

Market Study Notice: Competition in Broadband Services

**Comments
of
BCE Inc.**

31 August 2018

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1.0 **INTRODUCTION**

1. Broadband competition is strong across Canada, driven by intense head-to-head competition among facilities-based carriers. At Bell, this facilities-based competition drives us both to roll out the next generation of Canada's digital infrastructure, fibre-to-the-premises (FTTP) networks, and to win as many retail customers as possible to make use of those networks. As a result, projects like our ongoing \$1.5 billion investment in FTTP in Toronto are delivering to consumers unprecedented speeds (now up to 1.5 Gbps) and intensely competitive retail prices.¹ In the coming years we intend to expand this investment to millions of additional homes.

2. Given these benefits of the existing competitive market, it is particularly important that the Competition Bureau (Bureau) approaches this Market Study on Broadband Services (Market Study) from the perspective of its well-established mandate "to protect competition and the competitive process, not competitors".²

3. In this regard, in the course of its study the Bureau will need to ask and answer questions beyond those in the Market Study Notice.³ Six of the eight questions about Canada in the Market Study Notice are focused exclusively on resale competitors. Regulatory intervention is not warranted simply to help some companies become more profitable or grow more quickly. As noted by the Bureau, "[r]egulatory action should be reserved for situations where carriers' exercise of market power is likely to lead to a substantial negative impact in retail markets. Otherwise, the CRTC risks mandating access in cases where the costs of doing so exceed the benefits."⁴

¹ BCE Inc., News Release, "Bell boosts Fibe Internet top speed to an industry-leading 1.5 Gigabits per second" (20 August 2018), available at <http://www.bce.ca/news-and-media/releases/show/Bell-boosts-Fibe-Internet-top-speed-to-an-industry-leading-1-5-Gigabits-per-second-1>.

² Competition Bureau, Submission to the Competition Policy Review Panel (11 June 2008).

³ See <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04360.html>.

⁴ Competition Bureau, Submission by the Commissioner of Competition in Telecom Notice of Consultation CRTC 2013-551, *Review of wholesale services and associated policies* (TNC 2013-551), see <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03755.html>.

4. The Bureau has previously concluded that "competition between ILECs and cable companies is generally vigorous" and that "ILECs do not possess market power in markets for residential services".⁵ That competition is even more intense today, and we are not aware of any evidence that could lead the Bureau to reach a different conclusion.

5. The Bureau describes its approach to its study as follows:

[w]hile regulation can be necessary to ensure that legitimate policy objectives are met, the Bureau's perspective is that such regulation should be undertaken in a manner that allows competitive forces to dictate marketplace outcomes to the maximum extent possible.⁶

6. If the Bureau applies this approach, we believe the evidence collected during its study will lead the Bureau to the following conclusions:

- mandated wholesale access for residential broadband services should be eliminated;
- at a minimum, mandated wholesale access to FTTP networks should be eliminated as any current competitive benefits from such access are significantly outweighed by the potential impact on investment; and
- the phase-out period for aggregated wholesale services should be reduced to a maximum of one year following implementation of disaggregated broadband services (DBS) and forbearance for aggregated wholesale services should be granted immediately following the phase-out period; otherwise the Canadian Radio-television and Telecommunications Commission (CRTC) will be mandating ongoing access to non-essential facilities contrary to the essential facilities test and well-established economic theory and policy.

7. Such recommendations would be a valuable contribution to the regulatory process, making the Bureau a crucial advocate for the importance of competition and market forces in

⁵ *Ibid.*

⁶ Competition Bureau, Market Study Notice: Competition in Broadband Services (10 May 2018), paragraph 21.

the broadband sector to ensure that the competitive process continues to drive innovation, and provide high-quality broadband services to consumers.

2.0 BROADBAND INDUSTRY IS HIGHLY COMPETITIVE

2.1 Facilities-Based Providers Drive Competition

8. Facilities-based providers are competing vigorously along all dimensions in the Canadian broadband business. In particular, telephone companies (telcos) such as Bell are locked in an aggressive competitive battle with cable companies (cablecos) to win over broadband customers. Wireless providers also influence broadband competition and, with the imminent launch of 5G, could at any time become major or even the primary broadband competitors (as they have for voice services). Given that the Bureau's focus in its conclusions will be prospective, it is essential that these future competitive developments be fully taken into account.

2.1.1. Dynamic Competition

9. The ongoing competitive process continues to drive telcos and cablecos to innovate and increase quality of their broadband products and services over time.

10. For example, prior to 2004, Bell and other telcos were at a significant Internet speed disadvantage compared to cable companies. To compete more effectively, Bell began making significant investments in fibre-to-the-node (FTTN) networks. This created a new choice for consumers looking for high-speed broadband. Reflective of the broad benefits of facilities-based competition, it also enabled us to launch our innovative Fibe TV Internet Protocol Television (IPTV) service, which broke the near-monopoly that cablecos had held in the delivery of traditional TV services in many urban areas (where satellite was often not a viable option from a technical perspective).

11. As a competitive response to these types of investments, cablecos continued to increase the speed of their broadband networks. Indeed, cablecos typically retained a sometimes substantial speed advantage particularly in areas where telcos had only built FTTN. As a result of this competitive process, Bell shifted its focus to building almost exclusively FTTP networks, including overbuilding areas in which it had built FTTN networks with brand new FTTP

networks. We also launched, in August 2015, our Gigabit Fibe service delivering Internet speeds up to 1 Gbps. Illustrative of the intensity of dynamic competition, cablecos such as Rogers, Eastlink and Videotron then rushed to prepare to launch similar speeds themselves. Rogers announced in October 2015 that it would later start offering 1 Gbps download speeds (its upload speeds would still be significantly slower). Eastlink launched its Gig Internet business in 2015 and in June 2017 expanded the service to additional regions in Nova Scotia, Ontario and British Columbia.⁷ Videotron also launched a similar service in June 2016.⁸

12. The process of dynamic competition is always ongoing. Continuing the battle, earlier this month we launched 1.5 Gbps Internet packages in Ontario which will be followed shortly by Quebec, Atlantic Canada and Manitoba.⁹

13. As a result of this process, "Rogers and Bell's plans are among the fastest available in North America".¹⁰

14. Dynamic competition between telcos and cablecos also extends beyond investments in the broadband network itself to the services delivered over that network. One part of the strategy and business case for major investments in broadband networks is to "win the broadband home". This has extended the intense competition between telcos and cablecos to investing in the delivery of new television platforms to consumers.

15. Notably, Bell developed industry-leading TV platforms (Fibe TV and Alt TV) as an innovative and competitive response to allow it to win broadband and television subscribers from cable companies. Our CEO, Mr. George Cope, emphasized the value of the Fibe TV platform in gaining broadband customers during a recent investor conference call: "[a]nd I think

⁷ Eastlink, News Release, "Eastlink expands Gig Internet availability to more communities across Canada" (19 June 2017), available at <https://www.eastlink.ca/about/mediacentre.aspx?NewsId=1168>.

⁸ Rose Behar, "Videotron launches gigabit internet service in Quebec" (29 June 2016), available at <https://mobilesyrup.com/2016/06/29/videotron-launches-gigabit-internet-service-in-quebec/>.

⁹ BCE Inc., News Release, "BCE reports second quarter 2018 results" (2 August 2018), available at <http://www.bce.ca/news-and-media/releases/show/BCE-reports-second-quarter-2018-results-1?page=1&month=&year=>.

¹⁰ Emily Jackson, "Bell's fibre expansion boosts competition with Rogers in 'speed-obsessed' Toronto" (20 November 2017), available at <https://business.financialpost.com/telecom/bells-fibre-expansion-boosts-competition-with-rogers-in-speed-obsessed-toronto>.

the thing I am most pleased with ... is the Alt TV in the marketplace now which will help drive broadband and also the acceleration of the fibre even an extra 100,000 households drives it quicker than where we thought we would be."¹¹

16. As a response to Bell's Fibe TV platform, Rogers has made significant investments in its own TV service. Initially, they invested over \$500 million in developing their own IPTV platform beginning in 2011. Illustrating the large risks that must be taken in a dynamically competitive environment, that initial product development process was ultimately abandoned in 2016, with Rogers taking a write down of around \$484M.¹² Instead, it invested again in the adoption and integration of Comcast's X1 platform, which was launched this June under Rogers' Ignite IPTV banner.¹³ The Financial Post noted that Rogers' pursuit of IPTV technology was a direct response to Bell's our Fibe TV platform: "IPTV uses different technology than cable, and Rogers wanted the product to compete with offerings from BCE Inc., whose IPTV subscriber base continues to grow as traditional cable companies bleed TV subscribers".¹⁴

17. Our CEO, Mr. George Cope, recently emphasized the head-to-head competition between us and other cablecos for TV subscribers, and its relationship to broadband investment and competition for broadband subscribers, in our most recent earnings call: "Bell TV gained 20,653 net new IPTV subscribers in Q2, up 25.7% from the 16,427 last year despite sustained aggressive cable service bundle offers and ongoing cord cutting by customers. The improved year-over-year performance reflected strong customer demand for Alt TV and ongoing direct fibre footprint expansion."¹⁵

¹¹ BCE Inc., "Q2 2017 Results Conference Call", available at <http://www.bce.ca/investors/financial-reporting/2017-Q2/2017-q2-transcript.pdf>.

¹² Rogers Communications, "Rogers Communications Reports Fourth Quarter 2016 Results" (26 January 2017), available at <https://www.newswire.ca/news-releases/rogers-communications-reports-fourth-quarter-2016-results-611847175.html>.

¹³ See: <https://mobilesyrup.com/2018/06/07/rogers-begins-rolling-out-ignite-tv-iptv-platform-to-subscribers-in-ontario/>.

¹⁴ Emily Jackson, "Rogers Communications Inc to take up to \$525 million hit as it kills IPTV plans, adopts Comcast platform" (16 December 2016) available at <https://business.financialpost.com/technology/rogers-communications-inc-to-take-up-to-525-million-hit-as-it-kills-iptv-plans-adopts-comcast-platform>.

¹⁵ Sameer Chhabra, "Rogers begins rolling out Ignite TV IPTV platform to subscribers in Ontario" (7 June 2018), available at <http://www.bce.ca/news-and-media/releases/show/BCE-reports-second-quarter-2018-results-1?page=1&month=&year>.

2.1.2. Competitive Rivalry

18. The head-to-head competition between cablecos and telcos has not only led to faster speeds and innovative services for consumers but also produces intense rivalry between broadband providers.

19. Marketing campaigns vying for broadband customers are demonstrative of the competitive environment between telcos and cablecos. For example, our campaigns have attempted to differentiate our services from cable companies on the basis of innovative service features and price and to encourage consumers to switch broadband providers. The figures below provide some examples of these campaigns.

Figure 1A
Unlimited Internet Commercial



Figure 1B
Switching Promotion



Figure 1C
A Duo Worth Switching For

A duo worth switching for.

Switch to Bell and get Canada's fastest ranked Internet provider¹ and the best TV service at a fantastic price. Hurry, the offer ends soon.

Unlimited Internet
+
Fibe TV
All the major networks and a 4K Whole Home PVR²

Get guaranteed savings of \$45/mo.³ off the regular price, for 1 year.
Right now, pay only
\$79⁹⁰/MO.
FROM
Current regular price of \$124.90/mo. Subject to change.
⁴Applies to full billing periods.
⁵\$59.95 one-time installation fee with a 2-year contract.⁶

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Bell bundling just got better

© 2014 Bell Canada. All rights reserved. 1. Based on Speedtest.net data as of March 2014. 2. Availability varies by region. 3. Savings based on current regular price of \$124.90/mo. 4. Applies to full billing periods. 5. \$59.95 one-time installation fee with a 2-year contract. 6. Subject to change. © 2014 Bell Canada. All rights reserved.

Figure 1D
Switch to Bell

Profitez du déménagement pour passer à Bell.
Économies garanties de 21 \$/mois sur le prix courant pendant 1 an.

Maintenant seulement :
99⁸⁵ \$/mois
Prix sujet à modification.

Magasiner

Bell

20. Both Rogers and Bell have been aggressively competing for broadband subscribers by reducing prices as well, even as they are making massive investments in increasing quality and as customer usage continues to increase dramatically. The Canadian Free Press has reported on how "Bell, Rogers slash prices of gigabit-speed internet in bid to woo customers"¹⁶ and the Financial Post recently reported that "[t]he jockeying between the country's two largest carriers over network speed appears to be fulfilling analysts' predictions that competition between their Ignite and Fibe brands would heat up for the back-to-school season... [and there is] the potential for greater pricing pressure given Bell's mass marketing of its fibre connections."¹⁷

2.2 Minimal Barriers to Switching

21. A key feature of a highly competitive industry is the ability for consumers to freely switch between suppliers. In these circumstances, consumers can choose suppliers based on their own preference for price, quality and other factors. The evidence clearly shows that barriers to switching suppliers is extremely low in the broadband sector.

2.2.1. No Sunk Costs

22. Broadband customers typically do not incur any sunk costs when they subscribe to an Internet service. Broadband equipment is usually rented or otherwise obtained free or for a monthly fee from the broadband provider and/or includes standard WiFi routers or similar equipment that is purchased from any electronic stores and used for any network provider.

2.2.2. Minimal Switching Costs

23. The vast majority of our broadband services are provided without a contract. Over 99.5% of our Internet subscribers are currently month-to-month customers with no fixed-term

¹⁶ David Paddon, "Bell, Rogers slash prices of gigabit-speed internet in bid to woo customers" (5 July 2018), available at <https://www.theglobeandmail.com/business/article-bell-rogers-slash-prices-of-gigabit-speed-internet-in-toronto/>.

¹⁷ Emily Jackson, "Bell enters the fast lane as back-to-school internet competition heats up" (20 August 2018), available at <https://business.financialpost.com/telecom/bell-enters-the-fast-lane-as-back-to-school-internet-competition-heats-up>.

contract.¹⁸ For the less than 0.5% of fixed-term customers, the early termination fee is minimal: \$75 for a one-year contract and \$150 for a two-year contract. These fees are not significant relative to the long-term cost of a broadband plan and allow even the small number of customers under contract to easily switch between providers.

2.2.3. No impact on other existing services and content

24. Switching broadband providers also has no impact on other existing services such as over-the-top (OTT) services and media content, which are increasingly popular among consumers. Content provided through existing services is not contingent on the network used by the consumer. The CRTC's *Exemption order for digital media broadcasting undertakings*¹⁹ prohibits the provision of content exclusive to the consumer's specific mobile or retail Internet access services. Existing OTT services such as Skype or WhatsApp are also not contingent on the network used by the consumer, and today consumers can and do use email addresses (e.g. Gmail, Hotmail) that are not tied to their Internet provider.

25. As a result of intense facilities-based competition between cablecos and telcos, including dynamic competition and the competitive rivalry between providers, and given competitive features such as minimal barriers to switching, the Canadian broadband industry is intensely competitive regardless of the role played by Wholesale Internet Service Providers (ISPs).

3.0 SUCCESS OF WHOLESALE ISPS

3.1 Wholesale ISPs Gaining Share

26. Even if the Bureau were to continue to approach the study from the perspective of ensuring the success of Wholesale ISPs (which we believe is the wrong approach for the

¹⁸ Total current customers for Internet is based on recent data from the "BCE reports second quarter 2018 results" Press Release (2 August 2018) available at <http://www.bce.ca/investors/financial-reporting/2018-Q2/2018-q2-press-release.pdf>.

¹⁹ Broadcasting Order CRTC 2012-409, *Amendments to the Exemption order for new media broadcasting undertakings (now known as the Exemption order for digital media broadcasting undertakings)*.

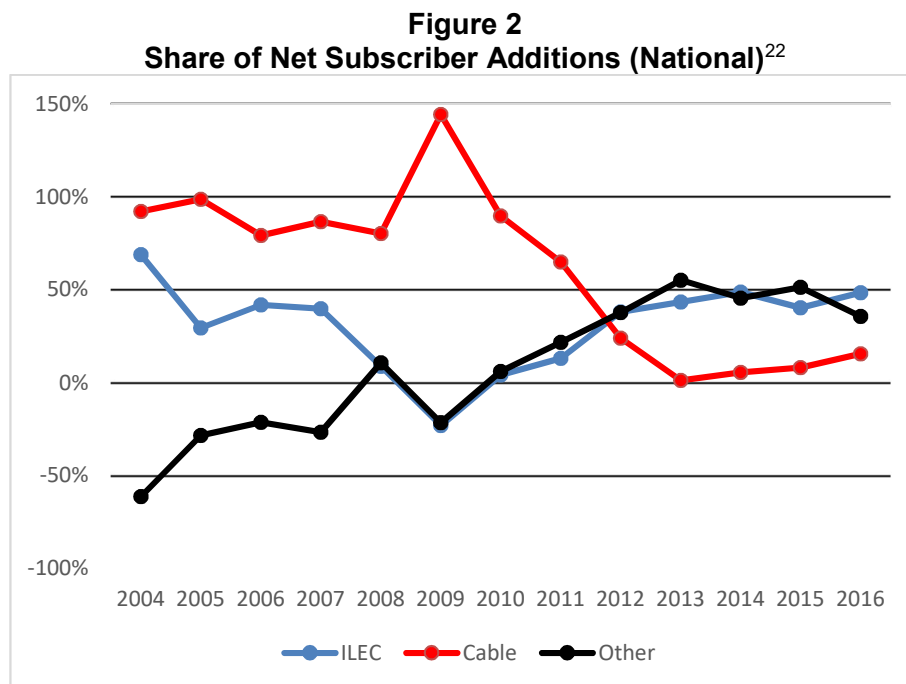
reasons set out above), the evidence is very clear that the current regulatory environment is extremely beneficial for Wholesale ISPs, as it enables them to access state-of-the-art fibre networks at regulated rates and without having to deploy capital to anywhere close to the same degree as their facilities-based competitors.²⁰

27. The questions contained in paragraphs 8(a) and 8(b) of the Bureau's Notice all appear to be directed at the dynamics surrounding the Bureau's understanding that "as of 2016, 87% of retail internet subscriptions in Canada were purchased from a traditional telephone or cable company".

28. First, shares based on new customer additions are more relevant to the Bureau's analysis with respect to Wholesale ISPs than shares based on existing customers. This is aligned with the Merger Enforcement Guidelines which state that: "[w]hen a regulated or historical incumbent firm is facing deregulation or enhanced competition, shares based on new customer acquisitions may be a better indicator of competitive vigor than are shares based on existing customers."²¹ Employing the Bureau's framework, Figure 2 below summarizes net subscriber additions in Canada between 2004 and 2016:

²⁰ While Wholesale ISPs service 13% of subscribers, they deploy only 0.3% of the capital (see Figure 3 and Figure 5).

²¹ Competition Bureau, *Merger Enforcement Guidelines*, paragraph 5.4.



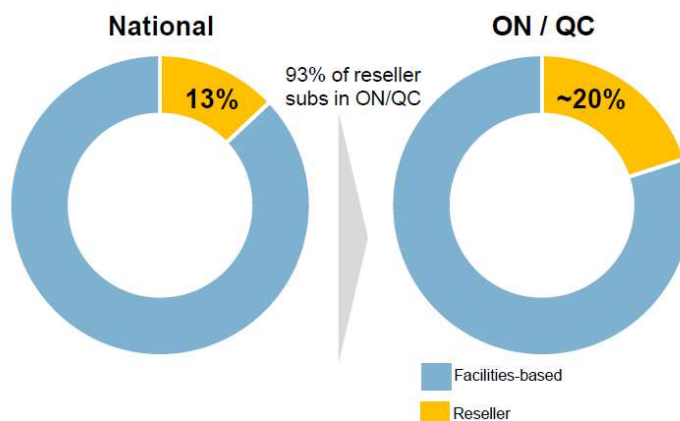
29. Notably, in each of the last five years, Wholesale ISPs have accounted for between 36% and 55% of all subscriber additions. Beyond the net subscriber additions, many more consumers are switching between the facilities-based and the various Wholesale ISPs. The evidence demonstrates that consumers are aware of and can readily switch to competitive alternatives.

30. Second, shares in the regions in which Wholesale ISPs have chosen primarily to compete, Ontario and Quebec, are more relevant to the Bureau's analysis than shares based on the overall national market. Ontario and Quebec account for approximately 93% of wholesale end-users.²³ Figure 3 below illustrates that given the distribution of Internet households in Canada and of Wholesale ISP subscribers, a 13% national share for Wholesale ISPs would suggest an approximately 20% share in Ontario and Quebec as of 2016.

²² CRTC Communications Monitoring Reports.

²³ CRTC Communications Monitoring Report – 2017, page 343.

Figure 3
Estimated Share of Wireline Subscribers (2016)²⁴



31. To the extent that the Bureau is concerned with the ability of Wholesale ISPs to compete in the broadband sector and consumers' reactions to these new competitive alternatives, the evidence is clear that Wholesale ISPs have been extremely successful in gaining new broadband subscribers in the regions in which they have chosen to focus their efforts.

3.2 Wholesale ISPs' Bundles

32. Question 8(b)(ii) of the Bureau's Market Study suggests that Wholesale ISPs do not typically provide other telecommunication services, implying that this may constrain their success. This is not true: many or most Wholesale ISPs provide home phone and television services (among others), in addition to broadband Internet. Figure 4 below provides examples of the range of telecommunications services offered by Wholesale ISPs such as CIKtelecom, V Media, Distributel and Comwave. Other Wholesale ISPs continue to develop additional bundled offerings.²⁵

²⁴ CRTC Communications Monitoring Report – 2017.

²⁵ For example, TekSavvy has apparently had an IPTV offering in closed beta testing for nearly two years. See <http://www.dslreports.com/forum/r31198588-TekTV>.

Figure 4
Examples of Wholesale ISPs' Bundles²⁶



3.3 Quality Difference

33. Paragraph 6 of the Market Study Notice appears to suggest that Wholesale ISPs and facilities-based providers offer comparable services.²⁷ In fact, in most cases (and certainly in the case of Bell), there is a significant quality difference between Wholesale ISPs and facilities-based competitors as a result of individual decisions taken by Wholesale ISPs.

34. While the portion of the service purchased by Wholesale ISPs at wholesale is the same as the facilities-based carrier itself uses. Each individual Internet service provider makes other independent decisions about their service that impact speed, latency, and uptime, in addition to customer service. These decisions include the level and nature of investments in peering capacity, direct peering links, caching, their Domain Name System, redundancy and other

²⁶ See <https://www.ciktel.com/>, <https://www.vmedia.ca/en>, <https://www.distributel.ca/>, and <http://www.comwave.net/>.
²⁷ Competition Bureau, Market Study Notice, paragraph 6.

factors. This has inevitably resulted in variations in quality between Wholesale ISPs and facilities-based providers (and among certain facilities-based providers).

35. In practice, Wholesale ISPs in Canada have chosen to provide lower cost services with less investment in aspects of quality.

36. Some Wholesale ISPs have also chosen to invest less in other quality features such as customer service (e.g., less call center capacity, no account management application and no online chat) in order to reduce their costs.²⁸

37. Certain customers appear to prefer this type of service, while the vast majority have revealed a preference for the higher quality services typically offered by facilities-based carriers like Bell. Wholesale ISPs have presumably chosen nevertheless to focus on this low-cost customer segment because it most fully exploits their regulatory advantages and artificially low rates, while the market as a whole is already exceptionally well-served and intensely competitive.

38. Since there are minimal barriers to switching between providers, customers are free to switch to a provider based on their own preference for price, quality and other factors. That is how market forces are meant to operate, and despite what appears to be contemplated by the Bureau's Notice,²⁹ it is not the role of regulation (and certainly not the mandate of the Bureau) to push customers to make one type of choice over another.

²⁸ DSL Reports, a discussion platform for broadband users, contains admissions from Wholesale ISPs such as TekSavvy that they choose not to make necessary investments in customer service due to costs: "[r]ight now its the busy season... Temporary agents for the busy season aren't practical as by the time they are comfortable and efficient, its time to let them go. Its not easy finding people for such short term work, and also very difficult to guess how many will be needed, and hire enough to meet that demand while predicting the attrition. More permanent agents being staffed isn't practical either, as for the three quarters of the year when call volume is much lower will have us significantly over staffed. This would increase costs, and force us to increase our pricing, lowering the number of customers, reducing revenue, forcing another cost increase, in a self defeating cycle." available at: <http://www.dslreports.com/forum/r32066084-ls-1-to-2-hour-wait-really-acceptable-wait-for-CSR-tech-phone>.

²⁹ Paragraph 8(b)(i) of the Market Study: Are there factors that may drive consumer inertia in this industry and, if so, are there ways to overcome these factors?.

4.0 REGULATION UNDERMINES INVESTMENT

39. Question 8(c) of the Market Study considers how regulation in the broadband industry impacts the economic behaviour of suppliers, including how the current Wholesale ISP regime affects the incentives that network owners have to expand or upgrade their networks. Economic theory and the real-world evidence are unambiguous: mandated wholesale regulation reduces dynamic competition in the broadband sector and undermines incentives for all providers to invest in broadband networks and in particular in brand new FTTP networks.

40. This is aligned with prior Bureau conclusions stating that "[f]acilities-based competition is beneficial because such competition is most likely to lead to robust and effective long-term competition. This is consistent with the Federal Government's Policy Direction ... [and] with the objectives set out in section 7 of the Telecommunications Act... service providers that control their own end-to-end networks have greater incentives for investment, innovation and cost efficiency than... Wholesale ISPs and providers that rely on unbundled ILEC network elements. Similarly, ILECs that are not forced to share their networks have greater incentives to invest and innovate at the network layer."³⁰

41. Facilities-based competition among companies that invest in their own broadband networks has been the crucial driver keeping Canada as a global leader in broadband despite our challenging geography.

4.1 Eliminates Incentives for Wholesale ISPs to Build Their Own Facilities

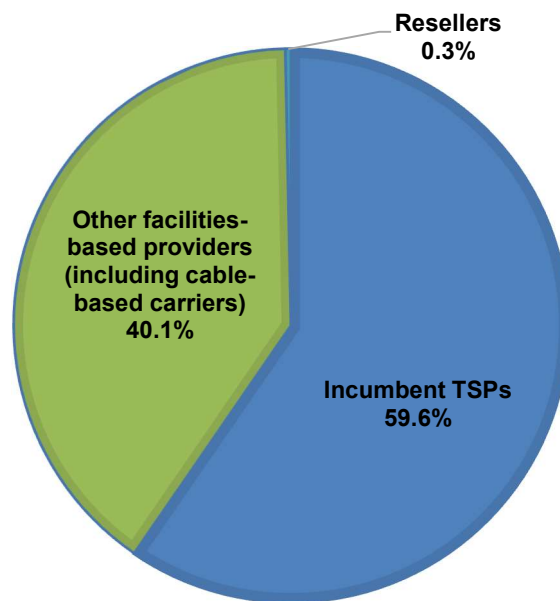
42. There is overwhelming evidence that mandated access effectively eliminates incentives for Wholesale ISPs to develop their own infrastructure.

43. As long as mandated access to existing networks exists, the incentives for Wholesale ISPs to invest their own capital to compete using their own networks are at best minimal, as Wholesale ISPs can gain wholesale access at artificially low rates without incurring any of the

³⁰ Competition Bureau, Submission by the Commissioner of Competition in TNC2013-551.

associated risk. Mandated access readily allows Wholesale ISPs to access extremely valuable parts of the facilities-based providers' infrastructure, which in the case of FTTP networks are being built from the ground up using private capital raised by facilities-based providers and without relying on any legacy components. As a result, Wholesale ISPs have not made any substantial investments in new or innovative networks (see Figure 5 below).

Figure 5
Annual Investment in Plant and Equipment – Wireline – 2016³¹



4.2 Reduces Incentives for Facilities-Based Competitors to Invest and Innovate

44. Mandated access also undermines the incentives and ability of facilities-based providers to continue to invest in existing and new networks and technologies, and in particular today in new fibre-to-the-home (FTTH) networks.

³¹ CRTC Communications Monitoring Report 2017, page 219.

45. All potential service providers wishing to offer these new fibre-to-the-home Internet services, whether they are traditional telephone companies, cable companies, Wholesale ISPs, utilities, or other technology companies, begin from the same starting point. Specifically, FTTH requires a brand new build using no legacy components. For Bell, the build out of FTTH is a completely new build to replace our 135 year old legacy copper plant.

46. The reason dynamic competition results in large risky investments in new and improved services is that when successful, these investments allow the company that made them to gain a competitive advantage over others in the market (who then in turn have the incentive to undertake their own innovation). Mandated access eliminates this advantage by giving it away unearned to hundreds of resale competitors. For the same reason, mandated access reduces the expected return from an investment and increases its uncertainty, resulting in changes in capital allocation that lead to some investments being delayed and others never undertaken or significantly scaled back.

47. In the case of FTTH networks, this will affect most prominently smaller towns and rural areas as well as higher-cost neighbourhoods in larger centres, where FTTH deployment will be delayed or not take place at all.³²

4.2.1. FTTP Business Case Depends on "the Broadband Home"

48. The impact of mandated access on the FTTP business model is especially concerning. The significant capital expenditures to construct an entirely new FTTP access network are typically economically justified where the company receives revenues from other services in addition to Internet. Investment plans have therefore been premised in large measure on

³² To illustrate the fragility of the investment case for FTTP deployment, even in the absence of wholesale regulation, San Francisco (with a vibrant Internet sector and high demand for advanced broadband services) is not guaranteed to receive ubiquitous FTTP coverage, with a report for the city noting that "AT&T is also upgrading its infrastructure to fiber in many parts of San Francisco, but it's unlikely that the upgrade will be citywide or ubiquitous. AT&T's upgrades in many cities thus far have been incremental and concentrated in select neighborhoods, sometimes based on where AT&T already has fiber and can cost-effectively extend it, or on areas where AT&T has reason to build fiber to serve large enterprise customers." Layering on the impact of wholesale regulation on top of the business challenges will certainly have an impact on FTTH deployment. <https://sfbos.org/sites/default/files/CTC-Deliverable22-final-20171017.pdf>.

"winning the broadband home"; that is, providing the customer with a suite of services which includes Internet, television, home phone, and/or home monitoring.

49. Compared to the telephone networks Bell began building in 1880, and cable networks built many decades ago, the significant up-front costs associated with FTTP may never be fully recovered given the competitive environment. The FTTP provider starts with no customers on its new FTTP network (which in any area where they start offering service is already almost fully built out to every home) and must compete to win customers from well-established cable companies and then seek to deliver a suite of broadband services (Internet, television, home phone, and/or home monitoring) to those customers to justify the investment.

50. To the extent that Wholesale ISPs relying on mandated access are expected to serve customers that would otherwise be served by the facilities-based competitor, this results in two or more retail revenue streams being replaced by a single wholesale revenue stream. This inevitably results in lower expected revenues accruing to the facilities owner, reducing the number and scale of FTTP investments that can be undertaken.

4.2.2. Negative Impact on Deployment of Fibre Networks

51. The empirical evidence is clear that mandated access already had a significant negative impact on the extent and pace of FTTN deployment by us and other companies.

52. After the CRTC mandated wholesale access to services enabled by FTTN facilities in 2010, the result was that fibre networks were rolled out to approximately 400,000 fewer homes over the two subsequent years. For Bell, FTTP can be up to three times more expensive than FTTN, so the impact of mandated access on FTTP investment is likely to be that much more dramatic.

53. The impact of mandated access is supported by a financial analysis of the FTTP business case. Bell Aliant previously undertook some very detailed financial analysis which demonstrated how mandated wholesale access would have negatively affected its business case for its 2014 FTTP investment program. For the analysis, Bell Aliant showed its location-specific footprint prioritization model used for business decision making purposes as it applied to 21 locations that had been approved for FTTP deployment under its 2014 FTTP capital build program. It showed the business case analysis without mandated access to FTTP (which is

what led to the approved deployments in these areas), and then reversed that assumption to determine how the introduction of mandated wholesale access would have affected the business case for investment.

54. The results revealed that the introduction of mandated wholesale access to FTTP facilities would have reduced the Net Present Value (NPV) of the overall investment in the 21 communities substantially. More importantly, the NPV would have become negative for 9 of 21 communities in the 2014 capital plan. Of course, for those 9 communities, an investment with an expected negative NPV would never have been undertaken.

55. That is simply the unavoidable result of a business case that involves building brand new access networks, achieving significant penetration at the retail level, and earning revenues from the entire broadband home. Mandated access undermines every one of these core elements of the underlying business case.

5.0 INTERNATIONAL EXPERIENCE DEMONSTRATES THAT LESS REGULATION IS APPROPRIATE

56. Question 8(d) of the Market Study considers how other countries have managed and regulated broadband competition.

57. In the United States, the regulatory regime required mandated access to Next Generation Networks (NGNs) including FTTH until 2003-2005.³³ During that time, next generation fibre networks were not extensively deployed because, as SBC Communications Inc. (now AT&T) explained, the "pervasive regulations and uncertainty concerning what regulatory rules will apply when [AT&T] deploys and provides broadband and advanced services has become an anchor on the company."³⁴ Following the elimination of mandated access obligations beginning in 2003, ILECs in the United States began announcing initial plans to build

³³ See the Triennial Review Order, issued in 2003, the Fiber-to-the Curb Order and Multi-Dwelling Unit Order both issued in 2004, the Triennial Review Remand Order, adopted in late 2004 and issued in early 2005, and the Wireline Broadband Order, issued in 2005.

³⁴ SBC Communications Inc., Quarterly Report to Shareholders 2001, page 1.

out fibre networks and as mandated access was fully eliminated, telcos and independent third parties like Google rolled out fibre networks in communities across the country. According to United States firm Wilson Barker Knauer, "[d]ata show that [the] FCC decisions... led to a precipitous uptick in fiber and xDSL investment".³⁵ Annual wireline broadband expenditures by telephone companies was estimated to increase by 28% and continued at that level.³⁶

58. In Europe, wholesale regulation is typically only imposed after a finding of significant market power – unlike in Canada, where all telecommunication services are presumptively regulated. Dr. Andrea Renda of the Centre of European Policy Studies & Google Chair of Digital Innovation, College of Europe suggests the following:

[u]nder the EU regulatory regime, if a European regulator landed here they would never consider imposing such a remedy in Canada on the ILECs. We do have a rule in Europe that you need to find significant market power before you impose any remedy, regardless of how proportionate is the remedy and the market share here would not be compatible with a finding of significant market power.³⁷

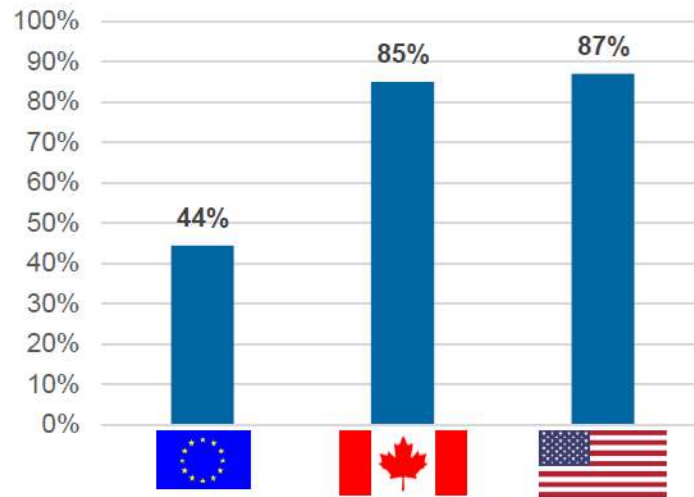
59. Accordingly, both the American and European approaches to broadband regulation suggest that there should be no mandated wholesale access to ILEC networks in Canada. The reason for this is illustrated in Figure 6 below: empirically, there is very little cable presence in the EU (44%), whereas in Canada cable is near-ubiquitous within ILEC territory at 85%, just as it is in the United States.

³⁵ See Attachment 2 to the Intervention of Bell Canada in TNC 2013-551, available at <https://services.crtc.gc.ca/pub/DocWebBroker/OpenDocument.aspx?DMID=2068512>.

³⁶ *Ibid.*

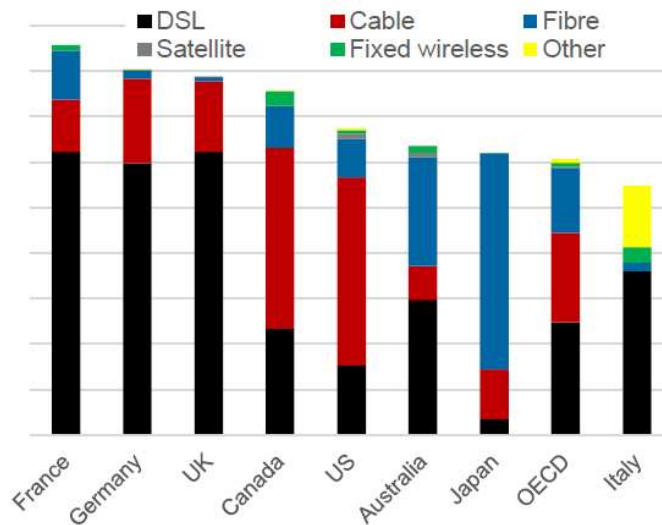
³⁷ See Attachment 3 to the Intervention of Bell Canada in TNC 2013-551, available at <https://services.crtc.gc.ca/pub/DocWebBroker/OpenDocument.aspx?DMID=2068513>.

**Figure 6
Cable Internet Availability³⁸**



60. Figure 7 below further demonstrates that Canada performs well in terms of fixed broadband adoption compared to peer countries.

**Figure 7
Fixed Broadband Subscriptions / 100 Pop.³⁹**



³⁸ CRTC, Communications Monitoring Report 2017 (2016 data); FCC, *Sixth International Broadband Data Report* (2016 data); and EC, *Broadband Coverage in Europe 2016* (2016 data).

³⁹ OECD Broadband Portal.

61. Canada is one of the few countries that already possesses a high degree of end-to-end facilities-based/intermodal competition. The pending introduction of 5G will further enhance this level of end-to-end facilities-based competition. For example, we have already launched wireless-to-the-home Internet services that are on the path to 5G and that already provide a competitive alternative to wireline Internet services.⁴⁰ In the United States, Verizon recently announced that it will introduce 5G residential broadband service to Indianapolis, Houston, Los Angeles and Sacramento by the end of 2018.⁴¹ The number of networks and service providers competing in the broadband market is therefore set to increase imminently, further eliminating any justification for mandated access.

6.0 CONCLUSION AND RECOMMENDATIONS

62. The broadband industry is highly competitive — in the circumstances that prevail in Canada, competition between ILECs and cablecos (and soon with other providers relying on 5G) is vigorous and effective. The evidence shows that removing mandated access would not result in a substantial lessening of competition. As a result:

- **Eliminate mandated access**: Given the significant and growing intensity of facilities-based competition in the broadband sector, and the imminent launch of 5G networks that will further increase this competition, following its study the Bureau should recommend that mandated wholesale access be eliminated. This would support the market forces driving dynamic competition over regulation that protects particular competitors rather than the competitive process.
- **No mandated access to FTTP**: At a minimum, the Bureau should recommend that mandated access not be extended to FTTP networks, as access to these networks is not necessary to be an effective retail competitor today but does undermine investment. At

⁴⁰ BCE Inc., Press Release, "Bell applauds government commitment to next generation 5G wireless" (20 March 2018), available at <http://www.bce.ca/news-and-media/releases/show/Bell-applauds-government-commitment-to-next-generation-5G-wireless-1?page=3&month=&year=>.

⁴¹ Corinne Reichert, "Verizon says it will be the first in the US to offer 5G services, with the carrier adding Indianapolis to its rollout alongside Sacramento, Los Angeles, and Houston" (15 August 2018), available at <https://www.zdnet.com/article/verizon-bringing-5g-to-indianapolis/>.

present, there is no need for resale competitors to access FTTP networks.⁴² In the most recent CRTC report, approximately 85% of Canadians subscribed to internet services with download speeds below 100 Mbps.⁴³ Wholesale ISPs already have access to speeds of up to 100 Mbps. Accordingly, there are no or limited potential benefits associated with mandating access to FTTP (even if the Bureau believes resale competitors are essential) but doing so imposes significant costs and significantly reduces dynamic competition.

63. If nevertheless the Bureau believes that Wholesale ISPs relying on mandated access including access to FTTP plays a necessary role in the market, the evidence is clear that their existing regulatory advantages make them effective competitors by any measure and in particular for new customers and in the regions in which they have chosen to focus. Upcoming regulatory changes, such as the transition to disaggregated access, will continue to expand the benefits of mandated access for Wholesale ISPs. However, the implementation of these changes by the CRTC unnecessarily interferes with market forces.

64. The Bureau has a clear mandate to limit regulation to what is necessary. The Bureau's endorsement of the CRTC's essential facilities test further supports this position.⁴⁴

65. The CRTC has determined that aggregated wholesale services do not meet the essential facilities test. As such, there is no justification for mandating access to these services. Despite this, the CRTC has proposed that the requirement to offer aggregated wholesale access services not be phased out until three years after disaggregated services are introduced in a local area. Moreover, even after that phase-out period the CRTC has indicated that it will not forbear from regulation of aggregated wholesale access services except pursuant to a subsequent and further forbearance application.⁴⁵

⁴² Telecom Regulatory Policy CRTC 2015-326, *Review of wholesale wireless services and associated policies* (TRP 2015-326) (22 July 2015), available at https://crtc.gc.ca/eng/archive/2015/2015-326.htm?_ga=2.256662219.1954139055.1534705159-387759480.1533058669, paragraph 154.

⁴³ CRTC Communications Monitoring Report 2017, page 271.

⁴⁴ Competition Bureau, Submission by the Commissioner of Competition in TNC 2013-551.

⁴⁵ This is inconsistent with the economic rationale underlying the essential facilities and forbearance tests. By definition, if a service is not essential then competition will be sufficient to protect the interests of users and the competitive market will continue when forbearance is granted. The CRTC recognized this in Telecom Decision CRTC 2008-17, *Revised regulatory framework for wholesale services and definition of essential service* (paragraphs 184 to 189), but later in TRP 2015-326, (and in practice in decisions that implement that pronouncement such as Telecom Decision CRTC 2018-133, *Bell Canada and TELUS Communications Inc.* –

66. This requirement means that services that were determined not to be essential in 2015 will continue to be mandated more than five and perhaps more than ten years later. There is no economic justification for such a result – it simply protects a certain subset of competitors, namely Wholesale ISPs who would prefer aggregated over disaggregated services. Consistent with economic theory and its mandate, the Bureau should recommend that the phase-out period be reduced to one year and that forbearance be granted immediately following the phase-out period.

67. As noted above, only facilities-based competition provides all the benefits of a competitive market for consumers. The Bureau has supported facilities-based competition in prior submissions: "[f]acilities-based competition is beneficial because such competition is most likely to lead to robust and effective long-term competition."⁴⁶ It should continue to do so following this study.

*** End of Document ***

Applications for forbearance from the regulation of pay telephone access line services) declined to automatically grant forbearance after the phase-out period for a service already determined not to be essential. The Bureau is well-positioned to articulate why that change in approach is inappropriate and the potential costs associated with it.

⁴⁶ Competition Bureau, Submission by the Commissioner of Competition in TNC 2013-551.