First Mile Connectivity Consortium
PO Box 104
Fredericton, NB E3B 4Y2
http://www.firstmile.ca
 Telephone toll-free:
1-877-737-5638 extension 4522

April 24, 2020

Submitted Electronically

The House of Commons,
Standing Committee on Industry, Science and Technology

RE: Study on Affordability and Accessibility of Telecommunications Services

Dear Members of the Committee:

The First Mile Connectivity Consortium (FMCC) files the attached Brief regarding the forthcoming study on Affordability and Accessibility of Telecommunications Services.

We have previously filed comments with the Committee for its 2017 study on broadband connectivity in rural regions of Canada, and have participated in several proceedings before the CRTC and consultations by ISED.

The First Mile Connectivity Consortium (FMCC) is an incorporated independent not-for-profit national association. Our members are First Nations Internet service providers – what we call "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

In our submission, we make the following points:

   a) Affordable, accessible telecommunications services are essential in remote and rural First Nations;

   b) The COVID-19 pandemic highlights the breadth and depth of rural/remote digital divides – and the efforts of First Nations telecommunications providers to address them;

   c) Government should address barriers faced by these providers, and provide an emergency COVID-19 fund and operational subsidies to support their work;

   d) Effective spectrum management and regulation should support small and non-profit community operators (we make specific references to 5G and satellites); and

   e) We have developed a series of metrics the Committee may be interested in for its study.

We appreciate this opportunity to comment and would welcome the opportunity to meet with the Standing Committee to further expand upon and discuss the issues raised in our submission.

Sincerely,

Rob McMahon
Coordinator, First Mile Connectivity Consortium
info@firstmile.ca

House of Commons Standing Committee on Industry, Science and Technology:

Study on Affordability and Accessibility of Telecommunications Services

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Brief submitted by The First Mile Connectivity Consortium (FMCC)

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. For more information see http://firstmile.ca.

Affordable, Accessible Telecommunications Services are <u>Essential</u> in Remote and Rural Indigenous Regions

2. The *Telecommunications Act* includes the objective "to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada."[1]

3. Digital services are <u>essential</u> for the social, cultural, and economic development of rural and remote Indigenous communities. These services support health care delivery, education, Indigenous organizations and businesses, and sharing of Indigenous cultures.

4. However, paradoxically, communities with the worst transportation links and greatest needs (due to lack of local services) often have the worst access, lowest reliability, and most expensive communications services.[2] The 2020 report of the *Broadcasting and Telecommunications Legislative Review Panel* stated that "the telecommunications industry in Canada is more than 2.5 times more profitable than other industries".[3] These highly successful commercial providers have little interest in upgrading or maintaining communications networks in remote regions where costs are high and revenues are low.

The COVID-19 Pandemic Highlights the Extent of Rural/Remote Digital Divides – and the Efforts of First Nations Telecommunications Providers to Address Them

5. The COVID-19 pandemic highlights the consequences of Canada's rural digital divide. Long-standing digital inequities are exposed as data traffic puts increased strain on already over-burdened networks needed for telemedicine, online education and telework. High rates charged by commercial providers further exacerbate the burden on economically

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[1] *Telecommunications Act*, Section 7(b).

[2] See: http://www.northernpublicaffairs.ca/index/volume-6-special-issue-2-connectivity-in-northern-indigenous-communities/a-whole-community-approach-for-sustainable-digital-infrastructure-in-remote-and-northern-first-nations/

[3] Broadcasting and Telecommunications Legislative Review Panel (2020). *Final Report - Canada's Communication Future: Time to Act*. Available at: https://www.ic.gc.ca/eic/site/110.nsf/eng/00012.html

marginalized communities. Vulnerable groups are increasingly targeted by online scams and misinformation, highlighting the importance of culturally-appropriate digital literacy.

6. Long aware of the importance of adequate, affordable telecommunications services, many First Nations in rural and remote regions have set up their own technology organizations, built broadband infrastructure, and trained local technicians. These Indigenous telecommunications providers offer non-profit internet access and digitally-enabled health care, education, and culture and language initiatives.[4] Their work is increasingly important as more services move online during the pandemic.

7. Right now, transmission problems mean residents on the remote James Bay coast struggle to connect with each other and to receive updated health information. Fly-in communities like Kashechewan and Fort Albany have lost cellular service. Limited bandwidth is now carefully rationed. But thanks to the non-profit Western James Bay Telecommunications Network, these communities can still access essential online services.

8. Similar conditions exist in remote Matawa First Nations communities in Northern Ontario. There, Matawa First Nations Management is deploying an 800-kilometre fibre-optic network. But until construction is complete, communities depend on heavily oversubscribed satellite links. Residents cannot access real-time applications that support telemedicine, distance learning, and telework.

9. However, Indigenous service providers struggle with limited access to the transport networks and mobile spectrum that connect their communities to the rest of the country. They must contend with high prices for bandwidth and ever-increasing fees for equipment upgrades and installation, and for access to conduit and utility poles.[5]

10. Indigenous non-profit providers also face relatively high costs and limited revenues to provide affordable services in remote communities. Canadian funding for rural broadband is limited to capital costs of infrastructure and excludes operating costs. In contrast, in the U.S., federal Universal Service Funds provide operating subsidies for carriers serving rural and remote communities including Alaska villages. We elaborate on the need for operational subsidies in our testimony before the CRTC.[6]

11. We believe it is time to recognize the essential role of Indigenous and non-profit telecom providers in rural and remote communities. For example, the federal government should establish an emergency fund specifically for non-profit and Indigenous telecom providers to upgrade and extend broadband infrastructure in response to the Covid-19 pandemic.

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[4] For an overview of projects, see: http://firstmile.ca/wp-content/uploads/Stories-from-the-First-MIle-2018.pdf

[5] We discuss these barriers in our intervention in *Telecom Notice of Consultation CRTC 2019-406: Call for comments regarding potential barriers to the deployment of broadband-capable networks in underserved areas in Canada.* Our submission is available at: http://firstmile.ca/fmcc-submits-comments-to-crtc-on-barriers-to-the-deployment-of-broadband-capable-networks-in-underserved-areas/

[6] We discuss this issue in detail our intervention to *Telecom Notice of Consultation CRTC 2017-112: "Development of the Commission's broadband funding regime".* See: http://firstmile.ca/fmcc-post-intervention-and-reply-comments-on-crtc-broadband-fund/

Spectrum and 5G Issues

12. Effective spectrum management and regulation should support small and non-profit community operators as well as large providers.[7] Some Indigenous organizations such as K-Net Mobile in Northwestern Ontario have utilized spectrum through subordinate licenses, where available, to provide mobile services to their populations. [8] However, existing spectrum licensing policies limit Indigenous organizations in providing mobile services.

13. The Auditor General of Canada has highlighted significant shortcomings in Canada's existing spectrum management regime:

> "[S]mall Internet providers did not have sufficient access to high-quality spectrum to support broadband deployment in rural and remote areas…. Also, the secondary market for unused spectrum did not function well, partly because licensees had little business incentive to make unused spectrum available for subordinate licensing."[9] (p.4)

14. Fixed wireless is a low-cost means to upgrade community broadband networks. In the U.S., the Federal Communications Commission (FCC) has opened a "Rural Tribal Window" so that Native Tribes can secure 2.5 GHz spectrum covering their Tribal lands as a low-cost means to support broadband deployment in these communities."[10] Canada should also establish spectrum set-asides or licence transfers for Indigenous territories.

15. 5G operators are seeking high bandwidth spectrum including C-band for urban and business services, whereas lower bandwidths with longer range could cover Indigenous communities. However, C-band spectrum is currently used by Canadian satellites serving isolated northern communities. We (and several satellite operators) have argued that C-band spectrum should not be repurposed for 5G.[11]

16. In the U.S., Alaska-based satellite operators supported excluding Alaska from any reallocation and repurposing of C-band to terrestrial use because C-band service is often the only option available to reach remote villages to provide basic telephone service, E911, and broadband service used to support applications such as telehealth and distance learning. The FCC has therefore decided to retain the Fixed Satellite Service (FSS) allocation across the

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[7] Organizations including the International Telecommunication Union (ITU) Development Bureau have recommended that administrations consider mechanisms to facilitate the development of broadband services in rural and remote areas by small and non-profit community operations. Recommendation ITU-D 19. WTDC 2017 report. https://www.itu.int/en/ITUD/Conferences/WTDC/WTDC17/Documents/WTDC17_final_report_en.pdf

[8] See: http://mobile.knet.ca/

[9] See: http://www.oag-bvg.gc.ca/internet/English/parl_oag_201811_01_e_43199.html

[10] Source: https://www.fcc.gov/25-ghz-rural-tribal-window

[11] Submission by the First Mile Connectivity Consortium (FMCC) in: *ISED's Consultation on Revisions to the 3500 MHz Band to Accommodate Flexible Use and Preliminary Consultation on Changes to the 3800 MHz Band*.

3.7-4.2 GHz band in Alaska.[12] We believe Canada should also retain C-band FSS allocations for satellite service to Northern regions.

Metrics for Analysis of Rural Telecommunications

17. We have developed a series of metrics for assessing rural telecommunications that could be useful in designing the Committee's study. We would be happy to share them with the Committee.

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[12] Federal Communications Commission (FCC). "In the Matter of Expanding Flexible Use of the 3.7 to 4.2 GHz Band." REPORT AND ORDER AND ORDER OF PROPOSED MODIFICATION .

GN Docket No. 18-122. Adopted: February 28, 2020.