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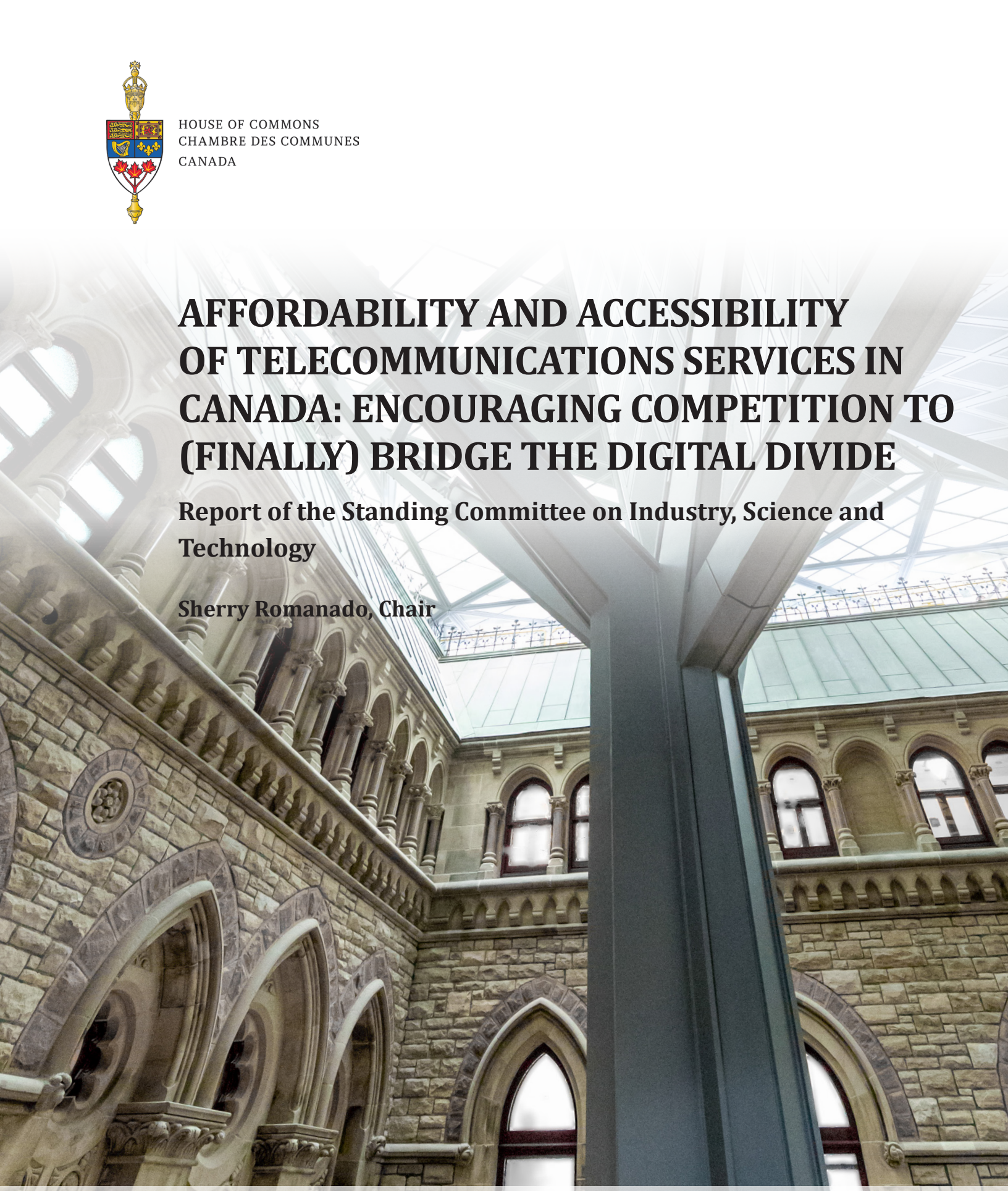
CANADA

AFFORDABILITY AND ACCESSIBILITY OF TELECOMMUNICATIONS SERVICES IN CANADA: ENCOURAGING COMPETITION TO (FINALLY) BRIDGE THE DIGITAL DIVIDE

Report of the Standing Committee on Industry, Science and Technology

Sherry Romanado, Chair



JUNE 2021
43rd PARLIAMENT, 2nd SESSION

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NOTICE TO READER

Reports from committees presented to the House of Commons

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

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THE STANDING COMMITTEE ON INDUSTRY, SCIENCE AND TECHNOLOGY

has the honour to present its

SEVENTH REPORT

Pursuant to its mandate under Standing Order 108(2), the committee has studied the accessibility and affordability of telecommunications services and has agreed to report the following:

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LIST OF RECOMMENDATIONS

As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.

AFFORDABILITY AND ACCESSIBILITY OF TELECOMMUNICATIONS SERVICES IN CANADA: ENCOURAGING COMPETITION TO (FINALLY) BRIDGE THE DIGITAL DIVIDE

INTRODUCTION

On 5 November 2020, the Standing Committee on Industry, Science and Technology (the Committee) adopted the following motion:

> That the committee recognize access to high-speed Internet and a high-quality cellular network as essential and universal for 100% of Canadians; that, pursuant to Standing Order 108(2), the committee continue its work on a comprehensive study on the accessibility and affordability of telecommunications services in all regions of Canada, particularly in rural areas, which could include a study of telecommunications regulation and Canada's Connectivity Strategy; that the committee devote a minimum of two meetings to this study before Friday, December 11, 2020, and report its findings to the House no later than February 2021.

The Committee held five meetings, heard 28 witnesses and received ten briefs as part of this study. Also, on 29 October 2020, the Committee adopted the following motion:

> That, pursuant to Standing Order 108(2), the committee undertake a study of Canadian Response to the COVID-19 Pandemic, and that the evidence and documentation received by the committee during the 1st Session of the 43rd Parliament on the subject be taken into consideration by the committee in the current session.

STATE OF CONNECTIVITY AND AFFORDABILITY OF TELECOMMUNICATIONS SERVICES

Access to Broadband Internet

Witnesses who appeared as part of the Committee's study agreed that access to the Internet is essential and that it is important to act quickly to address the enduring digital divide in Canada. Many witnesses also noted that there is an urgent need to

address affordability as well as access to telecommunications services. In addition, witnesses noted that Canada needs a coordinated national broadband strategy rather than relying on the current disjointed and disconnected approach. Ian Stevens, Board Member of the Canadian Communications Systems Alliance put it this way:

> Currently, we have a myriad of municipal, provincial and federal funding programs. They all have similar goals and strong support, but those programs are not aligned on their timing, their objectives, their focus or their commitment to execution. As a result, they compete for potential applicants' limited time and resources. For that reason, we fear that in terms of solving the rural broadband problem, those various programs will actually end up accomplishing less than the sum of their parts.[1]

Mr. Barry Field from Southwestern Integrated Fibre Technology (SWIFT) added:

> I think what we need to do is for the federal, the provincial and the municipal governments to collaborate. I really believe that the funding, like other infrastructure projects in Canada, is no different. The funding should be transferred from the federal government, getting it as close to the communities as possible through the provinces and letting them decide how to execute the programs in their provinces.[2]

Witness pointed out that households have a greater need for adequate Internet service in the current context of the COVID-19 pandemic.[3] More Canadians are working and studying from home because of the pandemic. In many cases, however, their Internet connection is not good enough to meet their needs, or their connection drops frequently because of increased demands on the network.[4] According to OpenMedia, the digital divide widened in 2020 as broadband Internet speeds increased in cities and stagnated in rural and remote regions.[5]

As OpenMedia noted:

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1 House of Commons, 43rd Parliament, 2nd Session, Standing Committee on Industry, Science and Technology [INDU], *Evidence*, 8 December 2020, 1105 (Ian Stevens, Canadian Communications System Alliance [CCSA]).

2 INDU, Evidence, 23 February 2021, 1125 (Barry Field, South Western Integrated Fibre Technology).

3 INDU, *Evidence*, 26 November 2020, 1105 (Ian Scott, Canadian Radio-television and Telecommunications Commission [CRTC]); INDU, *Evidence*, 26 November 2020, 1215 (Erin Knight, OpenMedia); INDU, *Evidence*, 8 December 2020, 1115 (Robert Ghiz, Canadian Wireless Telecommunications Association [CWTA]); INDU, *Evidence*, 1130 (Tamir Israel, Samuelson-Glushko Canadian Internet Policy and Public Interest Clinic [CIPPIC]); INDU, *Evidence*, 23 February 2021, 1115 (Pierre Karl Péladeau, Quebecor Media Inc.); OpenMedia, *Brief*; Cybera Inc., *Brief*.

4 INDU, *Evidence*, 8 December 2020, 1115 (Robert Ghiz, CWTA); Canadian Canola Growers Association [CCGA], *Brief*.

5 INDU, *Evidence*, 26 November 2020, 1215 (Erin Knight, OpenMedia).

> The government's inaction during the first seven months of the pandemic made certain that, on average, rural and remote Canadians are no better connected today than they were in March. According to recent data from the Canadian Internet Registration Authority, rural Internet speeds have remained stagnant throughout the pandemic while urban speeds have significantly increased. On average, urban Internet users now see speeds 10 times faster than rural users. The digital divide has deepened simply by a failure to act.[6]

In 2016, recognizing that the Internet was increasingly important to Canadians, the Canadian Radio-television and Telecommunications Commission (CRTC) declared that broadband Internet access was an essential service for all Canadians. It set targets for 90% of Canadians to have access to download speeds of 50 megabits per second (Mbps) and upload speeds of 10 Mbps, as well as an unlimited data option (50/10/unlimited), by the end of 2021, and for all Canadians to have access within 10 to 15 years. Furthermore, the CRTC called for the latest generally deployed mobile wireless technology to be available not only in Canadian homes and businesses, but also along as many major transportation roads as possible.[7]

In late 2019, it appeared that the Government of Canada would meet the CRTC targets for urban areas, but rural and remote regions lagged far behind. According to CRTC data, in 2019, 87% of Canadian households had access to a 50/10/unlimited plan, but this figure dropped to 45% for rural and remote regions.[8] As shown in Figure 1, plan availability varies considerably among provinces. The three territories are not represented in this figure, as no 50/10 package that also includes unlimited data is available in any of the territories.[9,10]

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6 Ibid.

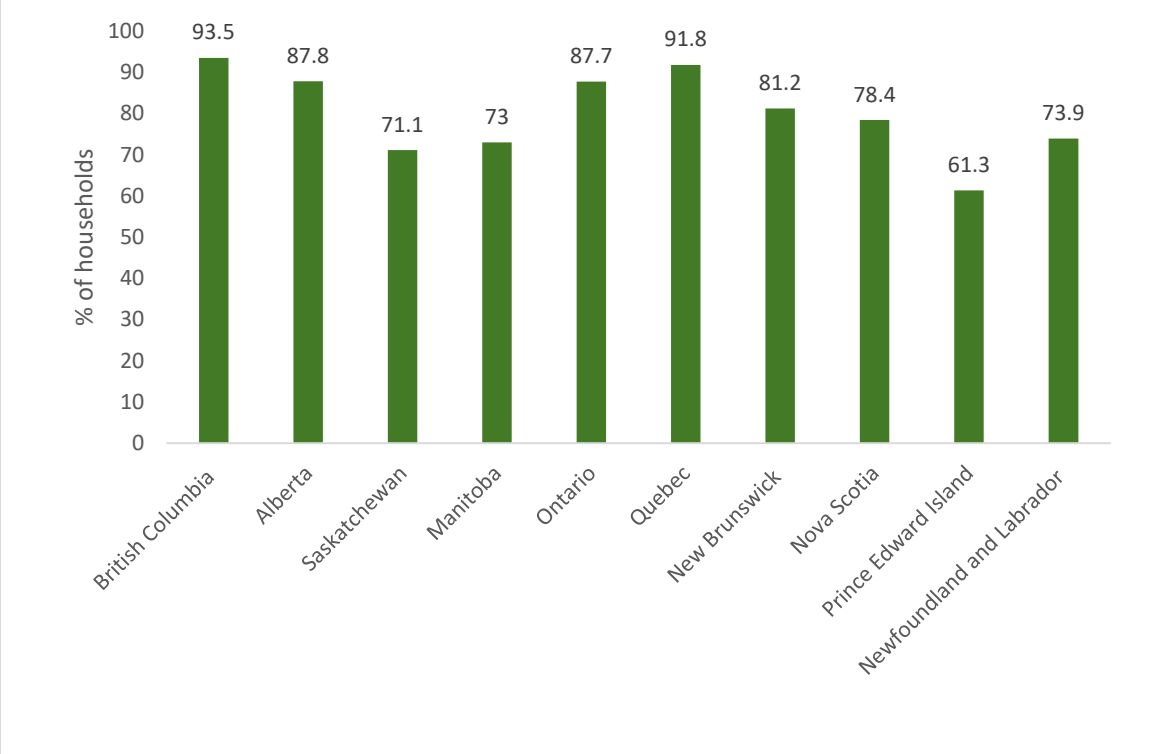
7 CRTC, *Telecom Regulatory Policy CRTC 2016-496*, 21 December 2016.

8 CRTC, *Communications Monitoring Report 2020*, as cited in Rogers, *Brief*; INDU, *Evidence*, 26 November 2020, 1110 (Ian Scott, CRTC), p. 146.

9 CRTC, *Communications Monitoring Report 2020*, p. 137.

10 INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, Public Interest Advocacy Centre [PIAC]).

Figure 1—Broadband Service Availability for the 50/10/Unlimited Plan, by Region (% households), 2019



Source: Figure prepared by Library of Parliament analysts using data from the *Communications Monitoring Report 2020*, Table 4.2 Broadband service availability, by speed and province/territory (% of households).

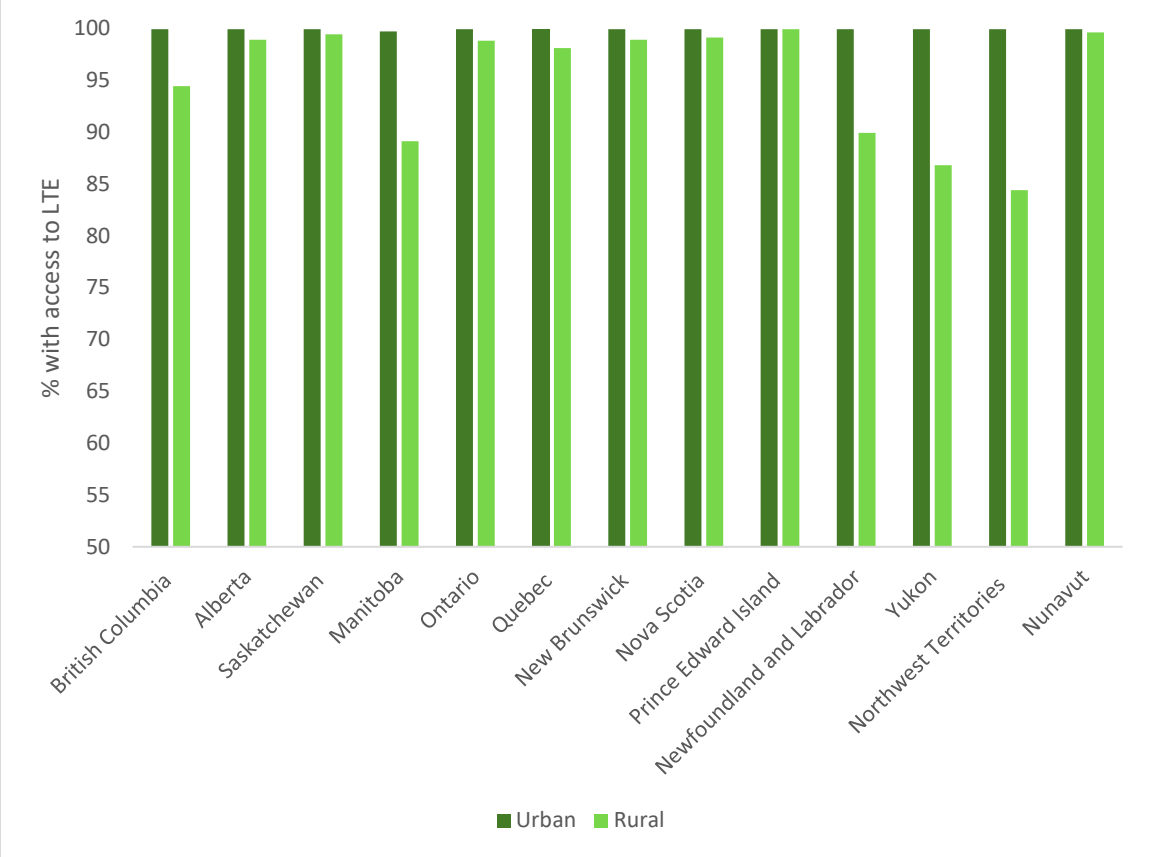
Wireless service coverage has improved somewhat in recent years, especially in rural regions, according to Robert Ghiz, President and CEO at the Canadian Wireless Telecommunications Association (CWTA).[11] CRTC data shows that, in 2019, 99.5% of Canadians had access to wireless long-term evolution (LTE) coverage across the country. In rural regions, this coverage increased from 35% in 2013 to 97% in 2019.[12] As shown in Figure 2, coverage varied among the provinces and territories in 2019, but remained good in all regions. However, Figure 3 shows that access to LTE along major roads and highways varied considerably from one region to another and was particularly poor in the territories and non-existent in Nunavut. As well, some witnesses noted that prices for wireless services remain high. Tamir Israel from the Canadian Internet Policy and

11 INDU, *Evidence*, 8 December 2020, 1120 (Robert Ghiz, CWTA).

12 CRTC, *Communications Monitoring Report 2020*, p. 99.

Public Interest Clinic noted that Canada's mobile costs have been persistently high in comparison to its global peers for years[13].

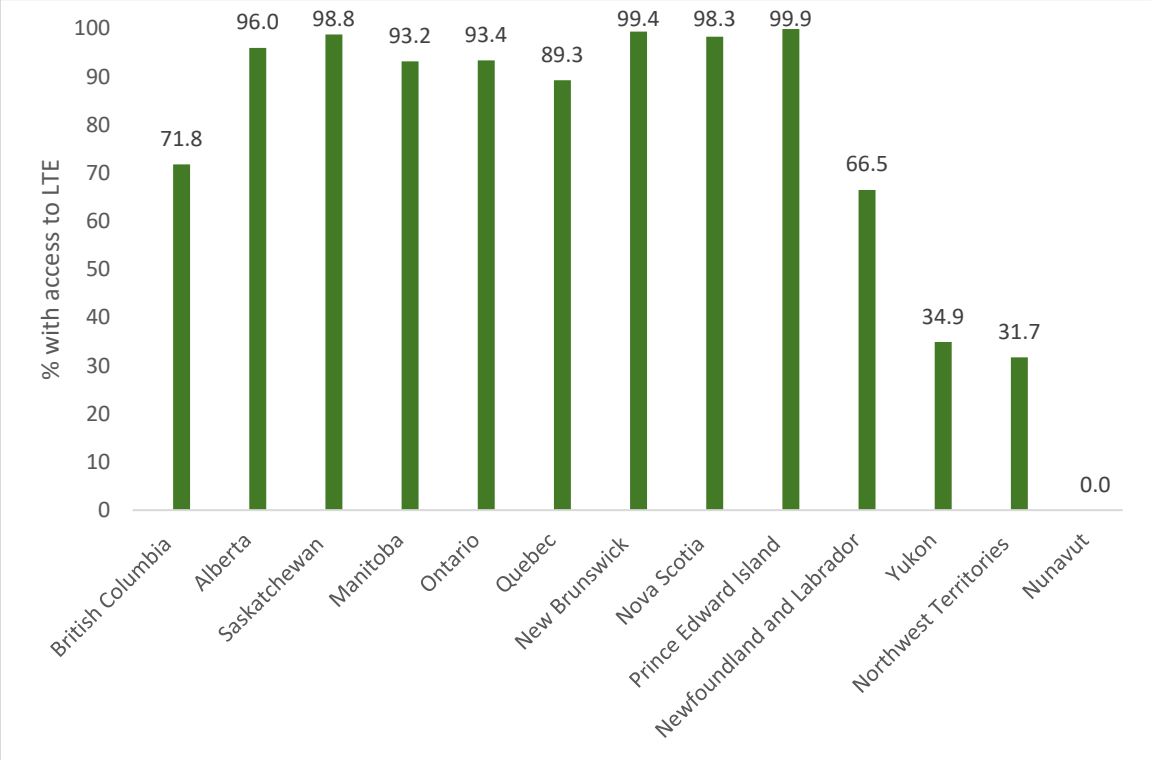
Figure 2—LTE Coverage, by Region, Urban Centres vs. Rural Communities (% of households), 2019



Source: Figure prepared by Library of Parliament analysts using data from the *Communications Monitoring Report 2020*, Figure 4.3 LTE population coverage, by region, urban centres vs rural communities (%).

13 INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC);

Figure 3—LTE Coverage of Major Roads and Highways (%), by Region, 2019



Source: Figure prepared by Library of Parliament analysts using data from the *Communications Monitoring Report 2020*, Figure 4.4 LTE coverage of major roads and highways (%), by region.

According to one witness, the ongoing lack of adequate Internet service in rural areas is a particular problem for Canada's farmers and ranchers. In the brief it submitted to the Committee, the Canadian Canola Growers Association (CCGA) explained how the agriculture sector is affected by delays in connecting rural and remote regions. Farmers lose precious time owing to unreliable Internet connections. For example, it might take hours to download software for farm equipment, particularly during peak periods of the season. Adoption of smart farming, which depends on new agriculture technologies that require large quantities of data, is limited. Furthermore, without adequate Internet access, farmers have difficulty applying for government programs online. According to the CCGA, this situation is ultimately "threatening Canada's competitiveness as a world leader in agricultural exports."[14]

14 CCGA, *Brief*.

Affordability of Broadband Internet

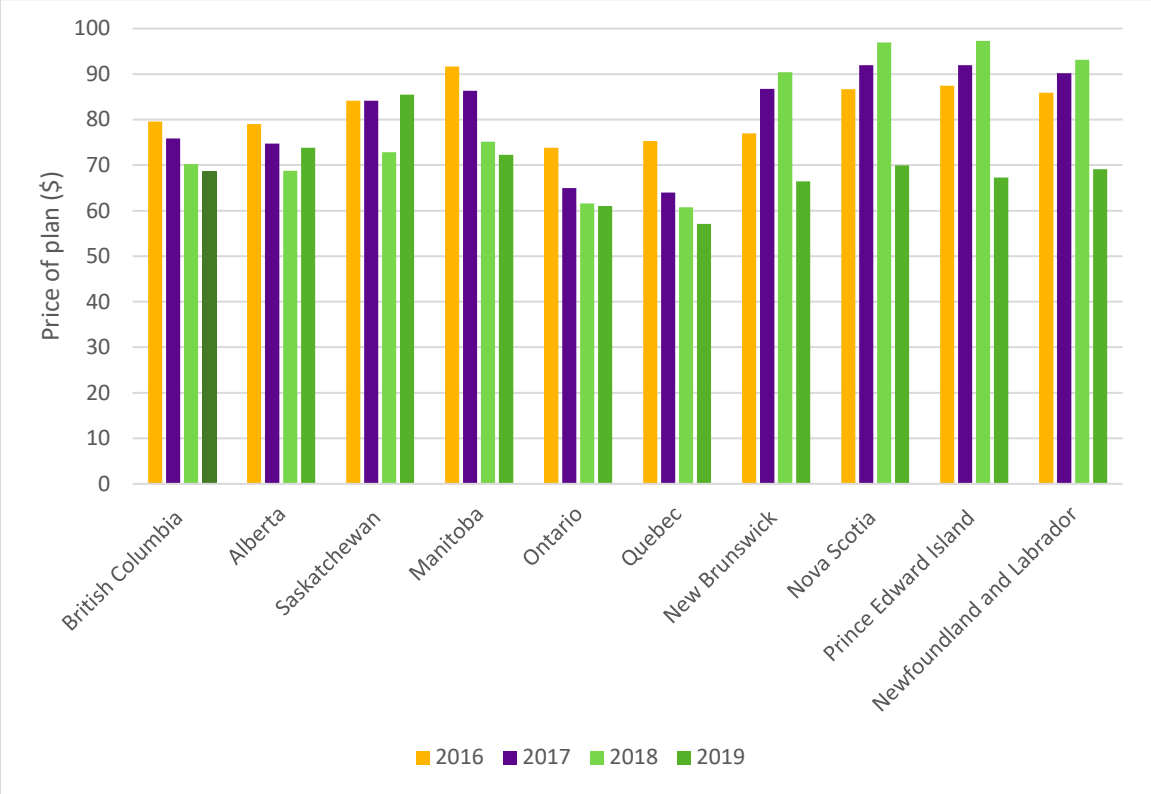
Some stakeholders said that the price of various telecommunications services in Canada has gone down in recent years.[15] For example, according to Rogers, the retail price per gigabyte (GB) of data for its wireless services dropped by 50% in the previous five years.[16] Furthermore, according to CRTC data, average monthly prices in Canada for mobile services decreased by 13.8% between 2018 and 2019, and the cost of a 50/10/unlimited plan decreased by 12.2%.[17] As Figure 4 shows, the cost of a 50/10/unlimited plan decreased in every province between 2018 and 2019, with the exception of Alberta and Saskatchewan, where it increased. The three territories are not represented in the figure because this plan is not available there.

15 INDU, *Evidence*, 8 December 2020, 1115 (Robert Ghiz, CWTA); INDU, *Evidence*, 26 January 2021, 1105 (Robert Malcolmson, BCE Inc.); INDU, *Evidence*, 23 February 2021, 1115 (Pierre Karl Péladeau, Quebecor Media Inc.); Rogers, *Brief*; Shaw Communications Inc. [Shaw], *Brief*.

16 Rogers, *Brief*.

17 CRTC, *Communications Monitoring Report 2020*, pp. 131 and 143, cited in Rogers, *Brief*.

Figure 4—Average Price of a 50/10/Unlimited Plan, by Region, 2016 to 2019



Source: Figure prepared by Library of Parliament analysts using data from the *Communications Monitoring Report 2020*, Figure 5.15 Average price of 50/10 Mbps unlimited Internet (region: province/territory).

A number of stakeholders said that the price of telecommunications services remains an issue, particularly in rural and remote regions. OpenMedia stated in its brief that Internet services in Canada are among the most expensive in the world.[18] Ian Stevens said that some households in rural and remote regions are still paying $200 a month for basic Internet service.[19] The CCGA pointed out in its brief that these communities "have less options for telecommunications service providers, with some areas only having one, leaving no opportunity to obtain lower pricing elsewhere."[20] The CRTC noted[21] that it

18 OpenMedia, *Brief*.

19 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA).

20 CCGA, *Brief*.

21 INDU, *Evidence*, 26 November 2020, 1115 (Ian Scott, CRTC).

would address remedies or solutions to ensure the affordability of wireless services in an upcoming decision.[22]

Some witnesses pointed out that the affordability of telecommunications services was an issue for vulnerable populations. According to ACORN Canada, some people have to choose between broadband Internet access and meeting their basic needs, like food.[23] Low-income groups often include seniors and person with disabilities.[24] John M. Rafferty, President and CEO of the CNIB Foundation, explained that smart devices have changed the way Canadians with disabilities can interact, particularly those who are blind or partially sighted. He said that it is important for them to have access to affordable Internet so they can take advantage of the latest technologies.[25] Raymond Noyes, a member of ACORN Canada, pointed out the irony, as he sees it, of the federal government investing in the latest technologies, like fifth generation wireless service (5G), when many Canadians still cannot afford broadband Internet service.[26]

Many stakeholders emphasized that, despite the importance of affordability, guidelines on what constitutes an affordable plan in Canada seem to be lacking. Mr. Lawford suggested that a plan could be considered affordable if it constitutes no more than 4% to 6% of a household's income. He explained that low-income households are spending 8% to 10% of their household income for lower-quality Internet services.[27] In response to a question to understand if the CRTC has a definition of what constitutes affordable services, Ian Scott, CRTC Chairperson and CEO, mentioned that the CRTC Broadband Fund would ensure that beneficiaries offer affordable plans in rural and remote regions, at a price no higher than what is available in urban areas in that area.[28] He added that the CRTC did not have a definition of what constitutes basic or affordable services.[29]

During the Committee's study, several witnesses emphasized that the federal government should address broadband Internet accessibility and affordability at the same time. Mr. Field noted that individuals in rural and remote regions often have two

22 The CRTC published the *Telecom Regulatory Policy CRTC 2021 130* on 15 April 2021

23 INDU, *Evidence*, 26 January 2021, 1210 (Raymond Noyes, ACORN Canada); ACORN Canada, *Brief*.

24 INDU, *Evidence*, 26 January 2021, 1210 (Raymond Noyes, ACORN Canada); OpenMedia, *Brief*.

25 INDU, *Evidence*, 26 November 2020, 1220 (John M. Rafferty, CNIB Foundation); OpenMedia, *Brief*.

26 INDU, *Evidence*, 26 January 2021, 1240 (Raymond Noyes, ACORN Canada).

27 INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, PIAC).

28 INDU, *Evidence*, 26 November 2020, 1110 (Ian Scott, CRTC).

29 INDU, *Evidence*, 26 November 2020, 1145 (Ian Scott, CRTC).

or three cellphone plans because they connect their computers to their cellphone to get broadband Internet access. Many of them have cellphone bills that cost hundreds of dollars a month, or even up to $1,000 a month.[30] OpenMedia noted that government programs should promote not only better connectivity but also more affordable telecommunications services.[31]In their testimony, OpenMedia noted:

> We can't connect the country to quality Internet and then try to tackle the cost. They need to be addressed in tandem. Without affordability, there is no accessibility. For those who have access but can't afford it, when can they expect to start using the Internet?[32]

INITIATIVES AND ISSUES: SUPPORTING INFRASTRUCTURE DEPLOYMENT

Technological Advances

Internet service providers in rural and remote regions of Canada spoke about the opportunities for growth involving their technologies. In its brief to the Committee, Huawei said it was the leading equipment provider in rural and remote areas in Canada. The company explained that a new generation of antenna, weighing only 25 kg, can be installed in under two hours without heavy machinery such as a crane. Huawei established a partnership with telecommunications service providers (TSPs) in 2019 to connect 70 communities, primarily in northeastern Quebec and areas of Newfoundland and Labrador.[33]

Three companies that provide satellite Internet service in Canada told the Committee about the opportunities associated with the development and evolution of these technologies.

Jeff Philipp, founder and CEO of SSi Canada, explained what his company has achieved to date and the challenges it is facing. He mentioned that SSi Canada has successfully deployed broadband Internet across Nunavut and now offers LTE.[34] In recent years, SSi Canada has invested $80 million in Nunavut and provides services to

30 INDU, *Evidence*, 23 February 2021, 1135 (Barry Field, South Western Integrated Fibre Technology [SWIFT]).

31 INDU, *Evidence*, 26 November 2020, 1215 (Erin Knight, OpenMedia).

32 Ibid.

33 Huawei Technologies Co., Ltd., *Brief*.

34 INDU, *Evidence*, 26 January 2021, 1215 (Jeff Philipp, SSi Canada).

10,000 households spread across 25 communities.[35] Mr. Philipp explained that SSi Canada did not receive any public funding to deploy its services. He noted that with equal partnerships and opportunities for all TSPs, even the smallest and most remote communities could be connected.[36] Finally, in addition to lamenting the lack of access to spectrum licenses for regional TSPs, Mr. Philipp noted that it is difficult for satellite-building companies to invest hundreds of millions of dollars over the long term in developing their capacity, as government funding commitments are often staggered by four-year election cycles.[37]

Daniel Goldberg, President and CEO at Telesat, told the Committee about Telesat's activities and projects to improve broadband Internet access in rural and remote regions. However, Mr. Goldberg noted that current satellites are too deep in space to provide high-capacity, low-latency service (latency being the delay between when a data packet is sent and when it is received). Telesat plans to develop a network of low-earth-orbit satellites (LEO) to increase its satellite-based Internet capacity, giving users access to broadband services equivalent to fibre, as well as wireless LTE and 5G services. He expects construction on these satellites to begin in early 2021 and the system to be ready for beta testing in 2023.[38] Telesat received $600 million in funding from the federal government to develop this project.[39]

Patricia Cooper, Vice-President of Satellite Government Affairs at Space Exploration Technologies Corp. (SpaceX), told the Committee about SpaceX's Canadian business plans for its Starlink broadband Internet system. She explained that SpaceX uses a different business model from Telesat, as it provides services directly to users instead of selling capacity to TSPs. Its LEO satellites provide a new generation of high-speed Internet services, with speeds exceeding 100 Mbps and latencies of less than 40 milliseconds. With this capacity, people in rural and remote regions would be able to telework and access telehealth care. Ms. Cooper said that SpaceX began its public beta rollout in a number of regions in Canada in November 2020 and it expected full satellite coverage to be available across Canada, including rural and remote regions, by 2022.[40]

35 INDU, *Evidence*, 26 January 2021, 1235 (Jeff Philipp, SSi Canada).

36 INDU, *Evidence*, 26 January 2021, 1215 (Jeff Philipp, SSi Canada); SSi Canada, *Brief*.

37 Ibid., 1250.

38 INDU, *Evidence*, 17 November 2020, 1105 (Daniel Goldberg, Telesat).

39 Ibid., 1120.

40 INDU, *Evidence*, 17 November 2020, 1115 (Patricia Cooper, Space Exploration Technologies Corp. [SpaceX]).

Once geographic coverage is complete, SpaceX plans to continue increasing its number of satellites to add capacity in order to offer services to more users across Canada.[41]

The three companies that provide satellite Internet service each provided a brief overview of what their services cost. Mr. Goldberg was unable to provide a price for Telesat services, since it does not sell directly to users.[42] However, he mentioned that Telesat's new constellation of low-earth-orbiting satellites (LEO) would improve capacity and service quality "at an extraordinarily low cost, multiples lower than what exists in the market today."[43] Ms. Cooper said that the current price for Starlink service includes a one-time equipment purchase of $649 and then a monthly subscription of $129. She explained that the cost of deploying new satellites is very high, justifying the current cost of its Internet plan, but that SpaceX planned to drive the cost down significantly in the years to come.[44] Mr. Philipp provided some background information to put the cost of satellite service in perspective, explaining that fibre costs between $2 and $10 per Mb, while satellite services cost between $300 and $1,000 per Mb.[45] Mr. Goldberg and Mr. Philipp both said they are in favour of a competitive telecommunications sector and support the arrival of new players in Canada, such as SpaceX.[46]

While satellite is a compelling option for providing Internet services in rural and remote communities, OpenMedia argued that it is not the best solution. OpenMedia expressed concerns about the affordability, sustainability and scalability of satellite Internet service. It pointed out that areas served by satellite Internet tend to have a single provider, which is a factor that keeps costs high. OpenMedia noted that, while Starlink provides a direct-to-consumer alternative, its prices are currently too high for most users. According to OpenMedia, satellite technology is costly over the long term, since its lifespan is only a few years and it requires ongoing investment in infrastructure upgrades to improve capacity.[47] SSi Canada explained in its brief that funding is needed to ensure that satellite Internet service providers can offer "services at rates that are

41 INDU, *Evidence*, 17 November 2020, 1225 (Patricia Cooper, SpaceX).

42 INDU, *Evidence*, 17 November 2020, 1130 (Daniel Goldberg, Telesat).

43 Ibid, 1120.

44 INDU, *Evidence*, 17 November 2020, 1130 (Patricia Cooper, SpaceX).

45 INDU, *Evidence*, 26 January 2021, 1225 (Jeff Philipp, SSi Canada).

46 INDU, *Evidence*, 17 November 2020, 1110 (Daniel Goldberg, Telesat); INDU, *Evidence*, 26 January 2021, 1250 (Jeff Philipp, SSi Canada).

47 OpenMedia, *Brief*.

truly affordable for the often-disadvantaged people living in satellite-dependent communities."[48]

David Brown, CEO of FSET Information Technology, spoke about his experience with Starlink to get the Pikangikum First Nation community connected. He explained that he reached out to large TSPs, but they were not very interested in collaborating, and their processes were very time-intensive (taking several years) and expensive.[49] According to Mr. Brown, Indigenous communities often face such difficulties, but are forced to work with the big TSPs because no one else can provide service in their area. Looking for an alternative, he reached out to Starlink, and his experience was very positive. The process was flexible and fast, taking only a few days, and it was easy to calculate the cost per home.[50] Homes using Starlink in his community are currently seeing download speeds of about 130 Mbps.[51]

Witnesses had different views on what technology is best suited to deploying broadband Internet across Canada. Witnesses explained that investments should be tailored to meet future needs, not current ones, and in their opinion fibre was the only technology that could continue to meet growing needs without major new investments.[52] Fibre can last for up to 70 years before having to be replaced.[53] In its brief, OpenMedia stated, "[f]uture-proofing our broadband technologies should be the gold standard."[54] Another witness proposed making fibre mandatory for all infrastructure projects, particularly in rural and remote regions.[55] However, some witnesses pointed out that fibre is very expensive to deploy in rural regions, which is why wireless solutions are often preferred.[56] Mr. Field said that it was not possible to use a single model or one type of technology across Canada, as each region has distinct geographic and demographic features.[57]

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48 SSi Canada, *Brief*.

49 INDU, *Evidence*, 8 December 2020, 1125 (David Brown, FSET Information Technology).

50 Ibid.

51 Ibid, 1205

52 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); OpenMedia, *Brief*, CCSA, *Brief*

53 OpenMedia, *Brief*.

54 Ibid.

55 Cybera Inc., *Brief*.

56 INDU, *Evidence*, 26 January 2021, 1105 (Robert Malcolmson, BCE Inc.); Cybera Inc., *Brief*.

57 INDU, *Evidence*, 23 February 2021, 1105 (Barry Field, SWIFT).

Spectrum Management

Radio spectrum frequencies range from 3 kilohertz (kHz) to 300 gigahertz (GHz).[58] To provide Internet services, low-band spectrum (below 1 GHz) is used in rural regions, as it is ideal for covering large geographic areas and penetrating buildings, while mid-band spectrum (between 1 GHz and 10 GHz) and high-band spectrum (over 10 GHz) is used in more densely populated regions, as it covers a smaller area but provide increased capacity for data transfer.[59]

Several witnesses spoke about spectrum-access issues in rural and remote regions. According to TELUS Communications Company (TELUS) and BCE Inc. (Bell), spectrum access in rural and remote regions is crucial, as it is often faster and more cost-effective to use a wireless connection for broadband Internet access in these areas rather than a wired connection.[60] Mr. Philipp mentioned that SSi Canada had participated in every spectrum auction and never gotten a licence, even though it would be very useful for SSi Canada to have access to more spectrum for the areas in which it operates.[61] In its brief, SSi Canada stated, "[a]nother factor that contributes to the higher cost of broadband access in satellite-dependent and other underserved regions is the scarcity of spectrum."[62]

Laura Tribe, Executive Director of OpenMedia, explained that stakeholders who obtain spectrum licences often do not fully use them, particularly in rural areas, leaving some regions without wireless service.[63] For example, TELUS data show that Shaw, Eastlink and Videotron have deployed only 15% to 17% of their rural spectrum licences.[64] Witnesses put forward a number of steps the federal government could take to address this issue:

- Impose more conditions for rural deployment on each licence.[65]

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58 One kilohertz (kHz) equals 1,000 hertz. One megahertz (MHz) equals 1 million hertz. One gigahertz (GHz) equals 1 billion hertz.

59 Innovation, Science and Economic Development Canada [ISED], *Spectrum Outlook 2018–2022*.

60 INDU, *Evidence*, 26 January 2021, 1135 (Robert Malcolmson, BCE Inc.); TELUS Communications Inc. [TELUS], *Brief*.

61 INDU, *Evidence*, 26 January 2021, 1305 (Jeff Philipp, SSi Canada).

62 SSi Canada, *Brief*.

63 INDU, *Evidence*, 26 November 2020, 1245 (Laura Tribe, OpenMedia).

64 TELUS, *Brief*.

65 INDU, *Evidence*, 8 December 2020, 1155 (John Lawford, PIAC), TELUS, *Brief*.

- Implement a "use it or lose it" policy providing that the unused portion of the spectrum licence would be lost.[66]

- Establish a secondary market for spectrum, which would give independent TSPs[67] or other organizations the opportunity to buy spectrum from those who are not using it.[68]

- Rebate spectrum fees when incumbent TSPs[69] use their licences in rural and remote regions.[70]

As for licence costs, Mr. Ghiz said that Canada had probably the most expensive spectrum costs in the world and that those costs are passed down to customers. In his opinion, making spectrum more accessible would reduce costs for TSPs and encourage them to deploy more telecommunications services.[71] SSi Canada mentioned in its brief that it is sympathetic to calls for the federal government to allocate spectrum auction revenues to vital public interests, such as ensuring that all Canadians have access to broadband Internet service, regardless of their income.[72]

Stakeholders had different views about the benefits of set-asides at spectrum auctions.[73] Shaw pointed out that this practice increased spectrum access for regional competitors that are at a disadvantage compared with the large national TSPs, thereby supporting the growth, investment and expansion of regional competitors. For example, thanks to a set-aside at the 2008 spectrum auction, Shaw was able to obtain spectrum licences that were critical to its launch of services in 20 new rural and remote regions in 2019.[74] However, TELUS was against the practice of set-asides, saying that Innovation, Science

66 INDU, *Evidence*, 8 December 2020, 1155 (John Lawford, PIAC); INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC); INDU, *Evidence*, 26 November 2020, 1245 (Laura Tribe, OpenMedia); TELUS, *Brief*.

67 In its *Communications Monitoring Report 2020*, the CRTC defines independent service providers [ISPs] as "ISPs that are not cable-based carriers or incumbent TSPs [telecommunications services providers]."

68 TELUS, *Brief*.

69 In its *Communications Monitoring Report 2020*, the CRTC defines an incumbent TSP as "a company that provides local telecommunications services on a monopoly basis prior to the introduction of competition. Examples of incumbent TSPs include Bell, SaskTel and TELUS. They also include small incumbent TSPs such as Sogetel and Execulink."

70 TELUS, *Brief*.

71 INDU, *Evidence*, 8 December 2020, 1200 (Robert Ghiz, CWTA).

72 SSi Canada, *Brief*.

73 At some spectrum auctions, ISED sets aside spectrum for regional or small TSPs to promote competition.

74 Shaw, *Brief*.

and Economic Development Canada (ISED) set aside spectrum for TSPs that did not invest in rural coverage.[75] Shaw said that the fact that large national TSPs were against the set-asides was "a transparent and desperate attempt to thwart further competitive entry and expansion by regional competitors like Shaw, in order to maintain and further entrench their joint dominance in the 5G era."[76] SSi Canada and Quebecor Media Inc. noted that set-asides promote competition, which helps keep monopolies in check.[77]

Some witnesses said that it is important for the federal government to manage the spectrum strategically in order to support the development of new technologies.[78] For example, Mr. Goldberg explained that many of the spectrum bands required for 5G currently have several other uses, particularly in rural regions. In order for this new technology to be made available, TSPs will have to change frequency bands without interrupting service to users, which will be a very expensive endeavour.[79] Mr. Goldberg pointed out that, in the United States, the Federal Communications Commission (FCC) paid satellite operators $18 billion to clear the 5G spectrum and build new facilities to maintain existing services. In Canada, ISED is just beginning consultations in this area. Telesat proposed implementing an initiative in Canada that is similar to the FCC one, which would provide funding for new LEO satellites and help Canadian companies compete on an equal footing with American satellite operators.[80]

Access to Support Structures

Some witnesses mentioned issues involving access to existing support structures, such as utility poles. These structures belong to various entities, particularly electricity and telephone companies. In its brief, Rogers explained that fees to access these poles may account for as much as half of the total cost of deploying fibre in rural and remote regions for small TSPs. The brief also mentioned unreasonable delays for obtaining approval to use poles.[81] Pierre Karl Péladeau, President and CEO of Quebecor Media Inc., asserted that it is difficult for Videotron to offer more services outside of cities because of Bell's obstruction tactics. He added that Videotron only has trouble accessing Bell's

75 TELUS, *Brief*.

76 Shaw, *Brief*.

77 INDU, *Evidence*, 23 February 2021, 1145 (Pierre Karl Péladeau, Quebecor Media Inc.); SSi Canada, *Brief*.

78 INDU, *Evidence*, 17 November 2020, 1230 (Robert Goldberg, Telesat); INDU, *Evidence*, 26 January 2021, 1105 (Robert Malcolmson, BCE Inc.).

79 INDU, *Evidence*, 17 November 2020, 1230 (Robert Goldberg, Telesat).

80 INDU, *Evidence*, 17 November 2020, 1200 (Robert Goldberg, Telesat).

81 Rogers, *Brief*.

poles, not Hydro-Québec's, which he said shows that Bell is using anti-competitive practices.[82] One witness said that implementing a regulatory policy to make it easier to access support structures would increase the likelihood of meeting the universal target for connecting Canadians by 2030.[83]

Robert Malcolmson, Executive Vice-President and Chief Legal and Regulatory Officer at BCE Inc., addressed criticisms directed at Bell regarding access to its support structures. He said that 70% of requests to access its poles come from Quebec. Many of these poles are owned or used jointly by Bell, TELUS and Hydro-Québec, and Mr. Malcolmson believes that delays are warranted owing to the various technical and safety issues associated with accessing a utility pole. He also noted that access fees are regulated by the CRTC. Furthermore, he said that, in response to complaints about how long it took to gain access to poles, the three stakeholders and the Government of Quebec set up a coordination table and that a number of changes had been implemented.[84] However, Mr. Péladeau maintained that it is premature to conclude that the measures announced by Bell would solve this issue.[85]

Some witnesses proposed solutions to the issue of access to support structures. One witness suggested creating a database with information on the availability, cost and upgrades required for support structures not owned by telecoms, and creating a mechanism to report any issues with a particular support structure.[86] Mr. Péladeau suggested that the federal government intervene to put an end to Bell's obstruction tactics.[87] Mr. Scott explained that the CRTC was in the process of holding consultations to address the concerns various stakeholders expressed about access to utility poles.[88] However, other witnesses said that the CRTC consultations would not be enough to resolve this issue, as the CRTC does not have jurisdiction to regulate support structures owned by municipal or provincial entities.[89] As well, according to Shaw, consultations will solve only part of the problem. The company suggested that ISED amend the

82 INDU, *Evidence*, 23 February 2021, 1200 (Pierre Karl Péladeau, Quebecor Media Inc.).

83 Cybera Inc., *Brief*.

84 INDU, *Evidence*, 26 January 2021, 1125 (Robert Malcolmson, BCE Inc.).

85 INDU, *Evidence*, 23 February 2021, 1135 (Pierre Karl Péladeau, Quebecor Media Inc.).

86 Cybera Inc., *Brief*.

87 INDU, *Evidence*, 23 February 2021, 1200 (Pierre Karl Péladeau, Quebecor Media Inc.).

88 CRTC, *Telecom Notice of Consultation CRTC 2020-366*, cited in INDU, *Evidence*, 26 November 2020, 1130 (Ian Scott, CRTC).

89 Shaw, *Brief*; Cybera Inc., *Brief*.

Telecommunications Act to expand the scope of the CRTC's jurisdiction over passive infrastructure.[90]

Government Programs

Some witnesses highlighted the importance of ongoing government support to subsidize telecommunications services in rural and remote regions, and they proposed initiatives to improve existing programs.[91] Cybera pointed out that in the United States the FCC has a "High Cost/Connect America" program that provides subsidies to cover the cost of services in regions with low population density, and suggested that the federal government provide similar funding on an ongoing basis.[92] To reduce deployment costs in Northern regions, Cybera suggested implementing training programs for network technicians in remote communities, as it is very expensive to fly technicians in to fix infrastructure issues.[93] Mr. Field noted that, while the government has already made significant investments in deploying broadband Internet, significantly more funding will be required to achieve the CRTC's universal service objective by 2030.[94]

Some witnesses pointed out the importance of ensuring that broadband Internet funding programs are accessible to non-traditional TSPs, such as independent TSPs or municipalities. They criticized the fact that the format and eligibility criteria of government programs often exclude communities or independent organizations.[95] They said that these stakeholders often have a better understanding of the situation in a region where they want to offer Internet service than do larger TSPs, and that they are often more inclined to invest significant resources in the project.[96] Mr. Field noted that a significant part of the challenge of broadband Internet accessibility is understanding where service is available and who provides it in each region.[97] According to

90 Shaw, *Brief*.

91 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); Rogers, *Brief*; Cybera Inc., *Brief*; CCSA, *Brief*

92 Cybera Inc., *Brief*.

93 Ibid.

94 INDU, *Evidence*, 23 February 2021, 1110 (Barry Field, SWIFT).

95 INDU, *Evidence*, 8 December 2020, 1215 (David Brown, FSET Technology); OpenMedia, *Brief*; Cybera Inc., *Brief*.

96 INDU, *Evidence*, 23 February 2021, 1110 (Barry Field, SWIFT); Cybera Inc., *Brief*.

97 INDU, *Evidence*, 23 February 2021, 1125 (Barry Field, SWIFT).

OpenMedia, it is important for the government to provide more support to non-traditional TSPs when they apply for government programs.[98]

The CRTC established a fund to improve access to broadband Internet across the country to complement existing government initiatives. Industry stakeholders pay into the fund. Mr. Scott said that the CRTC's Broadband Fund is addressing the affordability of telecommunications services by asking eligible stakeholders to provide rural packages for the same price as those in urban areas.[99] However, Mr. Stevens cautioned that government stakeholders should not use urban prices as a benchmark for affordability, as it would penalize some TSPs that, without government support, need to charge higher prices in rural areas, because the cost per customer is higher.[100]

Several stakeholders shared their concerns about the Connecting Families initiative. It offers low-income families high-speed Internet service for $10 a month. According to Mr. Noyes, the Internet speeds available through this initiative are not fast enough for a family with multiple children; he proposed that the speeds offered match the CRTC's service target of 50/10 Mbps.[101] In addition, a household must be receiving the maximum Canada Child Benefit to be eligible and has to contact their TSP to participate.[102] A number of witnesses said these criteria leave out many low-income households, as they cannot participate if they do not have children. Furthermore, it is optional for TSPs to participate in the program, and many choose not to.[103] Lastly, the household participation rate is quite low, around 5%, and Mr. Noyes said he thought the reason could be the slow speeds offered through the initiative and the lack of promotion for the program to the target audience.[104]

Some witnesses had program ideas to help reduce the cost of telecommunications services. Mr. Lawford suggested that the CRTC could shift the focus of the National Contribution Fund, which was used to subsidize telephone service in rural areas, to subsidize Internet service in these regions instead.[105] He also suggested that households

98 OpenMedia, *Brief*.

99 INDU, *Evidence*, 26 November 2020, 1110 (Ian Scott, CRTC).

100 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); CCSA, *Brief*

101 INDU, *Evidence*, 26 January 2021, 1210 (Raymond Noyes, ACORN Canada); ACORN Canada, *Brief*.

102 ACORN Canada, *Brief*.

103 INDU, *Evidence*, 8 December 2020, 1235 (John Lawford, PIAC); INDU, *Evidence*, 26 January 2021, 1210 (Raymond Noyes, ACORN Canada); ACORN Canada, *Brief*.

104 INDU, *Evidence*, 26 January 2021, 1255 (Raymond Noyes, ACORN Canada).

105 INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, PIAC).

and businesses could pay an additional fee on their Internet bills (for example, 50¢ a month) to finance an affordability fund.[106] However, according to several witnesses, while these programs may be beneficial over the short term, they are not a long-term solution because they do not put downward pressure on the price of telecommunications service plans in Canada.[107]

Lastly, some witnesses stressed the importance of the government being more strategic in coordinating programs to make telecommunications services more accessible.[108] As it stands, programs are offered by different departments, governments and organizations, each with their own timelines, selection criteria and objectives. Stakeholders must invest considerable resources in applying for the various programs, which leads many of them to apply for only one program in one area, meaning they may miss out on other opportunities as a result.[109] Having competing programs is also costly for the stakeholders offering them, as administrative tasks are duplicated, which reduces program profitability.[110]

To address this issue, several witnesses proposed implementing a national connectivity plan in Canada.[111] Coordinating programs would increase efficiency and reduce the resources required for stakeholders to apply.[112] This approach would mean a number of issues could be addressed in a coordinated and strategic manner, such as spectrum management, access to support structures and funding for broadband in rural and remote regions.[113] Subsidized projects could then be selected based on a strategic direction for connectivity in Canada rather than on a case-by-case basis.[114]

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106 INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, PIAC).

107 INDU, *Evidence*, 8 December 2020, 1235 (Andy Kaplan-Myrth, TekSavvy Solutions Inc. [TekSavvy]); ACORN Canada, *Brief*; OpenMedia, *Brief*.

108 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, PIAC); INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC); INDU, *Evidence*, 26 January 2021, 1105 (Robert Malcolmson, BCE Inc.); INDU, *Evidence*, 23 February 2021, 1110 (Barry Field, SWIFT).

109 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); TELUS, *Brief*.

110 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); INDU, *Evidence*, 23 February 2021, 1110 (Barry Field, SWIFT).

111 INDU, *Evidence*, 8 December 2020, 1110 (John Lawford, PIAC); INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA); INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC), CCSA, *Brief*.

112 INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA), CCSA, *Brief*

113 INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC).

114 INDU, *Evidence*, 8 December 2020, 1240 (Tamir Israel, CIPPIC); INDU, *Evidence*, 8 December 2020, 1225 (John Lawford, PIAC).

Witnesses proposed various structures to govern such a national strategy. Mr. Field suggested that the federal government should provide funding for broadband services directly to the provinces and territories so they can allocate it based on their unique needs.[115] On the other hand, other witnesses suggested that the plan should be overseen by an organization at the national level. Tamir Israel thought that such a plan should be established by the CRTC. For his part, Mr. Lawford said that a neutral third party should be responsible for the plan, as he does not believe the CRTC currently has the required legislative authority.[116] He also emphasized that the plan would have to be implemented independently of the CRTC and the industry, because of "the parochialism in those two areas."[117]

To ensure this plan could be put in place, Mr. Lawford suggested including a universal service obligation in the *Telecommunications Act*, as in the United States. The universal service obligation in the United States entitles all Americans to affordable, upgraded service. This, in turn, guides the actions of the FCC and ensures it can undertake a number of coordinated projects. According to Mr. Lawford, in Canada, the *Telecommunications Act* has a number of objectives, including affordability, but the objectives compete with each other.[118] In his opinion, the CRTC does not have the tools it needs to make it mandatory to roll out programs in rural and remote regions or to create subsidies or funds to support access for companies or users. Mr. Lawford believes it is crucial to have this legal foundation so that a national strategy can be implemented. It would ensure that the universal service obligation is considered in all projects, forcing reluctant stakeholders to cooperate.[119]

A WAY FORWARD: SUPPORTING A COMPETITIVE TELECOMMUNICATIONS SECTOR

Some witnesses explained that, in their opinion, the structure of the Canadian telecommunications sector—where a few players dominate and profitability reigns supreme—is largely responsible for the various problems in telecommunications service

115 INDU, *Evidence*, 23 February 2021, 1110 (Barry Field, SWIFT).

116 INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC); INDU, *Evidence*, 8 December 2020, 1225 (John Lawford, PIAC).

117 INDU, *Evidence*, 8 December 2020, 1215 (John Lawford, PIAC).

118 *Telecommunications Act*, S.C. 1993, c. 38, s. 7.

119 INDU, *Evidence*, 8 December 2020, 1210 (John Lawford, PIAC).

accessibility across the country.[120] ACORN Canada said that the three largest national TSPs (Bell, Rogers and TELUS) control upwards of 90% of the Canadian wireless market.[121] According to Shaw, the big three hold more than 75% of the spectrum in Canada.[122] Dean Proctor, Chief Development Officer at SSi Canada, said that Canadians do not always have access to affordable, high-quality Internet services because "our regulatory system remains focused on the profitability of telephone companies … at the expense of competitors and, ultimately, consumers."[123] Matt Stein, President and CEO of Competitive Network Operators of Canada (CNOC), said that "large Canadian telecom companies have never been more powerful or less accountable."[124]

Mr. Brown explained that, following attempts to collaborate with the three biggest TSPs, he believes their service approach makes it more difficult to improve connectivity in Canada, particularly in rural and remote regions. He said, "[d]espite being funded in many, many cases by taxpayers to provide infrastructure, they simply don't have the desire to do so. It's about maximizing profits, not maximizing service delivery and coverage."[125] For example, he explained that, when he contacted Rogers to discuss obtaining service in an Indigenous community, Rogers took an unreasonable amount of time to respond and quoted exorbitant prices for accessing its network and buying its services.[126] Mr. Brown added that he was told by a telecommunications company's representative that "there's Vancouver, there's Toronto and there are a couple of speed bumps in Calgary in between, and the rest really doesn't much matter." He said this attitude is behind the enduring digital divide in Canada.[127]

Various witnesses said that developing and encouraging competition in the telecommunications sector in Canada would be key to loosening the stranglehold the

120 INDU, *Evidence*, 8 December 2020, 1125 (David Brown, FSET Information Technology); INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, Competitive Network Operators of Canada [CNOC]); INDU, *Evidence*, 26 January 2021, 1220 (Dean Proctor, SSi Canada); OpenMedia, *Brief*.

121 ACORN Canada, *Brief*.

122 Shaw, *Brief*.

123 INDU, *Evidence*, 26 January 2021, 1220 (Dean Proctor, SSi Canada).

124 INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, CNOC).

125 INDU, *Evidence*, 8 December 2020, 1255 (David Brown, FSET Information Technology).

126 Ibid.

127 Ibid.

top TSPs have on the market, thereby putting an end to the digital divide and the persistent affordability issues across the country.[128] For example, Mr. Scott said:

> [C]ompetition is the best way [to make rates affordable], not regulation … Clearly we need to continue to get mobile rates down and make them more affordable, but I firmly believe that competition, a competitive market, is the best and most meaningful way to do so.[129]

Erin Knight, Digital Campaigner with OpenMedia, agreed that more competition is the ticket to lower prices in Canada.[130] Mr. Stein added that:

> [T]he best investment that could be made in Canadian telecom affordability right now does not originate from government coffers. It originates from a reaffirmation from the current government of the role competitive service providers play in delivering on the goals of competition, affordability and innovation, and letting the CRTC do its work.[131]

According to Mr. Philipp, competition is essential to improving rural connectivity. During his testimony, he said, "Competition is the key to improve the affordability, quality and reliability of telecommunications in Northern Canada."[132] Mr. Philipp emphasized that the federal government should promote competition by encouraging shared infrastructure and networks and spectrum access for all. This is particularly important in rural and remote regions because the low population density makes it impractical to have multiple facilities. SSi Canada further proposed in its brief building open gateways in remote communities to connect all competing TSPs to the available facilities. Mr. Philipp also criticized the actions of TSPs such as Bell or its subsidiary Northwestel, which employ practices that limit competition in these regions.[133]

Some incumbent TSPs said they believe competition could be beneficial, but only if it is facilities-based competition. In their view, competition between national and regional network operators has already brought costs down and improved telecommunications

128 INDU, *Evidence*, 26 November 2020, 1115 (Ian Scott, CRTC); INDU, *Evidence*, 26 November 2020, 1215 (Erin Knight, OpenMedia); INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, CNOC); OpenMedia, *Brief*; Cybera Inc., *Brief*; SSi Canada, *Brief*.

129 INDU, *Evidence*, 26 November 2020, 1115 (Ian Scott, CRTC).

130 INDU, *Evidence*, 26 November 2020, 1215 (Erin Knight, OpenMedia).

131 INDU, *Evidence*, 26 November 2020, 1215 (Matt Stein, CNOC).

132 INDU, *Evidence*, 26 January 2021, 1215 (Jeff Philipp, SSi Canada); SSi Canada, *Brief*.

133 INDU, *Evidence*, 26 January 2021, 1215, 1230, 1235 (Jeff Philipp, SSi Canada); SSi Canada, *Brief*.

service quality, which undercuts the dominance of the largest TSPs.[134] Mr. Péladeau pointed out that, according to a Competition Bureau report, telecommunications services cost 35% to 40% less in areas with regional competitors.[135] Mr. Ghiz added that the federal government should encourage facilities-based competition, as "Canada's telecommunications policy has long recognized the importance of facilities-based competition as the best way to drive competition while also encouraging the level of private sector investment needed to build world-class networks."[136] Mr. Philipp noted that, while SSi Canada is an incumbent TSP, it believes that all forms of competition are valuable and beneficial.[137]

Other stakeholders said the federal government should promote all types of competition and support independent TSPs, which are facing numerous obstacles. In 2020, independent TSPs provided service to more than 1 million homes and businesses.[138] However, witnesses explained to the Committee that some large TSPs engage in anti-competitive practices toward independent TSPs and other small competitors.[139] For example, according to Andy Kaplan-Myrth, TekSavvy Solutions Inc. (TekSavvy)'s Vice-President of Regulatory and Carrier Affairs, large TSPs have introduced flanker brands (Virgin Mobile and Fido, for example) to give the illusion of competition, when, in fact, they were created to put pressure on independent TSPs by undercutting their prices.[140] Mr. Kaplan-Myrth said this type of practice has led to a situation where the competition framework will collapse unless the federal government intervenes.[141]

Sharing Network Capacity

During the course of the Committee's study, the topic of the CRTC's wholesale broadband Internet rates was raised many times. This has been an issue of contention

134 INDU, *Evidence*, 8 December 2020, 1115 (Robert Ghiz, CWTA); INDU, *Evidence*, 26 January 2021, 1115 (Robert Malcolmson, BCE Inc.); INDU, *Evidence*, 23 February 2021, 1115 (Pierre Karl Péladeau, Quebecor Media Inc.); Rogers, *Brief*; Shaw, *Brief*.

135 INDU, *Evidence*, 23 February 2021, 1115 (Pierre Karl Péladeau, Quebecor Media Inc.).

136 INDU, *Evidence*, 8 December 2020, 1115 (Robert Ghiz, CWTA).

137 INDU, *Evidence*, 26 January 2021, 1250, 1305 (Dean Proctor, SSi Canada).

138 INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy).

139 INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy); INDU, *Evidence*, 8 December 2020, 1105 (Ian Stevens, CCSA).

140 INDU, *Evidence*, 8 December 2020, 1250 (Andy Kaplan-Myrth, TekSavvy).

141 Ibid., 1120.

between incumbent TSPs and independent TSPs since the CRTC issued its ruling in August 2019:

- In August 2019, following three years of consultations,[142] the CRTC established final reduced rates for wholesale high-speed access services.[143] The CRTC also ruled that incumbent TSPs had to repay $325 million that they had overcharged independent TSPs in recent years.[144]

- Less than 30 days after the rates were announced, the incumbent TSPs filed appeals with the CRTC, the federal government and the Federal Court of Appeal. The Federal Court suspended the rates, even before they could be implemented, while the case was before the Federal Court of Appeal.[145]

- The Liberal government's Order-in-Council – which it released in August 2020 on a Saturday – effectively called into question the expert opinion of the CRTC, which had spent six years studying the issue.

- In September 2020, the Federal Court of Appeal released its judgment, validating the wholesale rates set by the CRTC.[146]

- Further to the Federal Court of Appeal's decision, the CRTC[147] decided to extend the stay on the announced wholesale rates while it completed its review of the applications made while the matter was before the courts.[148]

The Order-in-Council generated a lot of witness testimony. M. Kaplan-Myrth put it this way:

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142 INDU, *Evidence*, 8 December 2020, 1150 (Andy Kaplan-Myrth, TekSavvy). See also: CRTC, *Telecom Notice of Consultation CRTC 2015-225*.

143 CRTC, *Telecom Order CRTC 2019-288*.

144 INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, CNOC).

145 INDU, *Evidence*, 8 December 2020, 1220 (Andy Kaplan-Myrth, TekSavvy).

146 *Bell Canada v. British Columbia Broadband Association*, 2020 FCA 140.

147 INDU, *Evidence*, 26 November 2020, 1155 (Ian Scott, CRTC).

148 The CRTC published its decision on wholesale rates on 25 May 2021. See: CRTC, *Telecom Decision CRTC 2021-181*.

> It signalled that the government doesn't seem to have recognized or acknowledged that competitors—when we get those lower rates and when we get the refunds for the money that we've overpaid all of these years—will invest that money in the economy, including in facilities and in our networks. To arrive at a conclusion that low rates necessarily mean low investment basically requires that you also believe that only the incumbents are going to invest. Yes, the incumbents get lower revenues from wholesale rates than they do from a captured retail market where they can charge whatever they want. Of course, that's the idea of competition. When competitors are healthy and participating in that economy and their revenue is not tied up in incumbents, then competitors can also take that money and invest it in facilities and in their communities in different ways. That was our concern about that statement from the government. It reflected this idea that there's this balance or trade-off between investment and competition.[149]

In Mr. Kaplan-Myrth's view, since the CRTC spent so long deliberating before arriving at these rates, it already had all the information required to make a decision about them.[150]

Some stakeholders underscored the importance of implementing wholesale rates affected the activities of independent TSPs. As soon as the new wholesale rates were announced, they decreased the price they charged for their services, and operating at a loss in the belief they would receive the reimbursement ordered by the CRTC shortly. However, once the wholesale rates were stayed, these TSPs had to increase their rates again, thus losing several customers.[151] According to Mr. Kaplan-Myrth, the larger TSPs set the price of their services based on the wholesale price in order to crush competition.[152] In his view, applying the CRTC's wholesale rates will mitigate their price-fixing practices.[153] It would encourage competition in the sector, leading to more homes in underserved areas getting connected and having more affordable services.[154]

Some incumbent TSPs explained that, in their opinion, the new wholesale rates would impede investment in the telecommunications sector. They explained that many of them would not be able to invest in deploying broadband Internet and wireless services, particularly in rural and remote regions, because they will no longer have sufficient

149 INDU, *Evidence*, 8 December 2020, 1220 (Andy Kaplan-Myrth, TekSavvy).

150 INDU, *Evidence*, 8 December 2020, 1150 (Andy Kaplan-Myrth, TekSavvy).

151 INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy); Cybera Inc., *Brief*.

152 INDU, *Evidence*, 8 December 2020, 1250 (Andy Kaplan-Myrth, TekSavvy).

153 Ibid, 1120.

154 INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, CNOC); INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy).

revenues.[155] Shaw reported that the CRTC's announced rates were below cost. In its view, lowering the wholesale cost would not only reduce investment, but also deter new regional competitors.[156] Rogers explained that, while deploying 5G was expensive, it could generate significant economic benefits for Canada, but only if it has sufficient funding.[157] Mr. Péladeau noted that, without an adequate framework, independent TSPs could be parasites in the telecommunications sector, as they use the network but do not invest in it, which brings down network quality.[158]

Some stakeholders took issue with the arguments made by the incumbent TSPs. In their opinion, having to choose between investment or competition is a false dichotomy.[159] For example, Mr. Kaplan-Myrth explained that TekSavvy invests in infrastructure in southwestern Ontario, even as it purchases wholesale services in other regions. For example, TekSavvy recently invested $100 million in high-speed Internet facilities for 60,000 residents and companies in underserved regions in southwestern Ontario. Wholesale rates enable it to offer service in even more regions.[160] In its brief, SSi Canada explained that this either-or view, pitting facilities-based carriers against resellers, is misleading, because all TSPs use facilities owned by another company at some point. For example, Bell uses TELUS networks to provide end-user services in some regions, and its subsidiary Northwestel is wholly dependent on purchasing wholesale satellite service from Telesat to provide service in remote regions.[161] Mr. Péladeau also noted that, when it first launched, Videotron used the Rogers network.[162]

Mr. Stein said that the big TSPs have repeatedly claimed in recent years that they would be unable to continue investing in infrastructure if certain policies were implemented, but in fact they have never followed through:

> They say that every time. They said that back a decade ago. They said that if they have to offer higher speeds, they're never going to build fibre. It's on the public record. The CEO of Bell Canada announced this to the CRTC. He said they would never build fibre.

155 INDU, *Evidence*, 8 December 2020, 1120 (Robert Ghiz, CWTA); INDU, *Evidence*, 26 January 2021, 1105 (Robert Malcolmson, BCE Inc.); Rogers, *Brief*; Shaw, *Brief*.

156 Shaw, *Brief*.

157 Rogers, *Brief*.

158 INDU, *Evidence*, 23 February 2021, 1120, 1210 (Pierre Karl Péladeau, Quebecor Media Inc.).

159 INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy); INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC); SSi Canada, *Brief*.

160 INDU, *Evidence*, 8 December 2020, 1120 (Andy Kaplan-Myrth, TekSavvy).

161 SSi Canada, *Brief*.

162 INDU, *Evidence*, 23 February 2021, 1215 (Pierre Karl Péladeau, Quebecor Media Inc.).

> They're still doing it. They were required to give those speeds. They made the same claim in August 2019. They said that if these are the rates, then they're not going to build wireless for Canadians. They're going to hold back $100 million of investment. … It's not reasonable to think that they would cede their market to their competitors. If you believe they're competitive at all, you've got to believe they're going to continue to build. They always make those claims and they never hold water.[163]

In 2019, a few days after the CRTC announced its wholesale rates, Bell Canada cut back by 20% on its plans to expand a rural Internet program that would offer wireless Internet services in areas difficult to reach by fibre or cable, affecting approximately 200,000 homes. Mr. Malcolmson said that Bell made this decision because its losses would be too high under the new wholesale rates. However, he was unable to confirm the extent of the losses that would have resulted from this new service offering.[164]

According to some witnesses, the process to implement and contest the rates announced by the CRTC favours the large TSPs. They have no reason not to challenge the rates, because there is no cost associated with waiting for the decision, and they can continue their operations.[165] Delaying the implementation process for new regulations is to their advantage. Mr. Stein observed:

> [W]e can look at the history quite easily and say that it's been a recurring theme, and it's only been ramping up and getting worse. Whenever the incumbents see something they don't like, which is a lot, they race to appeal. … I don't see that getting better any time soon, unfortunately, because as I said earlier, a delay is a win, so if they can't win, they're going to try to delay.[166]

Some witnesses made the general observation that the large TSPs will do everything they can to prevent or, at least discourage independent TSPs from participating in the telecommunications sector. Mr. Kaplan-Myrth said that incumbent TSPs like to see their wholesale business decline, because it translates into gains for their retail operations.[167]

Several witnesses proposed solutions to address the matter of competition and support for independent TSPs. Mr. Stein suggested that the federal government could support the CRTC more quickly in its decisions, particularly when the result of a government

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163 INDU, *Evidence*, 26 November 2020, 1210 (Matt Stein, CNOC).

164 INDU, *Evidence*, 26 January 2021, 1130 (Robert Malcolmson, BCE Inc.).

165 INDU, *Evidence*, 8 December 2020, 1250 (Andy Kaplan-Myrth, TekSavvy), INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC).

166 INDU, *Evidence*, 26 November 2020, 1130 (Matt Stein, CNOC).

167 INDU, *Evidence*, 8 December 2020, 1250 (Andy Kaplan-Myrth, TekSavvy).

decision will be to maintain the situation as is.[168] Mr. Israel suggested that the CRTC could impose temporary wholesale rates on an interim basis while the final rate-setting process is ongoing, to ensure that the advantage does not go to those delaying the process.[169] Mr. Kaplan-Myrth proposed updating the process for implementing wholesale rates to make it more effective.[170] Lastly, Mr. Stein said that, if regulation does not work to preserve competition, the federal government could make regulations to enforce the structural separation of wholesale and retail activities within incumbent TSPs to ensure that their price-fixing practices do not undermine independent TSPs.[171]

OBSERVATIONS AND RECOMMENDATIONS

The Committee notes that, while broadband Internet connectivity has improved in recent years, particularly for wireless services, there is still a major digital divide between urban areas and rural and remote regions. The COVID-19 pandemic has demonstrated the need to get all Canadians connected as quickly as possible, no matter where they live. Too many Canadians have an Internet connection so poor they cannot carry out their daily activities, which limits their opportunities.

On 17 April 2018, in its report entitled *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide*, the Committee recommended that the CRTC regularly review its target speeds for broadband service.[172] In light of the evidence heard during this study, the Committee believes this recommendation is still relevant. The target speeds set by the CRTC are used to guide various government programs and initiatives. However, since these targets were put in place in 2016, they may not meet the technological needs of Canadians in 2030 and beyond, particularly as telework evolves quickly and the number of digital services on offer increases. The Committee believes that it is important for CRTC targets to adjust to changing needs and technologies. Therefore, the Committee recommends:

Recommendation 1

That the Canadian Radio-television and Telecommunications Commission regularly review its target broadband speeds to ensure they take into account technological

168 INDU, *Evidence*, 26 November 2020, 1230 (Matt Stein, CNOC).

169 INDU, *Evidence*, 8 December 2020, 1130 (Tamir Israel, CIPPIC).

170 INDU, *Evidence*, 8 December 2020, 1230 (Andy Kaplan-Myrth, TekSavvy).

171 INDU, *Evidence*, 26 November 2020, 1235, 1240 (Matt Stein, Geoff White, CNOC).

172 INDU, *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide*, Eleventh Report, April 2018.

developments and the overall usage trends of Canadians, and that it publish its findings in its annual report on the telecommunications sector.

Recommendation 2

That the Canadian Radio-television and Telecommunications Commission require Internet service providers to make information available to consumers on the usual download and upload speeds they can expect during peak periods so they can make more informed purchasing decisions based on accurate and transparent information, thereby improving the industry's competitiveness overall.

The Committee recognizes that the affordability of telecommunications services is an important issue for all Canadians. While prices have gone down in recent years, they are still too high for much of the population. The Committee is aware that some people have to choose between buying food and paying their bills for telecommunications services. Since no standards have been established to determine what constitutes an affordable rate, stakeholders in the telecommunications sector do not have any guidelines to inform their affordability initiatives. The Committee therefore believes that establishing such a standard could help guide the activities of various stakeholders, particularly in a context where prices may vary significantly from one region to another. The Committee therefore recommends:

Recommendation 3

That the Canadian Radio-television and Telecommunications Commission establish an affordability standard for telecommunications services across Canada after consulting with various stakeholders, taking into account an affordability standard for wholesale Internet rates ensuring equitable treatment of network owners and virtual operators in order to significantly reduce the cost of bandwidth among providers, thereby encouraging more competition and reducing the price of consumer packages, and that it issue its decision within a year.

The Committee notes that programs to subsidize the cost of certain telecommunications service packages help some vulnerable population groups afford these services. The Committee found that these groups have been particularly impacted by the COVID-19 pandemic. To support government programs to improve the affordability of telecommunications services, Canadians could be given the option of paying an additional amount on their telecommunications bill to contribute to these programs. The Committee therefore recommends:

Recommendation 4

That the Government of Canada increase service costs by 50 cents for Canadians who are willing and able to afford the incurred cost in order to come to the aid of neighbors that can not afford high prices

Recommendation 5

That the Government of Canada create a benefit for large band services until the end of the pandemic for low-income Canadians, seniors or Canadians who have lost their jobs during the pandemic

After hearing from many witnesses on this topic, the Committee believes the government could revise some of the criteria to improve the accessibility of these programs. For example, the Connecting Families program should be extended to all low-income households. It would also be important for the government to ensure that its programs are promoted in the right places so that more eligible Canadians benefit. The Committee also believes that all TSPs should participate in this program, or at least be required to offer an affordable plan for low-income households. The Committee therefore recommends:

Recommendation 6

That the Government of Canada change some of the parameters for the Connecting Families program to improve accessibility by, for example:

- **Changing the eligibility criteria and better targeting families to ensure all low-income households have access to it;**
- **Requiring service providers to participate in the program and funding them directly; and**
- **Promoting programs more strategically so that more low-income families are aware of them.**

The Committee notes that technological advances in the last several years, particularly in satellite service, hold out the possibility of improving the quality of Internet connections in rural and remote regions. While satellite services have been associated with poor quality in the past, the Committee is optimistic that the new low-earth-orbit satellites will provide better services for subscribers and can meet the needs of more households and businesses in these areas. However, satellite Internet services are still very

expensive, and the Committee hopes, as some stakeholders announced, that the cost will decrease significantly in the years ahead. Lastly, the Committee believes the spirit of cooperation among the satellite Internet service providers that appeared before it for the study is promising, as is the fact that their priority appears to be improving the accessibility and affordability of telecommunications services in all regions of Canada.

The Committee believes that spectrum access is critical for developing wireless Internet services. It is particularly important in rural and remote regions, where access to wired services is often more expensive and complicated. However, for a number of years, stakeholders have criticized the fact that some TSPs obtain spectrum licences but then deploy only part of them, leaving some rural and remote regions without service. The Committee believes it is critical for ISED to consider the needs of rural stakeholders when allocating spectrum bands. The Committee also notes that spectrum licences can be very expensive for some TSPs. Several stakeholders noted that the federal government has made more than $20 billion in revenue from spectrum auctions since they first started.

The Committee understands that it can be difficult for regional and independent TSPs to access spectrum licences, because national TSPs have significantly more resources. It notes that the process of setting aside spectrum at auction may improve connectivity across the country, as it allows regional and independent TSPs to provide more services in more regions. However, the Committee is of the opinion that the licences obtained from a set-aside or an auction must be fully utilized to ensure that no region is denied service. The Committee therefore recommends:

Recommendation 7

That the Government of Canada ensure that the interests of rural regions are given top consideration during spectrum allocation, which could include, but is not limited to:

- **Establishing a mechanism to reallocate unused spectrum to other telecommunications service providers according to a predetermined timeframe; and**

- **Ensuring the full deployment of spectrum allocated to rural and remote regions by providing partial reimbursement for the amounts spent acquiring the licence.**

Recommendation 8

That the Government of Canada consider that money from spectrum auctions that goes into the consolidated revenue fund be reallocated in broadband.

The Committee notes that spectrum management affects the deployment of new technologies, particularly 5G. It further understands that 5G requires a number of spectrum bands, including some currently in use to deliver services in rural and remote regions. The Committee notes that ISED has already taken this issue into account in its upcoming 3500 MHz band spectrum auction, where a certain amount of spectrum will be available for flexible-use licensing to give TSPs more flexibility.[173] The Committee will monitor the impacts of the auction, particularly in rural and remote regions, to assess whether flexible-use band allocation is beneficial for TSPs and users. The Committee therefore recommends:

Recommendation 9

That, following the 3500 MHz band spectrum auction planned for June 2021, the Government of Canada study the benefits and issues involving flexible-use licensing to determine whether this practice should be used or changed in future spectrum auctions, and that it report to the Committee within a year.

The Committee notes that many TSPs are still facing delays and significant costs when they apply for access to various support structures, particularly telephone poles. Delays and costs are often significant enough that they prevent TSPs from offering services in the area. The Committee notes that the CRTC is currently looking into this issue, including consultations with industry, but it does not have the authority to address the matter of access to poles which fall under provincial or municipal jurisdiction. The Committee therefore recommends:

Recommendation 10

That the Canadian Radio-television and Telecommunications Commission rapidly address existing barriers so that telecommunications service providers can access support structures more easily by establishing an independent inspection, prevention and enforcement mechanism with cost sharing among providers–users to upgrade the network so that it meets high efficiency and safety standards.

173 ISED, *3500 MHz band spectrum auction*.

Recommendation 11

That the Government of Canada collaborate with provincial and municipal governments to address existing barriers so that telecommunications service providers can access support structures more easily.

The Committee understands the importance of government programs in supporting the development of connectivity in Canada, particularly in rural and remote regions, where the return on investment for TSPs is often small or non-existent. Given this challenge, stakeholders stressed the even greater importance of sharing telecommunications infrastructure in these regions. In some rural and remote regions, most TSPs do not build infrastructure to provide services unless they receive government support. The Committee therefore recommends:

Recommendation 12

That the Government of Canada put in place a variety of means to support improved connectivity in rural and remote areas. For example, it could:

- **Provide financial support to help build infrastructure for carriers or service providers who are in areas where it is not economically beneficial for them to build it on their own in order to help reach the objective of providing an appropriate level of service;**

- **Ensure or promote competition in areas where there is only a small number of providers by allowing resale, allowing access to third parties to then provide services using the facilities of the incumbents.**

The Committee notes that the eligibility criteria for governmental programs frequently exclude non-traditional TSPs, and often fail to meet their needs. Non-traditional TSPs need this funding to deploy their projects but have significantly fewer resources than incumbent TSPs. In fact, they are sometimes the only ones willing to offer services in certain regions. The Committee believes that these independent stakeholders should have the same opportunities to obtain government funding as the larger TSPs. The Committee therefore recommends:

Recommendation 13

That the Government of Canada encourage independent and non-traditional telecommunications service providers and network operators to participate in its broadband funding programs by, for example,

- **Simplifying the application process;**
- **Establishing criteria that prioritize local and regional providers;**
- **Setting aside a portion of available funds for them; and**
- **Capping the share of any single provider to a maximum of 50% of the government's business.**

The Committee believes that the fact that a handful of TSPs control the telecommunications sector has a detrimental impact on the telecommunications industry and on Canadians, and ultimately is impeding the rollout of affordable and accessible telecommunications services in Canada. The Committee notes that the approach of the largest TSPs does not promote these objectives. It also has concerns about the practices of some TSPs, which penalize Canadians waiting for Internet service when a decision made by the federal government or the CRTC does not go their way. This practice is particularly troubling given that these same TSPs are receiving significant public funding to deploy broadband Internet in a number of regions.

While witnesses agreed on the importance of a competitive telecommunications sector, they did not agree on what form of competition was best: facilities-based competition or services-based competition. Without a more in-depth study on the topic, the Committee is confident in saying that competition must be encouraged in Canada, but is unable to comment on whether one type of competition is better than the other, or if they are both important. Over the course of its study, the Committee did not hear any conclusive proof that there is in fact a dichotomy between investment and competition.

After hearing from many witnesses on the topic, the Committee found that the process following the CRTC's announcement of new wholesale rates has been very difficult for independent TSPs that were initially expected to benefit from these rates. It notes that the rate-setting process entails a risk that TSPs that disagree with the CRTC's decision use the appeals process as a delay tactic. This practice puts stakeholders in favour of the decision in a tough position because they need to continue their operations in an uncertain period of unclear duration. The Committee does not believe these practices are beneficial for end users. It is of the opinion that a mechanism should be implemented to prevent the appeals process from being used as a delay tactic. The Committee therefore recommends:

Recommendation 14

That the Government of Canada issue a directive to encourage the CRTC to revise its process for implementing and appealing new rates so that incumbent telecommunications service providers stop using the appeals process as a delay tactic. For example, in cases where newly announced rates are appealed, the CRTC could:

- **Apply an interim rate equal to a 50% difference between the old rates and the newly announced rates; and**

- **Respect a strict time limit to issue a decision.**

While the Committee was preparing this report, the CRTC announced two important decisions. It announced a regime for mobile virtual network operators (MVNOs), and it reversed its decision on wholesale rates announced in August 2019. On the one hand, the Committee views the MVNO decision as a step forward, although it is a rather modest step considering the structure of the announced regime. On the other hand, the Committee is very frustrated with the CRTC's decision to cancel the new wholesale rates. During the Committee's study, independent TSPs repeatedly stressed the importance of implementing these rates to provide affordable services to their customers and thereby put downward pressure on the price of services offered by incumbent TSPs. The Committee questions this change in direction by the CRTC, which had studied the issue for several years before issuing its decision in 2019.

The Committee does not believe that, collectively, these decisions meet Canadians' expectations of affordability in the telecommunications sector. They certainly do not advance this objective as much as they should, and the Committee believes that the CRTC should do more to address affordability. The Committee believes that the federal government should intervene to encourage the CRTC to put in place decisions that promote specific objectives, including affordability and accessibility. The Committee therefore recommends:

Recommendation 15

That the Government of Canada issue a clear directive on competition to the CRTC to connect all Canadians quickly while maintaining a level playing field among telecommunications service providers, particularly between incumbent and independent providers, to ensure both the development of high quality networks and competition that will have a meaningful impact on the quality of service and price of consumer packages.

The Committee recognizes the importance of improving the coordination of programs and initiatives to develop broadband across Canada. In recent years, a number of studies have underlined the importance of developing a national strategy, including one of the Committee's earlier reports. On 17 April 2018, in its report entitled *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide*, the Committee recommended implementing a national broadband strategy.[174] In addition, in fall 2018, the Office of the Auditor General of Canada tabled *Report 1—Connectivity in Rural and Remote Areas*. This report pointed out that many in-depth reviews of the state of broadband in Canada have recommended that the government develop a national strategy for broadband, but that the federal government has not yet acted on these recommendations.[175]

The Committee believes that the recommendations made in these earlier studies are still valid. It maintains that the Government of Canada should not address the various issues surrounding broadband Internet in Canada in a vacuum, but in a coordinated and strategic manner. A number of witnesses stated that the lack of competition in the telecommunications sector affects various other areas of the industry, showing the pressing need to address these issues in tandem. The Committee therefore recommends:

Recommendation 16

That the Government of Canada, in collaboration with provincial and territorial governments, develop a unified, integrated and collaborative national broadband strategy covering a variety of issues. These could include the allocation of funding for telecommunications services in rural and remote regions, spectrum management, access to support structures and competition in the telecommunications sector. The Committee further recommends that the federal government works in close collaboration with all levels of government to complete the national strategy within one year and fully implement it within the following 12 months.

174 INDU, *Broadband Connectivity in Rural Canada: Overcoming the Digital Divide*, Eleventh Report, April 2018.

175 Office of the Auditor General of Canada, *Report 1—Connectivity in Rural and Remote Areas*, Fall 2018.

APPENDIX A
LIST OF WITNESSES

The following table lists the witnesses who appeared before the committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the committee's webpage for this study.

Organizations and Individuals	Date	Meeting
Space Exploration Technologies Corp.	2020/11/17	4
Patricia Cooper, Vice-President Satellite Government Affairs		
Telesat	2020/11/17	4
Michele Beck, Vice-President of Sales North America		
Daniel S. Goldberg, President and Chief Executive Officer		
Stephen Hampton, Manager Government Affairs and Public Policy		
Canadian Radio-television and Telecommunications Commission	2020/11/26	7
Renée Doiron, Director Broadband and Networking Engineering		
Nanao Kachi, Director Social and Consumer Policy		
Ian Scott, Chairperson and Chief Executive Officer		
CNIB Foundation	2020/11/26	7
John M. Rafferty, President and Chief Executive Officer		
Competitive Network Operators of Canada	2020/11/26	7
Matt Stein, President and Chief Executive Officer		
Geoff White, Director Legal and Regulatory Affairs		
OpenMedia	2020/11/26	7
Erin Knight, Digital Campaigner		
Laura Tribe, Executive Director		

Organizations and Individuals	Date	Meeting
Canadian Communication Systems Alliance	2020/12/08	10
Ian Stevens, Board Member and Chief Executive Officer of Execulink Telecom		
Jay Thomson, Chief Executive Officer		
Canadian Wireless Telecommunications Association	2020/12/08	10
Robert W.J. Ghiz, President and Chief Executive Officer		
Eric Smith, Senior Vice-President Regulatory Affairs		
FSET Information Technology	2020/12/08	10
David Brown, Chief Executive Officer		
Public Interest Advocacy Centre	2020/12/08	10
John Lawford, Executive Director and General Counsel		
Samuelson-Glushko Canadian Internet Policy and Public Interest Clinic	2020/12/08	10
Tamir Israel, Staff Lawyer		
TekSavvy Solutions Inc.	2020/12/08	10
Andy Kaplan-Myrth, Vice-President Regulatory and Carrier Affairs		
ACORN Canada	2021/01/26	12
Raymond Noyes, Member		
BCE Inc.	2021/01/26	12
Jonathan Daniels, Vice-President Regulatory Law		
Robert Malcolmson, Executive Vice-President, Chief Legal and Regulatory Officer		
SSi Canada	2021/01/26	12
Jeff Philipp, Founder and Chief Executive Officer		
Dean Proctor, Chief Development Officer		
Quebecor Media Inc.	2021/02/23	19
Pierre Karl Péladeau, President and Chief Executive Officer		
Southwestern Integrated Fibre Technology	2021/02/23	19
Barry Field, Executive Director		

Organizations and Individuals	Date	Meeting
Vidéotron ltée	2021/02/23	19
Jean-François Pruneau, President and Chief Executive Officer		

APPENDIX B
LIST OF WITNESSES

The following table lists the witnesses who appeared before the committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the committee's webpage for this study.

43rd Parliament – 1st Session

Organizations and Individuals	Date	Meeting
Canadian Communication Systems Alliance	2020/05/07	13
Ian Stevens, Board Member and Chief Executive Officer of Execulink Telecom		
Jay Thomson, Chief Executive Officer		
City of St. Clair Township	2020/05/07	13
Steve Arnold, Mayor		
OpenMedia	2020/05/07	13
Laura Tribe, Executive Director		
Regional District of East Kootenay	2020/05/07	13
Rob C. Gay, Board Chair and Director Electoral Area C		
TekSavvy Solutions Inc.	2020/05/07	13
Andy Kaplan-Myrth, Vice-President Regulatory and Carrier Affairs		
Department for Women and Gender Equality	2020/05/11	14
Hon. Maryam Monsef, P.C., M.P., Minister for Women and Gender Equality and Rural Economic Development		
Department of Canadian Heritage	2020/05/11	14
Hon. Steven Guilbeault, P.C., M.P., Minister		
Hélène Laurendeau, Deputy Minister		
Department of Industry	2020/05/11	14
Éric Dagenais, Assistant Deputy Minister Industry Sector		
Simon Kennedy, Deputy Minister		
Paul Thompson, Associate Deputy Minister		

Organizations and Individuals	Date	Meeting
Cogeco Inc.	2020/05/14	15
Leonard Eichel, Senior Director Regulatory Affairs		
Marie-Hélène Labrie, Senior Vice-President and Chief Public Affairs and Communications Officer		
Rogers Communications Inc.	2020/05/14	15
Dean Prevost, President Connected Home, Rogers for Business		
David Watt, Senior Vice-President Regulatory		
Telus Communications Inc.	2020/05/14	15
Tony Geheran, Executive Vice-President and Chief Customer Officer		
Stephen Schmidt, Vice-President Telecom Policy and Chief Regulatory Legal Counsel		
Xplornet Communications Inc.	2020/05/14	15
Charles Beaudet, Vice-President Eastern Canada		
C.J. Prudham, Chief Legal and Regulatory Officer		

APPENDIX C
LIST OF BRIEFS

The following is an alphabetical list of organizations and individuals who submitted briefs to the committee related to this report. For more information, please consult the committee's webpage for this study.

ACORN Canada

Canadian Canola Growers Association

Canadian Communication Systems Alliance

Cybera Inc.

Huawei Technologies Co., Ltd.

OpenMedia

Rogers

Shaw Communications Inc.

SSi Canada

Telus Communications Inc.

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* (Meetings Nos. 4, 7, 10, 12, 19, 40, 42, 43 and 46) from the 43rd Parliament, 2nd Session and (Meetings Nos. 13, 14 and 15) from the 43rd Parliament, 1st Session is tabled.

Respectfully submitted,

Sherry Romanado
Chair

NDP SUPPLEMENTAL RECOMMENDATIONS

During this public health crisis due to the COVID 19 pandemic the need for accessible and affordable wireless and high-speed broadband internet has become obvious to all Canadians. As demonstrated with people sheltering at home and with schools and businesses closed during the lockdowns, Canadians needed fast and reliable internet connections to communicate for work and school through online applications. This was true before the pandemic and will continue to be after it is over. It is an essential utility and must be treated as one. Unfortunately, governments for the past several decades have failed to treat this with the urgency it deserves.

Among OECD and other developed economies, Canadians pay some of the highest prices for mobile wireless and broadband subscriptions in the world. For decades, Liberal and Conservative governments have relied on market forces and the supposed 'facilities-based' competition to determine what Canadians pay for their cell phone and internet service every month - despite clear evidence that this model has failed. A 2020 report from Finland-based telecom research firm *Rewheel* found that *Telus, Bell,* and *Rogers* ranked 1st, 2nd, and 3rd most expensive amongst 168 wireless carriers operating in 48 countries around the world. In fact, Canadian telecom companies make more revenue per gigabyte of data than almost any other company in the world. 23 times more than those in Finland and 70 times more than those in India. Yet this has resulted in lower data use than in almost any other country. This damages Canada's economy and harms consumers. The need for government intervention to address this market failure is obvious. The only definitive way to ensure this, is price regulation, which was used previously in the telecom market to successfully build a universal and, at that time, affordable landline service. An affordable basic plan for everyone that matches OECD average prices, which are drastically lower than Canada's, must be mandated by regulation.

Facilities based competition in the telecom market has failed to deliver universal broadband access over the past 20 years. In Canada, 63 percent of rural households do not have access to high speed broadband (50/10 Mbs with unlimited data) and 14 percent of highways and major transport roads do not have access to LTE wireless services. In the Northwest Territories, Yukon, and Nunavut, no households have access to high speed broadband (50/10 Mbs with unlimited data) and 72 percent of highways and major transport roads do not have access to LTE wireless services. During this public health emergency, the situation has gotten worse for Canadians in rural and remote areas. The Canadian Internet Registration Authority released data on May 8, 2020 as part of its Internet Performance Test that was submitted to the CRTC for their consultation on barriers to rural broadband deployment that in April 2020, median rural download speeds were measured at 3.78 Mbps, compared to 44.09 Mbps in urban Canada – a difference of 11.7 times. The underfunded government plan to make Canadians wait 13 years to achieve 100 percent high speed broadband access across the country is unacceptable. This can be done using the revenues from the spectrum auctions, a public asset, to achieve this goal within 48 months.

Recommendation 1

The government of Canada immediately direct the Canadian Radio-television and Telecommunications Commission (CRTC) to re-establish retail price regulation for wireless, broadband, and wireline with the consumer costs to be based upon the price average of OECD countries. This would include mandatory quality and service standards.

Recommendation 2

The government of Canada immediately direct the Canadian Radio-television and Telecommunications Commission (CRTC) to re-establish wholesale price regulation for wireless, broadband, and wireline with the 2019 CRTC aggregated wholesale high-speed access services (Telecom Order 2019-288) decision as basis for further implementation.

Recommendation 3

As revealed in the CRTC *Report on Misleading or Aggressive Communications Retail Sales Practices,* consumers need significant protection from price gouging, outrageous sales and customer service practices, and arbitrating disputes. Accordingly, the government needs to institute a *Telecom Consumers' Bill of Rights* which prevents price gouging, aggressive and misleading sales practices, ensures best practice standards across the sector from all providers, set fines and penalties for violations along with consumer compensation with mandatory binding arbitration, establishes complete transparency and accountability of firms by publishing quarterly reports on complaints, resolutions, compliance, and consent agreements.

Recommendation 4

As the CRTC has made decisions which are considered to have negative impacts on consumers, the need to ensure telecom customers' interests are considered in determinations and protected in the short, medium, and long term, it is imperative that an *Office of the Consumer Advocate* (OCA) be established. The OCA should be mandated to be involved in the process of CRTC evaluation, analysis and developing decisions through a consumer interest screen. Additionally, the OCA must be instituted with the requisite powers and authorities to initiate investigations, enforce the *Telecom Consumers' Bill of Rights,* and be independent of the CRTC. Furthermore, the decisions of the OCA can only be reviewed or appealed to the federal judiciary.

Recommendation 5

To achieve universal high speed internet access and affordability a comprehensive broadband build out plan must be started in the next 12 months with 95 percent to be completed in 36 months and with the remaining geographic challenges being addressed to reach 100 percent within 48 months. The federal government should fund the entire $ 6 billion, based on Budget 2019's cost estimate, buildout with the revenues from the spectrum auctions and the CRTC Broadband Fund. Include partners in the infrastructure installation and ongoing operations in rural and remote locations such as indigenous communities, non-profits, municipalities and smaller independent telecom and utility companies. Guarantee price equivalency between large metropolitan areas and rural and remote communities with regulatory rate setting for a basic universal affordable plan. All funded projects must be open access. The CRTC's 50/10 basic speed target needs to be the floor, not the ceiling. Fiber must be the default technology being deployed, wherever possible, ensuring the longevity and scalability of these investments.