FMCC Responses to Requests for Information (CRTC 2019-406)

Executive Summary

E1. 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" whose work focuses on digital infrastructure and services in rural and remote regions and communities across Canada.

E2. Some of FMCC's members have recently begun providing Internet and other services, while others have been operational for a decade or longer. All of them confront challenges in meeting the needs of their communities.

E3. We point out that the Government has a duty to consult and accommodate Indigenous groups when considering conduct that might adversely impact potential or established Aboriginal or treaty rights. We also note Section 25 of the *Canadian Charter of Rights and Freedoms*.

E4. We point to lessons from COVID-19, which has emphasized the importance of broadband in remote and Indigenous communities, and the difficulties that people living in these communities face when bandwidth is insufficient, unreliable and/or unaffordable. We note specific examples in areas including education, health care, business activities, and personal and household activities.

E5. In this filing we address several of the questions provided by the Commission.

Efficient and Affordable Access to Existing Transport Services

E6. Few FMCC members outside of Quebec can lease capacity that could provide USO-level service (50/10). That transport capacity simply does not exist in most northern regions. In cases where FMCC members can access USO-level service, they face additional barriers related to limited competition and increased costs of installing local access infrastructure. Some FMCC members lease capacity from provincial electric utilities as well as incumbents.

E7. Those FMCC members who lease capacity face additional challenges, including: out-of-date infrastructure (specifically, electronics in central office buildings that support fibre optic networks); limited links to adequate transport options (e.g. 5 GB circuits); adequate network path diversity, redundancy and multi-homed service; and delays to new and planned projects due to ongoing RFP processes.

E8. Several FMCC members point out high transport costs that have made upgrades of broadband service excessively or prohibitively expensive for Indigenous providers. Our members request access to reasonable and affordable transport – including when they plan to upgrade their networks due to growing user demand.

E9. FMCC members noted the limited transport options available to them. They stated that their projects would serve end-users who currently do not have USO level service availability.

Access to Dark Fibre

E10.   Several FMCC members noted the dark fibre in their networks. They pointed to examples of partnerships involving dark fibre, including 'condominium' arrangements and partnerships with utility companies.

Rights of Way

E11.   FMCC members provided examples of broadband upgrades generally (not projects to provide USO level service, since opportunities for them to do so are not generally available). They noted several barriers, including: delays in accessing permits; high (and increasing) costs for pole attachment fees; old/damaged support structures in some communities; and challenges interacting with the DUSS system which is used to register and manage pole access in Quebec. We note that FMCC members provided additional examples of barriers in past filings with the Commission, including during this current proceeding.

E12.   FMCC members suggest that the Commission can play a role in addressing these barriers, and provided suggestions.

E13.   **Timeliness:** The Commission could establish guidelines for the time required to issue permits (e.g. three months) and provide a mechanism that providers could use to report delays. The Commission could enforce sanctions such as fines or other penalties.

E14.   **Pricing:** The Commission should establish regulated wholesale pricing for access to transport networks built using public funds. Regulation of the pricing of pole attachments and transport by incumbent TSPs should not be forborne in rural and remote regions.

E15.   **Access to Facilities Owned by Public Utilities:** FMCC members should be provided access to publicly owned dark fibre (such as Manitoba Hydro Fibre). They should be supported in leasing capacity from provincial electric utilities without major delays or price increasing. Recognising the Commission does not regulate electric utilities, we nonetheless propose that CRTC meet with CAMPUT (Canada's association of utility regulators) and the Canadian Energy Regulator (CER) to determine how permitting for telecom use could be streamlined, and how pricing can be kept reasonable.

E16.   We note CER's vision, which refers to a renewed Nation-to-Nation relationship based on the recognition of rights, respect, cooperation, and partnership. We also note that the CER has established Indigenous Advisory and Monitoring Committees to provide advice to regulators.

E17.   **Indigenous Rights of Access:** Finally, we emphasize that Indigenous communities should have right of access to any fibre crossing their traditional territories.

Infrastructures Database

E18.   We note that FMCC included comments supporting the creation of the databases and updated maps earlier in this proceeding. We note the limited maps and documentation currently available of our regions, and of the condition of infrastructure in our communities. We suggest a database could include items such as: location of dark fibre; location and condition of support structures; location of towers; and age, condition and capacity of electronics. This information should be reviewed and updated annually, with sanctions such as fines for infrastructure owners who do not provide annual updates, or provide erroneous or outdated information.

E19.   We believe that all of the information from the databases and maps should be made publicly available, as should the cost and terms of leasing capacity on transport networks built using public funds. In the event that providers succeed in classifying some information as proprietary, project offers should be able to apply for this information and receive it in a timely manner in order to plan projects and submit funding proposals.

Spectrum

E20.   We are aware that spectrum is under the jurisdiction of ISED, but believe that the Commission also needs to consider its importance as critical infrastructure in rural/remote regions. Many wireless providers currently do not generally utilize their spectrum rights in remote communities. In such regions, where providers do not utilize these rights within three years, local providers should be able to apply to use that spectrum.

Introduction

1. The FMCC is an independent, incorporated not-for-profit national association, whose members are First Nation Internet service providers known as "community/regional intermediary organizations." Our member organizations provide and support the delivery of broadband-enabled public services such as online education and telehealth, as well as entertainment services for household consumers. 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 at: http://firstmile.ca.

2. Some of our members have recently begun providing Internet and other services to their communities, while others have been operational for a decade or longer. All of them confront challenges in meeting the needs of their communities. For example, K-Net, which began providing communications services to rural and remote First Nations 20 years ago, has seen technology evolve from T1 lines to optical fibre, but still struggles to upgrade electronics and obtain adequate backhaul where bandwidth is limited and transport costs are high.

Duty to Consult:

3. We point out that the Government has a duty to consult and accommodate Indigenous groups when considering conduct that might adversely impact potential or established Aboriginal or treaty rights. Sovereign First Nations possess inherent rights to self-determination, having the jurisdiction to administer and operate their own political, legal, economic, social and cultural systems.

4. Section 25 of the *Canadian Charter of Rights and Freedoms* guarantees certain rights and freedoms shall not be construed as to abrogate or derogate from any Aboriginal, treaty or other rights or freedoms that pertain to the Aboriginal peoples of Canada.

Lessons from Covid-19:

5. The COVID-19 pandemic has emphasized the importance of broadband in remote and Indigenous communities, and the difficulties people living in these communities face when bandwidth is insufficient, unreliable and/or unaffordable. For example:

Education:

- It has been difficult for students to study online at home during COVID because of challenges including lack of adequate bandwidth, many households sharing a single connection, and high costs for access because of data caps and overage.
- 'Turbo sticks' that have been provided by government, non-profit and private sector groups to distribute bandwidth over mobile networks are at best a temporary solution.
- Teachers may not have access to sufficient bandwidth to participate remotely in meetings or to take required professional development courses.

Health Care:

- There has been increased demand for more bandwidth – including symmetrical bandwidth – for telemedicine purposes during the COVID pandemic since travel has been difficult or impossible.
- There is increased demand for high reliability for emergency communications and first responders.
- Nurses and other medical staff in some regions request the ability to connect with their families, which is a strong incentive for retention.

Business Activities:

- Work must now be done from home or through access to expertise in other locations. For example, accounting is now done online. Local governments without sufficient bandwidth must scan and print documents to send to offices in the south.
- Software downloads and upgrades can take hours or days. A band office had to upgrade its internet service temporarily in order to download Office 365 for its staff.
- Data caps for household Internet in some regions restricts the ability of people to use cloud services, download updates, or use applications such as videoconferencing.
- Bandwidth is limited in cases where adults and students are working from home and sharing a connection, particularly in homes with high numbers of household users.
- Symmetrical bandwidth is increasingly important for videoconferences and uploads. A person who could not participate in a teleconference because of limited bandwidth required 12 hours to upload a 15-minute video to be seen by other participants.
- Forms to apply for grants for COVID support and other purposes and to make progress reports can only be filed online. Some must be completed online and must be started again if the connection drops.

Personal and Household:

- Many people use smartphones with limited data plans for most of their communication with other family members and for access to information on websites and social media.
- Government services are increasingly available only online, such as permits and licences, identification documents, tax filings, etc.
- Online ordering of goods has increased during the pandemic, especially in communities where local stores have not been restocked.

The Barriers are Real:

6. We address the questions from the Commission below. Our members emphasize that the barriers they face pose real challenges. As one FMCC member stated: "We could do more if there weren't so many barriers."

A. Efficient and Affordable Access to Existing Transport Services

Q1. *Identify each high-speed transport service currently leased that provides connectivity to a Canadian Internet exchange point (IXP) for the provision of USO level fixed Internet high-speed access services (50 megabits per second (Mbps) download and 10 Mbps upload).*

7. **Please note:** Very few of our members are able to lease capacity that could provide USO level service of 50 Mbps download and 10 Mbps upload. That transport capacity in most northern regions simply does not exist.

8. Some of our members lease capacity from provincial electric utilities (in Quebec, Ontario, and Manitoba), but in most cases not enough bandwidth is available to provide 50/10 service.

9. **The First Nations Education Council (FNEC)** in Quebec does lease 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 costs ranged from $1,500 to $80,000, and 100% of the ownership of the infrastructure paid for by FNEC remains with the telco.

10. 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 – a situation previously unavailable due to limited profit incentive for the incumbent telcos. 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.

11. **The Kuhkenah Network (K-Net)** in Northwestern Ontario leases transport from telcos to First Nations from 151 Front St, Toronto. Several First Nations along Highway 17 and 11 in Northwestern Ontario requested to increase their circuits for more capacity to meet their community demand. The quotes received from telcos were not affordable for the First Nations.

Q2. Provide views, with rationale, on the specific transport services needed separately for each purpose identified above, and the extent to which the transport services will support USO level fixed high-speed Internet access services in the downstream market.

12. **K-Net** states 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. Bell needs to upgrade its infrastructure – including the electronics in several central office buildings. 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.

13. K-Net also still has six communities served by C-Band satellite. It is not possible to lease sufficient capacity to provide 50/10 service for these communities. Two of them, Peawanuck and Fort Severn, may be able to interconnect with the Kativik Regional Government (KRG) ocean fibre network, at an estimated cost of $50 million.

14. **The Western James Bay Telecom Network (WJBTN)** states that it was informed by the Canadian Internet Registration Authority (CIRA) earlier this year that (according to the forecast modelling used by CIRA) it would require a 5 GB and preferably a 10 GB connection at Moosonee in order 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.

15. **Rapid Lynx** (Matawa First Nations Rapid Lynx Broadband Project) 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.

16. 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.

17. **Clear Sky Connections** notes that all projects in Northern Manitoba involve Manitoba Hydro and MTS fibre. Manitoba Hydro built a fibre optic infrastructure to connect its northern power dams which can be used for broadband networks to service northern communities. Hydro is also the only organisation with fibre to the home. Clear Sky is working to connect Nelson House using an existing agreement to use fibre. The province is currently going through an RFP process, but recently, any new projects have been put on hold. (See response to Q3 below).

Q3. Provide details of transport and access projects that were considered, over the last two years, for areas where end-users currently lack USO level fixed broadband Internet access services but were determined to be economically non-viable if transport had to be self-supplied.

18. Responses below address transport costs that have made upgrades of broadband service excessively or prohibitively expensive for Indigenous providers. For example, in Ontario, the incumbent's nonrecurring charges to upgrade its facilities and the high cost of recurring service represents *de facto*, if not *de jure*, discrimination against remote area providers.

19. As noted above, **WJBTN** could not obtain a 5 GB circuit, but had to pay Ontera/Bell $20,000 for their equipment at Moosonee to be upgraded from a 1 GB circuit to a 2 GB circuit.

20. WJBTN also notes that 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 contrasted to typical pricing arrangements where bulk purchases result in cost-savings). Under the terms of their funding application with the federal government WJBTN is urged to charge a <u>reasonable</u> rate for internet. As noted by WJBTN, the positions of both levels of government

are that internet should be equitably distributed to and <u>affordable</u> for remote and rural regions:

> "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."

21. **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.

22. As mentioned previously, FNEC supported two member communities, Opitciwan and Wemotaci, to secure fiber-to-the-home projects, including transport infrastructure. In the context of COVID-19, and supported by the security and protection measures being deployed, high-speed internet services to institutions and residences are making a major difference for those communities.

23. **K-Net** states that they have seen a large increase in monthly rates for transport in Ontario in cases where they are looking to upgrade from 10 MB to 100 MB, 500 MB to 1 GB, 1GB to 2GB. In past years, some of these upgrades were in the hundreds of dollars and now they are in thousands of dollars.

24. In K-Net's region, Lac Seul First Nation was looking to upgrade their 1 GB circuit with 500 EVC to 1 GB circuit to 1 GB EVC. The cost to upgrade for the transport was an one time cost of $35,000 and a $3,920 / monthly fee for a 3-year term. Lac Seul First Nation is a road access community near the towns of Sioux Lookout and Hudson, Ontario.

25. K-Net notes that they had good relationships with carriers in the past; however, over the past five years, relationships have changed. Rather than working with regional salespeople who live in the region, K-Net must now deal with a sales group in Mississauga. Bell staff in Mississauga may not have any knowledge of facilities or conditions in its northern

communities. For example, K-Net had to have its technicians travel to a community, take photos and send them to Bell to show them the condition of fibre on their poles.

26. Centralized Bell staff have also informed K-Net that prices are now charged for every hop in a network, resulting in added costs to bring circuits to every point in the network. Some circuits have been reclassified from rural to remote circuits with higher charges. For example, Lac Seul was considered a rural circuit, but we now assume it is classified as a remote circuit and so it is more expensive to serve.

27. **FNEC** is in the third year of a five-year contract, so current prices have not changed. Prices are mainly for 500 Mbps circuits – at present the organisation only has two 1 Gbps circuits. As new projects develop, FNEC hopes to have access to sufficient bandwidth at reasonable rates, based on the needs and size of the population.

28. In the case of the Atikamekw projects of Opitciwan and Wemotaci (fiber transport and FTTH), bandwidth is not currently an issue impacting the delivery of services. Those communities can now access the same services as people living in connected urban areas.

29. FNEC participated in another project on Basse-Côte-Nord which involved the Innu communities of Unamen Shipu and Pakua Shipi. An incumbent TSP received funding for the project, and though communities had limited involvement, their access increased from a very low level of service (limited transport, telephony and little or no internet) to higher bandwidth, improved internet services (typically 25/5 Mbps) and cellular access. Going forward, FNEC is concerned whether this level of service will be maintained, given that it only involves one TSP with a service obligation of only 5/1 Mbps for this region.

30. **Rapid Lynx** states that upgrade costs have ranged in the millions 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 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.

31. **Clear Sky Connections** have not seen price increases for transport. However, Clear Sky has faced other challenges. Clear Sky submitted a proposal to the CRTC Broadband Fund in its second call for applications that involved connecting 10 communities at a cost of $40 million through backhaul using Manitoba Hydro's dark fibre. The first phase of this plan will cost $24 million. If they receive the funding, the project is dependent on connections to Manitoba Hydro.

32. Clear Sky has written letters to the province, asking the government to support access to every community. However, Clear Sky notes that access to new Manitoba Hydro broadband is currently suspended:

> "In order to ensure transparency related to the provincial Request for Proposals for Rural Broadband Expansion and in support of the initiative Manitoba Hydro Telecom (MHT), being a division in a subsidiary of Manitoba Hydro which is a crown corporation, will immediately suspend all activities related to new broadband services including, proposals, contract negotiations, design, construction, and connection to infrastructure. MHT will maintain current operations and obligations of existing contracts including those that are or will roll over into a month to month term until the RFP process has concluded."[1]

33. The *Winnipeg Free Press* reported on September 4, 2020:

> "Earlier this week, Chris Mankewich, managing director of MHT, issued an order to immediately 'suspend all activities related to new broadband services including, proposals, contract negotiations, design, construction, and connection to infrastructure,' while a request for proposals process is underway to find a third party manager for the asset….
>
> Mankewich said MHT will maintain 'current operations and obligations of existing contracts' but the spokesman for the newly formed organization of small internet service providers in the province said this new uncertainty may cause development projects to be put on hold."[2]

34. **Broadband Communications North (BCN)** in Manitoba stated that the biggest issue they face in Manitoba right now is that the Government of Manitoba is seeking to give full control of the public owned dark fiber (Manitoba Hydro Fiber that Manitoba Hydro Telecom currently facilitates access to from a position of true neutrality and non-competition) to a single national telecommunications company (a direct competitor). Already, access to this critical infrastructure has been hampered. Once the winning telco gains this gatekeeper access, the RFP appears to also guarantee that they will be the sole provider mandated by Manitoba to proceed on builds across MB. According to BCN, existing industry players that are more local to MB were excluded from this process, which also had no consultation with

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[1] Email from Chris Mankewich, Managing Director, Manitoba Hydro Telecom to Clear Sky Connections sent on August 27, 2020.

[2] "Small internet providers fear fallout from hydro decision." *Winnipeg Free Press*, September 4, 2020. https://www.winnipegfreepress.com/business/small-internet-providers-fear-fallout-from-hydro-decision-572314482.html

public, industry or First Nations communities. They note that industry player experience with these national telcos indicates that all efforts to access infrastructure are met with multiple artificial barriers (requirements for engineering reports, "upgrade" fees, delay tactics to drag a process out for months and sometimes years).

Q3a. Identify the available transport alternatives that would make these projects viable, as well as the rates and terms of these transport alternatives.

35. In **Northern Manitoba**, the only transport option is Manitoba Hydro's fibre.

36. In **Northwestern Ontario**, the only transport option is Bell. **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.

37. **In the James Bay region of Ontario, WJBTN** states that the transport alternative which would aid in their project's viability would be to obtain a path of dark fibre from Moosonee to the IXP in Toronto: "We are waiting for a quote from Bell for this, and have been told it may be weeks before their engineers can come up with a price for us. From the IXP we could meet an American supplier which has quoted us a twentieth of the cost that we are paying now for IP transit."

38. In **Quebec**, **FNEC** supports its member First Nations by working with three of the primary transport providers: Telebec, Bell, and TELUS. However, for remote/isolated areas, the availability of transport services is extremely inadequate and underserved. For this reason, FNEC supported the development of three transport projects going from James Bay through Mauricie to Montreal, and also in the Basse Cote Nord regions.

39. In the case of the Atikamekw projects of Opitciwan and Wemotaci, the relations with the utility power company operating Optical Ground Wires (OPGW) helped with the deployment of fiber optic transport networks. A partnership between the Atikamekw Nation and the Cree Nation is now building a North-South fiber optic highway federating the Cree and Atikamekw networks and connecting them to multiple urban areas, including Montreal.

Q3b. Indicate whether these projects would serve end-users that are located in a 25 populated square kilometer hexagons with currently no availability of USO level service. If the answer is no, specify whether these end-users are located in rural areas. (In the Notice of Consultation to this proceeding, rural areas were defined as having a population of less than 1,000 or a density of 400 or fewer people per square kilometre).

40. **Clear Sky Connections:** Yes.

41. **K-Net:** Yes.

42. **FNEC:** Yes.

43. Please note that all of our members responding to this proceeding serve **rural areas** as defined in this Notice of Consultation.

B. Access to Dark Fibre

Q1. To the extent that you own dark fibre in Canada, provide the following information:

a. Terms under which your dark fibre is currently available to third-parties for the purpose of providing USO level fixed high-speed Internet services (50 megabits per second (Mbps) download and 10 Mbps upload).

44. **K-Net** has some dark fibre at Sioux Lookout townsite, which connects local buildings. K-Net could sell wholesale access to anyone; however, all available capacity is used by existing customers. The capacity is currently full, and the electronics are quite outdated. K-Net has also researched to see what dark fibre might be available in Northwestern Ontario. According to their research there is no dark fibre available.

45. **FNEC** is the steward of all fiber infrastructure it deploys to First Nations in Quebec. FNEC is given the mandate by its member communities to manage and report on this infrastructure. A total of 19 First Nations have received fiber infrastructure connectivity for their public sector institutions. These infrastructures are governed by First Nations, who are always open to working with third parties if it is in their best interest to do so, in order to improve services for their members.

46. Usage of dark fiber with electricity utilities or in fiber optic condominium arrangements can significantly benefit connectivity for First Nations communities and the regions where they are located. Transport infrastructure is and should be a regional infrastructure connecting and serving a whole territory: Transport is a regional problem and so should be shared between parties to support viable projects and operations. FNEC points to two examples of this kind of cooperation:

    - The first example is a condominium fiber transport structure. Typically, electrical utilities use telecom networks for the surveillance and control of their power grid, and typically

prefer fiber optic for that purpose. The joint deployment of a fiber infrastructure benefits involved parties by splitting the capital investment and the operations costs, making such projects more viable. Condominium cable projects can also involve multiple parties, communities and regions to support transport networks.

- The second example is the purchase of dark fiber from an electrical utility to serve as a transport backbone for communities. Multiple models can be developed, but typically this involves pro-rated costs which make the net cost for the transport more accessible to involved partners. Other advantages are that such telecom projects are greatly simplified, and the robustness of Overhead Ground Wire is high. Such projects require strong and continuous communications between all involved parties. A specific example of this arrangement involved the Atikamekw and Cree Nations partnering to build a north-south fiber network to connect their communities and regions to urban areas via a network that extended to Montreal. This initiative resulted in the Société de télécommunications Atikamekw Cri (STAC), a network that should be operational in 2021. This is the first high capacity telecom highway that crosses the province of Quebec from North to South.

47. Achieving such results take time, perseverance and continuous effort. In the Opitciwan, Wemotaci and STAC projects, FNEC worked with stakeholders and provided steady and continuous support throughout the life of the projects, which ranged from 7 to 10 years.

48. **Clear Sky Connections** has no dark fibre available.

b. If your dark fibre is not currently available to third-parties for the purpose of providing USO level fixed high-speed Internet services, indicate the terms under which you may consider making your dark fibre available for third-party access for that purpose.

49. See the response from **K-Net** above. No spare capacity is available.

C. Rights of Way

Q1. Describe situations where you have experienced delays and costs associated with negotiating rights of way to install infrastructure to provision fixed high-speed Internet access services of at least USO level (50 megabits per second (Mbps) download and 10 Mbps upload) in areas where such services were not available.

50. **Please note** that the comments below refer to broadband upgrades in general. Opportunities to provide USO level service (50/10) are generally not available. We also note that our prior submissions in these proceedings provide additional examples of these barriers.

51. **K-Net** notes that when Bell was building fibre and using Hydro lines, it experienced delays when asking for permits. In Wabigoon First Nation, this resulted in 3-year delays to provide service. During a CTI-funded Bell project in Wabaseemoong First Nation, there were delays of over a year after asking Bell for updates, despite the fact Bell had been funded to build the fibre.

52. **WJBTN** points out the high costs it must absorb:

> "We are trying to hold the line at $150 per month for the end-user. However, our pole attachment fees are now double for the 100 or so poles we had in each community. These poles were used for the fibre run that serves our anchor institutions [health clinic, school, Band office, etc.]

> However, with fibre to the home, we will have to pay pole attachment fees for every single street for every pole on that street. So instead of paying $22.35 for 100 poles in each community, we had budgeted for paying $22.35 each for 500 poles per community [total $ 33,525 for 3 communities], and we had taken that amount into consideration when we arrived at the $150.00 price.

> Now the pole attachment fee has doubled to $44.70. The pole attachment fees will eventually end up at $ 44.70 x 500 poles per community x 3 communities = $67,050. WJBTN will therefore have to come up with an additional $33,525 or about $2.50 per customer per month to cover the increased pole costs.

> Also, the price of bandwidth has increased 40 percent per mb (instead of decreasing as would be expected with more capacity), so WJBTN needs, or to come up with about another $140,000 per year for bandwidth and shelter upgrades, or about $10.25 per month per customer."

53. **FNEC** stated that whenever they go into communities, they discover poles are often old and poorly maintained. Owners of these support structures benefit when First Nations fiber projects finance repairs, maintenance and upgrades. Also, First Nations projects face continuous and repeated delays, without adequate explanation as to why. Such issues result in significant costs for projects undertaken by FNEC, which has had to wait as long as two years to obtain necessary permits.

54. FNEC explains that in Quebec, there is a centralized system called DUSS that is used to register and manage pole access. However, there is limited communication between parties involved in DUSS (such as TSPs, pole owners and third parties), which puts the onus on groups like FNEC to monitor and follow up with DUSS. As well, although there are rules

and policies to follow, there does not seem to be anyone monitoring or enforcing those rules. It appears that in some cases the telcos do not even know the condition of the poles in the communities. In cases involving the installation of fiber, telcos will ask a First Nations project to pay for pole structures, but much of the time those same telcos will not do repairs for the installation of their own cables.

55. In one case, FNEC was deploying fiber infrastructure in a community where there was a mixture of poles owned by the community and the Hydro utility. The community, which has a few hundred residents, uses a generator to furnish electricity throughout the community and so requires a thicker gauge of cable for distribution. FNEC was required to install two new poles, and had to complete re-engineering of the cable. However, these conditions did not apply to the incumbent telco that already had their cable infrastructure installed. This project took approximately 18 months for FNEC to complete.

56. In northern Manitoba, **Clear Sky Connections** uses Manitoba Hydro's electric poles, and pays a monthly or annual rate for use. The permitting process takes a long time. Manitoba Infrastructure manages the process. For Nelson House, Clear Sky had to wait 4 to 6 months for permits to connect communities via 76 km of fibre. For some other communities they had to wait 6 to 7 months.

Q2. Provide views, with rationale, on the role you would like the Commission to play in order to prevent situations where access to rights of way becomes the reason for USO level fixed high-speed Internet access services projects being delayed or not built.

Timeliness:

57. As noted above, delays in obtaining required permits for access to fibre, conduit, poles or other infrastructure can both delay and increase the costs of broadband projects. These delays are particularly significant when the provider has received public funding based on a specific budget and timeline to complete the project.

58. The CRTC should therefore establish guidelines for time required to issue permits from other operators for access to poles or other infrastructure. We believe permits should be issued within three months. The CRTC should provide a mechanism for providers to report delays when this deadline is exceeded and should have the power to sanction delinquent entities with fines or other penalties.

Pricing:

59. The CRTC should establish regulated wholesale pricing for access to transport networks built using public funds (e.g. Mackenzie Valley Fibre Link) so that competitive ISPs can offer services using this backbone infrastructure.

60. Regulation of pricing of pole attachments and transport by incumbent TSPs should not be forborne in rural and remote regions.

61. Regulation of wholesale transmission service rates is inadequate to support the needs of Internet Service Providers in remote regions which have invested scarce capital or received public funding to deploy modern broadband infrastructure that can support gigabit and higher capacity, including requirements for critical services requiring real time, symmetrical video connections.

Access to Facilities owned by Public Utilities

62. Several of our members lease capacity, or intend to lease capacity, from provincial electric utilities. In some cases, they face major delays and price increases from these utilities. We realize that the CRTC does not regulate electric utilities. **However, we recommend that the CRTC should meet with CAMPUT (Canada's association of utility regulators) and the Canadian Energy Regulator (CER) to determine how permitting for telecom use could be streamlined, and how pricing can be kept reasonable in order not to render rural broadband unaffordable.**

63. We note that the CER's vision is:

> "to transform the way we work with Indigenous Peoples, recognizing their unique cultures, knowledge and histories; and endeavor to reflect a renewed Nation- to-Nation relationship based on the recognition of rights, respect, cooperation and partnership.
>
> We recognize reconciliation is an ongoing process that occurs in the context of evolving Indigenous-Crown relationships. Sitting around the table with Indigenous communities, we are working to find new ways to co-manage regulatory oversight…. We are also ensuring we equip the communities with the right skills and support to make the changes we envision a reality."[3]

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[3] See https://www.cer-rec.gc.ca/en/consultation-engagement/indigenous-engagement/index.html

64. We note that the CER has also established Indigenous Advisory and Monitoring Committees (IAMC) that bring together Indigenous and federal leaders to provide advice to regulators.

Indigenous Rights of Access:

65. We further emphasize that Indigenous communities should have right of access to any fibre crossing their traditional territories.

D. Infrastructures Database

Q1. Provide views, with rationale, on: Whether the Commission should create, with the information it already collects on fibre and support structures, a database and/or maps, as suggested by some parties to the proceeding.

66. We note that FMCC has included comments supporting creation of databases and updated maps earlier in this proceeding. In paras 90-94 of our Reply Comments we stated that:

> We emphasize the need for timely and meaningful methods for updating data as it is reported by providers. Federal resources convey detailed information about broadband infrastructure by providing access to summative geo-spatial data using on-line platforms. The CRTC's current fixed broadband and transport and broadband in-reserve mapping tools highlight service development requirements for achieving universal service objective levels and outline community-based LTE, 5 Mbps and 50 Mbps availability. For example, in Northwest Ontario: "When consulting these resources about the NWOBEI build regional and community-level information was found to be out-of-date and incorrect."[4]

67. We also refer in our Reply Comments to other parties that endorse up-to-date and detailed maps and databases available to all.

68. Maps of our regions are often erroneous or incomplete, showing service availability for entire communities or areas when only a few locations have service.

69. There is also no general documentation of the condition of infrastructure in communities. This lack of information can result in costs and delays to locate the infrastructure and document its condition.

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[4] Rowlandson, John. (2020) "Getting up to Speed in 19 Sioux Lookout Area First Nations." Unpublished report, p.19. March.
https://knet.ca/sites/default/files/Download%20Final%20Report%20on%20Northern%20Broadband%20Services%20March%202020.pdf

70. A database would therefore be very useful. It should include:

- Location of dark fibre;
- Location and condition of support structures;
- Location of towers;
- Age, condition and capacity of electronics.

71. Information in data bases and maps should be reviewed and updated annually. Owners of infrastructure who do not provide annual updates, or who provide erroneous or out-dated information, should be subject to penalties such as fines.

Q2. The appropriate level of information from the database/maps that should be made publicly available.

72. We believe that **all** of the information from the databases and maps should be made publicly available.

73. Also, the cost and terms of leasing capacity on transport networks built using public funds should be made public.

74. However, if providers succeed in classifying some information as proprietary, project officers should be able to apply for this information and receive it in a timely manner in order to plan projects and submit proposals for funding.

Q3. The level of information that should only be provided, by the Commission, to service providers that submit to the Commission a valid broadband-capable network expansion plan.

75. As noted in our answer to Q2, we believe **all** information should be made publicly available.

E. Spectrum

76. We have added the topic of **spectrum**. We are aware that spectrum is under the jurisdiction of ISED, but believe that the CRTC should also consider the importance of spectrum as critical infrastructure in rural and remote regions.

77. Our members point out that Bell and other wireless providers generally do not utilize their spectrum rights in remote communities because they have higher priorities in areas with much greater demand and expected return on investment.

78. In regions where providers do not utilize their spectrum rights within three years, local and Indigenous providers should be able to apply to use that spectrum.

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