



December 21, 2015

VIA EMAIL: ic.telecomsubmission-soumissionitelecom.ic@canada.ca

Director General,
Telecommunications Policy Branch
Industry Canada
10th Floor, 235 Queen Street
Ottawa, Ontario K1A 0H5

Dear Sir or Madam:

Re: The City of Calgary – Submission Regarding Notice No. DGTP-002-2015, Petition to the Governor in Council concerning Telecom Regulatory Policy CRTC 2015-326 by Bell Canada

The City of Calgary submits the attached Submission, pursuant to the procedure set out in 21 November 2015 Canada Gazette, Part I, with respect to Notice No. DGTP-002-2015, Petition to the Governor in Council concerning Telecom Regulatory Policy CRTC 2015-326 by Bell Canada.

Yours truly,

A handwritten signature in purple ink, appearing to read "Naheed", written over a faint circular stamp.

Mayor Naheed K. Nenshi

and

A handwritten signature in blue ink, appearing to read "Glenda", written over a faint circular stamp.

Glenda E. Cole, Q.C.
City Solicitor
MBE/jl

Cc: Clerk of the Privy Council and Secretary to the Cabinet

**Petition to the Governor-in-Council
by Bell Canada**
**Regarding Telecom Regulatory Policy 2015-326, *Review of
wholesale wireline services and associated policies:***

**Bell Canada – Application to Vary Telecom Regulatory
Policy CRTC 2015-326**



**SUBMISSION OF
THE CITY OF CALGARY**

December 21, 2015

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EXECUTIVE SUMMARY

- ES.1 This submission is filed by The City of Calgary pursuant to the procedure set out in 21 November 2015 Canada Gazette, Part I, with respect to Notice No. DGTP-002-2015, *Petition to the Governor in Council concerning Telecom Regulatory Policy CRTC 2015-326*, submitted by Bell Canada (the “Petition”).
- ES.2 In Telecom Regulatory Policy 2015-326 (the “Decision”), the *Canadian Radio-television Telecommunications Commission* (“CRTC”) directed incumbent carriers to begin implementing disaggregated wholesale high-speed access services (“DBS”). As a result of the Decision, incumbent carriers are directed to permit access to their “fibre access facilities” at wholesale rates to be determined by the CRTC in future proceedings. The Decision does not require incumbent carriers, such as Bell Canada, to provide access to their “fibre transport facilities” (middle-mile facilities).
- ES.3 The City of Calgary (“Calgary”) participated in Telecom Notice of Consultation 2013-551 (the “Proceeding”) for two reasons:
1. First, one of the [dominant considerations before the CRTC during the Proceeding was the transition of the telecommunications industry to fibre and/or FTTP networks. Considerations focused on whether access to such networks should be mandated under the wholesale services framework. The transition to fibre networks and FTTP networks, in a facilities-based competitive environment, has the potential for multiple carriers to apply to Calgary for alignments to construct multiple fibre networks. Calgary expressed significant concerns about the capacity of its municipal rights-of-ways (“ROWS”) for multiple installations of new fibre networks. Associated with the capacity of ROWs are the capacities of support structures to accept new installations of fibre networks, particularly the most accessible and cost-effective support structures, which in Calgary are power poles. Limited capacity in both ROWs and support structures ensures that incumbent local exchange carriers and cable carriers will be the only entities that will be able to install a fibre network in any substantial manner in Calgary, since, by virtue of their position as incumbents, they have existing legacy rights to alignments in ROWs and access to power poles that they can utilize for construction of their fibre networks.
 2. Second, Calgary has its own fibre network that it has constructed over time. Calgary is currently focused on capital investments in the development of new infrastructure for a burgeoning population. Although Calgary’s fibre network is in its infancy, its fibre network plays a critical role in providing municipal services to residents. By installing excess capacity of fibre in the process of building out its fibre network to provide municipal services, Calgary can complement the services provided by carriers and indirectly enhance competition in the telecommunication marketplace.

- ES.4 Contrary to Bell Canada’s assertions about the Decision in its Petition, the CRTC does a masterful job of balancing multiple interests, promoting facilities-based competition, allowing for innovation in facilities-based competition and fostering resale competition in the telecommunications industry. The Decision addresses concerns expressed during the Proceeding relating to the incumbents’ market dominance and incumbents’ legacy access to ROWs and other urban infrastructure for installation of fibre networks. Consumers will ultimately benefit from the Decision.
- ES.5 Although Bell Canada asserts that “fibre-to-the-home requires a brand new build using no legacy components” and makes the argument that “all potential service providers wishing to offer ... new fibre-to-the-home Internet services ... begin from the same starting point”,¹ Bell Canada’s assertion conveniently ignores that its rights of access to existing alignments in ROWs and support structures are legacy rights that cannot be duplicated in many cases, with the result that such legacy rights constitute an outright prohibition to new installations of fibre facilities by non-incumbent carriers. DBS addresses this issue. DBS does not allow incumbents to take advantage of legacy rights of access to ROWs and support structures and thereby maintain monopoly or duopoly status in the geographical areas where they provide telecommunications services.
- ES.6 The Decision stimulates investment in fibre transport facilities in a number of ways, as is discussed in more detail in the following pages. The CRTC acknowledges that there may be limited availability of fibre transport facilities in some geographical markets and it “may take time for competitors to build the necessary transport facilities”² due to the lower demand that existed under the aggregated wholesale HAS service model. Nevertheless, in order to benefit from DBS, competitor carriers will be induced to build fibre transport facilities.
- ES.7 The Decision also allows for innovation in facilities-based competition. As noted above, Calgary has its own fibre network that it has constructed over time for the purpose of providing municipal services and which it continues to build. The Decision facilitates the building of municipal transport networks by creating a market for the leasing or licensing of municipal fibre. This has significant benefits for municipalities, carriers and consumers:
1. Municipalities are skillful in managing infrastructure in all forms, and this skill can be put to excellent use in managing a fibre network by providing excess capacity fibre for licensing to all carriers on a non-discriminatory basis.
 2. A municipality’s deployment of fibre is ubiquitous, as municipal governments are not concerned with “markets” for their services—their services are provided to all citizens regardless of location or economic benefit.
 3. Competition in the downstream market is not impeded by the lack of available alignments in ROWs or conveniently accessible and cost-effective support structures.

¹ Petition at para. E15 (see also para. 47).

² Decision at para. 149.

4. Bottlenecks for the installation of fibre facilities are eliminated.
5. The construction of fibre networks in municipalities is beneficial for the local economy in the same manner that a carrier's construction of a fibre network is beneficial to the economy. Moreover, an open, operator-neutral transport network is of ongoing benefit to local economies and the telecommunications industry.

ES.8 Given their public interest mandate, municipalities share the objectives of the CRTC and federal and provincial governments. For this reason, municipal transport fibre networks constitute a model that is taking hold in both Europe and the United States and is a model that DBS facilitates. The benefits of that model are considered in the following pages. In the follow-up implementation proceeding to the Decision, Calgary will be exploring its options to proceed with a municipal pilot project for implementation of DBS that will advance the Policy Objectives in a manner consistent with the Policy Direction.

1.0 INTRODUCTION

1. This submission is filed by The City of Calgary pursuant to the procedure set out in 21 November 2015 Canada Gazette, Part I, with respect to Notice No. DGTP-002-2015, *Petition to the Governor in Council concerning Telecom Regulatory Policy CRTC 2015-326* (the Petition).
2. In addition to any defined terms used in the Executive Summary, the following terms are used throughout this submission:
 - a) **Act** means the *Telecommunications Act*, S.C. 1993, c. 38 (as amended);
 - b) **Alignment** means a defined segment of space located in a ROW that is designated to a TSP or other utility, which is used to install Facilities or other utility infrastructure;
 - c) **Bell** means Bell Canada;
 - d) **Carrier** means a Canadian carrier, as defined in the *Act*, that is not an Incumbent;
 - e) **Facilities** means telecommunications facilities as defined in the *Act*;
 - f) **Final Submissions** means the final written submissions submitted 19 December 2014 by Calgary to the CRTC during the Proceeding;
 - g) **FTTP** means fibre-to-the-premises;
 - h) **Incumbent** means the incumbent local exchange carrier and any incumbent cable carrier operating in a geographical area;
 - i) **Legacy Rights** means the Incumbents' existing rights of access to Alignments in ROWs, existing ownership of telephone poles located on the surface of ROWs, and existing rights of access (through long-standing agreements) to support structures such as power poles, all of which are a legacy of their "Incumbent" status.
 - j) **Oral Hearing** means the oral hearing portion of the Proceeding held from 24 November 2014 through to 4 December 2014, including the Presentation and Reply Phases;
 - k) **Policy Direction** means the Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunication Policy Objectives, SOR 2006-355;
 - l) **Policy Objectives** means the objectives set out in Section 7 of the *Act*;
 - m) **Presentation** refers to Phase I of the Oral Hearing;
 - n) **Proceeding** means the Telecom Notice of Consultation 2013-551: *Review of wholesale services and associated policies*, including the Oral Hearing and Final Submissions;
 - o) **Reply** means Phase II of the Oral Hearing;
 - p) **TSP** means telecommunications service provider and includes an Incumbent or other Carrier.
3. In its Petition, Bell asserts that the Decision will
 - a) reduce investment in FTTP infrastructure,
 - b) reduce investment and deployment of FTTP in smaller and rural communities,
 - c) lead to loss of employment in Canada as a result of the Incumbents' reduced investment and deployment of FTTP,

- d) undermine the competitiveness of the Canadian economy, and
- e) result in Canada losing its broadband leadership position.

Bell further alleges that it is impossible for the CRTC to set a wholesale rate that adequately compensates Incumbents for their investment in FTTP networks.

4. Bell's Petition should be recognized for what it is: Bell's attempt to maintain its dominance as a provider of telecommunications services and potential status as a monopoly provider of FTTP services in the geographical areas of Canada where it provides telecommunications services.
5. Bell submitted its Petition pursuant to Section 12 of the *Act*, which holds that if the Governor-in-Council receives a petition in writing within 90 days after a decision is made by the CRTC, the Governor-in-Council may on its own motion, by order, vary or rescind the decision and send the decision back to the CRTC for reconsideration of all or a portion of it.³
6. Pursuant to the *Act*, Bell was required to send a copy of the Petition to the CRTC at the same time that the Petition was presented to the Governor-in-Council.⁴ The CRTC was then required to send a copy of the Petition to each person that made any oral representation to the CRTC during the Proceeding.⁵ Calgary made representations in the Oral Hearing to the CRTC on November 28, 2014. However, Calgary, like many other participants in the Proceeding, did not receive a copy of the Petition until it was posted on the website of Industry Canada on or about November 21, 2015. A failure to receive a copy of the Petition in a timely manner has resulted in disadvantaging participants in the Proceeding by placing significant time constraints on their ability to reply to the Petition.
7. Prior to making a recommendation to the Governor-in-Council for the purposes of an order under Section 12 of the *Act*, the Minister must notify a minister designated by the government of each province of the Minister's intention to make the recommendation and provide an opportunity for the provincial ministers to consult with the Minister. Calgary is likely the only large municipality submitting a response to the Petition. As such, Calgary respectfully requests that it be provided with an opportunity, along with the provincial minister, to consult with the Minister relating to the Minister's recommendation to the Governor-in-Council.

³ *Act*, s. 12(1).

⁴ *Act*, s. 12(2).

⁵ *Act*, s. 12(3).

2.0 GOVERNMENT OBJECTIVES AND THE POLICY DIRECTION

8. Bell's assertions throughout its Petition focus solely on economic arguments that are designed to demonstrate the disastrous economic consequences of the Decision. Privately owned TSPs are profit-driven entities and can reasonably be expected to act in a manner, and make decisions, that will increase revenues and do so in a way that simultaneously increases their profits. However, governments, whether they are federal, provincial, or municipal, subscribe to a "Triple Bottom Line" philosophy (taking into account social, environmental and financial concerns in decision-making) and do not have the luxury of making decisions based solely on economic criteria. Governments operate under mandates to consider the public interest in all of their activities.⁶
9. The foregoing purposes of government bodies align the goals of governments with the Policy Objectives, more particularly with the objectives of developing a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and which is responsive to the economic and social requirements of users of telecommunication services.⁷ Governments understand the importance of telecommunication facilities in achieving safe and viable communities. The services offered by government are often dependent on telecommunications facilities and many governments own or license facilities for such purposes.
10. UN Secretary General Ban Ki-moon has stated that "broadband connectivity is a transformative tool to achieve the three pillars of sustainable development – economic growth, social inclusion and environmental balance".⁸ On World Telecommunication Day 17 May 2014, Hamadoun I. Toure, Secretary-General of the International Telecommunications Union declared:

Broadband connectivity is a critical element today in ensuring that information and communication technologies are used as effective delivery vehicles for health, education, governance, trade and commerce in order to achieve sustainable socio-economic growth.⁹

He called on the global economy to "roll out high-speed broadband networks, making digital communication affordable as well as universally accessible".¹⁰
11. All governments, whether they be federal, provincial or municipal acknowledge the benefit of high-speed broadband connectivity for their economies and for the well-being and benefit of their citizens, as broadband connectivity improves economic, educational and healthcare

⁶ Increasingly, municipalities are taking into consideration a fourth criterion: resiliency. Resiliency refers specifically to the ability of a government body, its citizens and its businesses to recover and function normally after an emergency. Resiliency relies on redundancy, which is the duplication of components that act as insurance against a primary unit failure. Multiple TSPs and competition between TSPs provide redundancy.

⁷ Act, ss. 7(a), (h).

⁸ 'Turn digital divides into digital opportunities,' Ban tells annual UN forum on Internet governance (17 May 2014), online: UN News Centre < <http://www.un.org/apps/news/story.asp?NewsID=47817#.Vm4GIo3lteI> >

⁹ *Ibid.*

¹⁰ *Ibid.*

outcomes. Municipal governments provide a significant number of services that require fibre Facilities, such as water, natural gas and other hydro-carbons, wastewater removal, storm water removal, electricity, street lighting, thermal pipes, traffic operation infrastructure, police services, fire services and public safety and communication services. In addition, Calgary provides supervisory control and data acquisition (SCADA) network services, information technology services, corporate security services, property management services and parking authority services to the corporation. Thus, municipal governments are keenly aware that fibre networks benefit their communities and facilitate the provision of public services.

12. Municipal governments work with the Incumbents and appreciate their ongoing development of the telecommunications industry. However, municipal governments also seek to benefit from improvements to the telecommunications industry, such as heightened sensitivity to municipal concerns, increased competition, and better services for citizens. Calgary believes DBS is a significant impetus for change that will drive the foregoing improvements and compensate for the fundamental advantage of Legacy Rights enjoyed by the Incumbents.

3.0 BENEFITS OF DBS

3.1 CRTC's Objective: Promoting Competition

13. Both the Canadian Policy Objectives and Policy Direction provide mandates to promote competition. The CRTC's objective in the Decision was to increase competition in a traditional facilities based competition market where the capacity and ability to install Facilities is becoming increasingly limited. The CRTC acknowledged the "impediments to ... duplication [of Facilities] such as "securing capital and rights-of-way".¹¹ Continued reliance on a strictly facilities-based competition market would maintain the status quo. The vertically integrated structure of the Incumbents, and Legacy Rights foundational to that structure, enable them to dominate the market and benefit from the revenues associated with such market dominance. The Media and Internet Concentration Report, 1984 – 2014 ("MIC Report") published in November 2015, shows that 90.6% of the residential retail internet access market is accounted for by the Incumbents on the basis of revenue, or 89.3% when measured on the basis of subscribers.¹² The MIC Report reports that "the incumbent telcos and cable companies account[] for just under four-fifths of the market by revenue". The Incumbents monopoly or duopoly position and Legacy Rights constitute a significant advantage that provide both the financial ability and capacity to install new Facilities, advantages which other Carriers just do not have.

¹¹ Decision at para. 186.

¹² Dwayne Winseck, Director, Canadian Media Concentration Research Project, The Media and Internet Concentration Report, 1984 – 2014 (November 2015), online: < http://www.commediaconverge.ca/sites/default/files/documents/2015-Media_InternetConcentration1984-2014_for_web.pdf > (p.24) (MIC Report).

14. Plainly, the CRTC thinks Canada's telecommunications industry can do better. As succinctly stated in the MIC Report:¹³

Such observations underpinned the CRTC's decision earlier this year that found that the indy ISPs will still need regulated wholesale access to the incumbents' *local* Fibre-to-the-Premise networks if they are not to be left to wither on the vine as internet access migrates from copper and coaxial cables to fibre to the doorstep. The Commission's decision did not mince words:

1. "incumbent carriers continu[e] to dominate the retain Internet access services market" (para. 125);
2. "there is limited rivalrous behaviour to constrain upstream market power" (para. [123]);
3. wireless Internet access is **not** an acceptable substitute for wireline facilities on the grounds of significant disparities in terms of price, speed, capacity and quality (para. 126);
4. whatever "competition that does exist today is ... a result of regulatory intervention" (para. [123]).

15. In its Petition, Bell frames the issue before Cabinet as a choice between fostering "resale competition" versus fostering "facilities based competition" and alleges that the Decision favours "resale competition over creating incentives for facilities based investment".¹⁴ Bell further asserts that the CRTC has "depart[ed] from Canada's long-standing policy of facilities based competition....".¹⁵
16. Bell's framing of the issues in the Petition misrepresents the substance of the Decision. The CRTC's implementation of DBS is not mandating access to fibre transport Facilities. The CRTC states that "facilities-based competition is best achieved by requiring incumbent carriers to make available facilities that are "essential" for competition",¹⁶ and determines that fibre access Facilities are such Facilities. The CRTC's objective is clear: "The desired outcome is that once competitors are given access to certain facilities (for example access facilities), they are incented to enter the market and invest in other parts of the network, eventually leading to lower prices, innovative service offerings, and greater choice for consumers."¹⁷ DBS is creating and/or bolstering incentives for competitors to invest in fibre transport Facilities.
17. In the Decision, the CRTC does a masterful job of promoting facilities based competition and, moreover, allows for innovation in facilities based competition while facilitating resale competition. In mandating DBS, the CRTC addresses the Incumbents' market dominance and Legacy Rights and allows for access to the Incumbents' fibre access Facilities by other

¹³ *Ibid.* (p.24).

¹⁴ Petition at 24, para. 20.

¹⁵ Petition at 18, para. 7.

¹⁶ Decision at para. 6.

¹⁷ Decision at para. 7.

Carriers to the ultimate benefit of the consumer. It is a perfect example of the Privy Council's assertion in the Canadian case of *Minister for the Dominion of Canada v. City of Levis* ("Levis") that a duty to supply, for a reasonable cost, may arise "from the circumstances and from the relative positions of the parties".¹⁸ *Levis* will be discussed in more detail later in this submission.

3.2 Incentives for Investment

18. In the Petition, Bell alleges that DBS will significantly reduce investment in the construction of fibre Facilities, and that after receiving access to the Incumbents' fibre access Facilities, other TSPs will not invest in additional fibre transport Facilities but will seek to license the Incumbents' fibre transport Facilities.
19. The CRTC acknowledged that there may be limited availability of fibre transport Facilities in some geographical markets and it "may take time for competitors to build the necessary transport facilities" due to the lower demand that existed under the aggregated wholesale HSA service model.¹⁹ However, it is expected that the Decision will significantly stimulate the investment in fibre transport facilities, so that competitors can benefit from licensing of the Incumbents' fibre access Facilities—whether that investment be for the construction of transport Facilities or licensing transport Facilities constructed by another Carrier. The Decision specifically contemplated that competitors may either invest in transport Facilities or lease/license those facilities from another Carrier.²⁰
20. The Decision ensures that Carriers have numerous incentives to invest in fibre transport Facilities, as follows:
 - (a) Consumer demand for service speeds in excess of 100 MBPS, like those available over FTTP, will continue to climb steadily. Since the CRTC ruled that TSPs may only access customers served via DBS, the incentive is created to construct fibre transport Facilities.²¹
 - (b) Where it is possible to do so, it makes long-term business sense for other TSPs to build their own fibre transport Facilities to Points of Interconnection (POI) than to perpetually license fibre transport Facilities from third parties (in order to maximize cost savings).
 - (c) TSPs will want to build fibre transport Facilities in order to license them to other TSPs who may not have the capacity to build out to a specific POI themselves (which will also accelerate the TSPs' return on its investment).

¹⁸ (1918), [1919] AC 505; 45 D.L.R. 180 (PC), cited in Michael H. Ryan, Telecommunications Carriers and the "Duty to Serve", 57 McGill L.J. 519 at 522-523 (Ryan).

¹⁹ Decision at para. 149.

²⁰ Decision at para. 57.

²¹ Decision at para. 153.

- (d) Constructing and owning their own fibre transport Facilities will provide TSPs with a greater level of control over the services they can offer, and greater flexibility, than if they license fibre transport Facilities from another TSP.

21. As a result of the above incentives, TSPs will invest in fibre transport Facilities. Bell's assertions are therefore misleading in regard to the context and potential consequences of the CRTC's Decision. The Decision does not mandate that the Incumbents provide access to their fibre transport Facilities. Thus, Bell's fears in this respect are unfounded, because Bell does not need to license its fibre transport Facilities to other TSPs if it does not wish to do so. Presumably, in this case, if other TSPs want to access Bell's fibre access Facilities, they will be required to construct fibre transport Facilities or license them from another TSP who has constructed fibre access Facilities.

3.3 Innovations in Investment

22. Bell's assertions that investment will not occur if DBS is implemented are particularly misplaced with respect to municipal governments who are also provided with additional incentives by the Decision to invest in fibre transport Facilities. Supporting the investment in municipal fibre is remarkably innovative, as, similar to the Swedish Stokab model (discussed in more detail in Part 4.3 below), and similar municipal fibre infrastructure builds in the United States, it promotes the building of fibre infrastructure, as distinct from providing any related downstream telecommunication services. This has significant benefits for municipalities (and their economies), other Carriers and consumers. Municipal governments in Europe, and increasing numbers of municipalities in the United States are investing in fibre transport Facilities, with the support of government funding, for the following reasons:

- (a) Municipalities already invest in fibre transport Facilities as part of their business plans for monitoring and or providing municipal services, such as noted in paragraph 11 above.
- (b) Municipalities generally own and manage the ROWs and have their own existing Alignments in the ROWs, therefore the unavailability of an Alignment in a ROW is likely not a prohibition to the installation of fibre transport Facilities.
- (c) It is cost effective and efficient for municipalities to construct fibre transport Facilities at the same time that municipalities carry out large infrastructure projects, such as road work or the construction of transit facilities.
- (d) Municipalities can recover the cost of constructing fibre transport Facilities by licensing fibre transport Facilities to other entities who provide downstream telecommunications services and do not have the capacity or an available Alignment to construct their own Facilities.
- (e) Municipalities are skilled in managing infrastructure in all its forms and retain the expertise of engineers and other skilled workers on an ongoing basis who install and

maintain the infrastructure. Managing a fibre network is just managing one more piece of infrastructure.

- (f) Municipalities often build their own networks for themselves and to their civic partners and it is more cost-effective to provision their own fibre and provide those services than it is to license equivalent services from a Carrier.
- (g) Municipal fibre networks spur local economic development (see Parts 4.2 and 4.3 below).
- (h) Municipalities can provide cost-effective digital infrastructure in the form of dark fibre to public institutions, which improve educational and healthcare outcomes for the community.

23. The benefits for both governments and TSPs of the construction of fibre transport Facilities by municipalities is that:

- (a) competition in the downstream market is not impeded by the lack of Alignments in ROWs or conveniently accessible and cost-effective support structures for installation of fibre transport Facilities;
- (b) fibre deployment is ubiquitous, as municipal governments are not concerned with “markets” for their services—their services are for all citizens, regardless of location or economic benefit;
- (c) bottlenecks for the installation of Facilities are eliminated. Multiple installations of fibre across some ROWs or structures such as bridges are not convenient or cost-effective. Installation on these structures is critical for a TSP who wishes to serve customers on both sides of a river (for example). A TSP who is prevented from installing their facilities in one of these structures due to it being full of a competitor’s facilities will be at a significant disadvantage and may have to lay many kilometres of extra cable to compensate. By owning fibre in these crucial structures and licensing it out to all TSPs on a non-discriminatory basis, municipalities can facilitate fairness and competition; and
- (d) the capacity of ROWs can be managed more effectively and efficiently for the benefit of all utility providers that locate their infrastructure in ROWs.

24. Given their public interest mandate, municipalities share many goals with the CRTC and federal and provincial governments. Acting in good faith and in the best interests of the public circumscribes everything that municipalities do, and with their existing need to install fibre transport networks to provide ongoing and an increasing multiplicity of municipal services, municipalities are well placed to facilitate the advancement of the Policy Objectives with respect to building fibre transport networks.

25. As a result, it is evident that the Decision not only provides incentives to build fibre transport Facilities, but that it supports innovative approaches to the building of fibre transport Facilities by allowing municipalities (for instance) to be physical infrastructure providers. The incentives and innovative approaches have the potential to greatly improve the telecommunications market in Canada, enable next generation municipal services, as well as stimulate local economies.

3.4 Efficient Investment

26. In the event the Minister grants Bell's Petition, each TSP will have to provide its own fibre transport network (if capacity for such installation exists in a desired location) to allow the TSP to access an Incumbents' fibre access network. On this model, the ability of a TSP to license any excess capacity within its fibre transport network to other TSPs does not exist. Excess capacity remains unused and does not provide any opportunity for its owner to recoup initial investments for construction and installation. This scenario would result in the investment of millions of dollars on redundant infrastructure that is likely to be used at only a fraction of its total capacity. Further, as communicated by Calgary during the Proceeding, broad scale construction of fibre transport Facilities by every TSP would not be possible due to the unavailability of space in ROWs and on support structures to construct such Facilities. Broad scale construction by every TSP (*if that were physically possible*) would also likely increase consumer costs. The consequences of Bell's proposed framework is succinctly described in the Canadian Network Operators Consortium Intervention filed 4 December 2015 with the CRTC:²²

Bell's proposed framework is akin to building a dozen identical highways (transport) to a particular location (POI) even though a much smaller number of highways would comfortably accommodate all traffic to and from that location, now and into the future. In this example, the end-users would pay for all of the highways even though the vast majority of this infrastructure is seldom used. In parallel, the obligation to deploy transport at each and every POI would entail substantial costs that would necessarily trickle down to consumers—with no corresponding benefit.

While inefficient deployments of fibre transport Facilities or networks do not support recovery of TSPs initial investments or lead to any reduction in end-user costs, "efficient" fibre transport deployments may drive new forms of investment due to innovation in other areas of the telecommunications industry and ultimately reduce end-user costs due to efficient sharing of fibre transport Facilities.

27. Although the option to either construct or license fibre transport Facilities provides incentive for efficient network investment and innovation, the option to license fibre transport Facilities does not facilitate and support the monopolies or duopolies that continue to dominate the telecommunications industry in Canada. Alternatively, the ability to license fibre transport

²² Canadian Network Operators Consortium Inc., Intervention (CRTC File No. 8662-B2-201512161) (4 December 2015) to Bell Canada – Part I Application to Review and Vary Telecom regulatory Policy CRTC 2015-326 at para. 33.

Facilities facilitate and support competition, which is the driver of innovation and continued investment in the telecommunications industry as a whole.

28. Facilities based competition in the telecommunications industry has historically encouraged the sharing of Facilities such as conduits and support structures where doing so would advance the telecommunications industry in Canada. For instance, support structures have been categorized by the CRTC as a “public good” wholesale service based on the fact that duplicate support structures would result in an inefficient use of public land and private resources and would be an inconvenience to the public.²³
29. Continuing similar practices with respect to fibre transport Facilities will provide similar efficiencies, reducing the negative impact of duplicate infrastructure in ROWs and preserving the environment and aesthetics of dense urban communities.

4.0 CALGARY’S REPLY TO BELL CANADA

4.1 Legacy Rights: The Value Inherent in Legacy Networks for Deployment of Fibre

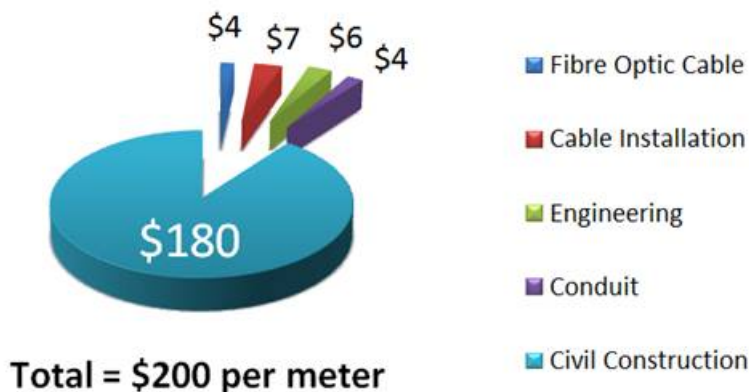
30. In its Petition, Bell states that “fibre-to-the-home requires a brand new build using no legacy components,” and makes the argument that “all potential service providers wishing to offer ... new fibre-to-the-home Internet services ... begin from the same starting point”.²⁴ Bell further argues that DBS will reduce investment in fibre Facilities because Incumbents will not receive an adequate return on their investment in fibre Facilities given that they do not derive any advantage from their legacy copper networks.
31. Although Incumbents may not derive advantage from their legacy networks, they do derive significant advantage from what Calgary calls “**Legacy Rights**”: existing rights of access to Alignments in ROWs, existing ownership of telephone poles located on the surface of ROWs, and existing rights of access (through long-standing agreements) to support structures such as power poles, all of which, in Calgary, are unavailable to other Carriers for installation of fibre Facilities. The Incumbents’ Legacy Rights exist simply by virtue of their Incumbent status.
32. For more than a century in Canada, Incumbents have benefitted from publicly funded support, protection from competition, and access to ROWs, support structures and government owned infrastructure, which allowed them to build huge underground and above-ground networks in municipal and provincial ROWs of conduits and telephone poles. In the era when the Incumbent telephone companies were building out infrastructure to provide telephone services, long-term agreements with other public utility owners for access to above ground power poles for installation of legacy infrastructure were also obtained. The Incumbents’ legacy infrastructure was established with public money and Legacy Rights—unrestricted access to public assets or to public utilities’ assets. For instance, in 1908, the

²³ Telecom Decision 2008-17, 3 March 2008 at para. 93.

²⁴ Petition at 9, para. E.15. See also 36 at para. 47.

Alberta government purchased Bell Telephone Company's operations and assets in Alberta for \$675K and formed Alberta Government Telephones. In 1990-1991, Alberta Government Telephones became TELUS, and in 1999, TELUS merged with BC Tel to form the TELUS we know today. The Incumbent TELUS continues to benefit from Legacy Rights obtained 107 years ago. Therefore, although it may be costly for Incumbents to pull new fibre facilities through their existing network of conduits, digging up a municipal ROW to install conduit and fibre will cost significantly more than that—if such access is available.

33. As an example, in Calgary, construction costs for installation of fibre (e.g., digging up ROWs to install fibre Facilities) is approximately \$200 per metre, apportioned as follows:



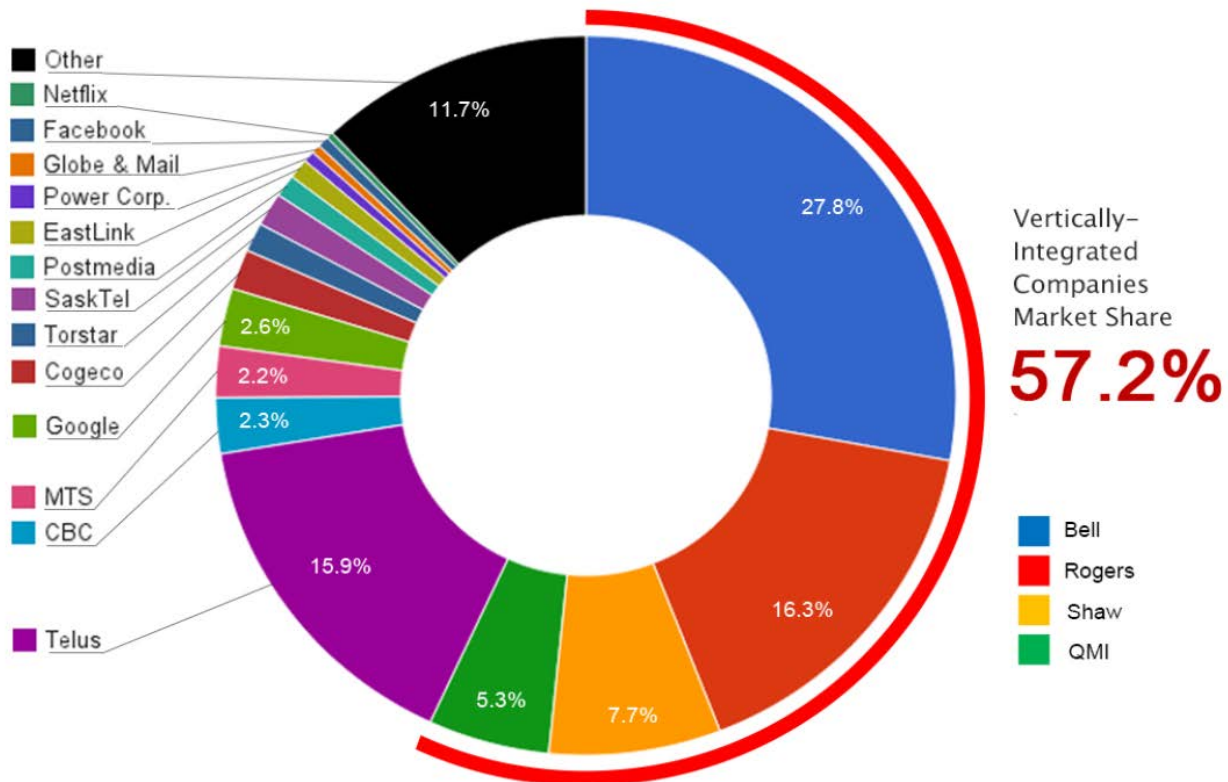
However, if an Incumbent is pulling fibre optic cable through existing conduit the costs drop dramatically to \$11 per metre, as the Incumbent pays only for the fibre optic cable and the costs of the installation of the fibre optic cable into existing conduit.

Overhead costs are irrelevant in Calgary as pole access is unavailable. TELUS and Shaw have Legacy Rights to ENMAX poles under long-standing agreements with ENMAX.

34. Incumbents' Legacy Rights have resulted in vertically integrated modern day monopolies (or duopolies) dominating the markets in the geographical areas they serve within Canada, as can be seen in the pie chart below:²⁵

²⁵ MIC Report, *supra*, at 15.

Figure 3: Vertical Integration and the Network Media Ecology, 2014



35. Telecommunications services, like the other utility services provided by governments, have become a necessary service in the twenty first century. Michael Ryan observes that the Canadian common law imposes a duty to serve on suppliers of water, electricity, and other public-utility services, and the same duty extends to telephone companies. Such a duty has not been extended to the provision of telecommunications services. Although the term “public utility” is not easily defined, entities that are traditionally perceived as public utilities have certain features in common: (i) they hold themselves out to the public as suppliers of a service that is considered essential, (ii) which is typically provided on a monopoly or quasi-monopoly basis, and (iii) they enjoy the privilege of constructing their facilities along, under or above public streets.²⁶
36. Ryan discusses the 1918 judgment of the Judicial Committee of the Privy Council in *Minister of Justice for the Dominion of Canada v. City of Levis*,²⁷ which provides some insight into the potential obligations of Incumbents based on Incumbents’ Legacy Rights.²⁸ *Levis* involved a dispute between the city and the federal government over the supply of water by the City of Levis to federal buildings. The Privy Council held that although the City did not have a legal monopoly over the supply of water, the court recognized “a right of public access to

²⁶ Ryan, *supra*, at 522-523.

²⁷ (1918), [1919] AC 505; 45 DLR 180 (PC) as cited in Ryan, *supra*, at 532.

²⁸ Ryan, *supra*, at 529-534.

essential services ... may exist outside of situations where a supplier has a legal monopoly or privilege, and that a duty to supply [for a reasonable price] may arise whenever a supplier enjoys a 'special advantage' in relation to the provision of such a service".²⁹ Ryan notes that "Levis has been accepted in Canada without reservation".³⁰

37. The Privy Council's assertion that a duty to supply may arise "from the circumstances and from the relative positions of the parties"³¹ finds its evolution in the telecommunications industry within the definition of "essential service" in the wholesale services framework.³² The Legacy Rights of Incumbents constitute an advantage that other Carriers cannot overcome. Through DBS, the CRTC is ameliorating the unduly preferential effect of Legacy Rights on the telecommunications market in Canada in the only way left to it—by mandating access to fibre access Facilities.
38. In its Final Submissions, Calgary asserted that Alignments in ROWs are, or are very similar to, an "essential service" in the wholesale services framework, with the exception that access to Alignments cannot be mandated when availability is limited or non-existent. In the wholesale services framework, the CRTC has the authority to mandate the sharing of essential services (at a reasonable rate determined by the CRTC). However, sharing of Alignments cannot be mandated by the CRTC in the same manner, as it is municipalities that own and control the ROWs and determine available capacity for installation of infrastructure.³³ The ability to obtain an Alignment is an issue of availability of space in a ROW. If space for additional Alignments is not available, a reasonable alternative is that when Incumbents install fibre in an Alignment for their own use, they can install excess capacity and license that fibre to other TSPs. This addresses regulatory concerns (CRTC has regulatory control), municipal concerns (addresses the availability of space in ROWs), economic concerns (CRTC can determine fair rates of return on investment for licensing of fibre Facilities) and meets the Policy Objectives in a manner consistent with the Policy Direction (increases competition and accounts for economic and social concerns). What it does not do is permit Incumbents to rely on Legacy Rights to maintain an iron grip on their monopoly or duopoly status in the geographical areas in which they provide service.
39. During the Proceeding, Calgary expressed significant concerns about the capacity of its ROWs for multiple installations of new fibre networks.³⁴ In dense urban environments,

²⁹ Ryan, *supra*, at 532.

³⁰ Ryan, *supra*, at 532.

³¹ Ryan, *supra*, at 532.

³² To be "essential" a facility, function or service has to satisfy the following conditions:

- i. The facility is required by competitors to provide telecommunications services in a downstream market;
- ii. The facility is controlled by a firm that possesses upstream market power such that withdrawing access to the facility, or having no access to the facility will likely result in a substantial lessening or prevention of competition in the downstream market; and
- iii. It is not practical or feasible for competitors to duplicate the functionality of the facility.

³³ *Municipal Government Act*, R.S.A. 2000, ch. M-26, ss. 16, 18.

³⁴ Reply Comments, Oral Hearing and Final Submission.

ROWs are at capacity. Deep utilities (water pipes, wastewater pipes and storm water pipes) and shallow utilities (electrical lines, natural gas lines, telecommunications facilities), as well as infrastructure for street lighting and transit are all located in urban ROWs. The demand for ROW Alignments continues to grow on all fronts as electric and natural gas utility providers rebuild old utility infrastructure, municipalities' rebuild water, wastewater and storm water infrastructure, Incumbents overbuild existing Facilities to take advantage of new technologies such as fibre, and new TSPs attempt to enter the telecommunications market. Calgary provided examples (and underground maps) of ROWs in Calgary that are at capacity where no Alignments are available for accommodating new installations of Facilities. A map was provided that identified areas in Calgary where the availability of Alignments are severely limited.³⁵ In all likelihood, these areas will never be serviced by any wireline Facilities based providers other than the existing Incumbents.³⁶

40. The surface of ROWs is also more in demand, with the installation of additional electrical facilities, telecommunication facilities and Canada Post installations, while at the same time ROW space is being decreased to accommodate higher population densities.³⁷ While the majority of telecommunication facilities are now installed underground (with the exception of aerial installations on poles), access to those underground facilities is provided through above-ground cabinets. These cabinets, which are of a significant size, are installed on laneways, roadways and private property. They take up more space in ROWs than poles do, provide a significant barrier to development for private property owners, and are aesthetically challenging to deal with for homeowners, business owners and municipalities.
41. Since Incumbents are the first TSPs to deploy fibre Facilities, they are also the first installers of fibre cabinets. If other TSPs want above-ground ROW space for the installation of cabinets for their fibre networks, citizens will express significant dissatisfaction in regard to placement of additional fibre cabinets in ROW space adjacent to their homes. Calgary already receives complaints from its residents about existing cabinets. TELUS has communicated that that they too received complaints. Such complaints will only become louder and more virulent if numerous fibre cabinets spring up in roadways and laneways where it is still possible to deploy additional fibre networks.
42. This is a challenging issue for both TSPs and municipalities to address, with few options for resolution that do not result in higher costs for the TSPs. The only alternative for reducing the number of cabinets is to install cabinets with multiple compartments for additional TSPs—i.e., shared fibre Facilities or DBS.
43. Bell's comments that it is impossible for the CRTC to set a wholesale rate for DBS that adequately compensates Incumbents for their investment are based on Bell's unwarranted

³⁵ Oral Hearing.

³⁶ During the Proceeding, Calgary noted that issues related to access of either ROWs or support structures could be alleviated if Incumbents were willing to share their existing rights to Alignments in ROWs and/or share telecommunications facilities through licensing. However, the responses of the Incumbents to requests for information by Calgary during the Proceeding demonstrate that Incumbents will not license or share Facilities voluntarily.

³⁷ Calgary City Council has approved a decrease in ROW width in new areas to 2.4 metres from the former 3.0 metres.

assumption that Bell should be able to expect a rate of return on its investment that is comparable to an unregulated monopoly.

4.2 Bell's Economic Assertions

44. In Attachments 1-3 of its Petition, Bell makes a series of assumptions that attempt to quantify the potential economic impact of Bell's investment in its FTTP network. The implied "costs" of the Decision will be the loss of thousands of jobs and economic output arising from the company's decisions to reduce the amount of investment in constructing FTTP networks. In addition to the direct economic effects of constructing FTTP networks, attempts are made to estimate the loss of ensuing spin-off effects such as boosting business productivity and the ability to attract talent to Canada. Bell's assumptions are difficult to assess due to a lack of Canadian data and the questionable validity of extrapolating the impacts seen in the United States onto the Canadian economy.
45. For example, Bell makes significant assertions regarding the impact on employment of FTTP deployment, using Atlantic Canada as an example. In Attachment 3 of the Petition, the authors conduct econometric analysis to assess the employment growth that resulted from investment in fibre facilities. However, standard analysis of the estimation results and methodology does not instil confidence in Bell's claims, as no attempt is made to isolate the effect of FTTP deployment on employment growth from the economic impact of other explanatory variables such as real provincial growth of GDP or population growth.
46. Bell contends that the Decision will effectively reduce the amount of Bell's investment in fibre optic network deployment because unbundling of FTTP reduces the expected return on its investment. However, Bell's petition would result in the company building fibre optic networks that are effectively monopolies in high end Internet service. The reduction or removal of competition in Bell's proposal will lead to higher rates for consumers and a higher return on investment for Bell. Is it reasonable for Bell to argue that it will reduce investment unless it receives a return on investment that exceeds that which would be attainable in a competitive market? Bell's arguments that there are no benefits to be had from increased competition and no long term benefits to consumers as a result of increased competition doesn't consider the higher costs to consumers that will result if the Minister approves its Petition.
47. The foregoing leads directly to other concerns with the criteria Bell sets out for investment in Attachment 2 at pages 9-10. In the analysis, the decision whether to invest in a given community is determined entirely by return on investment considerations. A community with an overall lower level of income would likely also have a lower uptake on high speed internet services. Bell's return on investment would be lower in such a community and, as a result, these communities would likely not be a recipient of Bell's investment in fibre Facilities. Calgary is very concerned that such a network development strategy will result in an increase in the digital divide between Canadians. The predictable result of Bell's Petition, if approved, does not accord with either the Policy Objectives or the Policy Direction.

48. Finally, Bell's economic arguments regarding the effect of the Decision on local economies and employment do not consider that construction of fibre transport facilities by other Carriers, including non-dominant carriers such as municipalities, will support local economies and increase local employment every bit as much, or more, than Bell's or other Incumbents' investments in fibre Facilities. As discussed in paragraph 47, while Incumbents make decisions to invest in fibre Facilities based on return on investment considerations, municipalities make decisions to invest in fibre Facilities based on the fact that it provides services to all citizens. As a result, investment in fibre Facilities by municipalities (for example) is not vulnerable to the same restrictions as investments by Incumbents.

4.3 Bell's Assertions Relating to Broadband Development in Europe

49. In its Petition, Bell has indicated that European countries have fallen behind other modern economies when it comes to broadband infrastructure due to past decisions to regulate FTTP.³⁸ However, recent studies cast serious doubt on Bell's assertions. European countries are rated high on the network readiness index within The Global Information Technology Report 2015, ICTs for Inclusive Growth, produced by the World Economic Forum:³⁹

Singapore tops the rankings this year, and even though this bumps Finland to 2nd place, seven of the top 10 this year are European. That is one more than in 2014, thanks to Luxembourg (9th), which—along with Japan (10th)—enters the top 10 at the expense of the Republic of Korea (12th, down two spots) and Hong Kong SAR (14th). As a result, only Singapore represents the Asian Tigers in the top 10. Besides Singapore and Japan, the United States (stable at 7th) is the only other non-European country in this group.

Europe is home to some of the best connected and most innovation-driven economies in the world. In particular, the Nordics—Finland (2nd), Sweden (3rd), Norway (5th), Denmark (15th), and Iceland (19th)—continue to perform well. Indeed, these five countries have featured in the top 20 of every edition since 2012.

The group performance of Western European countries is also strong. The Netherlands (4th), Switzerland (6th), the United Kingdom (8th), and Luxembourg (9th) all appear in the top 10. Ireland (25th) has been stable since 2012, and France (26th)—which has lost three places since 2012—closes the group in the subregion. In Southern Europe, Portugal (28th, up five), Italy (55th, up three), and Greece (66th, up eight) improve significantly from last year on the back of major improvements in government usage, whereas Malta (29th), Spain (34th), and Cyprus (36th, up one) remain quite stable. These largely positive trends contribute to narrowing Southern Europe's gap with the rest of the region, which had been widening since 2012.

(Emphasis added).

³⁸ Petition at paras. E12, E31.

³⁹ The Global Information Technology Report, ICTs for Inclusive Growth, edited by Soumitra Dutta, Thierry Geiger & Bruno Lanvin, online: World Economic Forum < http://www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf > at 16 (GIT Report).

50. The Networked Readiness Index 2015 is shown below:⁴⁰

Table 1: The Networked Readiness Index 2015

Rank	Country/Economy	Value	2014 rank (out of 148)	Income level*	Group†
1	Singapore	6.0	2	HI	ADV
2	Finland	6.0	1	HI-OECD	ADV
3	Sweden	5.8	3	HI-OECD	ADV
4	Netherlands	5.8	4	HI-OECD	ADV
5	Norway	5.8	5	HI-OECD	ADV
6	Switzerland	5.7	6	HI-OECD	ADV
7	United States	5.6	7	HI-OECD	ADV
8	United Kingdom	5.6	9	HI-OECD	ADV
9	Luxembourg	5.6	11	HI-OECD	ADV
10	Japan	5.6	16	HI-OECD	ADV
11	Canada	5.5	17	HI-OECD	ADV
12	Korea, Rep.	5.5	10	HI-OECD	ADV
13	Germany	5.5	12	HI-OECD	ADV
14	Hong Kong SAR	5.5	8	HI	ADV
15	Denmark	5.5	13	HI-OECD	ADV
16	Australia	5.5	18	HI-OECD	ADV
17	New Zealand	5.5	20	HI-OECD	ADV
18	Taiwan, China	5.5	14	HI	ADV
19	Iceland	5.4	19	HI-OECD	ADV
20	Austria	5.4	22	HI-OECD	ADV

51. In addition, innovative solutions to the deployment of fibre Facilities have developed in Europe that are beginning to influence municipalities in Canada and the United States. For instance, Stokab, which is owned by Stockholm City Council, provides passive infrastructure in the form of dark fibre to TSPs. Stockholm’s philosophy is that IT infrastructure should be available to the whole society, public sector, telecom operators, and other businesses alike. Therefore Stokab’s network is designed to facilitate competition and the fibre network is open to everyone on equal terms.⁴¹ The municipally owned company builds competition neutral infrastructure that can be licensed to TSPs, businesses, local authorities and organizations for digital communications. Stokab’s infrastructure is designed to meet future communication needs, spur economic activity, offer freedom of choice and minimize disruption to Stockholm’s streets.⁴² Stokab has inspired several municipal and regional fibre networks in Europe and throughout the world and Stockholm is often referred to as an IT world-class city.⁴³

52. To date, Stokab has over 100 telecom operators and more than 800 companies and/ or organisations as customers.⁴⁴

⁴⁰ *Ibid*, at 30.

⁴¹ Marco Forzati and Crister Mattson, Stokab, a Socio-Economic Analysis (17 December 2012 – 1 July 2013) Acreo Swedish ICT AB < https://www.acreo.se/sites/default/files/pub/www.acreo.se/upload/publications/acr055698en_-_stokab_-_a_socio-economic_analysis.pdf > at 4 (Forzati & Mattson).

⁴² Stokab Charter, online: < <http://www.oecd.org/sti/broadband/40460908.pdf> >

⁴³ Forzati & Mattsson, *supra*, at 3.

⁴⁴ Mölleryd, B., Development of High-speed Networks and the Role of Municipal Networks, OECD Science, Technology and Industry Policy Papers, No. 26 (2015) online: OECD Publishing, Paris

53. As mentioned above, Stokab does not compete with the telecommunications services sector, instead it remains at the lowest level in the value chain: the dark fibre level. This has led to virtually all operators in Stockholm and Sweden using the Stokab network. It is cheaper to license dark fibre than having to build an entire privately owned network and with hundreds of operators and companies using the same infrastructure, this is a cost effective model. The biggest cost is represented by digging and installation; therefore Stokab has established coordination with other utilities (such as sewage and electricity), the underground public transport authority, and other infrastructure players to facilitate the installation of fibre Facilities.⁴⁵
54. The Stokab model provides one method of addressing a situation where current capacity in ROWs and on support structures does not allow for duplication of the same infrastructure by multiple TSPs. The effects of this model for investment far outweigh other models:

The effects of Stokab's network has been analysed by Forzati and Mattson (2013). The research estimated the socio economic return to be USD 2.5 billion, over three times the investment. The estimates consisted of the creation of new jobs through the development of advanced services and entrepreneurship worth USD 1.2 billion; the procurement and deployment of the network had generated over USD 0.8 billion of economic activity for the supplier industry; lower cost for communication services for the city of Stockholm and the region was estimated to be USD 0.3 billion; the deployment of fibre network to the housing companies in Stockholm (with 100 000 apartments), which have been equipped with indoor wiring gave a higher property value estimated to USD 0.3 billion as well as increased rental revenues of over USD 4.6 million per year; and with the open network with intense competition on service providers have resulted in lower prices for broadband, estimated at USD 12 million per year if compared to Copenhagen.⁴⁶

55. In summary, recent studies show that European countries are leading in the top 20 of the Networked Readiness Index 2015. Moreover, Europeans are finding innovative ways to provide services that don't depend on vertically integrated monopolies or duopolies. These studies contradict Bell's assertions that Europe is falling behind in fibre deployment.

4.4 Bell's Assertions Regarding Broadband Development in the United States

56. Bell cites the United States as a model for broadband deployment, stating that the "United States and South Korea have long rejected regulation of fibre-to-the-home networks, clearing the way for their deployment".⁴⁷ However, deployment of broadband in the United States has suffered from the issues discussed elsewhere in this submission concerning markets remaining unserved or underserved and lack of competition. A report published by the Executive Office of the President in 2015 titled *Community-Based Broadband Solutions*

< <http://dx.doi.org/10.1787/5jrqdl7rvns3-en> > at 54 (Mölleryd).

⁴⁵ Forzati & Mattson, *supra*, at 3.

⁴⁶ Mölleryd, *supra*, at 55.

⁴⁷ Petition at 8, para. E12.

– *The Benefits of Competition and Choice for Community Developments and High Speed Internet Access* exposes and discusses the foregoing issues (the “President’s Report”):⁴⁸

As this report describes, while the private sector has made investments to dramatically expand broadband access in the U.S., challenges still remain. Many markets remain unserved or underserved. Others do not benefit from the kind of competition that drives down costs and improves quality. To help fill the void, hundreds of towns and cities around the country have developed their own locally-owned networks. ...

Competition has also been slow to emerge at higher speeds. Nearly forty percent of American households either cannot purchase a fixed 10 Mbps connection (i.e. a wired, land-based connection), or they must buy it from a single provider. And three out of four Americans do not have a choice between providers for Internet at 25 Mbps, the speed increasingly recognized as a baseline to get the full benefits of Internet access

Without strong competition, providers can (and do) raise prices, delay investments, and provide sub-par quality of service. When faced with limited or nonexistent alternatives, consumers lack negotiating power and are forced to rely on whatever options are available. In these situations, the role of good public policy can and should be to foster competition and increase consumer choice

57. In addition, Bell references remarks made by the Chairman of the FCC to support its assertions that private sector investment in fibre networks should not be regulated, and that “the primary means [of achieving] widespread deployment of robust broadband networks is private sector investment”.⁴⁹ However, within the same remarks made by Chairman Wheeler as cited by Bell, Chairman Wheeler goes on to state:⁵⁰

Simply put, I believe that competition is the most effective tool for advancing the public interest and promoting innovation and investment across the ICT sector.

Our view on competition is clear. Where competition exists, we will work to protect it. Where greater competition can exist, we will encourage it. Where competition cannot be expected to exist, we will not hesitate to act to protect consumers and advance the public interest.

We strongly believe that the Internet’s open design is essential to its success. It allows innovation without permission, and it empowers the marketplace to pick winners and losers, not network gatekeepers. **Preserving this competition at the edge of the network is linked directly to competition between network operators.**

⁴⁸ *Community-Based Broadband Solutions – The Benefits of Competition and Choice for Community Developments and High Speed Internet Access* (July 2015), Executive Office of the President, online:

< https://www.whitehouse.gov/sites/default/files/docs/community-based_broadband_report_by_executive_office_of_the_president.pdf > ES at 3-4 (President’s Report).

⁴⁹ Petition at 35, para. 44.

⁵⁰ Tom Wheeler, Remarks Prepared for the International Institute of Communications Annual Conference, Washington, D.C. (7 October 2015), online: < <https://www.fcc.gov/document/remarks-chairman-international-institute-communications-event> > at 2.

And the simple truth is that competition for wired high-speed Internet access is limited in most U.S. markets. Internet service providers have the ability and the incentives to leverage that market power to their financial advantage by blocking, degrading or favoring content.

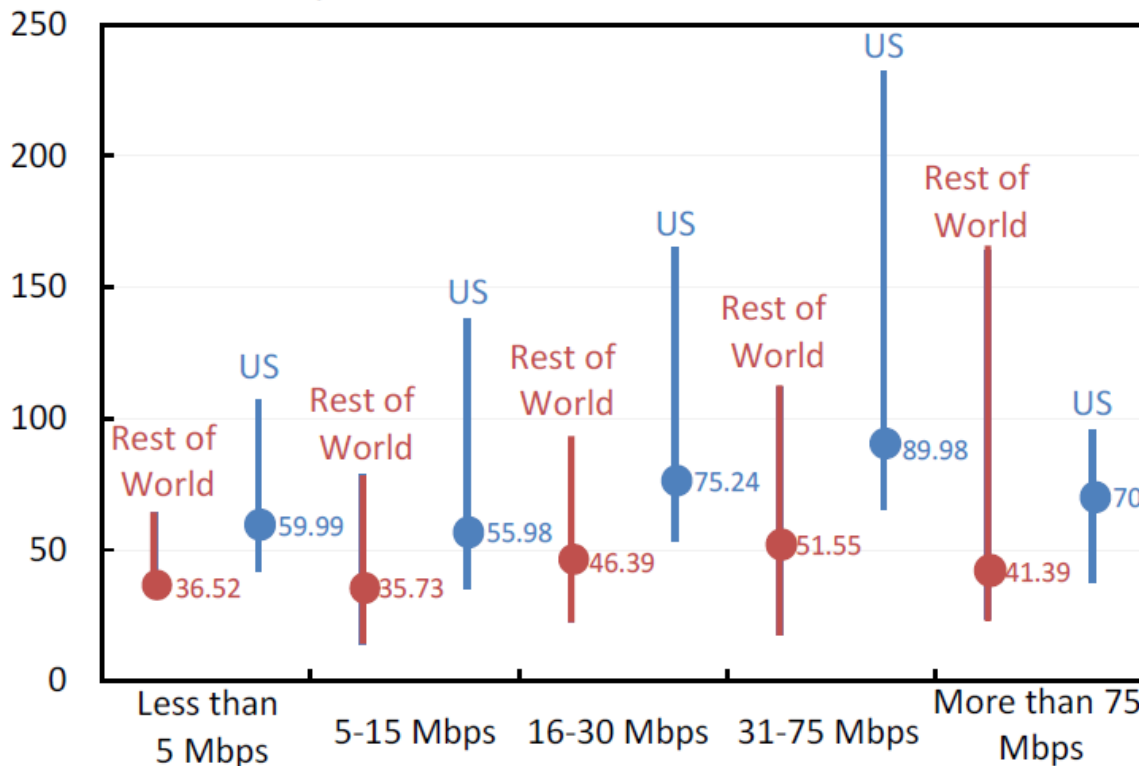
Our broadband networks are the indispensable infrastructure of our modern economy and society and they should be subject to fully effective oversight.

(Emphasis added.)

58. Chairman Wheeler is clear, as is the President's Report, that preserving competition is necessary for a healthy telecommunications market and that governments need to provide effective oversight to ensure that some markets are not underserved (or not served at all) and foster competition so that consumers have access to a choice of affordable, quality services.
59. Bell notes that the markets in Canada and the United States have a similar structure, based as they are (historically) in facilities based competition. As a result, they also suffer from similar flaws, many of which are noted in the President's Report: markets remaining unserved or underserved, high costs, sub-par service. Significantly, the report notes that without strong competition, providers can (and do) raise prices, delay investments and provide sub-par quality of service and consumers are forced to rely on the only available options.
60. Notably, the President's Report also points out that U.S. broadband is relatively expensive when compared internationally.⁵¹

⁵¹ President's Report, *supra*, at 10.

Monthly Price of a Yearly Internet Plan by Speed: US vs. World US Dollars (PPP-adjusted)



Source: New America Foundation, CEA Calculations Note: Lines cover price range, point=median

61. **This is the market that Bell urges the Minister to emulate.**
62. In Canada, prices for internet usage vary widely across the country, which led Netflix’s chief content officer to refer to the Canadian internet situation this way: “[It’s] almost a human rights violation, what they’re charging for internet in Canada”.⁵² Perhaps this is because “vertical integration [in Canada] is not just high by historical standards ... it is high relative to the United States and by international standards”.⁵³ In 2013 after Shaw and BCE acquired Global TV, CTV and Astral Media, respectively, Canada had the highest levels of vertical integration and cross-media ownership out of the 28 countries studied.⁵⁴
63. As an option, the President’s Report encourages investments by local governments:
- Over the past few years ... municipal networks have emerged as a critical tool for increasing access, encouraging competition, fostering consumer choice, and driving local and regional economic development. Local investments have also

⁵² Matt Fairley, “Why do Canadian broadband rates vary so much?” CBC News (Feb 21, 2013), online: < <http://www.cbc.ca/news/business/why-do-canadian-broadband-rates-vary-so-much-1.1387144> >

⁵³ MIC Report, *supra*, at 17.

⁵⁴ MIC Report, *supra*, at 18.

spurred the private sector to compete for customers, improving services, increasing broadband adoption, and providing more choice for consumers.⁵⁵

64. A comparison of costs between the costs of internet access between Copenhagen, which has a monopoly TSP, and Stockholm, which has an open access dark fibre network (e.g., Stokab) is shown below. Note that internet access in Stockholm is not only significantly cheaper, it has 100Mbps download and 100Mbps upload (Symmetrical) as opposed to 100Mbps download and 10 Mbps upload (Asymmetrical) in Copenhagen. In short: better service and better price.⁵⁶

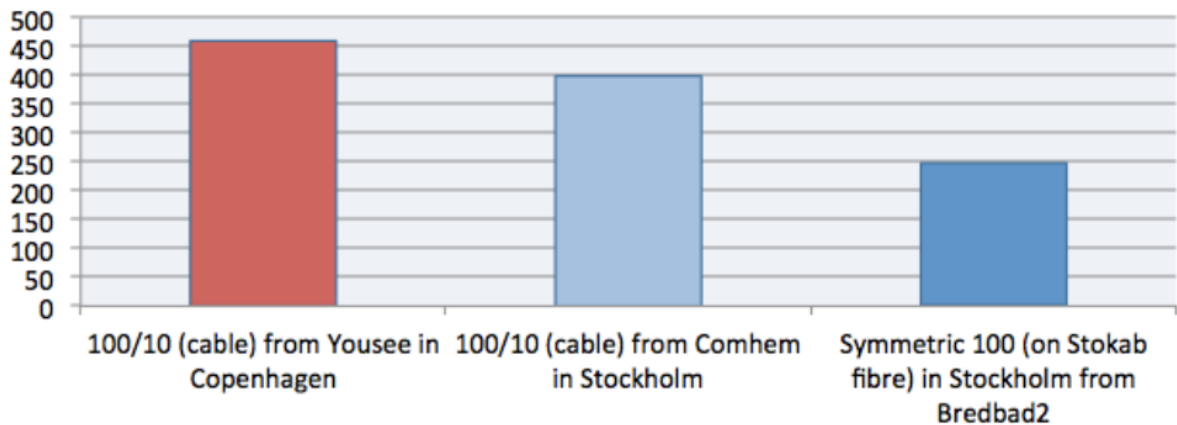


Figure 13 - Comparison of consumer prices (monthly price in SEK for 100 Mb/s) in Stockholm and Copenhagen; source: online information from each respective service provider, retrieve on 4 February 2013

65. In summary, Bell’s assertions that Europe is falling behind in the provision of high-speed broadband services and assertions that Canada should follow the model historically followed in the United States appear to be self-serving. Bell’s proposal would not likely facilitate the achievement of either the Policy Objectives or the Policy Direction, or be of benefit of consumers. On the other hand, innovative strategies for providing infrastructure for telecommunications services being pursued in both Europe and the United States provide significant promise for achieving the Canadian government’s goals.

5.0 ADDRESSING LOCAL GOVERNMENT CONCERNS: SOLUTIONS & PROPOSALS

66. During the Proceeding, Calgary expressed its concerns regarding the effect of fibre deployment by multiple TSPs in municipalities, namely:
- (a) the impact that the proposed duplication of Facilities would have on ROWs;
 - (b) the unavailability of new Alignments in ROWs for installation of Facilities;

⁵⁵ President’s Report, *supra*, at 4.

⁵⁶ Forzati & Mattson, *supra*, at 37.

- (c) the effect on the urban environment of multiple fibre cabinets located on the surface of ROWs and placed adjacent to residents' homes; and
- (d) The fact that Incumbents' Legacy Rights allow Incumbents to install fibre Facilities where space would otherwise be unavailable to their competitors.

Calgary also proposed that municipal fibre networks could assist in alleviating unnecessary duplication of Facilities and increase downstream competition where Incumbents' competitors did not have access to Alignments or support structures for installation of their fibre Facilities.

67. Section 1(c)(ii) of the Policy Direction encourages the CRTC to take into account, in its wholesale services policy, the following:

principles of technological and competitive neutrality, the potential for incumbents to exercise market power in the wholesale and retail markets for the service in the absence of mandated access to wholesale services, and the impediments faced by new and existing carriers seeking to develop competing network facilities ...

68. By mandating DBS in the Decision, it appears the CRTC carefully considered the Policy Direction and addressed many of the issues raised by Calgary. The implementation of DBS is to be considered following submissions to the Follow-up Proceeding in February 2016.

69. In its Final Submission, Calgary proposed that a pilot project for implementation of DBS could explore the optimal architecture for a FTTP networks and the actual costs of installation in a "Greenfield" (new development) versus a "Brownfield" (previously developed) urban areas to provide a more comprehensive understanding of challenges to advancing the Policy Direction. A pilot project could also explore the different forms of investment or an aggregation of investment for FTTP network builds to defray risk for a single entity and provide opportunities to share financial burdens and mitigate risks. It could also provide an opportunity to explore innovative technology solutions.

70. Calgary has taken the suggestion of a pilot project for implementation of DBS seriously and is exploring options for proceeding with a pilot project in the city of Calgary. In the process of considering a pilot project, Calgary will also explore the efficiency and effectiveness of municipal networks for contributing to the success of DBS. TSPs' access to operator neutral dark fibre complies with principles relating to technological and competitive neutrality, allows for non-Incumbent TSPs to compete in the retail market, and alleviates barriers to obtaining rights to ROW space and support structures for new entrants to the market. A thriving market in licensing dark fibre may cultivate a thriving retail market in telecommunications services. An additional benefit may be innovation in the industry driven by the needs of individual network operators to develop and implement business solutions.

6.0 CONCLUSION

71. In summary, the Decision rigorously considered the competing interests of Incumbents, other Carriers, municipalities and government agencies as expressed during the Proceeding. The solution the CRTC proposes strikes a careful balance that advances multiple goals—most notably, those expressed in the Policy Objectives and Policy Direction.
72. As a result, Calgary requests that the Minister reject Bell's Petition.
73. In addition, since Calgary is likely the only large municipality in Alberta (or possibly in Canada) submitting a response to the Petition, Calgary respectfully requests that it be provided with an opportunity, along with the provincial minister, to consult with the Minister relating to the Minister's recommendation to the Governor-in-Council.

Respectfully Submitted,
The City of Calgary

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