Telecom Notice of Consultation CRTC 2023-56

Call for comments – Review of the wholesale high-speed access service framework

Second Submission of the First Mile Connectivity Consortium

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Executive Summary

E1.   Since 2012, the First Mile Connectivity Consortium (FMCC) has participated in CRTC proceedings to demonstrate the essential role that Indigenous and non-profit telecom providers play in providing telecommunications in rural, remote, Northern and Indigenous regions. FMCC has filed extensive evidence regarding the barriers faced by such organizations.

E2.   We are pleased to see the Commission's 2023 *Policy Direction* focus on supporting "broad, sustainable and meaningful competition" in fixed Internet services. FMCC member organizations endorse that mandate but emphasize that it must include removal of barriers to wholesale access.

E3.   Forbearance policy for wholesale HSA services may be efficient in urban centres where it is profitable for multiple providers to deploy competing networks. This is not the case in rural and remote areas.

E4.   The Commission points out that Canadian demand for broadband has increased significantly in recent years. Residents of Indigenous communities also need faster broadband and want to download more data. However, Indigenous and non-profit providers serving these areas often find that the incumbents lack sufficient bandwidth or are unwilling to provide access to their networks at affordable rates.

E5.   FMCC's position is that all transport providers should provide wholesale access to their networks at reasonable rates, subject to regulation.

E6.   We also recognize that Indigenous providers have the right to maintain their autonomy and decision-making power.

E7.   It is also important for the Commission to monitor the amount of available capacity on wholesale transport networks.

E8.   We disagree with incumbents' assertions that wholesale access requirements would reduce incentives for private investment in high-cost service areas. The status quo of regulatory forbearance has not resulted in extending reliable and affordable broadband to many rural and remote communities, despite decades of public subsidies to do so.

E9.   We recognize that incumbents disagree with these positions. However, incumbents have failed to demonstrate that an unregulated monopoly provides adequate incentives to invest in these regions. Wholesale access to existing networks can introduce competition where duplicating facilities is not financially feasible.

E10. To support these arguments, we present examples of barriers that FMCC member experience with respect to Wholesale Access to incumbents' transport infrastructure. FMCC members have confirmed and updated evidence previously filed in CRTC 2019-406 to reflect present circumstances (2023).

FMCC Recommendations:

E11. Pricing for incumbent transport services in remote and Indigenous regions should be regulated to ensure timely access at reasonable rates.

E12. Large incumbent TSPs that are building transport infrastructure using public funds should be required to offer a range of transport speeds at costs that reflect the diversity of needs of third-party organizations.

E13. Regulators and policy makers should encourage the development of open access telecommunications components in public infrastructures or utility projects, such as electricity, transportation or energy corridors.

E14. Transport services requested by third-party providers must be provided by incumbents in a timely manner. Incumbents should be penalized for unreasonable delays.

E15. Any policies that the Commission implements should include provisions that Indigenous and non-profit providers operating in rural, remote, Northern and Indigenous regions can maintain their autonomy and decision-making power (as per Telecommunications Act, section 27.6).

E16. Incumbents and other major telecommunications providers should be prohibited from negotiating wholesale prices that discriminate against other providers requiring access (as per Telecommunications Act, section 27.2).

E17. To support the Commission's BSO, recipients of public funds should be required to install sufficient transport capacity to meet projected demand and network redundancy requirements over at least 10 years.

E18. The Commission should publish details concerning how oversight of funded transport projects will be carried out, and how compliance to provide wholesale access and other requirements at reasonable terms and rates will be enforced.

Introduction

    General Comments

1.   The First Mile Connectivity Consortium (FMCC) is an incorporated independent not-for-profit national association. Our members are First Nations Internet service providers known as "community/regional intermediary organizations." Our associate members are university and private sector researchers and others interested in Indigenous and community communications and telecommunication services for the public good. Our work focuses on innovative solutions to digital infrastructure and services with and in rural and remote regions and communities across Canada. More details about our members and activities are available: http://firstmile.ca

2.   Since 2012, we have participated in CRTC proceedings to point out that digital infrastructures and services are essential for the social, cultural, and economic development of rural and remote Indigenous communities and their residents. For over 10 years we have stressed the **essential** role that Indigenous and non-profit telecom providers play in providing telecommunications in these communities and regions.

3.   Unlike large commercial Telecommunication Service Providers (TSPs), non-profit and Indigenous organizations exist to serve the regions and communities they are located in. FMCC member organizations represent an alternative approach to telecommunications deployment and operations. Their work foregrounds sustainable local and regional enterprise development in rural and remote regions, including the Far North and the Northern regions of provinces.

4.   We are pleased to see the Commission's 2023 *Policy Direction* focus on supporting "**broad, sustainable and meaningful competition**" in fixed Internet services (NOC, para 26). FMCC member organizations demonstrate how Indigenous and non-profit service providers can support that mandate.

5.   However, these Indigenous and non-profit providers need access to resources that can provide the required bandwidth and quality of service to the communities and regions they serve. They also need to be able to conduct their work in an environment free of unnecessary barriers.

6.   Over the years FMCC has filed extensive evidence in proceedings including CRTC 2019-406 and CRTC 2020-366 regarding the barriers faced by Indigenous and non-profit telecommunications providers operating in rural/remote regions of Canada. For example, our comments submitted to 2019-406 noted that in Ontario, the incumbent's nonrecurring charges to upgrade its transport facilities and the high cost of recurring wholesale service represents *de facto*, if not *de jure*, discrimination against remote area providers.

7.   In this intervention we respond to the Commission's Notice of Consultation, and primarily the following question:

> 80.ix. "How the Commission could better support wholesale-based competition across all regions of the country, particularly areas that do not currently have significant wholesale-based competition, including many Indigenous communities."

8.   This intervention addresses key issues and presents examples drawn from the experiences of FMCC member organizations.

Wholesale HSA Services

10.   We note the Commission's statement in this Notice of Consultation that they seek to "Maintain a regulatory framework mandating the provision – **at just and reasonable rates** – of wholesale services for fixed Internet" (CRTC 2023-56, para 26).

11.   In past interventions we argued that forbearance policy for wholesale HSA services may be an efficient strategy in urban centres where it is economically profitable for multiple providers to deploy competing networks. However, this is not the case in rural and remote areas, where, as Hambly and Rajabium (among others) point out: " …building multiple facilities is either not feasible at all without public subsidies and/or leads to inefficient duplication and 'over-investment' in old technologies." [1]

12.   We therefore reiterate our statement filed in 2019-406 that: "[t]he issue is not regulation of non-existent [wholesale transport] capacity, but provision in an equitable and affordable manner of access to existing capacity."[2]

13.   As the Commission has pointed out, demand for broadband has increased significantly in the past few years. "Almost 75% of [Canadian] households now subscribe to an Internet access speed at or above the universal service objective speeds of 50 megabits per second (Mbps) download and 10 Mbps upload established by the Commission…The consumption of data has also grown, as Canadian households now download an average of 395 gigabytes (GB) of data per month, an amount that has more than doubled since 2019" (CRTC NOC 2023-56, para 2).

14.   Residents of Indigenous communities also need faster broadband and want to download more data.To provide these services, Indigenous and non-profit service providers operating in rural/remote regions generally need access to fibre transport networks provided by ILECs, as the

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[1] Hambly, H. & Rajabiun, R. (2021). "Rural Broadband: Gaps, maps and challenges", *Telematics and Informatics*, 60(1): 1-18. Available at: https://doi.org/10.1016/j.tele.2021.101565

[2] CRTC 2019-406. Reply Comments of the First Mile Connectivity Consortium, July 10, 2020, para 16.

cost of installing their own networks is prohibitively expensive. Yet too often they find that the incumbents do not have sufficient bandwidth available, or are not willing to provide access to their networks at rates that would enable the Indigenous providers to offer affordable rates to their consumers and end users. As we have also pointed out, there can also be significant delays in gaining access to incumbents' networks.

15.   Over the years, ILECs have argued that **all** wholesale capacity, even in rural and remote regions, should remain unregulated because: (a) there is the potential for facilities-based competition; and (b) they could not afford to serve these regions if they had to provide wholesale access to other providers.

16.   Surely both of these arguments cannot be true simultaneously; incumbents must believe that there is significant unmet demand if other providers want access to their networks or might build their own networks.

17.   Moreover, we disagree with incumbents' assertions that the Commission's wholesale policies have reduced incentives to private investment in high-cost service areas. The evidence is clear that this reliance on hypothetical facilities-based competition resulting in ongoing ILEC transport monopolies has not resulted in extending reliable and affordable broadband to many rural and remote communities.

18.   As has been demonstrated in research commissioned by the CRTC and presented on the record in the CRTC 2022-147 proceedings, most Northern consumers believe that competition is a mechanism to lower prices, improve reliability, incentivize better customer service, and increase transparency.[3] They also welcome the opportunity to access competitive providers, particularly Indigenous, non-profit and/or municipal providers. Access to affordable, adequate wholesale transport services would enable non-profit and Indigenous providers to provide such service.

19.   The Commission also notes that: "large incumbent carriers collectively hold an 84% national market share. This situation has raised concerns with respect to the potential for these dominant firms to exercise market power" (CRTC NOC 2023-56, para 5). For remote and Indigenous regions, this market share is often 100 percent. The experiences of FMCC member organizations presented below demonstrate the limited options available to third-party providers attempting to access wholesale transport networks in rural, remote, Northern and Indigenous regions.

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[3] See: Environics (2023).*Research on Telecommunications Services in Northern Canada: Final Report*;
DigitalNWT (2023). *DigitalNWT Northwest Territories Report on Household Internet Affordability in Rural/Remote Communities*;
McMahon, R., & Akcayir, M. (2022). Investigating concentrated exclusion in telecommunications development: Engaging rural voices from Northern Canada. *Journal of Rural Studies, 95:* 183-194.

20.   Forbearance of wholesale regulation assumes that competition will supplant the need for regulation.This forbearance is based on the false assumption that all wholesale fibre facilities are potentially competitive. This makes no sense – particularly in rural and remote regions, it is often prohibitively expensive (and inefficient) to duplicate transport networks.

21.   Therefore, because of the overwhelming dominance of incumbents in rural, remote and Indigenous regions, and the potential of Indigenous and non-profit providers to help connect these areas, we believe that their transport services should be regulated.

22.   The Commission also stated the need to **monitor and evaluate** the new HSA regulatory framework, and **adjust as necessary** (CRTC Notice of Consultation for 2023-56, para 26). We note that one area that will be important to monitor is the amount of available capacity on wholesale transport networks.

23.   We disagree with Bell Canada and TELUS that wholesale access will discourage innovation and investment and could exacerbate "place-based disparities" in smaller and rural communities.[4] Incumbents have had decades, and significant public funding, to upgrade and extend their networks in Indigenous regions. They have not demonstrated that an unregulated monopoly provides adequate incentives to invest in these regions. Furthermore, Indigenous and non-profit providers, including FMCC member organizations, have innovated to build and sustain infrastructure and services in these regions.

24.   We also disagree with TELUS that "the Commission should be taking steps to encourage investments in competing networks that provide redundant connectivity, rather than encouraging companies to reduce redundancy and reliability by renting instead of buying."[5] We support investment in network diversity, whether by using other technologies such as satellites, or building fibre rings to prevent outages from fibre cuts. This is a different issue from facilities-based competition. Wholesale access to existing networks will also introduce competition where duplicating facilities is not financially feasible.

25.   We further disagree that facilities-based competition is a necessary condition for Reconciliation, as TELUS implies.[6] In contrast, our position is that sharing existing facilities with Indigenous providers offers strong opportunities for economic reconciliation by supporting third-party service providers owned and operated by Indigenous entrepreneurs or non-profit entities. These local and regional providers contribute to the economic base in these communities by circulating revenues and hiring locally, as compared with extracting profits for the benefit of shareholders typically located far from these areas.

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[4] Intervention of Bell Canada in CRTC 2023-56, April 24, 2023, para. 16.
[5] Intervention of TELUS in CRTC 2023-56, April 24, 2023, para 118.
[6] Ibid, section 3.2.

26.   We intend to address these and other arguments from incumbents in the next stage of this proceeding.

Experience of FMCC member providers

27.   In the next section, we present examples of barriers that FMCC members experience with respect to Wholesale Access to incumbents' transport infrastructure. Some of these cases were previously filed in CRTC 2019-406; FMCC members have confirmed and updated them to reflect present circumstances (2023).

28.   These examples demonstrate that even when transport infrastructure is available, FMCC member organizations face challenges in accessing services owned and operated by commercial telecommunications providers.

Western James Bay Telecom Network (WJBTN)

29.   WJBTN is a First Nations owned and operated, non-profit regional network in Northern Ontario that provides broadband services to businesses and institutions in Fort Albany, Kashechewan and Attawapiskat, and recently expanded its services to FTTH in the three communities. The network services three First Nations Band Offices; the Education Authorities and schools; Health Services and hospitals; and the Ministry of Transportation. With their network of locally based and trained technicians, WJBTN provides maintenance services to 750 residential fibre-to-the-home customers and 40 public and private sector anchor institutions in the three First Nations communities.

30.   WJBTN relies on an agreement with Bell for transport that reflects high rates for wholesale transport access. In CRTC 2019-406, WJBTN stated that it paid $9.33 per MB to Bell Canada in 2010 and $15.35 per MB (for 2 GB service) to Bell/Ontera in 2020. Since 2016, the cost of IP Transit has risen in Northeastern Ontario – and specifically as more bandwidth is purchased, the price per MB increases (in contrast to typical pricing arrangements where bulk purchases result in cost-savings). In short, whereas the price of wholesale bandwidth has decreased dramatically elsewhere, it increased significantly in that region. At the same time, demand also increased substantially, especially since the COVID-19 pandemic, such that WJBTN now needs a 5 GB feed.

31.   Under the terms of their funding application with the federal government WJBTN is urged to charge a reasonable rate for internet. As noted by WJBTN, the positions of both levels of government are that internet should be equitably distributed to and affordable for remote and rural regions. They state:

"So, we are between a rock and a hard place with government expectations on one hand and Bell on the other. If the price of Bell/Ontera IP transit at Moosonee continues to rise WJBTN will need to take steps to protect the end user (many of whom are on social assistance) from this rise: a rise we did not foresee in 2016 given that we forecasted the price/mb would go down, (not up) the more we purchased. This rise is having a detrimental impact on our ability to restrict adequate funds to invest in redundancy, path diversity options and repairs of our existing physical plant. By comparison, a 10GB feed out of the data hotel in Toronto would cost us $2,500/month. We pay $46,000/month for a 5GB non-priority service."

32.   WJBTN also stated that it was informed by the Canadian Internet Registration Authority (CIRA) in 2020 that (according to the forecast modelling used by CIRA) it would require a 5 GB and preferably a 10 GB, connection at Moosonee to give its end-users the service required to meet the federal 50/10 standard. When WJBTN asked Ontera/Bell for a quote for a 5 GB circuit, Ontera/Bell said that their equipment at Moosonee could not provision a 5 GB connection.WJBTN ended up paying $25,000for an equipment upgrade to secure the 5GB link and thereby be in compliance with the BSO.

Keewaytinook Okimakanak's K-Net Services (K-Net)

33.   K-Net services connects over 100 First Nations in northern Ontario, providing Internet and mobile services, and services for telehealth and distance educationincludingKeewaytinook Okimakanak Telemedicine and the Keewaytinook Internet High School.

34.   K-Net's activities focus on enabling its partner communities to engage in a variety of First Mile technology development projects. These include infrastructure development, capacity-building, operations and management, lobbying and advocacy, and application development.

35.   K-Net and its partner communities face significant challenges in building and managing broadband services to these dispersed and isolated communities, many of which can be reached only by air or winter road across frozen lakes.

36.   K-Netstated that 20 First Nations communities have fibre to the community installed but lack sufficient Bell transport network capacity. A Bell fibre optic network is in place; however, Bell electronics need to be upgraded to improve capacity. K-Net has submitted a proposal for $18.9 million to the CRTC and the provincial Ministry of Infrastructure Broadband Program to do these upgrades. This project involves upgrading more than 30 locations in more than 20 communities.

37.   In another example, Lac Seul First Nation was looking to upgrade their 1 GB circuit The cost to upgrade for the transport was a one-time cost of $35,000 and a $3,920 per month for a 3-

year term. Lac Seul First Nation is not remote, but has road access from the nearby towns of Sioux Lookout and Hudson, Ontario.

38.	In Northwestern Ontario, the only transport option is Bell. Because of Bell's high prices for access, K-Net is looking into other transport to Toronto, for example, Hydro One. However, Hydro One does not have any fibre in Northwestern Ontario. Now K-Net is looking into connectivity through Fort Francis, near the U.S. border, which has some fibre owned by a U.S. company and offers much lower prices.

Eeyou Communications Network (ECN)

39.	ECN is a majority-Cree owned, not-for-profit telecommunications company that provides broadband carrier services for 14 communities in Northern Quebec, including the Cree communities of Eeyou Istchee and municipalities of the James Bay region. ECN delivers advanced, reliable and cost-effective network access for the benefit of communities, populations, businesses, organizations and governments, bringing diversified connectivity to global telecom networks, content providers and Internet for a broad range of social and economic opportunities.

40.	The Cree majority-owned company has developed an all-fibre 3,000 km transport network in Eeyou Istchee and the James Bay region, serving major public institutions including health centres, schools and education centres, public administration and security including councils and municipalities. It also provides wholesale services to local ISPs, and extended FTTH services to residents.

41.	As a regional network provider, ECN is committed to open-access to promote affordable, reliable, and high-quality internet services to Eeyou Istchee-Baie James communities. As an independent not-for-profit regional transport carrier, ECN supports open and fair access, however it asserts the right to ECN maintain its decision-making authority over the network. ECN is governed by its stakeholders who are in turn representatives of the Health and Education Boards, and Band and municipal governments. They have made the decision to treat the region as one customer, thus ensuring everyone in the region, whether in one of the more populated communities, or in the smallest, more remote community have access to the same high-quality services for the same rates.

First Nations Education Council (FNEC)

42.	In Quebec, FNEC supports its member First Nations by working with three primary transport providers: Telebec, Bell, and TELUS. FNEC leases transport capacity (typically using 500 Mbps internet circuits) to provide 50/10 service where available for public sector use across 14 First Nations in the province of Quebec. Telcos such as TELUS, Telebec, and Bell work

within their respected service areas, making it impossible to access competitive options or even service availability in many rural and remote areas. In addition, FNEC has been required to pay telcos for the cost of local access infrastructure in order to get fiber connectivity services for some communities. These infrastructure costs ranged from $1,500 to $80,000, and 100 percent of the ownership of the infrastructure paid for by FNEC remains with the telco.

43.   FNEC costs for transport (500 Mbps of Internet transit) range between $1,200 to $1,900 per month (or approximately $2 to $4 per month per Mbps of bandwidth). Rates differ based on the specific region or carrier, and the length of the contract. Economies of scale are possible or expected over time, but rate reductions are more likely in cases where more bandwidth is being used – if such bandwidth is even available, which is not always the case. Since no competitive options are available in the majority of First Nations it works with, FNEC chose to establish 5-year contracts to achieve the lowest price possible.

44.   However, for remote/isolated areas, the availability of transport services is extremely inadequate. For this reason, FNEC worked with a partner (FMCC member ECN) to build fibre transport services to enable the development of three transport projects going from James Bay through Mauricie to Montreal, and also in the Basse-Côte-Nord regions.

45.   In the Atikamekw fiber optic projects of Opitciwan and Wemotaci, transport infrastructures were built to connect communities to urban areas, and local fiber networks were also deployed for institutions, businesses and fiber-to-the-home. The fibre networks support virtual private networks and deliver Internet, video services and potentially telephony services. Those communities now have similar levels of access as urban areas – reflecting a level of service previously unavailable from the incumbent telcos.

46.   Business plans and rates will evolve over time, according to the residential take rate and usage levels by institutions and businesses for applications (telemedicine, distance learning, cloud services). At this time, households can access services at rates comparable to urban areas, and institutions pay affordable rates for bandwidth. Since operations costs are mostly fixed, as institutions start using these high capacity networks more, the rate per Mbps is expected to drop significantly.

Rapid Lynx (Matawa First Nations Rapid Lynx Broadband Project)

47.   Rapid Lynx points out that in their region of remote Northern Ontario, competitive wireline options for affordable and reliable high-capacity connections to major Internet Interexchange Points are unavailable. Requests to the incumbent provider have been met with notifications that capacity was unavailable, and costly upgrades to existing network facilities would be required.

48.   Moreover, and more importantly with respect to connectivity for critically needed telemedicine and remote education services, there are no feasible solutions for network path diversity, redundancy and multi-homed service to increase network uptime and reliability.

49.   Rapid Lynx states that upgrade costs have ranged in the millions of dollars for wireline connectivity, requiring over a year to complete. Where a temporary microwave solution could be made available, upgrade costs were in the half-million dollar range and required months to complete. Assuming that a customer could pay the nonrecurring upgrade costs, recurring costs for 1GB service have ranged from approximately $75,000 to $175,000 per year. Without operational funding support in the form of grants and subsidies, these costs must be spread across a limited subscriber base of remote communities, raising the monthly cost of retail Internet service to a level that may be unaffordable for many residents.

Summary and Recommendations

50.   To summarize, the main transport problems facing Indigenous and remote area providers are:
- Lack of sufficient available capacity on incumbent networks;
- Lack of transport alternatives to incumbent networks;
- High prices for transport access that make it difficult for Indigenous providers to offer affordable broadband to their communities;
- Excessive delays in obtaining access to incumbent transport networks.

51.   We conclude our submission with the following recommendations.

52.   Pricing for incumbent transport services in remote and Indigenous regions, including those that receive public funds (e.g. ISED funding programs or the Commission's Broadband Fund), should be regulated to ensure timely access at reasonable rates.

53.   Large incumbent TSPs that are building transport infrastructure using public funds, including the CRTC's Broadband Fund, should be required to offer a range of transport speeds at costs that reflect the diversity of needs of third-party organizations, in particular Indigenous and non-profit providers operating in rural, remote, Northern and Indigenous regions.

54.   Regulators and policy makers should encouragethe development of open access telecommunications components in public infrastructures or utility projects, such as electricity, transportation or energy corridors.

55.   Transport services requested by third-party providers must be provided by incumbents in a timely manner. Incumbents should be penalized for unreasonable delays.

56.   Any policies that the Commission implements should include provisions that Indigenous and non-profit providers operating in rural, remote, Northern and Indigenous regionscan maintain their autonomy and decision-making power. As stated in the Telecommunications Act (section 27(6)), "a Canadian carrier may provide telecommunications services at nocharge or at a reduced rate…to any charitable organization or disadvantaged person or otherperson." Therefore, if an Indigenous carrier or a carrier which is a recipient of public funding wants to provide special discretionary pricing, for example to providers of public services such as education, it should be able to do so.

57.   The Telecommunications Act states "No Canadian carrier shall, in relation to the provisionof a telecommunications service or the charging of a ratefor it, unjustly discriminate or give an undue or unreasonablepreference toward any person, including itself, or subject any person to an undue or unreasonable disadvantage." (Telecommunications Act, 1993, section 27(2)). Incumbents and other major telecommunications providers should therefore be prohibited from negotiating wholesale prices that discriminate against other providers requiring access.

58.   To support the Commission's basic service objective and long-term needs for adequate broadband infrastructure, recipients of public funds should be required to install sufficient transport capacity to meet projected demand and network redundancy requirements over at least 10 years.

59.   The Commission should publish details concerning how oversight of funded transport projects will be carried out, and how compliance to provide wholesale access and other requirements such as reasonable terms and rates will be enforced.

Conclusion

60.   In conclusion, in line with the CRTC's 2023 Policy Direction, we stress that ILECs, including those serving rural, remote, Northern and Indigenous regions, should be required to provide wholesale access at reasonable terms and rates to other providers that rely on their networks for middle mile or backhaul connectivity. Requiring large commercial TSPs to provide access to HSA Wholesale services for Indigenous and non-profit service providers is a key element to closing the digital divide in Canada as well as an opportunity for economic reconciliation and a reflection of the application of UNDRIP in the area of telecommunications policy and regulation.

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