? What other services, if any, should be defined as basic telecommunications services?

66. See responses to questions 3 and 8.

Question 10. What changes, if any, should be made to the existing local service subsidy regime? What resulting changes, if any, would be required to the existing regulatory frameworks (e.g. price cap regimes)?

67. The GNWT has not identified any changes to the local subsidy regime that are required at this time. The regime has played and continues to play an important role in ensuring the availability of affordable local phone service in the North.¹⁹

68. As noted elsewhere in these responses the GNWT believes that additional subsidies are required for high speed Internet service. However, such subsidies would be in addition to the existing local service subsidy.

¹⁸The GNWT notes that in DT 2003-39, at which time the rates for Northwestel internet services were unregulated, the CRTC stated, at paragraph 63, that "The Commission considers that Northwestel should be the ISP of last resort for the 54 unserved communities under 2,000 NAS and for any served community under 2,000 NAS, if other ISPs cease operation within the two-year roll-out period (2003 to 2004). The Commission therefore **directs** Northwestel to provide toll-free Internet service to any customer requesting such service in the aforementioned communities. The Commission considers that there would be no reason to make Northwestel the ISP of last resort for communities over 2,000 NAS since these communities are generally served by several ISPs."

¹⁹ The GNWT has in the past argued that competitive equity requires the local service subsidy to be portable as between the incumbent telcos and new competitors. While the GNWT continues to be of this view it accepts that the CRTC has repeatedly rejected this position.

Question 11. What changes, if any, should be made to the contribution collection mechanism? Your response should address, with supporting rationale, which TSPs should be required to contribute to the NCF, which revenues should be contribution-eligible and which revenues, if any, should be excluded from the calculation of contribution-eligible revenues.

69. Pursuant to Telecom Circular CRTC 2007-15 and the *Telecommunications Fees Regulations, 2010*, all TSPs with telecommunications revenues in excess of \$10 million a year are required to pay a small percentage of their contribution eligible revenues into a fund to support CRTC costs including those of the NCF. Contribution eligible revenues are defined as total telecommunications revenues net of various deductions, one of which is “retail Internet service revenues”. With the proposed inclusion of NCF funding for 2 new high speed Internet service subsidies the GNWT would propose that this deduction be eliminated.

Question 12. Should some or all services that are considered to be basic telecommunications services be subsidized? Explain, with supporting details, which services should be subsidized and under what circumstances.

70. The GNWT believes that all basic services should be eligible for subsidy support and notes that section 46(5) of the *Telecommunications Act* does not identify any class of basic services for which subsidy support would automatically not be considered. This does not however imply that all basic services actually require a subsidy. Rather, such subsidies should only be considered where they will further achievement of the Act’s objectives.

71. Accordingly the GNWT believes that subsidies should generally only be used where market forces will not ensure the availability of a basic service at affordable prices in all regions of Canada. Following this approach subsidies will normally be needed for basic services only in high cost areas where market based prices would be significantly above the level charged in other markets.

72. At this time the GNWT is proposing retention of the Residential Local Service Subsidy and the addition of (i) a High Speed Internet Rate Subsidy and (ii) a High Speed Internet Service Extension Subsidy.

Question 13. If there is a need to establish a new funding mechanism to support the provision of modern telecommunications services, describe how this mechanism would operate. Your response should address the mechanism described in Telecom Regulatory Policy 2013-711 for transport services and/or any other mechanism necessary to support modern telecommunications services across Canada.

73. The GNWT submits that, in order to ensure the availability of affordable high speed Internet service to all Canadians, two new subsidies are required. The first of these, which we refer to as a High Speed Internet Service Extension Subsidy, would allow for the extension of service to areas where the service is not available by financing the costs of the facilities required to extend the service. The second, which we refer to as a High Speed Internet Rate Subsidy, would subsidise the costs of service provision in areas where the service is available but where, without a subsidy, the rates would be in excess of affordable levels.

Question 13(a) What types of infrastructure and/or services should be funded?

74. In the North the principal barrier to extending high speed Internet is the high costs of transport, particularly to communities currently served by satellite. A High Speed Internet Service Extension Subsidy to address this issue should be made available to either lower the prices paid for satellite services²⁰ or to provide for the construction and maintenance of alternative transport facilities.

75. In addition, the GNWT believes that high speed Internet rates in the North exceed the affordability threshold and that a High Speed Internet Rate Subsidy should be introduced to remedy this situation.

Question 13(b) In which regions of Canada should funding be provided?

76. In the introduction to TRP 2013-711 the CRTC stated that:

Although the implementation of Northwestel's Modernization Plan will contribute to achieving these objectives, the Commission is of the view that it will not be possible for Northwestel alone to deliver the telecommunications services needed by Canadians across the company's vast operating territory. Accordingly, the Commission will launch in 2014 1) an inquiry on satellite transport services offered in Canada, and 2) a Proceeding in which, among other things, it intends to establish a mechanism to fund infrastructure investment in transport facilities in Northwestel's operating territory.

²⁰ In TRP 2015-133 the CRTC has instituted a review of the price setting mechanism for satellite rates that could potentially yield some needed reductions in the cost of acquiring satellite transport services.

This mechanism would complement other investments from the private sector and governments, including public-private partnership.

77. The GNWT submits that the unique characteristics of northern Canada, including its immense size, sparse and dispersed population, harsh terrain, and difficult climate result in a situation where without external subsidy assistance it will not be possible to achieve the expanded level of basic service it is proposing at affordable rates.
78. The GNWT believes that in other areas of the country any need for assistance will be lesser but that where such a need can be demonstrated any necessary subsidies should be made available.

Question 13(c) (d) (e) Which service providers should be eligible to receive funding, and how should eligibility for funding be determined (e.g. only one service provider per area, all service providers that meet certain conditions, wireless service providers, or service providers that win a competitive bidding process)? How should the amount of funding be determined (e.g. based on costs to provide service or a competitive bidding process). What is the appropriate mechanism for distributing funding? For example, should this funding be (i) paid to the service provider based on revenues and costs, or (ii) awarded based on a competitive bidding process?

79. For the High Speed Internet Rate Subsidy component, the GNWT believes that the existing Residential Local Service Subsidy model should be employed and that High Speed Internet Rate Subsidy should be calculated based on the difference between per subscriber rates and costs in high cost areas. The GNWT believes that such subsidies should be equally available to both the ILEC having the obligation to serve in an area and to any competitor offering service.
80. For the High Speed Internet Service Extension Subsidy, required funding should be determined and distributed through a competitive bidding process, so as to minimize subsidy costs and to promote competitive equity between competing service providers.

Question 13(f) Should any infrastructure that is funded be available on a wholesale basis and, if so, under what terms and conditions?

81. In general, competitive equity requires that subsidized infrastructure should be made available to competitors at cost based rates where cost is defined net of any subsidies received.

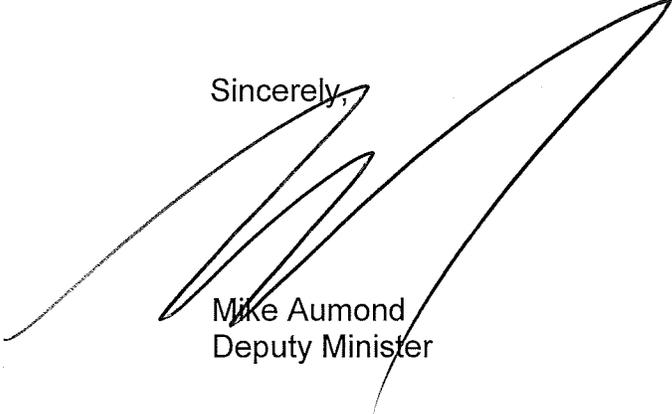
Question 13(g) Should the Commission set a maximum retail rate for any telecommunications service that is subsidized?

82. Yes. The CRTC should set a maximum retail rate for any telecommunications service that is subsidized: to ensure achievement of the *Telecommunications Act's* affordability objectives, and to ensure that the benefit of the subsidy is passed on to the service end-user.

Question 13(h) Should this mechanism replace the existing residential local wireline service subsidy? If so, explain how the existing subsidy should be eliminated, including details on any transition period. In addition, explain whether the small ILECs and/or Northwestel should be subject to any special considerations or modifications for this transition period.

83. A High Speed Internet Service Extension Subsidy and a High Speed Internet Rate Subsidy are being proposed to ensure that this element of basic service is made available to all Canadians at an affordable price. The provision of such subsidies does not affect the ongoing need for the Residential Local Service Subsidy which addresses the affordability of a different element of basic service.

Sincerely,



Mike Aumond
Deputy Minister

- c. Northwestel Regulatory
CRTC Regulatory, Yukon Territory Government
CRTC Regulatory, Government of Nunavut