

Selling Speed: Reforming Broadband Advertising Regulations in Canada



**PUBLIC INTEREST ADVOCACY CENTRE
LE CENTRE POUR LA DÉFENSE DE L'INTÉRÊT PUBLIC**

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1. Introduction

10 years ago, broadband internet was important for consumers to derive the full extent of social and economic benefits from the digital economy. Now, broadband is inarguably an essential service that is required to, at minimum, conduct the day-to-day functions of modern life.¹ The global COVID-19 pandemic threw this fact into stark relief, as Canadians turned to online platforms to work, go to school, pay bills, access health and social services and pandemic economic aid, keep up with news, media, and culture, and maintain connections with loved ones. To achieve these ends, consumers require access to affordable, reliable broadband services. There is no longer any compromising on this reality.

The broadband industry should therefore be founded on a commitment that internet service providers' (ISPs) broadband advertisements are informative, intelligible, comparable, and most importantly, accurate to the broadband speeds that consumers can expect to receive most of the time. Broadband ads must also include sufficient information on the technical limitations that may prevent customers from achieving the advertised speed limits.

In 2012, PIAC published our report for a research project funded under the Contributions Program comparing ISPs' broadband advertising practices in Canada and other countries. In that study, PIAC also conducted a survey canvassing consumer perceptions about their broadband services.² The study revealed that not only were broadband plans advertised mainly in terms of "up to" maximum speeds, information about technical limitations were lacking and/or presented in the fine print. The survey found that most respondents placed high importance on download speeds when choosing an ISP, yet many also did not know the advertised maximum download speed for their home internet service.

A decade ago, broadband advertising practices were generally uniform across the countries studied in the 2012 report. At that time, the United Kingdom and Australia fared slightly better than Canada, as regulators abroad had begun to develop voluntary guidelines for accurate and informative broadband speed advertising. In 2012, PIAC recommended more precise and reliable disclosures about internet performance in Canadian broadband advertisements, supplemented with better information about the factors that can affect speed delivery. Since 2012, both the UK and Australian regulators have developed specific, practical guidelines. The major ISPs in these jurisdictions have – voluntarily or via enforcement – now uniformly adopted more stringent standards for speed claims, consumer-friendly explanations of

¹ Since Telecom Regulatory Policy CRTC 2016-496, the CRTC has consistently viewed broadband as an essential service. TRP 2016-426 declared broadband internet a basic telecommunications service within the meaning of subsection 46.5(1) of the *Telecommunications Act*, which allows the Commission to require any service provider to contribute to a fund supporting access by Canadians to basic telecom services. TRP 2016-426 further established that "[i]n rural and remote communities, high-quality broadband Internet access service is essential for accessing services that may not otherwise be available due to distance (e.g. health services via videoconferencing and education)." (at para 104). Also see Ian Scott's speech at the 2020 Canadian ISP Summit, in which he stated: "The COVID-19 pandemic has proven what an essential service the Internet is for us all." (3 November 2020)

² Laman Meshadiyeva & Janet Lo, "Transparency in Broadband Advertising to Canadian Consumers" (2012) Public Interest Advocacy Centre, online:

<https://www.ic.gc.ca/app/oca/crd/dcmnt.do?Open=1&id=4360&lang=eng&wbdisable=true>.

technical limitations, and overall more informative advertisements that help consumers match services to needs.

With access to reliable, high-quality broadband services more important than ever, consumers deserve higher standards of advertising transparency. While broadband ads have received a major facelift in other jurisdictions, ads in Canada have largely remained the same since the early 2010s. The regulations and guidance governing broadband speed advertising has also remained stagnant and non-specific. In the intervening years, the Canadian Radio-Television and Telecommunications Commission (CRTC) has commissioned broadband speed measurement studies, which PIAC will analyze while considering recent literature relating to speed measurement methodologies. Hence, this “refresher” study aims to build on PIAC’s 2012 findings in light of regulatory developments in other countries and new evidence on speed measurements.

2. Report Methodology

- 2.1 Collecting advertisements:** Periodically throughout the study period, PIAC canvassed broadband internet advertisements within Canada and abroad. In summer 2021, fall 2021, and spring 2022, PIAC collected the online advertisements of Canada’s national ISPs: Bell, Rogers, and TELUS. In the same periods, PIAC also collected the ads of some major ISPs in the UK (BT Broadband and Sky Broadband) and Australia (Tangerine and Telstra), where regulators have implemented major changes to advertising practices. PIAC recorded not only the face of the ads – reflecting speeds, data limits, suitability, and promotional add-ons – but also noted any information, whether in footnotes or links, explaining the technical factors that may affect customers’ ability to achieve the advertised speeds. The ads and accompanying information shown in this report’s figures were collected in spring 2022. Due to the ongoing pandemic, repeated lockdowns, and store closures over the study period, we could not consistently collect in-person advertisements or promotions to conduct comparisons using physical ad formats, therefore online ads are the main focus of this report.
- 2.2 Research on foreign reforms:** PIAC examined in detail the UK and Australia’s recent developments in broadband advertising rules, as well as ongoing efforts by the FCC in the United States to reform broadband advertising practices. In analyzing the reasoning and evidence for these regulatory reforms, PIAC studied completed and ongoing reviews and stakeholder consultations underpinning the changes in advertising rules. To assess the impact of these foreign reforms, we also used subsequent reports and media reporting where available. PIAC used these supporting materials to determine why and how reforms occurred, the level of industry support, the feasibility of imposing more stringent standards for speed testing different types of services (legacy cable services vs new FTTP services), the consumer benefits, and any legal challenges, successful or otherwise, that arose as a result of the new rules.
- 2.3 Speed measurement studies and literature analyses:** When PIAC’s first report was published in 2012, there were no speed measurement initiatives in place yet in Canada. Since then, the CRTC has contracted SamKnows, a broadband measurement company, to conduct measurement studies in 2016 and 2019 to evaluate whether Canadian ISPs were meeting their own speed standards. For this current report, PIAC conducted a close analysis of the two measurement

studies to determine whether the results and methodology reflect the real-world consumer experience. PIAC also researched secondary sources discussing the pros and cons of various broadband speed testing methodologies, and how speed testing approaches have evolved over the course of a decade, especially as higher speed services have become more available and in-demand.

2.4 Stakeholder consultations: PIAC consulted with various stakeholders through questionnaire forms tailored to distinct stakeholder groups, or through one-on-one calls to discuss the questions and aims of the study. The questionnaire varied for each stakeholder group, but all were prompted to provide their views on the recent foreign developments in broadband advertising practices. PIAC consulted the Competition Bureau, the Canadian Radio-television and Telecommunications Commission (CRTC), the Commission for Complaints for Telecommunications Services (CCTS), and the Advertising Standards Council (ASC), which have varying degrees of jurisdiction over broadband advertising and related issues. To these regulatory stakeholders, PIAC asked whether there were any changes in the number and types of complaints received relating to broadband performance claims in the last decade. PIAC also attempted to engage with industry stakeholders (all major ISPs, and some smaller regional ISPs) but most contacts declined to provide substantive feedback. The questionnaire targeted to these industry stakeholders sought comments on any changes to how broadband performance is validated and advertised by each company. PIAC also sought comments from the following consumer interest groups: ACORN Canada, National Pensioners Federation, Consumers Council of Canada, and Union de consommateurs. Consultations with these groups focused mainly on the consumer experience when shopping for broadband services, and how consumers perceive and understand performance claims.

3. Applicable Canadian Laws and Policies Regarding Internet Speed and Performance Claims (2022 Update)

This section provides updates to the laws, policies, decisions, and initiatives of the relevant regulatory bodies that provide protections for consumers and guidance for industry in the context of broadband speed claims. Specifically, the section analyzes provisions of the *Competition Act* governing false and misleading advertising, policies of the CRTC with respect to sales practices, as well as the work of the Commission for Complaints for Telecommunications Services (CCTS) and the Advertising Standards Council (ASC) regarding consumer complaints about performance representations.

3.1 The *Competition Act* and the Competition Bureau

3.1.1 Overview

The *Competition Act* contains both criminal³ and civil⁴ provisions that prohibit the making of false or misleading representations. For simplicity, this report primarily discusses the civil provision, which the Competition Bureau will generally rely on unless (1) there is clear and compelling evidence suggesting that an accused knowingly or recklessly made a false or misleading representation to the public and (2) a criminal prosecution would be in the public interest.⁵ That said, private parties have also used the criminal provision to initiate legal proceedings.⁶

The Competition Bureau, headed by the Commissioner of Competition, is an independent law enforcement agency responsible for the administration and enforcement of the *Competition Act*. This work includes promoting competition by, for example, conducting market studies to identify relevant laws, policies, regulations, and other factors that may be impeding competition.⁷

The Bureau's work also includes investigating allegedly false or misleading representations. Where it finds non-compliance, the Bureau may attempt to facilitate compliance through consensual resolution (ie: negotiated settlement) and/or litigation before the Competition Tribunal, the Federal Court, or a provincial superior court.⁸ Negotiated settlements often result in consent agreements, which, once registered with the Tribunal, are enforceable in a court setting.⁹ The Competition Tribunal is a purely adjudicative body that hears applications, typically made by the Bureau, and issues orders.

If a court finds that an individual or corporation has made a false or misleading representation, it may order the individual or corporation not to engage in such conduct or substantially similar conduct, publish a corrective notice, pay an administrative monetary penalty, or pay restitution to purchasers.¹⁰

3.1.2 Prohibition of Misleading Representations

Section 74.01(1)(a) of the *Competition Act* prohibits a person from making "a representation to the public that is false or misleading in a material respect". To be considered false or misleading in a "material respect" the representation must influence the purchaser into believing that the product would be advantageous. When making determinations under this section, the court will consider both the literal meaning conveyed by a representation and the general impression it creates. The general

³ *Competition Act*, RSC, 1985, C-34, s 52(1).

⁴ *Ibid*, s 74(1).

⁵ Competition Bureau, "Misleading Representations and Deceptive Marketing Practices: Choice of Criminal or Civil Track under the Competition Act" (September 1999), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/01223.html>>.

⁶ See for example, *TELUS v Shaw*, 2020 BCSC 1354 and *Bell v Cogeco Cable Canada*, 2016 ONSC 6044.

⁷ See for example: Competition Bureau, "Delivering Choice: A Study of Competition in Canada's Broadband Industry" (August 2019), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04470.html>>.

⁸ Competition Bureau, "Competition and Compliance Framework" (November 2015), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03982.html>>.

⁹ Registered consent agreements are published on the Competition Tribunal's website. Those pertaining to deceptive marketing practices can be found at the following link: <<https://decisions.ct-tc.gc.ca/ct-tc/en/d/s/index.do?cont=deceptive&ref=&d1=&d2=&p=&col=207&tf1=&tf2=&tf3=&or=>>>.

¹⁰ *Supra* note 3, s 74.1(1).

impression test includes two parts:

“First, the trial judge must determine the general impression conveyed to consumers, based only on the representations actually made in the advertisements. This is the impression formed by consumers upon seeing the advertising in its intended form. Once assessed in light of the information presented to the consumer in the body of the advertisement, **the impression is fixed as the impression of the average consumer...** the trial judge [must] also examine the **literal meaning of the representation** in determining whether the advertisement is false or misleading.

The **second** step of the test requires the court, having regard to extraneous facts if necessary, to gauge **whether the impression conveyed to consumers by the representations is false or, alternatively, misleading in a material respect.** Only at this stage is extraneous evidence considered, not to alter the general impression, but to gauge whether the impression is false or misleading.”¹¹ [emphasis added]

The court has stated that the average consumer, whose perspective is relevant to the general impression test, is one that is “credulous and technically inexperienced.”¹² Specifically, in a case that was released later in the same year as PIAC’s 2012 report, the court determined that the average consumer is credulous in the sense that they are “willing to believe [the claim] because it is contained in public representations” and lacks experience insofar as it “relates to the technical information contained in the advertisements.”¹³ Despite being experienced in the sense that they have historically used certain products and want a certain level of functionality, consumers may still be considered “technically inexperienced.” To illustrate this difference, in *Canada (Commissioner of Competition) v Chatr Wireless Inc*, the court wrote:

“The consumer by definition resides in a segment of the wireless services market that wants unlimited talking and texting wireless services. Such a consumer cannot be viewed as inexperienced with wireless talking and texting, otherwise the consumer would not reside in a segment of the wireless services market. For example, the consumer might know that he or she wants certainty in their wireless monthly bill due to a previous bad experience with unexpected cell phone fees. In addition, the consumer knows that he or she wants talking and texting wireless services and that he or she wants those services in an unlimited way. Accordingly, I am satisfied that the lack of experience relates to the technical information contained in the advertisements. For example, the advertisements claim that Chatr will drop fewer calls because of its cell site density. It is this aspect of the claim with which the consumer lacks experience.”¹⁴

¹¹ Originally articulated in *Bell Mobility Inc v TELUS Communications Inc*, 2012 SCC 8 at para 67. The test was also discussed in other cases involving ISPs alleging misleading advertising. See for example, *TELUS v Shaw*, 2020 BCSC 1354 and *Bell v Cogeco Cable Canada*, 2016 ONSC 6044.

¹² *Canada (Commissioner of Competition) v Chatr Wireless Inc*, 2013 ONSC 5315 at para 132, OJ No 3748, referencing *Richard v Time Inc*, 2012 SCC 8, [2012] 1 SCR 265 at paras 65-68, 71. The latter is a case decided under the *Quebec Consumer Protection Act*, which is worded similarly to section 74.01(1)(a) of the *Competition Act*.

¹³ *Canada (Commissioner of Competition) v Chatr Wireless Inc*, 2013 ONSC 5315 at paras 130 and 131, OJ No 3748 [Chatr].

¹⁴ *Ibid* at 131.

In other words, just because some technical features about a telecom service is presented to customers to guide their selection process, does not mean that customers fully understand the implications of that technical information on their real-world usage.

3.1.3 Enforcement Guidelines for False and Misleading Advertising

The Bureau periodically publishes general guidelines to help promote compliance with the Act's provisions addressing false or misleading representations. In these guidelines, the Bureau recommends that advertisers "fully and clearly disclose all material information in the advertisement."¹⁵ The Bureau also recommends that advertisers avoid using fine print disclaimers since they often fail to change the general impression conveyed by an advertisement.¹⁶ A disclaimer, even if simply worded, may not effectively alter the general impression of an advertisement that has already misled the average consumer.¹⁷ Additionally, if a disclaimer is used to restrict, contradict or somehow negate the message of the advertisement, it may significantly increase the ad's potential to mislead consumers.¹⁸

In the context of online advertisements, the Bureau has stated there is a risk that disclaimers will not be adequately displayed on every platform or device, and that "digital formats significantly limit the likelihood that disclaimers, as a general proposition, will be seen and understood in a way that is likely to alter the general impression of an online advertisement."¹⁹ As of Winter 2022, there are still no guidelines specifically dedicated to broadband services in Canada.

3.1.4 Prohibition of Representations Not Based on an Adequate and Proper Test

Subsection 74.01(1)(b) of the *Competition Act* prohibits "the making, or the permitting of the making, of a representation to the public, in any form whatever, about the performance, efficacy or length of life of a product, which is not based on an adequate and proper test." Whether a test is adequate and proper depends on what the common person understands the advertisement to be claiming. A recent 2022 guidance provided that if the performance claim is broad, "the existence of an adequate and proper test relevant to only one portion of the claim or under only one condition of use is insufficient."²⁰

Tests must be accompanied by credible and appropriate test methodology and cannot be based on belief.²¹ In a 2016 report on deceptive marketing practices, the Bureau cited the *Chatr* case, explaining that despite the company's argument that its greater density of cellular towers and better quality of indoor and underground reception was the basis for its belief that it could offer fewer dropped calls,

¹⁵ Competition Bureau, "False or Misleading Representations and Deceptive Marketing Practices" (January 2022), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03133.html>>.

¹⁶ *Ibid.*

¹⁷ Competition Bureau, "Disclaimers Demystified" *The Deceptive Marketing Practices Digest – Volume 1* (June 2015), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03946.html>>.

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ Competition Bureau, "Performance Representations not Based on Adequate and Proper Tests" (January 2022), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/00520.html>>.

²¹ Competition Bureau, "Substantiating performance claims — Standing the test of time for over 75 years" *The Deceptive Marketing Practices Digest — Volume 2* (March 2016), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04029.html#section2>>.

“the court concluded that the advertiser must nevertheless conduct testing to support the specific performance claim.”²² Testing must be done under controlled circumstances or in conditions which exclude, or take into account in a measurable way, external variables and must be conducted on more than one independent sample wherever possible (e.g. destruction testing may be an exception). Proper test methodology should not produce a result that is “a mere chance or one-time effect” and should achieve “similar results from a repetition of the test.”²³ That said, results need not be measured against a test of certainty.²⁴

Canadian consumers generally do not know how advertised speed claims are tested and verified. In PIAC’s 2012 study, the few ISPs that provided information about their speed validation practices only provided general statements that they verify speed claims through network testing and monitoring for congestion, either internally or through an external, independent company. No details were offered about when, how often, and where lines are tested, nor any details about what factors are accounted for in testing. For this updating study, PIAC attempted to consult ISPs again, but only one, TELUS, provided a response. The rest declined to comment or did not respond during the study period. Therefore, PIAC cannot offer any further clarifications or updates on whether speed testing is conducted based on credible, appropriate test methodology, and what variables were accounted for.

3.1.5 Guidance on Substantiating Performance Claims

In 2015, the Competition Bureau began publishing the Deceptive Marketing Practices Digest to provide advertisers and the public with the Bureau’s perspective on select topics relevant to advertising and marketing. Volume 2 of the Digest, published in 2016, includes a section on substantiating performance claims.²⁵

In Volume 2, the Bureau explains that making unsubstantiated claims exploits the information gap between purchasers and sellers, and undermines the proper functioning of the marketplace by betraying consumer trust and either driving competitors out of the market or forcing them to compete in similarly dishonest ways.²⁶ When consumers rely on unsubstantiated performance claims, they are more likely to purchase an inferior product, buy too much of it, or spend too much on it, diverting their purchasing dollars away from other, better or more innovative products. The Bureau posits that as consumers become skeptical of advertising claims in general, it may become more difficult for honest advertisers to convey the superior quality or performance of their products, thus limiting uptake of their potentially more innovative products and reducing diversity and competition in the market, leading to higher prices and loss of quality products.

3.1.6 Investigations into Advertisements by Telecommunications Service Providers

Since PIAC’s 2012 report, the Bureau has completed several investigations of misleading advertising practices, including a legal proceeding that was ongoing when the PIAC’s 2012 report was published. However, the Bureau has not yet completed any investigations specifically regarding “up to” or other speed claims made by ISPs.

²² *Ibid.*

²³ *Ibid.*

²⁴ *Canada (Commissioner of Competition) v Imperial Brush Co* (7 February 2008), CT-2006-010, online: Competition Tribunal <<https://www.ct-tc.gc.ca/en/cases/decision-summaries/CT-2006-010.html>>.

²⁵ *Supra* note 21.

²⁶ *Ibid.*

In *Chatr* case, the Bureau found that Rogers' ads stating that consumers would experience "fewer dropped calls than new wireless carriers" was not correct. A thorough review of technical data derived from a myriad of sources revealed that there was "no discernible difference in dropped call rates between Rogers/Chatr and new entrants."²⁷ The Bureau requested that the court order Rogers to immediately stop the advertising campaign and refrain from engaging in similar campaigns, pay an administrative monetary penalty of \$10 million dollars, pay restitution to affected customers, and issue a corrective notice to inform the general public about the nature and provisions of the order issued against them. Rogers, in response, requested that the court strike down s.74.01(1)(b) of the *Competition Act* requiring completion of "adequate and proper" tests with respect to a product's performance, arguing that the provision is inconsistent with the company's freedom of speech under the *Charter of Rights and Freedoms*. The court found that the infringement caused by s.74.01(1)(b) is justifiable and recognized that Rogers did not conduct adequate and proper tests to support its performance claims prior to making them. The court also found that Rogers did not exercise due diligence to prevent the conduct from occurring, and ordered Rogers to pay an administrative monetary penalty of \$500,000.²⁸

In 2016, Comwave Networks Inc. agreed to pay an administrative penalty of \$300,000 for advertising prices for telecommunications services that could not be attained due to additional non-optional fees and misrepresenting its internet and home phone services as unlimited, when in practice there were monthly caps on usage. The Bureau concluded that Comwave's representations were false or misleading even though disclaimers were disclosed, albeit in the fine print, and Comwave's staff was instructed to provide this information to consumers who contacted their call centre.²⁹

In 2012, the Bureau initiated inquiries into Bell, Rogers, TELUS, and the Canadian Wireless Telecommunications Association, in which the Bureau alleged that each had made or permitted false or misleading representations about premium text messaging in pop-up ads, apps, and social media. This facilitated third party services to charge customers for premium text messaging services, such as trivia questions and ringtones that customers did not intend to purchase and had not agreed to pay. The Competition Bureau reached settlement agreements with each party in 2015 and 2016. The substance of the agreements varied, but each contained some requirement to notify affected customers, establish consumer awareness campaigns, and/or enhance corporate compliance programs. Lastly, the service providers were also required to issue rebates to certain current and former customers: up to \$7.24 million for TELUS;³⁰ up to \$5.42 million for Rogers;³¹ and up to \$11.82 million for Bell.³²

²⁷ "Rogers cites free speech in Chatr ad claim dispute", *CBC News* (8 August 2012), online:

<<https://www.cbc.ca/news/business/rogers-cites-free-speech-in-chatr-ad-claim-dispute-1.1189436>>.

²⁸ *Canada (Commissioner of Competition) v Chatr Wireless Inc*, 2014 ONSC 1146.

²⁹ Competition Bureau, News Release, "Comwave to pay over \$300,000 to settle telecom services advertising case" (13 September 2016), online: <<https://www.canada.ca/en/competition-bureau/news/2016/09/comwave-pay-over-300-000-settle-telecom-services-advertising-case.html>>.

³⁰ Competition Bureau, "Telus customers to receive \$7.34 million in rebates as part of Competition Bureau agreement" (30 December 2015), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04017.html>>.

³¹ Competition Bureau, "Rogers agreement with Competition Bureau nets record refunds for wireless consumers" (16 March 2015), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03889.html>>.

³² Competition Bureau, News Release, "Bell customers to receive up to \$11.82 million as part of Competition Bureau agreement" (27 May 2016), online: <<https://www.canada.ca/en/competition-bureau/news/2016/05/bell-customers-to-receive-up-to-11-82-million-as-part-of-competition-bureau-agreement.html>>.

3.2 The Canadian Radio-television and Telecommunications Commission (CRTC)

3.2.1 CRTC Regulatory Policies and Reports

The CRTC is an independent public organization that regulates and supervises the Canadian broadcasting and telecommunications systems. In most areas of Canada, the CRTC does not regulate internet services, although it retains the jurisdiction to do so in specific conditions where competition is not sufficient.³³ In PIAC's consultations, the CRTC stated that "internet performance claims in advertising, and as such complaints relating to them, fall outside of our mandate and are not explicitly monitored."³⁴ The CRTC encourages customers that are unhappy with their current internet speeds to switch ISPs.³⁵

The CRTC has established regulatory policies regarding the implementation of internet traffic management practices (ITMPs) by ISPs. ITMPs involve the use of techniques such as traffic shaping or deep packet inspection to manage network congestion, and therefore may slow down internet speeds. The CRTC has also implemented guidelines for consumer complaints with respect to ITMPs. The CRTC received ten complaints about ITMPs during 2021.³⁶ The CRTC requires ISPs to disclose technical ITMPs to their customers and provide them with the following information:

- why ITMPs are being introduced;
- who is affected by the ITMP;
- when the Internet traffic management will occur;
- what type of Internet traffic (e.g. application, class of application, protocol) is subject to management; and
- how the ITMP will affect a user's Internet experience, including the impact on speeds.

The CRTC indicated that ISPs should provide or link such information on the web pages that describe the offered internet services and reference the online disclosures in relevant marketing materials, customer contracts, and terms of service.³⁷ In 2018 and 2019, the CRTC reviewed compliance and found that "the information regarding the technical ITMPs employed by those ISPs, with the exception of Cogeco and SaskTel, is not disclosed in a manner that is consistent with the requirements of TRP 2009-657."³⁸ While the CRTC found that the ISPs' fair use policy or terms of service generally contained ITMP disclosures, in most cases the information was not included on webpages describing speed offerings and when included, the disclosure was not clear or prominent enough to adequately inform customers about ITMPs and their impact on retail internet services.³⁹ Therefore, the CRTC requested several major ISPs, including Bell and Rogers, to revise disclosure practices accordingly and file reports explaining how the revised practices comply with TRP 2009-657.

³³ CRTC, "Frequently Asked Questions", online: <<http://www.crtc.gc.ca/eng/faqs.htm>>.

³⁴ PIAC's consultation with the CRTC, via completed questionnaire received on 26 January 2022.

³⁵ CRTC, "My Internet speed isn't fast enough" (February 2022); online: <<https://crtc.gc.ca/eng/contact/internet/q4.htm>>.

³⁶ CRTC, "Status Report - Complaints Related to Internet Traffic Management Practices (ITMPs)" (December 2021), online: <https://crtc.gc.ca/eng/internet/pub.htm?_ga=2.117707337.1711368066.1649357694-1808540332.1647039720>.

³⁷ CRTC, "Telecom Commission Letter addressed to the Distribution List" (June 2019), online: <<https://crtc.gc.ca/eng/archive/2019/lt190628.htm>>.

³⁸ *Ibid.*

³⁹ *Ibid.*

In 2018, following a direction from cabinet and a public consultation, the CRTC issued a Report on Misleading or Aggressive Communications Retail Sales Practices. The report discusses the prevalence of misleading or aggressive sales practices and existing consumer protection measures, as well as ways to strengthen these measures. The report also touched upon advertised versus delivered speeds:

“The CRTC notes that many Canadians mentioned issues related to the speed of their connection as a misleading or aggressive sale practice they experienced. While some [Canadians] felt they were oversold compared to their actual needs, most commented about their perception that they were not getting the service they signed up for. This issue therefore touches both potentially misleading advertising and the need for clear customer understanding of the services they are agreeing to.”⁴⁰

The CRTC also sets standards for what constitutes “basic services.” In 2015, the CRTC, launched a national consultation to examine the necessity of telecommunications services in the digital economy and to identify under-served or unserved areas. This consultation included a nation-wide survey on household telecommunications services,⁴¹ and culminated in a 2016 regulatory policy updating the universal internet speed targets for Canada to a “basic telecommunications service” standard of 50Mbps download and 10 Mbps upload, with unlimited data allowance.⁴² In 2016 and 2020, the CRTC published broadband measurement studies conducted by Samknows, and generally found that ISPs were delivering average download and upload speeds that commonly exceeded maximum advertised rates.⁴³ The measurement methodology used in the SamKnows studies will be discussed more thoroughly under Section 4 of this Report below.

The CRTC has also developed the Wireless Code in 2013 (reviewed in 2017)⁴⁴ and the Internet Code in 2019,⁴⁵ which are mandatory for service providers, to improve customers’ understanding of their rights and responsibilities under their contracts with wireless and internet service providers. Section G.2 of the Internet Code requires a 15-day trial period to allow new customers (30 days for customers self-identifying as a person with a disability) to cancel their contract without penalty or early cancellation fees if they have used less than the permitted usage limits for the trial period, and they have returned any ISP-provided equipment in near-new condition in original packaging. There is no specific requirement regarding performance standards attached to this Code provision. Complaints under these codes are dealt with by the Commission for Complaints for Telecom-television Services (CCTS).

3.2.2 Legislative Reform

In May 2021, MP Dan Mazier tabled Bill C-299, titled “An Act to amend to Telecommunications Act

⁴⁰ Canada, CRTC, *Report on Misleading or Aggressive Communications Retail Sales Practices* (Ottawa: CRTC, February 2019), at 24, online: <https://crtc.gc.ca/eng/publications/reports/2018_246/#a4>.

⁴¹ EKOS Research Associates Inc, “Let’s Talk Broadband” (March 2016), online: <<https://epe.lac-bac.gc.ca/100/200/301/pwgsc-tpsgc/por-ef/crtc/2016/030-15-e/report.pdf>>.

⁴² *Modern telecommunications services – The path forward for Canada’s digital economy* (21 December 2016), Telecom Regulatory Policy CRTC 2016-496, online: CRTC <<https://crtc.gc.ca/eng/archive/2016/2016-496.htm>>.

⁴³ CRTC, “Samknows Analysis Of Broadband Performance In Canada March & April 2016” (September 2016), and “Measuring Broadband Canada” (June 2020), online: <<https://crtc.gc.ca/eng/publications/reports/rp160929/rp160929.htm>> and <<https://crtc.gc.ca/eng/publications/reports/rp200601/rp200601.htm>>.

⁴⁴ CRTC, “The Wireless Code, simplified” (December 2017), online: <<https://crtc.gc.ca/eng/phone/mobile/codesimpl.htm>>.

⁴⁵ CRTC, “The Internet Code, simplified” (February 2021), online: <<https://crtc.gc.ca/eng/internet/codesimpl.htm>>.

(access to transparent and accurate broadband services information.” MP Mazier introduced the bill in the House of Commons by stating that “for years, Canadians have found themselves purchasing Internet services at sky-high prices, only to realize that the quality and the speed they expected to receive is nowhere what they actually receive,” further claiming the bill “would require Internet companies to provide Canadians with a reliable and comparable indicator of the speeds they can realistically expect.”⁴⁶ The text of the bill included requirements for Canadian carriers to provide consumers with information on service quality metrics during peak periods, typical download and upload speeds, and any other information as required by the CRTC.⁴⁷ The bill also required the CRTC to hold public consultations on the appropriate metrics, measurement methodology, and form and manner of the service quality metrics provided by ISPs. Although the bill did not reach second reading before dying on the Order Paper prior to the 2021 federal election, it demonstrates that consumers’ concerns about misleading broadband advertising practices have reached the ears of lawmakers. Notably, the CRTC was identified as the regulatory authority potentially responsible for implementing rules for more transparent and accurate broadband advertising.

3.3 The Commission for Complaints for Telecom-television Services (CCTS)

The Commission for Complaints for Telecom-television Services (CCTS) is an independent organization established in 2007 that provides consumers with a place to escalate their dispute “when their attempts to solve the problem directly with their service provider have proven ineffective.”⁴⁸ The CCTS will attempt to mediate a resolution between the two parties based on evidence submitted by a customer and their service provider. Where the CCTS is unable to reach a resolution through mediation, it may make a recommendation, which either party may accept or reject within 20 days.⁴⁹ If either party rejects the recommendation, the CCTS may issue a final decision, which, if accepted by the customer, becomes binding on the service provider.⁵⁰

In PIAC’s consultations, the CCTS stated that internet advertisement issues and broadband measurement are beyond its mandate and that generally the CCTS will direct consumers who complain about advertising to other resources, including Ad Standards and the Competition Bureau.⁵¹ However, the CCTS does investigate complaints where a customer’s plan indicates a certain speed, but evidence shows the customer is receiving a speed that pertains to a lower priced plan. In such instances, the CCTS may recommend that the consumer pay for service in the lower tier.⁵² There are several case studies demonstrating this scenario in the CCTS’ annual reports. For example:

“A customer in a rural area told us that she switched home internet service providers because she required a stable connection to work from home and conduct online meetings. The customer stated that her new provider had assured her that the new service would meet her needs. However, two weeks into the new service, the customer

⁴⁶ Hansard, 43rd Parl, 2nd Sess, No 105 (27 May 2021) at 1045 (Dan Mazier).

⁴⁷ Bill C-299, *An Act to amend the Telecommunications Act (access to transparent and accurate broadband services information)*, 2nd Sess, 43rd Parl, 2021, (first reading 27 May 2021).

⁴⁸ CCTS, “Developing Public Awareness of the CCTS” online: <<https://www.ccts-cprst.ca/about-ccts/public-awareness/>>.

⁴⁹ CCTS, “FAQ: What is a Recommendation?” online: <<https://www.ccts-cprst.ca/for-consumers/faq/>>.

⁵⁰ CCTS, “FAQ: What is a Decision?” online: <<https://www.ccts-cprst.ca/for-consumers/faq/>>.

⁵¹ PIAC’s consultation with the CCTS, via questionnaire received on 15 February 2022.

⁵² *Ibid.*

was receiving download speeds of only 1 Mbps for most of her work although she had a 10 Mbps plan. After spending hours troubleshooting the issue with the provider with no resolution, the customer brought her dispute to the CCTS.

During our investigation, we reviewed the provider's terms of service. We explained to the customer that the provider's terms of service do not guarantee internet speeds and that there are many factors that could affect internet speed and performance.

During discussions with the customer, we were able to clarify her goal, which was to reduce the cost of the service to better match the speeds she was receiving and remove the cancellation penalty should she decide to cancel the service at any time.

We brought this request to the provider, which offered the customer a \$40 per month discount for six months. As a goodwill gesture, the provider also agreed to remove the cancellation penalty if the customer decided to cancel service at any time. The customer was content with the resolution and concluded the complaint."⁵³

The CCTS has stated that "[s]ometimes customer expectations cannot be met, either because of technology limitations or because customers are not aware of limitations in service plans, such as 'up to' limits. In the latter case, full and proper disclosure to customers would help to decrease complaints."⁵⁴

According to the 2020-21 Annual Report, internet-related issues increased by 12% and more specifically, "quality of internet service" complaints increased by 48% compared to 2019-20. The CCTS noted the disproportionate number of quality-related issues for internet services, in that internet service issues accounted for 31% of all issues, but 54% of quality of service issues, which "may be indicative of customers' increased reliance on internet connectivity and increased service demands with remote work and virtual schooling due to the COVID-19 pandemic."⁵⁵

The CCTS stated, in its consultation with PIAC, that other factors contributing to complaints about slow speed (intermittent and complete loss of service) included:

- inefficient temporary towers;
- congestion during peak hours;
- improper installation;
- faulty equipment;
- timeouts;
- one Internet service provider buying out another provider's customers, thereby generating more congestion;
- traffic management policy restrictions;
- technology not accommodating a customer's needs (e.g., higher speeds required for gaming); and
- service throttling allegations.⁵⁶

⁵³ CCTS, "Annual Report 2020-2021" (December 2021), online: <<https://pub.ccts-cprst.ca/2020-2021-annual-report/topics-and-trends/>>.

⁵⁴ CCTS, "Annual Report 2019-2020" (December 2020), online: <<https://pub.ccts-cprst.ca/2019-2020-annual-report/?display=print>>.

⁵⁵ CCTS, "Annual Report 2020-2021" (December 2021), online: <<https://pub.ccts-cprst.ca/2020-2021-annual-report/topics-and-trends/>>.

⁵⁶ *Supra* note 55.

PIAC examines our consultation with the CCTS in more detail in Section VII of this report.

3.4 Advertising Standards Council (ASC)

The Advertising Standards Council (ASC) is a national, independent, not-for-profit self-regulatory body. ASC administers the general *Canadian Code of Advertising Standards (Code)*, which advertisers use to self-regulate advertising practices to meet legal and ethical standards. The *Code* contains provisions on, among other things, accuracy and clarity, disguised advertising techniques, price claims, guarantees, comparative advertising, testimonials, and professional or scientific claims.⁵⁷ Consumers who believe an advertisement violates the *Code* can complain to the ASC and, after investigating, the ASC may ask the advertiser to withdraw or appropriately amend the advertisement without unreasonable delay.⁵⁸ While the *Code* is voluntary, where an advertiser fails to comply with the complaints procedure or an ASC decision, the ASC may: advise exhibiting media of the non-compliance and request they no longer exhibit the advertisement in question; publicly declare the non-compliance of the advertisement and the advertiser; and notify the Competition Bureau or other regulatory authorities of the advertiser's non-participation and non-compliance.

ASC does generally receive complaints about telecommunications services,⁵⁹ but there are no recent case studies specifically pertaining to internet advertisement performance claims.⁶⁰ PIAC contacted the ASC for consultation, but did not receive a response in the study period.

4. Developments in speed testing methodology

As evident in the Section 6 figures in this report, Canadian ISPs still largely market their internet services in tiers differentiated by peak “up to” download and upload speeds. Customers then presumably self-select into the appropriate speed tier based on their usage needs and budget considerations. Now that employment, education, and communication more heavily rely on the internet, consumers – especially low-income consumers – must engage in difficult cost-benefit analyses when shopping for internet services. Users with heavier usage needs, like those who play online games at high resolutions or who regularly upload large content files, will want a plan with higher download and upload speeds. Users who only go online for emailing and occasionally viewing YouTube videos would likely be content with a lower tier plan. For consumers whose first consideration is how much they can afford to spend on

⁵⁷ Ad Standards, “The Canadian Code of Advertising Standards”, online: <<https://adstandards.ca/code/the-code-online/>>.

⁵⁸ Ad Standards, “Complaints”, online: <<https://adstandards.ca/complaints/>>.

⁵⁹ For example, telecommunications was the category with the 5th most complaints (81 in total), some of which pertained to “[p]romotional membership offers that did not include additional applicable fees, such as ‘annual fees’, ‘processing fees’, or requirement from consumers to buy their own device for telecommunications offers”;

ASC, “Ad Complaints and Disputes Report” (2019) at 4-6, online: <<https://adstandards.ca/wp-content/uploads/Ad-Complaints-and-Disputes-Report-2019.pdf>>.

⁶⁰ Ad Standards, “Archived Case Summaries”, online: <<https://adstandards.ca/complaints/complaints-reporting/archived-case-summaries/>>.

internet services, a close second consideration is whether buying into more expensive service tiers is worth the actual performance they can expect in the home. For this cost-benefit analysis to be meaningful, advertisements must accurately reflect the performance consumers actually experience most of the time, but especially during peak periods of internet use.

Advertisements that promise only the upper download and upload speed limits make it more difficult for consumers to seek accountability or recourse for performance issues because there are no minimum performance guarantees. Difficulties are compounded where customers are not sufficiently informed of technical caveats that limit performance potential. Researchers Reza Rajabiun and Catherine Middleton further argue that this information asymmetry negatively affects competition, especially for legacy platforms, when owners of older platforms “employ misleading advertising as a strategic tool that serves to create noise about the quality of their products relative to actual/potential competitors with higher quality networks,” which can potentially “distort platform competition and reduce the pace of technological change in the market for Internet connectivity.”⁶¹ In other words, innovation – a goal that ISPs tend to emphasize as a priority against any regulatory intervention addressing affordability and accessibility – is actually stifled where there is no systematic, standardized way to keep broadband ads credible and reflective of actual performance. Therefore, Rajabiun and Middleton very succinctly argue that “adopting contractual norms with harder performance targets seems particularly important in a network industry where competition may not be feasible or economically desirable.”⁶²

4.1 Performance Indicators

As described in PIAC’s 2012 report, download and upload speed together remain one of the most important criteria for consumers when selecting a broadband internet plan. Based on ISPs’ ads studied in this report, speed is still the main metric by which broadband service tiers are differentiated. Many factors affect internet performance, or otherwise limit the maximum speeds that customers receive on their devices. The factors described in the 2012 report are the same ones relevant to performance today: access technology, network congestion, latency, packet loss and jitter. In this report, we will speak to them in the context of speed measurement techniques and developments from the last decade.

Since the publication of PIAC’s 2012 report, more literature has emerged that examines the speed testing tools commonly used by governmental organizations, and also explores how policy-makers can leverage and improve various testing methodologies to better inform policy actions. More recent discussions around speed testing have evolved in light of the continued expansion of gigabit speed connections, which for more consumers has shifted the performance bottleneck from the ISP’s last mile access network to the users’ devices, home Wi-Fi network, network interconnections, speed testing infrastructure, and other factors.⁶³ Feamster and Livingood argue that current speed testing tools may

⁶¹ Reza Rajabiun & Catherine A Middleton, “Lemons on the Edge of the Internet: The Importance of Transparency for Broadband Network Quality” (2015) 98 *Communications & Strategies* 123.

⁶² *Ibid* at 124.

⁶³ Nick Feamster & Jason Livingood “Measuring Internet Speed: Current Challenges and Future Recommendations” (2020) 63:12 *Communications of the ACM*.

need to be redesigned to consider a more representative range of factors affecting a user's Internet experience.⁶⁴

Many of the commonly used speed tests today measure throughput, which is what consumers would understand as Internet "speed," but this is not the only metric affecting end-to-end Internet performance. In addition to throughput, which is the amount of data transferred between two network endpoints over a time interval, latency and packet loss are also metrics that are commonly tested to measure performance. For example, Ookla's speed test and the FCC's Measuring Broadband America program both test throughput speeds from server to client and vice versa, but also accounts for latency, often measured by a test known as "ping."⁶⁵

Latency, in speed tests like Ookla, is tested by measuring the time it takes for a single data packet to travel to a certain server. Usually, latency is measured in terms of the roundtrip that completes when the server sends a reply back to the user. Therefore, factors that disrupt this path also affect latency; the circuitousness of the network path, queueing, buffering, and the distance of the server can all increase latency.⁶⁶ For online gaming, where servers exchange information like controller input, world state, player coordinates and communications, low latency is essential for maintaining high quality of experience. To a lesser extent, latency also affects video chatting and browsing, where high latency will manifest as sync issues and freezing for the former and loading delays for the latter.⁶⁷

Bandwidth is essentially what most people understand as the internet speed metric that is typically placed on the face of ads. Bandwidth is the measure of how much data can travel from one network point to another within a fixed period of time, typically quantified as Megabits or Gigabits per second. The maximum bandwidth of a user's internet service is limited first by the upper limits of the user's plan, and then further limited by network congestion and degraded, faulty or outdated network devices like routers.⁶⁸ Bandwidth is the main factor in the quality of video and audio streaming. If the user's bandwidth cannot keep up with the size of the content, the user will experience excessive buffering, or the streaming service will downgrade the video quality to compensate for the slow download speed. The user experience is optimized with low latency and high bandwidth. High bandwidth is limited by high latency, which causes significant lags in activities that require constant data exchanges with a server; large amounts of data can be exchanged over time, but the user will experience loading delays. Low latency and low bandwidth will likely manifest as quick response times but less data being transferred at once; in the context of streaming, this may result in a smooth stream but low graphic resolution.

⁶⁴ *Ibid.*

⁶⁵ FCC, "Measuring Fixed Broadband" (March 2021), online: <<https://www.fcc.gov/general/measuring-broadband-america-measuring-fixed-broadband>>; Speedtest, "How does Speedtest measure my network speeds?" (2019), online: <<https://help.speedtest.net/hc/en-us/articles/360038679354-How-does-Speedtest-measure-my-network-speeds->>.

⁶⁶ *Supra* note 63.

⁶⁷ Dave Schafer & Kevin Parrish, "Bandwidth vs. Latency: What is the Difference?" (15 July 2021), *HighSpeedInternet.com*, online: <<https://www.highspeedinternet.com/resources/bandwidth-vs-latency-what-is-the-difference>>.

⁶⁸ Tim Keary, "Latency vs Throughput – Understanding the Difference", *comparitech*, online: <<https://www.comparitech.com/net-admin/latency-vs-throughput/>>.

For households mainly using the internet to watch videos and listen to music, bandwidth is the more significant factor. For households who also frequently play online games or engage in video conferencing, low latency is equally important, to ensure quick reaction times. ISPs should be able to explain the difference between the two, and the feasibility of a chosen internet package in providing a low latency, high bandwidth service, taking into consideration the user's needs and configuration. The greater the number of simultaneous users in a household, the greater the bandwidth must be to support larger simultaneous data transfers.

Jitter is the variation between latency measurements. Ideally, data packets are exchanged between the user and server at a regular interval, but when these intervals vary, the quality of real-time communication suffers. Even when a connection has low latency, the user may still experience noticeable lags if there is high jitter. In the context of VoIP, when voice chats stutter and overlap, jitter is typically to blame.⁶⁹ Network congestion, hardware and wireless system issues can cause varying degrees of jitter.⁷⁰

Packet loss is the rate at which data packets are lost compared to the total number of transmitted packets. A high level of packet loss may manifest as a video stream that skips. However, many video streaming applications are designed to compensate for packet loss by increasing buffer size.⁷¹ In other words, an application may periodically buffer a video to receive all data packets and ensure no content is lost, at the expense of latency.

4.2 Speed testing methodologies

Most speed tests in use today are active measurement tools (including Ookla), which introduce new traffic into the network to probe performance. This method necessarily creates additional network traffic, and therefore may briefly disturb the normal flow of traffic and cause congestion.⁷² Unlike passive testing, active measurement usually requires little storage space and is more privacy protective since probing is comparatively infrequent and random. Passive testing gathers data over time by using a device to duplicate a particular network's traffic.⁷³ Passive monitoring can more accurately measure packet loss and available bandwidth.⁷⁴ While passive methods provide a more accurate representation of actual network traffic compared to active measurement methods, there are additional data storage and privacy considerations.

In designing a speed test, there are critical considerations for maximizing accuracy. In any speed test, there is always a bottleneck somewhere along the path from the Wi-Fi link in the user's home network

⁶⁹ John Cirelly, "Jitter vs Latency – What are the Differences and Why Those Things Matter" (21 June 20), *Network Management Software*, online: <<https://www.networkmanagementsoftware.com/jitter-vs-latency/>>.

⁷⁰ *Ibid.*

⁷¹ *Supra* note 63.

⁷² Venkat Mohan, YR Janardhan Reddy, & K Kalpana, "Active and Passive Network Measurements: A Survey" (2011) 2:4 *International Journal of Computer Science and Information Technologies* at 1376, online: <<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.227.9625&rep=rep1&type=pdf>>

⁷³ *Ibid.*

⁷⁴ *Ibid.*

to the test server. Limiting factors along this end-to-end path constrain the throughput of the speed test. For example, if a user's home Wi-Fi network cannot exceed 200 Mbps, a speed test on any device on this Wi-Fi cannot ever exceed 200 Mbps, even if the user's internet plan provides a higher bandwidth cap.⁷⁵ With ISPs now providing increasingly higher Mbps and Gbps services, the limiting factor in the network is now more likely to be somewhere in the user's home network. Speed testing over a home wireless connection is often more reflective of the user's home wireless connection, not that of the ISP. Several limits within the home Wi-Fi network could potentially factor into a test, such as the distance of a device to the Wi-Fi Access Point, signal strength, technical limitations of a wireless device, other users and devices operating on the same network, interference from nearby access points using the same spectrum, interference from non-Wi-Fi household devices that operate on the same spectrum (ie. baby monitors, microwave ovens, security cameras, etc).⁷⁶ At the very least, users must be made aware of the caveat that speed tests run over a wireless connection can be more reflective of the home wireless connection rather than that of the ISP.

Variations in the user's hardware and software, even slightly older wireless devices, can also limit the throughput of a higher speed connection. This is why mass speed studies generally use dedicated hardware (like SamKnows' Whiteboxes) or embedded software within existing network devices in order to minimize interference from user-related factors. Such speed studies therefore generally yield higher throughput measurements than those collected using a browser-based test on a device over Wi-Fi. As more users are connected to services that exceed 1 Gbps, legacy measurement tools must evolve to accommodate the demand and to control for various additional limiting factors.

The distance between a test server and a client affects the accuracy of measurements, therefore Ookla uses thousands of servers around the world so that each test attempts to find the "closest" measurement server in relation to the user's IP geolocation to provide the most accurate result. And since IP geolocation can be inaccurate – often by thousands of miles – some testing platforms like Ookla have tried to mitigate this challenge by factoring in GPS-based location and/or prompting the user to select the closest of a preliminary list of servers.⁷⁷ Any real-time rate-limiting (aka throttling) or rate-boosting practices, if excluded or overrepresented, can confound the results of speed tests.⁷⁸ To mitigate this uncertainty, an effective speed test should take automatic measurements randomly throughout the day during both peak and off-peak periods.

With the above factors in mind, designing and marketing a speed test depends largely on the purpose of the test. A user accessing a 3rd party online speed test may simply be seeking to validate any immediate internet performance issues, or more broadly self-testing to assess whether and how often their service meets the advertised speed. An ISP testing its own lines may use its own speed testing methods to assess network capacity. A regulatory authority conducting mass speed testing studies may seek to evaluate the overall quality of ISPs' internet service offerings.

⁷⁵ *Supra* note 63.

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*

For the average home internet user, the go-to speed testing method is likely a browser-based test, or a desktop application that is quick and available at any time. However, there are many factors within and outside the control of the user that may affect measurements. For example, test results could be negatively affected by any downloads, uploads, or VPN connections running alongside the test. Users also may not know that their outdated modems and routers affect speeds. Furthermore, user-initiated testing may also suffer from systematic user bias, as users are more likely to access widely available testing platforms when already experiencing connection issues.

Hardware-based speed measurements like those collected through SamKnows Whiteboxes could eliminate potential bottlenecks along the measurement pipeline, but most studies contracting SamKnows are limited in the number of collected datapoints, and therefore may not be representative of many consumers' experience with a variety of performance issues.⁷⁹ These tightly controlled studies can easily prove that ISPs can achieve the speeds they advertise, but may ultimately be incongruous to the consumer experience, especially in rural and remote service areas which are largely excluded from study samples. Therefore, non-hardware-based testing methodologies that collect more datapoints across a wider user base may account for real-world factors that reflect the day-to-day experience of average users. Even though such a study would likely be more complex and time-consuming, it could reveal actual gaps in service delivery, which is more useful for consumers and policy-makers.

All considerations put together, it is truly a challenge to design internet speed tests that can appropriately capture the actual user experience and real-world conditions. Consumers also vary widely in sophistication regarding the internet and technology in general. Many have limited true comprehension of even the basic characteristics of internet services, let alone the various technical considerations of internet services. As such, the chief consideration in any speed test is audience, that is, who the results are most useful to. Regulatory authorities that conduct mass testing studies must clearly explain to consumers the purpose of the test, and clearly acknowledge the limitations of the methodology.

4.3 The CRTC's 2016 and 2020 Measuring Broadband Canada studies

In 2012, there had not yet been any national broadband speed measurement projects in Canada. Since then, the CRTC has contracted SamKnows, a global internet measurement and analysis company, to collect speed data in 2016 and 2019 to determine the quality of internet delivery across Canadian ISPs. The more recent study, conducted in October 2019, resulted in a report titled "Measuring Broadband Canada" published in June 2020.⁸⁰ The Commission's news release for this report announced that "the vast majority of participating Canadian Internet service providers (ISPs) have met or exceeded the

⁷⁹ Steve Bauer, David Clark & William Lehr, "Understanding Broadband Speed Measurements" (2010) TPRC at 3.

⁸⁰ CRTC, "Measuring Broadband Canada" (June 2020), online:
<<https://crtc.gc.ca/eng/publications/reports/rp200601/rp200601.htm>>.

maximum download and upload speeds they advertise.”⁸¹ However, some have criticized testing tools such as SamKnows as having “neither a proper vantage point nor ground truth knowledge of the behaviour they seek to detect.”⁸²

SamKnows collects speed data through its proprietary “Whitebox”, which is a piece of hardware installed between a user’s device and home modem or router to take speed measurements when no one in the household is using the Internet. The Whiteboxes continuously monitor the end-user’s cross-traffic, and refrains from taking measurements until cross-traffic subsides below a certain threshold, all to ensure that measurements are “not distorted by end-user activity, and that the Whitebox’s measurement traffic does not interfere with a user’s experience of the Internet.”⁸³ Whiteboxes therefore do not account for the user’s network setup, devices, or other factors that potentially slow down the internet speed while customer uses the Internet in a normal way.

In the Commission’s 2016 and 2020 measurement studies, the performance indicators measured were: download and upload speeds, latency, packet loss, and webpage loading time. By all these performance metrics, the test results purported to show that all major Canadian ISPs are providing users with speeds meeting or exceeding advertised speeds, such that users were often getting “additional” throughput, with very few instances of service falling below advertised speeds. The final report also claimed that speeds also did not decrease significantly during peak hours.

However, these results should be qualified by the fact that the study is actually extremely limited in scope, as the methodology was “designed to provide accurate data on the broadband performance experienced by the majority of Canadian fixed-line broadband users.”⁸⁴ Several aspects of the methodology and sample limit the real-world applicability of the conclusions. The reduced demographic scope of the study seems to have been justified on technical bases, that is, outlying data that represent the real-world use of certain broadband users were excluded because the data would otherwise lower the average performance results. The Commission’s uncritical endorsement of the study paints a simplified picture of broadband service speeds, when the reality is far more complicated and likely far less positive for many consumers. In PIAC’s view, the 2020 Measuring Broadband Canada report is especially less rigorous and therefore less useful than the 2016 study.

The sample pool is skewed towards higher tier plans and urban users

The first limitation is in the service packages and demographics that the 2020 Report chose to include, or rather, to exclude. The results were based on a pool of measurements from 2035 Whiteboxes deployed to customers of participating ISPs, including the three largest ISPs: Bell, Rogers, and TELUS. Only service packages with the highest subscriber counts were included in order to “represent the

⁸¹ CRTC, News Release, “Canadian consumers are receiving maximum advertised Internet speeds” (8 September 2020), online: <<https://www.canada.ca/en/radio-television-telecommunications/news/2020/09/canadian-consumers-are-receiving-maximum-advertised-internet-speeds.html>>.

⁸² Richard Bennett, “You Get What You Measure: Internet Performance Measurement as a Policy Tool” (2017) TPRC 45.

⁸³ *Supra* note 80.

⁸⁴ *Ibid.*

majority of Canadian fixed-line broadband users.”⁸⁵ For comparison, the 2016 study used data from 3056 Whiteboxes, and did not use the “highest subscriber count” condition as an inclusion criterion.

The 2020 Report also excluded advertised download speeds of 10 Mbps or less, and service packages that had less than 25 000 total subscribers. With few exceptions, the study also excluded data from samples of less than 40 Whiteboxes per Internet package. The report does not explain whether the exclusion of lower tier service packages was because of a declining number of subscribers or other reasons. The Commission’s 2016 measurement study did include Bell Canada’s 7/0.64 Mbps and 5/1 Mbps plans, and TELUS’ 6/1 Mbps plan, which respectively underperformed at 81%, 86%, and 81% of the advertised speeds.⁸⁶ The Commission’s choice to not re-evaluate these plans three years later leaves unanswered the question of whether the quality of service has improved for Canadians still relying on those basic plans.

The lack of evidence for lower-tier plans does a disservice to rural Canadians, who tend to only have access to lower speed broadband internet, or can only afford lower service tiers due to generally more expensive rural service. Based on the 2020 Communications Monitoring Report (CMR), which at the time of PIAC’s current study was the last edition of the CMR to report on broadband availability, the broadband coverage in rural communities in 2019 was only 45.6% for broadband speeds of 50/10 Mbps with unlimited data transfer capacity (34.8% in First Nations reserves), compared to 98.6% coverage for urban areas.⁸⁷ As of 2019, 1.5 Mbps broadband was available to rural communities at a much higher coverage rate of 94.4%,⁸⁸ and yet the Commission’s study does not help to confirm whether these communities are getting reliable service even under the lowest tier services.

Another major difference between the 2016 and 2020 Reports is that the former explicitly took measurements from all participating ISPs that “covered all geographic regions of Canada in a mix of urban and rural settings,” and acknowledged variations in results stemming from rural and remote measurements.⁸⁹ The 2020 Report made no such claims, and seems to have significantly pared down its rural sample to just Northwestel, which was pointedly included “in order to demonstrate the performance of a remote broadband provider.”⁹⁰ No reference was made to rural samples taken from the other participating ISPs. PIAC can only infer, based on how the data collection is skewed towards higher-tier services, that the results may largely represent urban and suburban users.

Furthermore, the 2020 Report excluded Northwestel from the results for webpage loading times because “their remote location would have an adverse impact on results compared to other ISPs.”⁹¹ A fairer approach would have been to include this data from Northwestel and then explain that data’s effect on the results. The 2016 Report did just this, qualifying its latency results by stating that “average

⁸⁵ *Ibid.*

⁸⁶ CRTC, “Samknows Analysis Of Broadband Performance In Canada March & April 2016” (September 2016), online: <<https://crtc.gc.ca/eng/publications/reports/rp160929/rp160929.htm>>.

⁸⁷ CRTC, Communications Monitoring Report (2020) at 107, online <<https://crtc.gc.ca/pubs/cm2020-en.pdf>>.

⁸⁸ See Dataset “Data - LTE and broadband availability”, in datasheet C-F8 “Broadband service availability – urban versus rural (% of households), 2016-2019,” online: <<https://crtc.gc.ca/eng/publications/reports/PolicyMonitoring/cmrd.htm>>.

⁸⁹ *Supra* note 86.

⁹⁰ *Supra* note 80.

⁹¹ *Ibid.*

latency for the 5-9 Mbps DSL bucket was pulled upwards by one ISP who deliver services to remote areas.”⁹² With regard to the slightly higher webpage loading times for Bell MTS customers, the 2020 Report explained that this was due to “user distance to major content servers – which are typically located near major urban centers – contributing to the small increment,” though the report does not specify whether these users were rural customers. In contrast, the 2016 Report qualified Bell-MTS’ higher loading times by the fact that “MTS’s users are also concentrated in rural areas, where the remoteness leads to higher latencies and lower speed products being available.” Overall, the more recent study seems to have shifted focus almost exclusively to urban and suburban users, who typically enjoy greater reliability and more service choice than rural and remote users, whose representation remains unclear or minimal at best. This is a specific instance where a broader sample would have enhanced the utility of the study from a policy and consumer perspective, proving more insight into the urban-rural divide.

Collecting data during periods of inactivity only measures speed, not user experience

As we noted earlier, the “real-world” utility of Whitebox measurements may also be limited by the fact that data are only collected when there is no end-user “cross-traffic” on the home network. In other words, the Whitebox only takes measurements when there is no one in the household using the Internet, apparently so that the WhiteBox’s measurements are not “distorted” by end-user activity, and so the Whitebox’s measurement traffic does not interfere with the user’s experience of the Internet. However, in reality, the user’s actual home internet experience is always filtered by the fact that a household must use their internet connection and some sort of consumer device, such as a smartphone, laptop, or connected TV, to access broadband services. Therefore, the study only measures potentially available speeds on a household network, not how efficiently and reliably those broadband speeds stand up to normal user activity, especially during peak periods. The study also qualifies that the Whiteboxes only measure speeds to the “doorstep” because factors like the number of devices in use at the same time, faulty equipment, and poor Wi-Fi connectivity can affect broadband performance inside the home. However, all consumers use broadband services with widely varying degrees and quality of “network overhead” like routers, WiFi, devices, etc.

It is precisely the real-world factors that, together with the “to the door” delivered speed and quality, “make or break” the utility of an internet service for a household. Without more comprehensive research, or at least some adjustment to the methodology and reporting that accounts for these factors, the study’s results are perhaps better framed as the potential maximum speeds “available” to a household. Moreover, the report extrapolates that “quality of service is consistent across Canada,” and that the results were based on “the broadband performance experienced by the majority of Canadian fixed-line broadband users.” Firstly, the overall exclusions of rural areas and the study’s focus on higher-tier packages weakens this general assertion. Lastly, though the Commission could not have anticipated the pandemic, the 2020 Report is now of limited utility in the context of the current pandemic, which has strained broadband networks and stretched the limits of consumers’ services. The need for faster and more reliable broadband is greater than ever, with more households working and schooling from home even two years into the pandemic, resulting in longer peak periods and heavier traffic, and more

⁹² *Supra* note 86.

use of video and audio streaming and communications tools like videoconferencing. Based on a StatsCan internet use survey conducted from November 2020 to March 2021, 75% of Canadians 15 years and older engaged in internet-related activities more often since the onset of the pandemic, 48% of Canadians streamed video content more often, 36% of Canadians used the internet more often to work from home.⁹³ A CIRA survey, conducted in March 2021, revealed that 55% of Canadians indicated that they spend five or more hours per day online, increasing from 44% in the previous year, with one in five Canadians reporting they have upgraded their internet plans since the onset of the pandemic.⁹⁴

PIAC acknowledges that these broad measurement studies can provide some information – they are some evidence that ISPs are provisioning the “to-the-door” speeds at or near to the levels they promise. Problems arise where regulators use the results of these measurement studies, with their limited scope, as support against further endeavors to hold the industry to a higher, real-world standard of performance or transparency, which would in turn support efficient development of networks. Future Commission studies on broadband speeds should adjust the methodological approach to make the next report more comprehensive and representative, followed with a tempered communications strategy that avoids overgeneralized conclusions which may mislead consumers about the more complicated reality of broadband service.

How should an ideal study be designed to be an effective policy tool? What caveats and limitations must be addressed?

Based on the breadth of research and evidence on speed testing, there may be no single, ideal, testing solution that alone captures the full, day-to-day connectivity of an internet service, reflecting both the achievable upper limits of any given plan and also the average user experience within the home. The true complexity of discerning appropriate speed methodologies however, clearly contrasts with the simplistic way internet speeds are advertised to consumers in Canada. Most internet service advertisements in Canada provide only maximum expected “up to” download and upload speeds, and provides no guarantees regarding the lower limits of a plan. The various regulatory bodies described in this report currently have no specific rules on broadband advertising to enforce. At best, the Competition Bureau could attempt to investigate the issue under laws regulating false and misleading advertisements, but it could be argued that “up to” ads are technically not misleading as they do not provide any service guarantees. To varying degrees of success, the CCTS can help customers resolve complaints about underperforming internet services, but not on the basis of any guarantees provided in advertisements.

Rajabiun and McKelvey, in a paper that addresses this very issue, further point out the information asymmetry between the consumer and provider has a negative impact on the investment in and evolution of networks, in that “[w]hen operators of higher quality sunrise platforms cannot credibly signal their superiority compared to lower quality suppliers ex post, this will have a negative impact on

⁹³ Statistics Canada, “Internet use and COVID-19: How the pandemic increased the amount of time Canadians spend online,” by Howard Bilodeau, Abby Kehler & Nicole Minnema (Ottawa: Statistics Canada, 24 June 2021), online: <https://www150.statcan.gc.ca/n1/en/pub/45-28-0001/2021001/article/00027-eng.pdf?st=eG8hu_IB>.

⁹⁴ CIRA, “Canada’s Internet Factbook 2021” (2021), online: <<https://www.cira.ca/resources/factbook/canadas-internet-factbook-2021>>.

their incentives to invest in new technologies and higher quality service.”⁹⁵ What they posit are two types of internet service providers: first, “sunset” providers who are offering speeds based on older (in their paper, copper-based ‘last mile’) technologies that they have little incentive to upgrade as their capital cost has long since been recouped – and thus all revenues from are largely pure profit; and second, “sunrise” providers who have upgraded technology to enable faster speeds (in their example, fibre-optic to the home) but whose revenue will in part be used to recoup these new capital costs (in other words, higher capital investment). The authors suggest that inaccurate or vague, surface level speed claims that are not verifiable or allow a wide range of throughput to satisfy performance claims effectively misleads consumers, who are then not able to signal to the ISP to make needed network investments to properly meet their demand. Since Canadian ISPs, especially larger ones, may be in the process of converting some or all of their legacy networks to fibre to the home (FTTH), it would be necessary to do an accounting of the progress of these investments, to map them and to compare them with the geographic overlay of broadband speed claims made in that area, whether to new or existing customers. This level of inquiry is beyond the scope of this paper but is a fruitful area of potential research to test the authors’ hypothesis.

What seems safe to assert based on our evidence about the present in-market speed representations, however, is that for all the claims that ISPs make about building innovative networks, without a systematic, verifiable framework to keep ads credible and transparent, the incentive to improve service offerings is not maximized. In addition, demand-side issues may arise and complicate this calculus and further occlude the situation where customers’ expectations and/or home set-ups are not effectively managed, subjecting ISPs to more complaints and customer service calls than is necessary. In other words, in the absence of accurate and informative advertising, everyone loses from a service standard point of view. Aligning ISPs’ financial incentives (whether by regulatory intervention or market reward) with a better consumer outcome therefore may allow them to do better.

5. Updates to broadband advertising rules and practices

None of the laws, codes, or studies described so far help to set any specific standards of testing or transparency by which retail broadband ads must adhere. There is no practical guidance on how and when advertised speeds are tested, nor any rules that require ISPs to uniformly provide consumers with consistent, prominent disclosures about performance caveats in the absence of any speed guarantees, which subsequently bars consumers from remedies when they don’t get those speeds. In this respect, the UK and Australia have both made significant progress in implementing clear and specific guidelines for advertising retail broadband services, accompanied by fair contractual remedies for customers whose services do not meet advertised claims.

PIAC’s review of the CRTC’s “Measuring Broadband Canada” report indicated a flawed and limited evaluation of the broadband speeds across Canada. We noted that the Commission’s report was a narrow

⁹⁵ Reza Rajabiun & Fenwick McKelvey, “Complementary realities: Public domain Internet measurements in the development of Canada’s universal access policies” (2017) 45 Research Conference on Communications, Information and Internet Policy, TPRC.

validation of the speeds available to the subset of consumers who enjoy mid- to high-tier plans within (sub)urban areas. PIAC's review raised questions about whether Canadians, especially rural and remote consumers, are actually getting the speeds they appear to have been promised in marketing.

Informative, accurate ads with clear explanations about the limitations of performance claims are especially important for existing and new customers in rural and remote areas who consistently have more connectivity issues than customers in urban areas. The government in recent times has announced various plans for bringing high-speed Internet to different underserved parts of Canada. For instance, in February 2022, ISED announced the government's plan to invest over \$929,000 to bring high-speed Internet to more than 500 households in Newfoundland and Labrador.⁹⁶ This funding is to bring high-speed Internet to 528 households in North West River and the Sheshatshiu Innu First Nation in Newfoundland and Labrador.⁹⁷ ISED also announced \$555,777 in funding to bring high-speed Internet to 136 households in rural areas near North Bay, Ontario.⁹⁸ The cited examples are just some of the recent initiatives to increase connectivity in rural and remote regions.

The next section of this report examines how other jurisdictions, particularly the UK, Australia, and the US have completed or begun reforms improving how ISPs advertise and sell broadband services. A subsequent examination of Australian and UK ads will further illustrate the informational gap that Canadian consumers face when shopping for broadband services.

5.1 United Kingdom

In the UK, advertising is primarily regulated through a system of self-regulation, including rules that the advertising industry writes and must adhere to. Written by the self-regulatory Committee of Advertising Practice (CAP), one of these codes is called the CAP Code,⁹⁹ which regulates non-broadcast advertisements, sales promotion, and direct marketing communications.¹⁰⁰ The Committee itself is administered by the independent Advertising Standards Authority (ASA), which enforces the Advertising Codes written by committees like the CAP.¹⁰¹ This includes investigating complaints and ruling on whether

⁹⁶ Innovation, Science and Economic Development Canada, "Government of Canada invests over \$929,000 to bring high-speed Internet to more than 500 households in Newfoundland and Labrador," (3 February 2022), online: <<https://www.canada.ca/en/innovation-science-economic-development/news/2022/02/government-of-canada-investsover-929000to-bring-high-speed-internet-to-more-than-500households-innewfoundland-and-labrador.html>>.

⁹⁷ *Ibid.*

⁹⁸ Innovation, Science and Economic Development Canada, "Government of Canada invests \$555,777 to bring high-speed Internet to 136 households in rural Ontario," (8 February 2022), online: <<https://www.canada.ca/en/innovation-science-economic-development/news/2022/02/government-of-canada-invests-555777-to-bring-high-speed-internet-to-136-households-in-ruralontario.html>>.

⁹⁹ Non-broadcast Code, (UK Code of Non-broadcast Advertising and Direct & Promotional Marketing (CAP Code)), online: <<https://www.asa.org.uk/static/47eb51e7-028d-4509-ab3c0f4822c9a3c4/4869041b-06d3-4745-b209d2a5c37500b3/The-Cap-code.pdf>>.

¹⁰⁰ *Ibid.*

¹⁰¹ Advertising Standards Authority webpage, "About the ASA and CAP," online: <<https://www.asa.org.uk/about-asa-and-cap/about-regulation/about-the-asa-and-cap.html>>.

ads should be changed or withdrawn.¹⁰² The CAP Code requires that all non-broadcast marketing communications should be legal, decent, honest and truthful; should not cause serious or widespread offence; exploit a consumer's inexperience; mislead, cause fear or distress; or condone or encourage unsafe practices or violence.¹⁰³ According to the CAP Code, all claims must be substantiated before being published or aired, that is, marketers must have evidence to prove claims that consumers would view as objective.¹⁰⁴

Besides the self-regulatory code, advertising is also governed by the *Consumer Protection and Unfair Trading Regulations 2008*, which provides that advertisers cannot mislead or harass consumers by including false or deceptive messages, leaving out important information, or using aggressive sales techniques.¹⁰⁵

While these general rules apply to broadband advertising, the ASA saw fit to impose specific rules in 2018 about advertising residential broadband services.¹⁰⁶ The basis of these specific rules was that, according to the Committees of Advertising Practice, "speed claims should be based on the actual experience of users and therefore marketers should be able to demonstrate that the speeds in their advertising can be achieved by a reasonable proportion of the provider's customers."¹⁰⁷ Notably, Ofcom's (the UK's communications regulator) consultation in 2017 sought to strengthen the then-voluntary codes to improve speed estimates provided at the point of sale, after sale and in customer contracts, and to enhance customers' right to exit.¹⁰⁸ The previous codes of practice on broadband speeds already required signatories to provide customers with speed estimates they are likely to receive at the point of sale, and provide a right to exit a contract without penalty if the download speed falls below a minimum level.¹⁰⁹ Notably, under the previous codes, ISPs only had to provide a minimum guaranteed access line speed (MGALS) in after-sale information, but at the point of sale, ISPs only had to provide this figure if a customer requests it, or questions what happens if they get a lower speed than estimated.¹¹⁰

Ofcom's new voluntary code provided new safeguards with the main changes being as follows:¹¹¹

¹⁰² *Ibid.* Also see: Advertising Standards Authority webpage, "Self-regulation and co-regulation," online: <<https://www.asa.org.uk/about-asa-and-cap/about-regulation/self-regulation-and-co-regulation.html>>.

¹⁰³ *Supra* note 99.

¹⁰⁴ *Ibid* at 18.

¹⁰⁵ *Consumer Protection and Unfair Trading Regulations 2008*, see Part 2 Prohibitions.

¹⁰⁶ Committee of Advertising Practice (CAP), "Broadband speed claims, Advertising Guidance (non-broadcast and broadcast): applies from 23 May 2018" (2017), online: <<https://www.asa.org.uk/static/uploaded/dbf3043b-02b4-4134-9ba50f2ad0be4d06.pdf>>.

¹⁰⁷ *Ibid* at 4.

¹⁰⁸ Ofcom, "Broadband Speeds Codes of Practice: Proposals to revise the Residential and Business Voluntary Codes of Practice on Broadband Speeds" (6 October 2017), online:

<https://www.ofcom.org.uk/data/assets/pdf_file/0023/237434/bbscop-gc-alignment-consultation.pdf>.

¹⁰⁹ Ofcom, Statement, "Better Broadband Speeds Information: Voluntary Codes of Practice", (1 March 2018), online: <https://www.ofcom.org.uk/data/assets/pdf_file/0024/111696/statement-broadband-speeds.pdf>.

¹¹⁰ *Ibid* at 5.

¹¹¹ *Supra* note 109.

- More realistic speed estimates at the point of sale (speed estimates provided at point of sale should reflect the speeds likely to experience at peak times and while taking into account factors that could affect it, such as peak-time network congestion. Peak times will be measured as 8-10 pm for residential services and 12-2pm for business services);
- Always providing a minimum guaranteed speed and the right to exit connected to this speed at the point of sale (this is to ensure that customers are aware of their right to exit their contract if speeds fall below a minimum level);
Strengthening customer’s rights and extending the right to exit to bundled products; (this right will apply to bundled products, such as landline services on the same line, or pay-TV services purchased at the same time as the broadband service, with a new 30-calendar day limit to improve speeds before the right to exit is offered to customers);
- Ensuring all customers benefit from the codes, regardless of their broadband technology; (the existing codes only apply in full to broadband services provided over certain networks, such as copper and part-fibre, but under the new rules, cable and fibre to the premise (FTTP) providers will also be covered).¹¹²

Though this code is voluntary and complementary to the ASA advertising guidelines, several major broadband providers in the UK have agreed to support the changes (Virgin Media, Sky Broadband, TalkTalk, and others).¹¹³ Earlier, CAP announced that effective from May 23, 2018, numerical speed claims in broadband ads should be based on the average speed i.e. download speed available to at least 50% of customers at peak times (8-10 pm),¹¹⁴ which was an important change from the previous guidance that advertised speeds can be represented as “up to” a certain speed, measured over a 24-hour period and available to at least 10% of customers.¹¹⁵ This new guidance was welcomed by Ofcom.¹¹⁶

Further, the CAP’s 2018 guidelines also require that factors that may affect the consumer’s ability to achieve the advertised speed must also be communicated clearly and prominently in ads. Relevant factors include signal attenuation, congestion/contention, Traffic/network management practices, protocol overheads, users’ distance from the mobile mast, and environmental obstructions between the user and mobile mast (“clutter”).¹¹⁷ The CAP Code acknowledged that factors beyond an advertiser’s control, like the presence of a virus on the user’s device, would not ordinarily be taken into consideration within a testing regime.¹¹⁸ More specifically, in considering which factors to account for, advertisers must pay attention to how similar factors have different effects on different platforms – for example, on fixed line service, factors affecting a users’ hardware within their home would be likely considered beyond the advertiser’s control. Advertisers must also further qualify the service if a factor may cause a significant

¹¹² *Ibid.*

¹¹³ Ofcom, “Clear, honest information before you buy broadband,” (28 February 2019), online:

<<https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2019/clear-information-before-buy-broadband>>.

¹¹⁴ *Supra* note 106.

¹¹⁵ *Supra* note 109 at 7.

¹¹⁶ *Ibid.*

¹¹⁷ *Supra* note 106 at 9.

¹¹⁸ *Ibid.*

proportion of customers to receive a speed so much lower than advertised that it prevents types of online activity that customers might reasonably expect to undertake at the advertised speed.¹¹⁹

After these new rules were introduced, nearly every ISP in the UK reduced their advertised broadband speeds.¹²⁰ Across all packages up to 100 Mbps, advertised speeds from the 12 biggest providers in the UK dropped by an average of 15%, and advertised speeds of the cheapest deals dropped by up to 41%.¹²¹ One company, TalkTalk, completely eliminated speed claims from their advertising.¹²² Reflecting the shift to averaged speed claims, Sky Broadband changed their marketing for a service from “up to 17 Mbs” to an “average 10Mbs download speed,” BT Superfast Fibre Unlimited went from “up to 52Mb” to “average 50Mb download speed, and TalkTalk went from “up to 76Mb” to “average 63Mb download speed.”¹²³

In 2020, Virgin Media formally brought a challenge to the ASA against a BT Broadband ad for FTTP broadband service.¹²⁴ The ad in question claimed that BT’s FTTP product in Bristol would provide more reliable speeds than Virgin’s services in the same area. Virgin argued that BT’s claims were not representative of the target audience and area, pointing to the 2018 guidelines which state that campaigns targeting specific areas should use data from tests carried out in that area. The ASA agreed, finding that although recent Ofcom studies showed that nationally, BT’s fibre speeds were indeed more reliable than those of Virgin’s services at the time, the local ad was misleading because it did not qualify that the claim was based on national data. This ruling was a prime example of how specific rules on broadband advertising help ISPs keep each other accountable while competing for customers.

5.1.1 Analysis

The revised advertising rules and guides have evidently improved broadband advertising in the UK by setting fair and transparent standards that provide realistic broadband speed estimates to consumers. PIAC understands that even the UK rules could be further improved, but at least the current measures provide more transparency than would have been available otherwise. If Canadian broadband ads were to embody similar rules, including the average achievable speed standard, and eliminate the outdated “up to” standard, it could greatly enhance transparency for consumers. It would also increase accountability and prompt many ISPs to review and evaluate their practices to ensure that they are in compliance. Further, introducing these standards would also promote broadband innovation and competition, as ISPs

¹¹⁹ *Supra* note 106 at 7.

¹²⁰ S Dent, “New rules are killing deceptive broadband ads in the UK,” *Engadget* (8 August 2018), online: <<https://www.engadget.com/2018-08-08-uk-deceptive-broadband-ads-new-rules.html>>. Also see: Jon Brodtkin, “ISPs’ listed speeds drop up to 41% after UK requires accurate advertising,” *Ars Technica* (6 August 2018), online: <<https://arstechnica.com/tech-policy/2018/08/isps-listed-speeds-drop-up-to-41-after-uk-requires-accurate-advertising/>>.

¹²¹ *Ibid.*

¹²² *Ibid.*

¹²³ Kim Staples, “Broadband speed advertising is about to change – but how?” *broadbandchoices* (27 March 2018), online: <<https://www.broadbandchoices.co.uk/ask-our-expert/broadband-speed-advertising-is-changing-but-how>>.

¹²⁴ ASA, “ASA Ruling on British Telecommunications plc t/a BT,” (5 May 2021), online: <<https://www.asa.org.uk/rulings/british-telecommunications-plc-a20-1053191-british-telecommunications-plc.html>>.

can keep each other accountable when competing for subscribers, and when striving to retain their existing subscribers.

PIAC notes that the Codes in the UK are not binding on ISPs. Some reports suggest that not all providers in the UK have implemented the measures under these voluntary Codes.¹²⁵ Therefore, instead of relying on voluntary codes as in the UK, we strongly recommend that Canadian regulators implement mandatory, enforceable standards to ensure all ISPs and their customers can benefit from common standards and uniform protections.

Other important safeguards to consider under Ofcom's 2018 Code include communicating at point of sale the minimum guaranteed speed and the right to exit the contract penalty-free if the speed falls below a minimum level and cannot be improved within 30 calendar days. Exiting a contract is not an easy decision for Canadian consumers, who often feel intimidated by the thought of paying high early cancellation fees. The knowledge that customers have 30 days to determine whether their new service measures up to expectations would likely significantly allay fears involved with making the choice to exit an unsatisfactory service plan.

CAP's rules on listing specific factors affecting broadband speed represents an important aspect to understanding the overall implications on the broadband speeds received by customers. We encourage the Competition Bureau and other regulatory stakeholders to consider these specific factors in designing any methodology for setting broadband speed advertising standards. Advertisements should communicate the effect of these factors consistently and in plain language. Technical caveats should not be hidden in footnotes or obfuscated by technical jargon. These caveats, along with guarantees, should also be prominently communicated in the contract so that, if need be, consumers can later effectively enforce their rights.

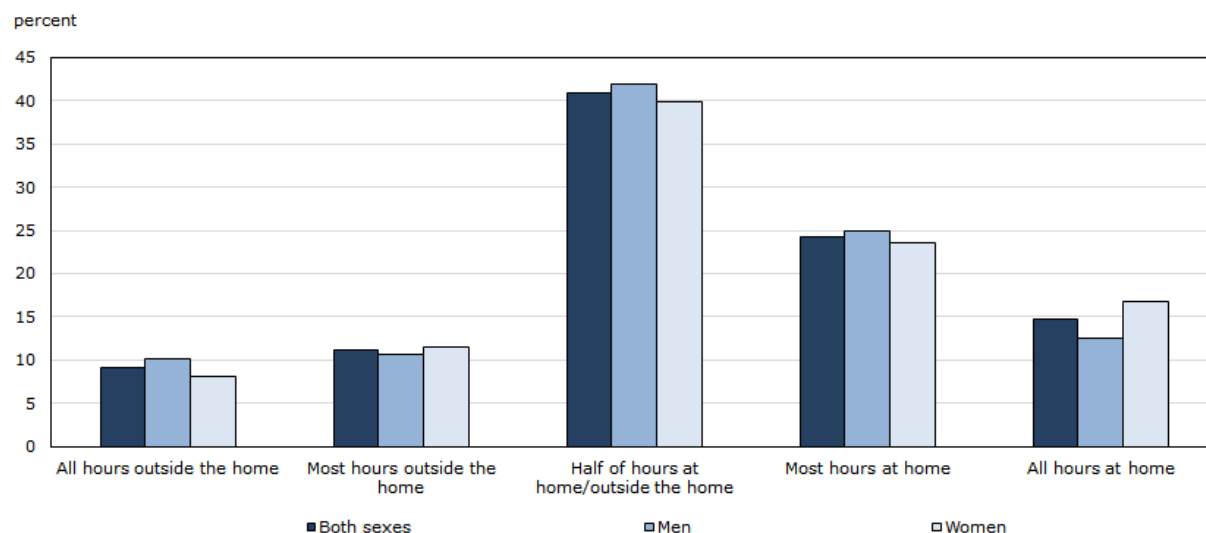
However, there are still missing components in the current UK framework that merit attention, such as realistic performance expectations and contractual safeguards applying to upload speeds. Provision of minimum upload speeds and a right to exit contracts penalty-free on that basis was indeed considered by Ofcom in the review process that culminated in the revised 2018 Code, but at that time Ofcom did not consider poor upload speeds to by themselves affect users' experiences to a degree that a general right to exit is warranted, but Ofcom did note that this will be reviewed in the future.¹²⁶ The 2020 Measuring Broadband Canada report defines upload speed as "[t]he measure of how fast data can be transmitted from the home to the internet," where "[h]igher speeds can allow for pictures, music, and documents to be uploaded and shared more quickly."¹²⁷ PIAC suggests that for some users, such as digital content creators who more often upload content, upload speed may be a significant factor in choosing a service plan. As ISPs increasingly offer higher speed services that promise symmetrical speeds, accurate representation of upload speeds may be just as important as accuracy of download speeds.

¹²⁵ Choose Ltd (Fair Price comparison), "Advertised broadband speeds: what do they mean?," online: <<https://www.choose.co.uk/guide/broadband-advertising-speeds-explanation.html>>.

¹²⁶ *Supra* note 109 at 21.

¹²⁷ *Supra* note 80 at 14.

Chart 2
Preferences of new teleworkers for telework once the COVID-19 pandemic is over



Sources: Statistics Canada, Labour Force Survey and Labour Force Survey supplement, February, 2021.

Source: Statistics Canada, “Working from home: Productivity and preferences,” (April 1, 2021)¹²⁸

5.2 Australia

In Australia, advertising practices are governed by the Australian Consumer Law (ACL), which is contained in Schedule 2 of the *Competition and Consumer Act 2010*. The ACL prohibits misleading or deceptive conduct, unconscionable conduct, unfair practices and other similar practices.¹²⁹ The Australian Competition and Consumer Commission (ACCC) and each state and territory’s consumer protection agency administers the ACL.¹³⁰ The ACL provides for guarantees that the provision of services will be with due care and skill, are fit for the purpose and are provided within a reasonable time.¹³¹

In 2017, the ACCC published its first guide for retail service providers on how to advertise speeds for broadband services.¹³² This guide was a response to concerns, complaints and dissatisfaction about perceived slow data speeds and to consumer desire for having easily comparable speed and performance information for consumers. The guide set out 6 key principles that apply to broadband speed and performance ads. Importantly, these principles provide that broadband consumers should have accurate

¹²⁸ *Ibid.*

¹²⁹ Australian Competition and Consumer Commission (ACCC), “Legislation,” online: <<https://www.accc.gov.au/about-us/australian-competition-consumer-commission/legislation>>.

¹³⁰ Australian Government, “Australian Consumer Law,” online: <<https://business.gov.au/products-and-services/fair-trading/australian-consumer-law>>.

¹³¹ Australian Competition and Consumer Commission (ACCC), “Consumers’ rights & obligations,” online: <<https://www.accc.gov.au/business/treating-customers-fairly/consumers-rights-obligations>>.

¹³² Australian Competition and Consumer Commission (ACCC), Broadband speed Claims, Industry Guidance (October 2020), online: <<https://www.accc.gov.au/publications/broadband-speed-claims-industry-guidance>> at 1.

information about the typical speeds that they can expect to receive during the busy period. The principles, reproduced below, require that wholesale network speeds or theoretical speeds should not be advertised without reference to typical busy period speeds; information about the performance of promoted applications should be accurate and sufficiently prominent; factors known to affect service performance should be disclosed; performance information should be presented in terms easily comparable by consumers; and RSPs should have systems in place to diagnose and resolve broadband speed issues.¹³³

- **Principle 1:** Consumers should be provided with accurate information about typical busy period speeds that the average consumer on a broadband plan can expect to receive.
- **Principle 2:** Wholesale network speeds or theoretical speeds taken from technical specifications should not be advertised without reference to typical busy period speeds.
- **Principle 3:** Information about the performance of promoted applications should be accurate and sufficiently prominent.
- **Principle 4:** Factors known to affect service performance should be disclosed to consumers.
- **Principle 5:** Performance information should be presented in a manner that is easily comparable by consumers, for example by adopting standard descriptive terms that can be readily understood and recognised.
- **Principle 6:** RSPs should have systems in place to diagnose and resolve broadband speed issues.

Source: Australian Competition and Consumer Commission (ACCC), Broadband speed Claims, Industry Guidance (October 2020)

Further Consultations and Improvements

The ACCC continues to review and improve its original guidance. In October 2020, the ACCC issued a revised guidance, which accounted for higher maximum speed plans, including products offering over 100 Mbps in download speed of the underlying wholesale access network service.¹³⁴ Amidst other details, the revised guide cautions advertisers against creating unrealistic expectations based on ads flaunting “burst speeds” that are available only for short periods of time,¹³⁵ and to clearly and prominently make disclosures in the marketing for plans offering more than 100 Mbps where the underlying wholesale access network does not support those speeds across the entirety of the access providers’ fixed line footprint.¹³⁶ Another addition to the guide was to limit providers to using the lowest end of speed ranges if providers rely on wholesale specifications for off-peak speed information.¹³⁷ The ACCC also added that service providers should not market services as suitable for online gaming where the plan speed limits and other performance attributes are unlikely to support a reasonable quality of experience during busy

¹³³ *Ibid.*

¹³⁴ *Ibid.*

¹³⁵ *Supra* note 132 at 8.

¹³⁶ *Supra* note 132 at 10.

¹³⁷ *Supra* note 132 at 7.

periods.¹³⁸ With respect to the presentation of performance information so that it can be easily comparable by consumers (principle 5), the ACCC's guide notes that the most beneficial and practicable method of providing this information is applying a text-based label as part of all residential plan descriptions and marketing materials.¹³⁹

The ACCC's proposed method uses standard labels to indicate the minimum speeds of different service tiers during the busy hours, with the specific labels being: Basic Evening Speed, Standard Evening Speed, Standard Plus Evening Speed and Premium Evening Speed, as shown below.¹⁴⁰ For providers that do not use these labels, consumers are advised to ask their service providers how services will operate during the busy period, and which plan best suits their needs.¹⁴¹



Source: Australian Competition and Consumer Commission (ACCC) webpage, [Broadband speeds](#)

Similarly to the UK, these new and updated guidances improved the state of broadband speed advertising in Australia. After the ACCC published the 2017 guide, eight ISPs in Australia came forward in late 2017 and early 2018 with court-enforceable undertakings admitting they likely misled consumers about broadband speeds, and offered to compensate customers.¹⁴² For example, Telstra offered to remedy 42 000 customers for promoting NBN plans with maximum speeds that were actually not achievable in real-world conditions.¹⁴³ Telstra admitted that it likely contravened the ACL by engaging in misleading/deceptive conduct and making false/misleading representations. In its undertaking to the ACCC, Telstra detailed options for affected customers: refunds, changing plans, or exiting the contract without penalties. The ACCC took two ISPs, Dodo and iPrimus, to court for making false claims about the speeds that customers could receive.¹⁴⁴ In 2021, the court ordered the two ISPs to pay a combined \$2.5

¹³⁸ *Supra* note 132 at 9.

¹³⁹ *Ibid.*

¹⁴⁰ ACCC, "Broadband speeds," online: <<https://www.accc.gov.au/consumers/internet-landline-services/broadband-speeds>>.

¹⁴¹ *Ibid.*

¹⁴² *Ibid.*

¹⁴³ ACCC, "Telstra offers to compensate 42,000 customers for slow NBN speeds," (8 November 2017) online: <<https://www.accc.gov.au/media-release/telstra-offers-to-compensate-42000-customers-for-slow-nbn-speeds>>.

¹⁴⁴ Leon Spencer (ARN), "Dodo and iPrimus fork out \$2.5M over misleading NBN speed claims," *ARN* (2 June 2021), online: <<https://www.arnnet.com.au/article/688814/dodo-iprimus-fork-2-5m-over-misleading-nbn-speed-claims/>>.

million penalty for making misleading claims based on flawed measurement methodology that used only the fastest observed speeds, ignoring the slower speeds that many customers experienced.¹⁴⁵

Australia's reformed rules continue to play an important role in holding ISPs responsible for misleading speed claims. In August 2021, the ACCC initiated court proceedings against Telstra, Optus, and TPG, alleging they misled hundreds of thousands of consumers over advertised NBN speeds.¹⁴⁶ Specifically, the ACCC stated the companies made false or misleading representations in their promotions for 50 Mbps and 100 Mbps NBN plans. The ACCC alleged that the three companies promised customers they would test line speeds and offer remedies if those tests fell short, but the companies failed to do so, and furthermore wrongly accepted payments from some customers even when the promised speeds were not delivered. Despite the ISPs being aware of the necessity to test speeds since 2017, the ACCC claims that these companies did not have adequate systems in place to perform the promised speed checks, and to issue notifications and remedies.¹⁴⁷

Recently, in January 2022, the ACCC issued a new consultation seeking views on how information is presented to consumers about upload speeds, and factors affecting speeds, received on alternative wireless access networks.¹⁴⁸ The ACCC's consultation paper noted that information about upload speeds has become less transparent since 2020, while at the same time such information has become more important for those who rely on upload speeds to undertake activities at home that were previously done in the workplace and place of education.¹⁴⁹

With respect to guidance updates, the most important change under consideration is "[t]o clearly state that RSPs should provide typical busy period upload speeds information in their broadband marketing for services provided over both fixed line and fixed wireless access networks."¹⁵⁰ Such information includes the busy period for upload speeds and the impact this period has on the upload speeds received by consumers. Available information suggests that the busy period for upload speeds aligns with the busy period for download speeds, but the ACCC is accepting input on whether the busy period for upload speeds may be outside the 7-11 pm busy hours due to certain types of activities like videoconferencing that more often occurs at other times of the day. At the time of this report's writing, stakeholder feedback and the results of the consultation have not yet been released.

Australia also has a Telecommunications Consumer Protections Code (TCP Code), which is an industry code of conduct enforced by the Australian Communications and Media Authority (ACMA), and which

¹⁴⁵ *Ibid.*

¹⁴⁶ Nassim Khadem, "ACCC accuses Telstra, Optus and TPG of misleading consumers over maximum NBN speeds," *ABC News* (9 August 2021), online: <<https://www.abc.net.au/news/2021-08-09/accc-telstra-optus-tpg-court-nbn-speeds-maximum-plans-misleading/100362298>>.

¹⁴⁷ *Ibid.*

¹⁴⁸ Australian Competition and Consumer Commission (ACCC), "Consultation on revising the Broadband Speeds Claims – Industry Guidance," (January 2022) Version 1, online: <<https://www.accc.gov.au/publications/consultation-on-revising-the-broadband-speeds-claims-%E2%80%93-industry-guidance>>.

¹⁴⁹ *Ibid* at 2.

¹⁵⁰ *Supra* note 148 at 5.

aims to ensure good service and fair outcomes for telecommunications product users in Australia.¹⁵¹ One of TCP Code's key commitments is for consumers receive clear, accurate and relevant information on products and services from their supplier, before, during and, where appropriate, after the point of sale.¹⁵² Section 4.1 of the Code specifically deals with content advertising and includes details on prohibited practices. For example, the section prohibits telecommunications service providers are from using headline representations about a price or service plan where the overall impression is qualified by fine print that declares it unlikely or impossible for the consumer to reasonably achieve the benefits offered in the headline.¹⁵³ Providers are also prohibited from making unsubstantiated claims in advertising relating to speeds, network coverage, and other performance characteristics.¹⁵⁴ The TCP Code also instructs service providers to also have regard to the ACL, and the ACCC's guidance on speed claims when advertising broadband speeds or data transfer rates.¹⁵⁵

The TCP Code also requires that service providers provide customers with a Critical Information Summary containing the contractual terms and conditions, and other service information relevant to the customer, to allow customers to compare providers' service plans according to the customer's needs.¹⁵⁶ In the customer contract, the TCP Code requires that the service provider specify what types of equipment would be compatible with the service plan.¹⁵⁷

ACMA investigates and issues warnings or takes action when service providers break rules under the TCP Code, then publishes quarterly summaries of the actions taken, and of enforceable undertakings accepted under the Code.¹⁵⁸ Most recently, in early 2022, ACMA issued a remedial direction to Optus Internet to undertake an independent audit of how Optus notifies customers about maximum internet speeds. Optus then self-reported that it failed to suitably notify more than 34 000 customers that they were not receiving the level of service they purchased.¹⁵⁹ Through a court-enforceable undertaking to conduct a similar audit, TPG also reported that it failed to properly notify more than 4400 customers about service speed shortcomings.¹⁶⁰ Both Optus and TPG committed to refunding the affected customers.

¹⁵¹ Australian Communications and Media Authority, "Telecommunications Consumer Protections Code," online: <<https://www.acma.gov.au/telecommunications-consumer-protections-code>>.

¹⁵² Communications Alliance Ltd, C628:2019 Telecommunications Consumer Protections Code (TCP), online: <https://www.commsalliance.com.au/_data/assets/pdf_file/0011/64784/TCP-C628_2019-incorporating-variation-no.1-2022.pdf>.

¹⁵³ TCP, Section 4.1.2(a).

¹⁵⁴ TCP, Section 4.1.2(n).

¹⁵⁵ TCP, at 24.

¹⁵⁶ TCP, Section 4.2.

¹⁵⁷ TCP Code, Section 4.6.1(b).

¹⁵⁸ ACMA, "Investigations into telco providers," online: <<https://www.acma.gov.au/investigation-telco-providers>>.

¹⁵⁹ ACMA, "Action on telco consumer protections: January to March 2022," online: <<https://www.acma.gov.au/publications/2022-04/report/action-telco-consumer-protections-january-march-2022>>.

¹⁶⁰ *Ibid.*

5.2.1 Analysis

The ACCC's key principles, together with the corresponding guidance, present a robust example for improving broadband speed advertising practices in Canada. Though recent developments in Australia were limited in the form of new guidances that are not strictly enforceable, we note that Australian authorities have been able to use the new guidance to pursue enforcement actions as necessary against service providers coming under its radar for misleading speed claims.¹⁶¹ The new broadband speed Guidance became an additional tool with which the ACCC enforces the ACL. Accordingly, the October 2020 Guidance states that “[w]hile the ACL applies to RSPs irrespective of compliance with this Guidance, one of the factors the ACCC may consider in assessing future enforcement matters in this area is the extent to which an RSP has taken steps to apply the measures in this Guidance.”¹⁶² In Canada, specific guidance on substantiated, accurate broadband speed advertising, combined with existing laws of general application under the *Competition Act*, and the regulatory will to enforce them, together would form a strong foundation for proactive enforcement and consistent compliance.

During the writing of this report, the most recent consultation focusing on upload speeds was still in progress in Australia, but the review offers important considerations for establishing Canada's own advertising standards for upload speeds. It is safe to assume that the importance of upload speeds has significantly increased and more transparency regarding upload speed claims is not only justified but critical for consumers in deciding which broadband service to purchase. Upload speeds are no longer inconsequential, and deserve recognition as an important aspect of internet service that supports a wider range of activities today:

Upload speed determines how fast you can send, or upload, data from your computer or device to the internet. This includes uploading files, such as pictures and videos to social media or homework assignments, but upload speeds are also essential to video conferencing, VOIP calling and online gaming.

Similar to how download speeds affect picture and sound quality when streaming a show on your TV, your upload speeds affect how others see and hear you on the other end of your video conference or online game. Slow or unstable upload speeds are often the cause of awkward frozen screens and broken audio when using apps like Skype or Zoom.¹⁶³

The continuous cycle of monitoring compliance and updating rules as needed in Australia also provides an example of a regulatory approach that is agile enough to adapt to evolutions of consumer needs and the broadband industry.

¹⁶¹ ACCC, “Dodo and iPrimus in court for alleged misleading broadband speed claims,” (23 June 2020), online: <<https://www.accc.gov.au/media-release/dodo-and-iprimus-in-court-for-alleged-misleading-broadband-speed-claims>>. Also see: Stamped ACCC v Dodo and iPrimus Concise Statement (22 June 2020), online: <https://www.accc.gov.au/system/files/Stamped%20ACCC%20v%20Dodo%20and%20iPrimus%20%20Concise%20Statement%20dated%2022%20June%202020_1.pdf>.

¹⁶² *Supra* note 132 at 2.

¹⁶³ David Anders, “Why upload speeds matter and how to improve them,” *CNET* (15 December 2021), online: <<https://www.cnet.com/home/internet/upload-speeds-explained/>>.

5.3 The United States

The Federal Communications Commission (FCC) has proposed new rules, which if implemented would require broadband providers to present easy-to-understand labels enabling consumers to compare different broadband services.¹⁶⁴ The proposed labels, formatted in a manner reminiscent of nutrition labels for food products, are to be presented at point of sale, and would include details such as prices, introductory rates, as well as speeds, data allowances, network management practices, and other critical broadband service information. These labels aim to provide consumers with accurate and simple-to-understand information about internet access services to allow them to make well-informed decisions.

In July 2021, the US President published an executive order titled “Promoting Competition in the American Economy,” which included an order for the Chair of the FCC to consider “initiating a rulemaking that requires broadband service providers to display a broadband consumer label, such as that as described in the Public Notice of the Commission issued on April 4, 2016 (DA 16-357), so as to give consumers clear, concise, and accurate information regarding provider prices and fees, performance, and network practices.”¹⁶⁵ Then, in November 2021, the US President signed into law the *Infrastructure Investment and Jobs Act*, which directs the FCC to “to promulgate regulations to require the display of broadband consumer labels, as described in the Public Notice of the Commission issued on April 4, 2016 (DA 16–357), to disclose to consumers information regarding broadband Internet access service plans.”¹⁶⁶ Accordingly, the FCC proposes to amend Part 8 of Title 47 of the Code of Federal Regulations, with the section 8.1(a) disclosure obligation to be amended as follows:¹⁶⁷

[S]uch disclosure shall be made via a broadband consumer label that is ~~publicly available, easily accessible website or through transmittal to the Commission.~~ **prominently displayed, publicly available, and easily accessible at the point of sale in the format prescribed by the Commission:**

- (1) For fixed broadband, as described in “Fixed Broadband Consumer Disclosure Label”;**
- (2) For mobile broadband, as described in “Mobile Broadband Consumer Disclosure Label.”**

The specific issues raised in the consultation notice relate to how broadband offerings have changed since 2016, what changes if any are needed to the content and/or format of these labels, and where these labels should be displayed to best inform consumers.¹⁶⁸ The FCC also sought comments on how consumers evaluate broadband service plans and whether the 2016 labels will assist consumers with the purchase process. The FCC also asked how ISPs currently disclose information about their broadband services. The labels included in the FCC’s notice are provided as Appendix B and C for fixed broadband service and for mobile broadband service respectively. These appendices include specific information on performance indicators like download and upload speed, latency, and packet loss, alongside various other factors.

¹⁶⁴ Federal Communications Commission (FCC), “Broadband Consumer Labels,” online: <<https://www.fcc.gov/broadbandlabels>>.

¹⁶⁵ *Executive Order 14036 of July 9, 2021: Promoting Competition in the American Economy*, 86 Fed Reg 36987 (2021) at § 5(I)(v), online: <<https://www.govinfo.gov/content/pkg/FR-2021-07-14/pdf/2021-15069.pdf>>.

¹⁶⁶ Federal Communications Commission (FCC), Notice of Proposed Rulemaking, FCC 22-7, CG Docket No 22-2, (27 January 2022), online: <<https://docs.fcc.gov/public/attachments/FCC-22-7A1.pdf>>.

¹⁶⁷ *Ibid* at Appendix A.

¹⁶⁸ *Supra* note 166 at 2.

Reproduced in the figures below are excerpts of each of these labels; the complete labels can be found in the FCC's notice document.

[See next page]

APPENDIX B

Fixed Broadband Consumer Disclosure Label From the 2016 Public Notice

Broadband Facts	
Fixed broadband consumer disclosure	
Choose Your Service Data Plan for [provide name of speed tier offered]	
Monthly charge for month-to-month plan <i>[provide non-promotional price of stand-alone broadband service on a month-to-month basis]</i>	\$[]
Monthly charge for [] contract plan <i>[identify length of available long-term contracts – provide one row for each available option; provide price of stand-alone broadband service available under each long-term contract option]</i>	\$[]
Click here for other pricing options including promotions and options bundled with other services, like cable television and wireless services.	
Other Charges and Terms	
Data included with monthly charge <i>[if applicable, identify the monthly data allowance associated with this plan]</i>	[]GB
Charges for additional data usage – <i>[provide increment of additional data, e.g., “each additional 50GB”; if applicable, identify additional charges if the monthly data allowance is exceeded]</i>	\$[]
Optional modem or gateway lease – Customers may use their own modem or gateway; click here for our policy <i>[at underlined language provide a link to the company’s policy with respect to customers using their own equipment; provide the monthly rental fee for any equipment available for rent]</i>	\$[]/ month
Other monthly fees <i>[identify any monthly fees that the company chooses to impose in connection with the purchase of broadband service, e.g., regulatory recovery fees]</i>	
One-time fees <i>[identify any one-time fees that the company chooses to impose in connection with the purchase of broadband service, e.g., installation fees and activation fees. if applicable, identify any fees that will be imposed if the customer cancels broadband service before the end of a long-term contract and provide a link to a full explanation of when such fees would be triggered; if applicable, include a statement that a deposit may be required based on credit history or other factors]</i>	
<i>[provide name of and amount of each one-time fee on a row]</i>	\$[]

Source: Federal Communications Commission (FCC), Notice of Proposed Rulemaking, FCC 22-7, (27 January 2022) Appendix B [continued].

Government Taxes and Other Government-Related Fees May Apply: Varies by location

[provide this disclaimer using this language to notify consumers that additional taxes and fees mandated by, or attributable to, government programs will be imposed – specific taxes and fees need not be identified]

Other services on network

[if applicable, in this section provide a brief description of any non-BIAS services offered by the company that might cause the customer to experience reduced performance of their broadband service; at underlined language provide a link to a full explanation of when such a situation would occur and details regarding the anticipated effect on broadband performance]

Performance - Individual experience may vary

[at underlined language provide a link to a full discussion of network performance metrics]

Typical speed downstream [] **Mbps**

[identify typical peak usage period download speeds for this tier of service, consistent with the Open Internet Orders and FCC guidance]

Typical speed upstream [] **Mbps**

[identify typical peak usage period upload speeds for this tier of service, consistent with the Open Internet Orders and FCC guidance]

Typical latency [] **milliseconds**

[identify typical peak usage period latency for this tier of service, consistent with the Open Internet Orders and FCC guidance]

Typical packet loss []%

[identify typical peak usage period packet loss for this tier of service, consistent with the Open Internet Orders and FCC guidance]

Network Management

Application-specific network management practices? **Yes/ No**

[answer yes or no; if yes, provide a brief description and a link to a full discussion that identifies application-specific network management practices, when such practices are triggered, and the effect such practices could have on performance]

Subscriber-triggered network management practices? **Yes/ No**

[answer yes or no; if yes, provide a brief description and a link to a full discussion that identifies subscriber-triggered network management practices, when such practices are triggered, and the effect such practices could have on performance]

More details on network management.

[at underlined language provide a link to the company's full disclosure of network management practices]

Privacy

[provide a link to the company's privacy policy for broadband services]

See our [privacy policy](#)

Complaints or Inquiries

[at underlined language provide a link to the primary

To contact us: [online/\(123\)456-7890](#);

Source: Federal Communications Commission (FCC), Notice of Proposed Rulemaking, FCC 22-7, (27 January 2022) Appendix B [...].

APPENDIX C

Mobile Broadband Consumer Disclosure Label From the 2016 Public Notice

Broadband Facts

Mobile broadband consumer disclosure

Device Compatibility

If you want to use your existing device, learn more about compatibility.

[at underlined language provide a link regarding compatibility of devices if the customer brings their own device.]

If you want to obtain a device, learn more about prices and other options.

[at underlined language provide a link to prices and other options for customers who wish to obtain a device from the provider]

Choose Your Data Plan - These prices do not include costs for obtaining a device from us.

	High Speed Data allowance per month		
	[]GB <i>[identify the monthly high speed data allowance associated with one of your most popular plans]</i>	[]GB <i>[identify the monthly high speed data allowance associated with one of your most popular plans]</i>	[]GB <i>[identify the monthly high speed data allowance associated with one of your most popular plans]</i>
Monthly charge	\$[] <i>[provide non-promotional price of the plan with this data allowance on a month-to-month basis]</i>	\$[] <i>[provide non-promotional price of the plan with this data allowance on a month-to-month basis]</i>	\$[] <i>[provide non-promotional price of the plan with this data allowance on a month-to-month basis]</i>
When you exceed the data allowance	[] <i>[if applicable, identify additional charges or other outcomes if the monthly data allowance for this plan is exceeded]</i>	[] <i>[if applicable, identify additional charges or other outcomes if the monthly data allowance for this plan is exceeded]</i>	[] <i>[if applicable, identify additional charges or other outcomes if the monthly data allowance for this plan is exceeded]</i>

Learn more about other included services/features.

[if applicable, at underlined language provide a link to description of other included services and features such as voice and text or tethering and hot spots.]

Additional pricing options, plans and promotions can be found here.

[at underlined language provide a link to additional mobile broadband offerings, including promotional offers and plans that bundle broadband with other services]

Source: Federal Communications Commission (FCC), Notice of Proposed Rulemaking, FCC 22-7, (27 January 2022) Appendix C [continued].

Coverage Map

[at underlined language provide a link to coverage map]

Charges and Terms Common to All Plans

Monthly fees

[identify any monthly fees that the company chooses to impose in connection with the customer's plan (e.g., a regulatory recovery fee or administrative fee) and for which all customers are charged the same fixed amount.]

[provide name of and amount of each monthly fee on a row] \$[]

One-time fees

[identify any one-time fees that the company chooses to impose in connection with the purchase of broadband service, e.g., activation fees; if applicable, identify any fees that will be imposed if the customer cancels broadband service before the end of a long-term contract and provide a link to a full explanation of when such fees would be triggered]

[provide name of and amount of each one-time fee on a row] \$[]

Government Taxes and Fees, and Other Carrier Surcharges May Also Apply: Varies by location

Performance - Individual experience may vary

[at underlined language provide a link to a full discussion of network performance metrics]

<i>[]G</i> <i>[identify the primary network technology for the plan (e.g., 4G, 3G)]</i>	<i>[]G</i> <i>[identify other network technologies for the plan (e.g., 4G, 3G)]</i>
Typical speed <i>[] Mbps downstream / [] Mbps upstream</i> <i>[identify typical peak usage period download and upload speeds for this network technology, consistent with the Open Internet Orders and FCC guidance]</i>	Typical Speed <i>[] Mbps downstream / [] Mbps upstream</i> <i>[identify typical peak usage period download and upload speeds for this network technology, consistent with the Open Internet Orders and FCC guidance]</i>
Typical latency <i>Less than [] milliseconds</i> <i>[identify typical peak usage period latency for this network technology, consistent with the Open Internet Orders and FCC guidance]</i>	Typical latency <i>Less than [] milliseconds</i> <i>[identify typical peak usage period latency for this network technology, consistent with the Open Internet Orders and FCC guidance]</i>
Typical Packet Loss <i>[] %</i> <i>[identify typical peak usage period packet loss for this network technology consistent with the Open Internet Orders and FCC guidance]</i>	Typical Packet Loss <i>[] %</i> <i>[identify typical peak usage period packet loss for this network technology consistent with the Open Internet Orders and FCC guidance]</i>

Source: Federal Communications Commission (FCC), Notice of Proposed Rulemaking, FCC 22-7, (27 January 2022) Appendix C [...].

The proposed labels were designed by the CAC after consultation with representatives from the Consumer Financial Protection Bureau (CFPB) with expertise in consumer disclosures with respect to financial products.¹⁶⁹ The FCC noted that s.60504 of the *Infrastructure Act* gives the Commission authority to mandate not only the content of these labels but also the specific format.¹⁷⁰ The FCC proposed to adopt the “nutrition label” format for broadband labels based on the considerable work done earlier in 2016 by the CAC with input from the CFPB and the FDA. Enforcement of the proposed broadband labels and evaluating and enforcing the accuracy of the content presented in these labels was another important consideration raised in the consultation notice.¹⁷¹

5.3.1 Analysis

As of March 2022, the design and application of broadband labels is still under consideration in the US, so it is unknown at time of writing what form these broadband labels will eventually take, and how they will be enforced. However, the FCC’s recent notice is indicative of a regulatory approach that actively interrogates the state of advertising for broadband services, including how speed and performance metrics are validated and presented. It is far overdue for Canadian regulators to follow in the FCC’s footsteps, to consult experts, consumers, and stakeholders on how broadband services should be advertised, then to impose specific, enforceable standards on the broadband industry in Canada. A productive consultation would consider the level of detail, visibility, and format of the performance information necessary to adequately assist consumers in comparing competing broadband services, thus in making informed choices.

6. Updated Online Advertisements and Technical Information

The informational gap is wide between Canadian ads and those of jurisdictions with more developed rules on broadband advertising. This gap is best illustrated by comparing the advertisements of Canada’s national ISPs (Bell, Rogers, and TELUS) with those of prominent ISPs in the UK (BT and Sky Broadband) and Australia (Tangerine and Telstra). The ads from the latter two jurisdictions, as seen below, also demonstrate how ISPs have closely followed their respective regulatory authorities’ new broadband advertising rules.

¹⁶⁹ *Supra* note 166 at 7.

¹⁷⁰ *Ibid.*

¹⁷¹ *Supra* note 166 at 9.

6.1 UK Advertisements

In the UK, both BT and Sky Broadband provide a guaranteed minimum average speed and range of estimated download speeds based on peak-time measurements, as required by Ofcom's Voluntary Codes of Practice on Broadband Speeds (See Figures 1 - 4). In addition, both UK providers guarantee that a customer can sever their contract penalty-free if the customer's speed falls below the minimum guaranteed speed and cannot be resolved within 30 days. All of this information is visible either on the face of the advertisement, or within a pop-up window that appears when a customer clicks on a link within the ad.

Plan	Download speed range	Estimated Stay Fast Guarantee	Upload speed range	Price (24 month contract)	Upfront P&P
Fibre Essential	35Mb - 36Mb	32Mb	8Mb - 9Mb	£28.99 ^Δ	£19.99
Fibre 1	49Mb - 50Mb	46Mb	8Mb - 9Mb	£29.99 ^Δ	£9.99
Fibre 2 (Full Fibre promise)	57Mb - 73Mb	51Mb	17Mb - 18Mb	£33.99 ^Δ	£9.99

Your speed estimates

These include your download speed range, your Stay Fast Guarantee and your upload speed range.

These speed ranges are estimates. Your actual speed depends on your location, line, home wiring, wi-fi connection and time of day.

How the Stay Fast Guarantee works

The Stay Fast speed shown is an estimate based on your postcode. We'll provide your personal Stay Fast Guarantee once we've checked your line. You'll be able to see your Stay Fast speed before you complete your order.

Once you've joined us, we'll constantly check and optimise your speeds. You can also test the download speed to your hub in My BT. If it's slower than it should be, we'll run checks to fix the problem and send out an engineer if needed.

If we can't get your Stay Fast speed back to where it should be within 30 days of a problem being reported, you can claim £20.

At that point you can also leave your contract without penalty. This is because we've signed up to the [Ofcom Voluntary Codes of Practice on Broadband Speeds](#).

Figure 1. The UK provider, BT, advertises their plans based on a guaranteed minimum speed and a range of typical download and upload speeds. Clicking on “What do these speed estimates mean?” opens a window that details BT’s minimum speed policy, the “Stay Fast Guarantee”. Though BT does not describe their broadband speed measurement methodology, they have indicated their commitment to checking and providing guaranteed peak time speeds (and a right to exit contracts penalty-free within 30 days if slow speeds cannot be remedied), by reference to their signing onto Ofcom’s Voluntary Codes of Practice on Broadband Speeds.

Superfast 35	Superfast
£28 a month for 18 months	£27.50 a month for 18 months
<ul style="list-style-type: none">✓ Includes our Speed Guarantee✓ Super for streaming and gaming✓ Unlimited fibre broadband✓ 60 - 74 Mb/s estimated download✓ 18 - 19 Mb/s estimated upload✓ 55 Mb/s minimum guaranteed download ⓘ	
Select	
Terms and conditions	
18 months contract, then £33 a month thereafter. £19.95 one-off cost. Prices may change during this period.	

Figure 2. For the popular “Superfast” plan offered by UK’s Sky Broadband, the ad guarantees a minimum download speed, and describes a range of estimated download and upload speeds.

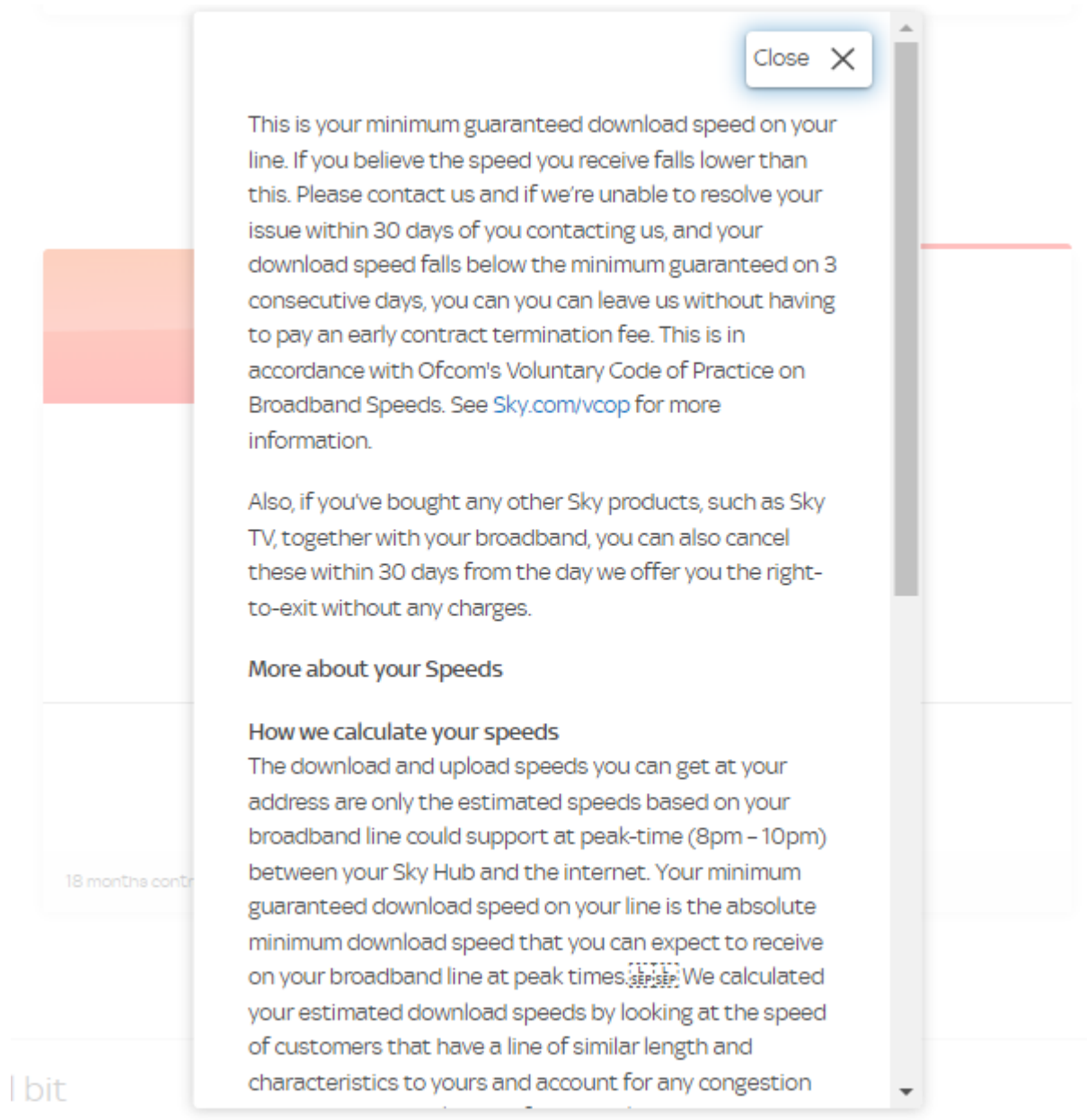


Figure 3. Clicking on the information icon beside “minimum guaranteed download” on BT’s ad (as seen in Figure 2) provides more information about the minimum speed policy, including eligibility for contract termination if speed issues are not resolved within 30 days. The info box also details how Sky Broadband calculates the advertised download and upload speeds.

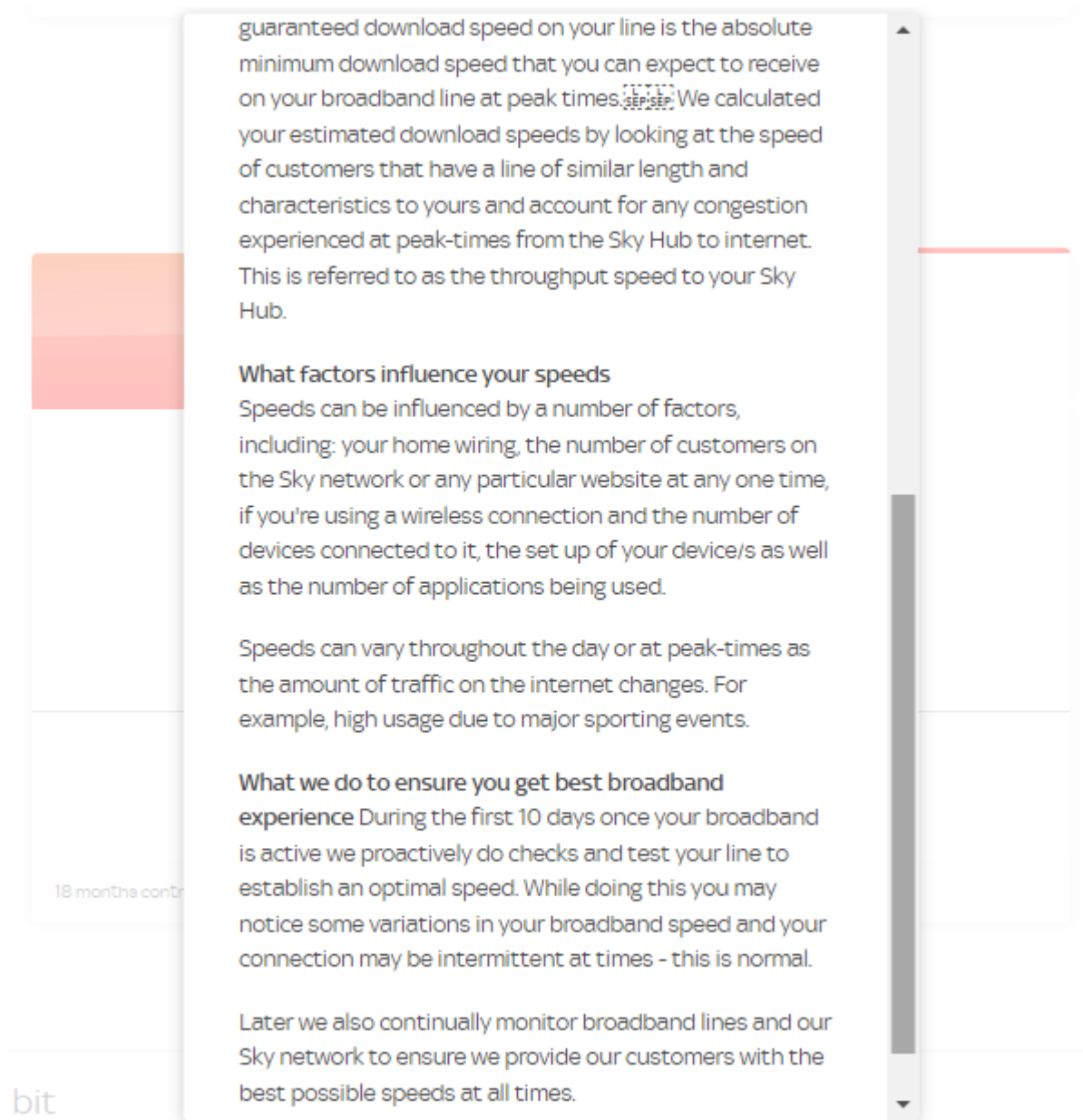


Figure 4. The information box shown in Figure 3 also further details the factors that potentially influence the customer's speeds, and how Sky Broadband initially tests and then continues to monitor broadband speeds.

6.2 Australian Advertisements

In Australia, even more information is provided to the consumer within the ad itself and in detailed fact sheets linked in the ad. The top broadband providers in Australia advertise their plans in terms of typical busy period speeds, and repeatedly indicate that these speeds may vary based on various factors. This information is ubiquitous and prominent on the websites, easily accessible for any customer well before the point of sale (See Figures 5 – 12 below). For any diligent customer viewing the available service plans, this information is very hard to miss.

The image displays four broadband service plans offered by Tangerine Telecom in Australia. Each plan is presented in a card format with a 'Choose Plan' button and a link to a 'Critical Information Summary' and 'NBN Key Fact Sheet'.

- STANDARD SPEED:** 25Mbps Typical Evening Speed. Price: \$44.90/MTH (\$44.90 for 6 months, then \$59.90 ongoing).
- XL SPEED BOOST:** 50Mbps Typical Evening Speed. Price: \$54.90/MTH (\$54.90 for 6 months, then \$69.90 ongoing).
- XXL SPEED BOOST:** 92Mbps Typical Evening Speed. Price: \$94.90/MTH (\$94.90 for 6 months, then \$109.90 ongoing). A mouse-over tooltip provides additional details: 'Maximum download/upload speeds of 100/20Mbps. Typical evening speed provides a measured expected download speed between 7pm and 11pm on fixed NBN services. This speed may differ based on various factors including your equipment, capacity of our systems and our suppliers, the number of users using your service, the applications running and the websites you are accessing. Speeds may be slower on NBN Fixed Wireless. Due to this we are unable to guarantee the typical evening speeds.'
- XXXL SPEED BOOST:** 205Mbps Typical Evening Speed. Price: \$94.90/MTH (\$94.90 for 6 months, then \$109.90 ongoing).

Each plan includes the following features:

- UNLIMITED DATA
- 14 DAY NBN TRIAL
- NO CONTRACT
- \$0 SETUP FEE
- SPECIAL PROMO PRICE

Figure 5. The advertised National Broadband Network plans offered by Tangerine Telecom in Australia describe the “Typical Evening Speed” expected between 7pm and 11pm. The mouse-over text also indicates the maximum download and upload speeds, though this information does not appear as the main identifier of the selected plan. The additional text also lists factors that may affect this speed. Customers can access further details by clicking on the “Critical Information Summary” and “NBN Key Fact Sheet” links, described in Figures 6 and 7 below.

KEY DETAILS

The NBN broadband plan that you have ordered is on our XXL SPEED BOOST. This is provided on the nbn 100/20 speed tier.

*Interface speeds refer to the speed to the technology installed at your premises. They are not necessarily equivalent to the download/upload speeds you will achieve in practice. Actual download and upload speeds will be affected by many external factors which include the number of end-users using the service at the same time, the hardware, the software and software configuration, the connection method within the premises and the type/source of content being downloaded.

All Tangerine Telecom plans are subject to the Tangerine Telecom Fair Use Policy, which can be seen on our [website](#)

Broadband Speed:

Actual speeds you will receive will vary due to a number of factors such the number of end-users using the service at the same time, the hardware, the software and software configuration, the connection method within the premises and the type/source of content being downloaded.

NBN services provided using Fixed Wireless/FTTB/FTTC or FTTN technology may not be capable of supporting the highest available speed tiers. It is not possible for us to determine precisely the maximum speed that you will be able to achieve until your service is connected. If after connecting to a higher speed tier, you cannot achieve the typical speeds shown for your plan we will inform you and offer to move you to a lower speed tier and refund any money that you have paid for the higher speed tier.

Please contact us as soon as possible if you are not achieving satisfactory speeds and we will provide some troubleshooting tips that may improve things.

Figure 6. The “Critical Information Summary” provides extensive details about each plan, including additional account fees, late payment and cancellation policies, and a disclaimer that the advertised speed refers to the speed to the installed technology at the customer’s premises, not necessarily the download/upload speeds achieved in practice, which depends on numerous external factors. As seen above (in sections taken from the summary sheet), the Summary describes factors that may limit the customer’s received speeds. Tangerine also explicitly provides that if a customer cannot achieve the typical speeds for their plan, Tangerine will move them to a lower tier and refund any money paid for the higher tier plan.

KEY FACT SHEET:

NBN Services

Information on speed tiers

NBN is available in a range of speed tiers. A speed tier is a theoretical maximum speed that is available during off-peak periods. The actual speed that you experience may be less, especially during busy periods. The nbn250 speed tier and above is only available to properties with FTTP and some HFC connection types. Please use our website to check your address and establish if these speeds are available to you. Details of the typical speeds you can expect and a recommendation of suitable plan for your usage can be found in the table below:

	nbn25 Speed Tier	nbn50 Speed Tier	nbn100 Speed Tier	nbn250 Speed Tier
Plan Name	Speed Boost	XL Speed Boost	XXL Speed Boost	XXXL Speed Boost
Typical Peak Time Speed (7pm – 11pm)	25Mbps	50Mbps	92Mbps	205Mbps
Typical Off-Peak Speed (11pm – 7pm)	25Mbps	50Mbps	92Mbps	205Mbps
Suitable for:	3+ users streaming music, video and web browsing. Streaming multiple HD services at the same time may not work well on this plan.	5+ users streaming music, HD video and web browsing at the same time.	Larger households, gamers and heavy internet users.	Those who want the fastest possible internet connection. Note that this is only available to FTTP and selected HFC services addresses.

Figure 7. The “NBN Key Fact Sheet” compares speed and suitable uses between the service tiers offered by Tangerine. The Fact Sheet clearly highlights that higher speed services of “nbn250” and above are only available to properties with FTTP and some HFC connection types, thus warning customers to check the availability of these higher speeds at their address before subscribing to these plans.

Information on FTTB/FTTC/FTTN speeds

NBN services provided using FTTB/FTTC or FTTN technology may not be capable of supporting the highest available speed tiers. It is not possible for us to determine precisely the maximum speed that you will be able to achieve until your service is connected. If after connecting to a higher speed tier, you cannot achieve the maximum typical speeds applicable to shown for your plan we will inform you and offer to move you to a lower speed tier and refund any money that you have paid for the higher speed tier. You will also have the right to cancel your plan without cost.

Other factors that can affect speed

Several factors at your premises that may affect your internet speed. This includes your modem/router configuration, internal cabling and sockets, the number of users using the internet and the software and hardware connected to your NBN. Wi-Fi performance is often affected by the position of your Wi-Fi device, thickness of walls and other electronic devices that may interfere with your Wi-Fi signal. See our article: [Why is my NBN running slow?](#) for more information and tips on things you can do to reduce the impact of these factors.

Technical limitations during power outage

Tangerine Telecom does not provide a battery backup in case of a power outage at your property. This means in the event of a power outage you will not be able to use the NBN service or make/receive phone calls (including emergency phone calls) using a telephone service that runs over the NBN. Any back to base alarm or medical alarm connected to the NBN will also cease to work. We recommend ensuring that a mobile phone is always charged and within coverage in case you need to make emergency calls.

Requirements of medical and security alarms

It is important to determine whether any medical or security alarms are compatible on the NBN before ordering an NBN service with Tangerine Telecom. If your alarm service is not compatible with NBN you should consult with your alarm provider for an alternative way for your alarm to operate over the NBN.

Figure 8. Tangerine's Key Fact Sheet also details the factors that can affect Internet speed, and assures customers that there are service and contractual safeguards in place to ensure customers are not paying for a speed standard that cannot be achieved in their household specifically.





UNLIMITED DATA	UNLIMITED DATA	UNLIMITED DATA	UNLIMITED DATA								
<p>Telstra Upfront Internet Plan Basic</p> <p>month-to-month</p> <p>\$80 per month</p>	<p>Telstra Upfront Internet Plan Essential</p> <p>month-to-month</p> <p>\$95 per month</p>	<p>Telstra Upfront Internet Plan Premium</p> <p>month-to-month</p> <p>\$110 per month</p>	<p>Telstra Upfront Internet Plan Ultimate</p> <p>month-to-month</p> <p>\$140 per month</p>								
<p>Good for browsing, social media, emails and SD video streaming.</p> 	<p>Better for multiple users, HD video streaming and video calling.</p> 	<p>Best for multiple users, Ultra HD video streaming and serious gaming.</p> 	<p>Amazing access for larger households with lots of users on high demand connected devices.</p> 								
<p>Plan speeds</p> <p>Check your address to find out what plans are available to you.</p> <p>Check your address →</p>	<p>Plan speeds</p> <p>Check your address to find out what plans are available to you.</p> <p>Check your address →</p>	<p>Plan speeds</p> <p>Check your address to find out what plans are available to you.</p> <p>Check your address →</p>	<p>Plan speeds</p> <p>Check your address to find out if Superfast speed is available to you.</p> <p>Check your address →</p>								
<p>typical evening speed 7pm-11pm:</p> <table border="1"> <tr> <td>25 Mbps Download</td> <td>4 Mbps Upload</td> </tr> </table> <p>More on Standard Speed →</p> <p>Speeds experienced may be lower due to factors incl. in-home set up/wiring.</p>	25 Mbps Download	4 Mbps Upload	<p>typical evening speed 7pm-11pm:</p> <table border="1"> <tr> <td>50 Mbps Download</td> <td>17 Mbps Upload</td> </tr> </table> <p>More on Standard Plus Speed →</p> <p>Typical speeds not avail to most FTTN connections. Speeds experienced may be lower due to factors incl. in-home set up/wiring.</p>	50 Mbps Download	17 Mbps Upload	<p>typical evening speed 7pm-11pm:</p> <table border="1"> <tr> <td>100 Mbps Download</td> <td>17 Mbps Upload</td> </tr> </table> <p>More on Premium Speed →</p> <p>Typical speeds not avail to most FTTN connections. Speeds experienced may be lower due to factors incl. in-home set up/wiring.</p>	100 Mbps Download	17 Mbps Upload	<p>typical evening speed 7pm-11pm:</p> <table border="1"> <tr> <td>250 Mbps Download</td> <td>22 Mbps Upload</td> </tr> </table> <p>More on High Speeds →</p> <p>Speeds experienced may be lower due to factors incl. in-home set up/wiring. Plan avail to HFC and FTTP connections only.</p>	250 Mbps Download	22 Mbps Upload
25 Mbps Download	4 Mbps Upload										
50 Mbps Download	17 Mbps Upload										
100 Mbps Download	17 Mbps Upload										
250 Mbps Download	22 Mbps Upload										

Figure 9. Telstra’s plans for broadband Internet, like Tangerine, describe the typical download and upload speeds between 7pm and 11pm, as well as suitable uses and the factors that may lower the experienced speeds. Where typical speeds are not available for FTTN/B/C connections, Telstra provides that speeds will be confirmed post-connection. These ads also set clear expectations about each plan’s typical speeds; for example, the details for the “Telstra Upfront Internet Plan Essential” specify that “Typical speeds not avail to most FTTN connections.”

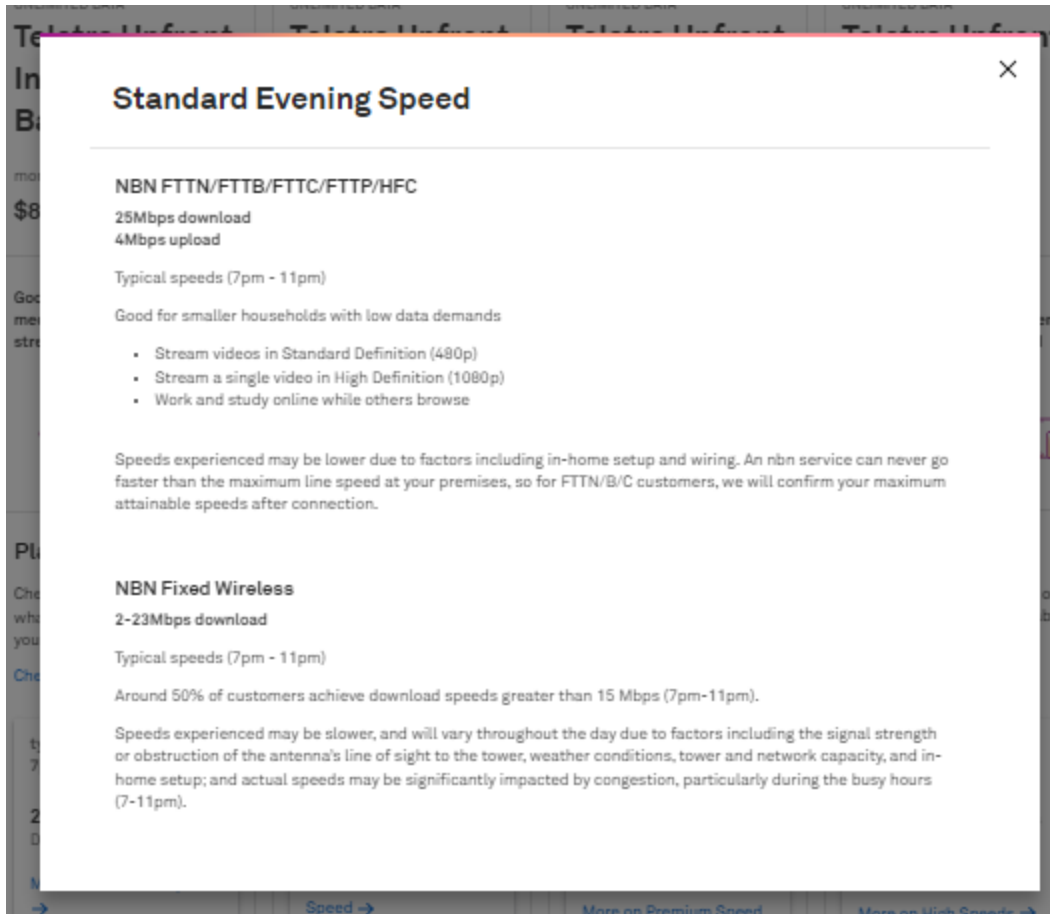


Figure 10. Clicking on “More on nbn speeds” within each Telstra plan as seen in Figure 9 opens a new floating window providing more details on the typical peak speeds and easy-to-understand descriptions of suitable uses specific to the plan.

Your in-premise setup and internet usage



Modem

The quality and age of your modem will impact the performance of your connection. We recommend using one of our latest Telstra branded modems to maximise your internet performance, such as the Telstra Smart Modem™, with hybrid technology that combines the power of Telstra's home internet and mobile networks in one device, for a more reliable connection. Please contact us if you require a new Telstra modem.



Wi-Fi

Your Wi-Fi performance can be impacted by where you place your modem, as well as any radio or electrical interference with other devices in or near your premises. Improve your Wi-Fi performance by placing your modem centrally in your premises, or near the stairwell in a two-storey building. To find out more ways to improve your Wi-Fi connection, search 'Telstra Home Dashboard' online.



In-premises wiring (FTTN/FTTB/FTTC)

If the copper lines within your premises are damaged, corroded, badly connected or poorly configured, it can significantly reduce your nbn speed. Our trained technicians can visit your premises and help fix issues related to in premises set up (fees apply). Please contact us if you would like to discuss this service.



Performance

Telstra is committed to providing a fast and reliable connection to the internet. However, if your performance on the nbn network is not meeting your expectations, you can test your connection speed. If your problems persist please contact us, and we will investigate what can be done to improve your performance. If needed we will engage nbn co to resolve any issues on the nbn network.

[Test your nbn speed](#)



Content

Downloads taking too long? This can happen if the source of the content you're trying to access is affected by congestion. An example is when a lot of users try and access the same website simultaneously. Also, remember that downloads from international websites are usually slower than Australian websites.



Devices

If your connection is slow on one device only, the problem could be malware, viruses or it might be too old to support higher speeds. If you're downloading on multiple devices at once, your available bandwidth is shared between these devices. The more devices connected, the more bandwidth you share between them, and the slower your experience will be.

Figure 11. The Telstra website also includes a detailed info page about the factors that may impact the customer's speeds, including the quality and location of the modem, as well as the condition of the customer's in-premises wiring. (<https://www.telstra.com.au/internet/nbn/nbn-speeds-explained>)

Key Facts Sheet: nbn™ Services for Consumer.

Important information about the nbn network speed options available with Telstra.

	Basic Evening Speed	Standard Evening Speed	Standard Plus Evening Speed	Premium Evening Speed	Superfast Evening Speed	Ultrafast Speed
Typical Busy Period Speeds (7pm to 11pm)	12Mbps Download	25Mbps Download	50Mbps Download	100Mbps Download	250Mbps Download	700Mbps Download
	Speeds experienced may be lower due to the factors listed below. Actual speed confirmed post-connection for FTTC/B/C customers. Typical busy period speed for Ultrafast is an estimate only. We do not have sufficient data yet to calculate the typical busy period speed of this add on. We will update this information once sufficient data is available. For ordinary personal/domestic use.					
	Not available on Fixed Wireless.		Not available for most FTTN customers.	Available on FTTC/P, HFC and selected FTTN/B connections only. Not available to most FTTN customers.	Available on FTTP and some HFC connections only.	
Available on:	Upfront Internet Plan Starter Starter Internet Plan	Upfront Internet Plan Basic Core Internet Plan	Upfront Internet Plan Essential Unlimited Internet	Upfront Internet Plan Premium Premium Internet	Upfront Internet Plan Ultimate with Superfast Speed Premium Internet with Superfast Add On	Upfront Internet Plan Ultimate with Ultrafast Speed Premium Internet with Ultrafast Add On
# of people online at the same time on multiple devices	1-2 people	1-2 people	4-6 people	6-9 people	6-9 people	6-9 people
Voice Calls	✓	✓	✓	✓	✓	✓
Emails and Browsing	✓	✓	✓	✓	✓	✓
Social Media	✓	✓	✓	✓	✓	✓
SD Video Streaming	✓	✓	✓	✓	✓	✓
HD Video Streaming	✗	✓	✓	✓	✓	✓
4K Video Streaming	✗	✗	✗	✓	✓	✓
Multiple Devices 4K Video Streaming	✗	✗	✗	✗	✓	✓
8K Video Streaming	✗	✗	✗	✗	✗	✓
Online Gaming	✗	✓	✓	✓	✓	✓
Download and Upload Large Files	✗	✓	✓	✓	✓	✓
Multiple Devices Download and Upload Large Files	✗	✗	✗	✗	✗	✓


Figure 12. Clicking on the “Key Facts Sheet” link under each plan presents a detailed chart that compares Telstra’s broadband speed tiers and suitable uses, cross-referenced with the number of people online at the same time on multiple devices.

6.3 Canadian Advertisements


Where ISPs in the UK and Australia provide for guaranteed minimum average speeds and ranges based on measured peak period speeds, major Canadian ISPs still primarily advertise their services as “up to” a certain speed, or a range that is not openly substantiated by any measurement method (See Figures 13 – 16). Information about factors affecting speeds is comparatively limited and not immediately accessible or visible when viewing the advertisements. Unlike the UK and Australia, there are no laws or codes in Canada that require ISPs to abide by specific standards for broadband ads, and therefore Canadian ISPs are able to provide just the bare minimum of information that is enough for consumers to differentiate between plans.

Ignite Internet 50u


Connect up to 5 devices



Unlimited
Usage



50 Mbps¹
Download speed up to



Ignite SmartStream
 Add for \$5/mo*

\$54⁹⁹ /mo*
After credit of \$30.00 /mo for 12 months.
Currently \$84.99

CREDIT -\$100.00 (one-time, applied after taxes)²
Prices may increase during subscription.

Add to cart >

Additional fees

Ignite Express Setup: ~~\$39.00~~*

Package perks

- ✓ One-time \$100.00 bill credit (applied after taxes)

Great for

- Downloading video clips and trailers in seconds³
- Everyday surfing, sharing and posting for smaller households

Package features

- Upload speed up to 10 Mbps
- Ignite WiFi™ Gateway modem rental
- Ignite WiFi Hub app⁴ for easy network control and Advanced Security cyberthreat protection³
- 24/7 support
- 5 email accounts

[Minimum System Requirements](#)

1. Assuming optimal network, equipment and customer device conditions. Based on current capabilities of available equipment technology, for Ignite Internet Gigabit an Ethernet/wired connection is recommended to reach maximum download speeds of up to 940 Mbps + 60 Mbps transmission overhead for fibre-to-the-home addresses, and at least one additional wired or wireless connection is required to reach maximum download speeds of up to 1 Gbps for fibre-to-the-neighbourhood cable addresses. See Acceptable Use Policy at rogers.com/terms.
2. Access to Ignite WiFi Hub requires Ignite Internet from Rogers, the Ignite WiFi Gateway modem, a MyRogers account and a compatible iOS or Android device or compatible web browser
3. The times and usage amounts specified are approximations based on maximum theoretical speeds and file size estimates and will vary depending on size and quality of content.
4. Usage allowances apply on a monthly basis and vary by tier of service. Usage exceeding data allotment provided is charged at \$5.00/GB to a max. \$200/mo. overage. Overage greater than or equal to 0.5 GB rounded up to next GB.

Figure 13. In Rogers' "Ignite Internet 50u" plan offering, the advertised download speed is described as "up to 50 Mbps." Footnotes qualifying this speed can be revealed by clicking on "See Full Details" at the bottom of the page, which is not visible near the actual ads. The 50 Mbps download speed is qualified with "[a]ssuming optimal network, equipment and customer device conditions," yet limited details are offered about how Rogers or the customer is responsible for maintaining optimal conditions.

Minimum System Requirements

For any internet package, a direct wired connection to your Rogers modem using a quality Ethernet cable will best ensure your fastest possible speeds.

The total download speed for Ignite Internet™ Gigabit service is even more than what can be supported by a single wired Ethernet port, so at least one additional wired or wireless device is needed to experience the total possible speed to your home.

For wireless connectivity at home, newer devices will be able to access 802.11ac WiFi, also known as “AC” WiFi, which is offered by Rogers top modems – the fastest WiFi technology.


See below for the recommended minimum system requirements for your devices to get the best possible internet performance.

Recommended Configuration	Windows	Mac
Operating System	Windows 7 (64-bit) or higher	OS X Tiger (10.4.10) or higher
CPU	2GHz (dual-core) or greater	2GHz (dual-core) or greater
RAM	4GB or more	4GB or more
Wired adapter	Gigabit Ethernet (1Gbps) for Ignite Internet 150u or higher (with CAT5e/CAT6 cable) Fast Ethernet (100Mbps) for all other packages (with CAT5e cable)	Gigabit Ethernet (1Gbps) for Ignite Internet 150u or higher (with CAT5e/CAT6 cable) Fast Ethernet (100Mbps) for all other packages (with CAT5e cable)
Wireless adapter	802.11ac for Ignite Internet Gigabit, 802.11n for all other packages	802.11ac for Ignite Internet Gigabit, 802.11n for all other packages
Web Browser	Internet Explorer 11, Chrome v.47 or Firefox v.43 or higher	Safari 9.0.2, Chrome v.47 or Firefox v.43 or higher


[Close this window](#)

Figure 14. Clicking on the “Minimum System Requirements” link below each plan reveals additional information on how to achieve the best possible Internet performance with a given plan, as well as the recommended system configurations.


Fibe 50 [View details](#)




50 Mbps
Max download speed to your Home Hub



10 Mbps
[Max upload speed to your Home Hub](#)



Unlimited
Monthly usage




Home Hub 3000
Wi-Fi included

\$84.95/mo.

[Offer details](#)

Online exclusive: get a \$100 Visa* prepaid card and pay no activation fee.^{1,2,3}

[Order now](#)



Add Wi-Fi pods for only \$10/mo. [Learn more](#)

Speeds to your Home Hub and usage	Minimum	Most customers get	Maximum
Download speed	46 Mbps	50 Mbps	50 Mbps
Upload speed	1.90 Mbps	7.5 Mbps	10 Mbps
Included monthly usage	Unlimited		

Home Wi-Fi

Home Hub 3000 with wireless AC technology included.

[Learn more about Wi-Fi](#)

Available to new residential customers, where access/technology permit. Subject to change without notice; not combinable with other offers. Taxes extra. Customer must opt to receive paperless billing. Modem rental included. Price is subject to increase during your subscription. Any change made to services may affect the price and/or result in the loss of credits or promotions, as the case may be, as eligibility conditions may vary. Upload access speed varies depending on the distance between the customer's modem and switching equipment from Bell. Speed experienced on the Internet may vary with your technical configuration, Internet traffic, server, your environment, simultaneous use of IPTV (if applicable) and other factors.

1. Upload access speed varies depending on the distance between the customer's modem and switching equipment from Bell.

Figure 15. Bell's Fibe 50 plan is advertised as "Up to 50 Mbps Download Speed." Clicking on "View Details" leads to a separate page providing more details on the service, including a minimum and maximum speed, and a speed that "Most customers get." There is no indication whether the minimum speed is guaranteed. As a footnote, limited details are provided on factors affecting the customer's experienced speeds.

Most popular

Plan Name	Speed	Upload Speed	Devices	Wi-Fi	Term	Price	Save
Fast PureFibre Internet 300/300	300 Mbps download speed	300 Mbps upload speed	6-12 devices streaming or gaming	Wi-Fi 6 included the fastest Wi-Fi	2 year term	\$95 /mo. \$420 /mo.	Save \$25/mo. for 24 months
Faster PureFibre Gigabit Internet	940 Mbps download speed	940 Mbps upload speed	20+ devices streaming or gaming	Wi-Fi 6 included the fastest Wi-Fi	2 year term	\$99 /mo. \$435 /mo.	Save \$36/mo. for 24 months
Fastest PureFibre 1.5 Gigabit Internet	1500 Mbps download speed	940 Mbps upload speed	30+ devices streaming or gaming	Wi-Fi 6 included the fastest Wi-Fi	2 year term	\$119 /mo. \$455 /mo.	Save \$36/mo. for 24 months

View details popup:

PureFibre Internet 300/300

Includes:

- Up to 300 Mbps download speed
- Up to 300 Mbps upload speed
- Unlimited data on a 2 year term, then \$20/month. Otherwise, a 1 TB data limit applies.
- The fastest Wi-Fi, powered by Wi-Fi 6. Wi-Fi equipment rental included.

Additional features:

- 30 day money-back guarantee*
- Flexible installation options
- Moving? We'll transfer you for free.

Terms and conditions apply.

Figure 16. TELUS advertises its Internet plans based on speed and the number of devices that can simultaneously stream and play games. Clicking on “View details” reveals that the advertised speeds are the maximum possible speeds in a given plan. Regarding the suitability of use, the advertisements only specify the number of devices that each plan can support for streaming or gaming.

^ Do you have a guarantee? What happens if I cancel?

2 year term

We offer a 30-day satisfaction guarantee. If you're not satisfied, you can cancel within 30 days of installation. All fees – including monthly charges, installation fees (if any) and up to \$100 in pay-per-view charges – will be waived. If you received a gift with purchase, you have 21 days to return it.

After 30 days, if you cancel your internet service, the fee will be \$15 for each month (or partial month) remaining in your term.

For example, if you cancel at the end of month 18, there are still 6 months remaining in your term. So the cancellation fee will be 6 months x \$15 = \$90 (plus taxes).

No term

If you are not on a term agreement (or if you've completed it) you may cancel services any time without charge. The 30-day satisfaction guarantee does not apply.

1. Offers subject to change without notice. Available to residential customers eligible who have not subscribed to TELUS Internet in the past 90 days. For customers signing up on a 24 months term, the Internet rate plan price is guaranteed to remain the same for the duration of the 24 month term. Prices of features and add-ons such as unlimited internet data, are not guaranteed during the 24 month term and subject to change anytime. One-time \$50 activation fee applies to all new orders of Internet services, except orders placed on telus.com. Offer includes internet 300 From month 1–24, a \$30/mo discount applies. Additional \$10/mo discount, only available to online orders of PureFibre internet on a 2-year term with the redemption of promo code FLASH. \$10/month discount available to TELUS Mobility customers who purchase qualifying TELUS Home Services product(s). \$10/month discount applied to the Home Services bill for 24 months (or as long as the eligibility requirements are met). Eligible Home Services products include TELUS Home Internet 15 and higher, Optik TV, Home Phone or combination thereof. Regular price of Internet 300 is currently \$120/mo, applies after the 24-month term. All prices do not include applicable taxes. \$0 unlimited data offer is only available to customers signing up on a 2 year internet service agreement. Regular pricing for Unlimited Data add-on applies at month 25, regular price is currently \$20 per month and is subject to change without notice Minimum system requirements apply. Final eligibility for the services will be determined by a TELUS representative. A cancellation fee applies to the early termination of your internet service agreement, which will be the sum of \$360, declining by \$15 for every month of Internet service and reducing to \$0 at the end of your 2 year term. Rental equipment must be returned in good condition upon cancellation of service, otherwise the replacement cost will be charged to the account. Maximum speeds require optimal network conditions on a wired connection. Internet access speeds may vary depending on location, usage within the home network, Internet traffic, applicable network management or server configurations. Concurrent data streams, including combinations of uploads and downloads, may be required to access maximum speeds. Maximum speeds may not be achievable using a single device.
2. Available to TELUS or Koodo Mobility post-paid customers who purchase qualifying TELUS Home Services product(s). A \$10/month discount will be applied to your Home Services bill for 12 months (or as long as the Home Services account contains at least 1 eligible product). Eligible products include TELUS Home Internet 15 and higher, Optik TV and/or Home Phone, or any combination thereof.
3. Individual results may vary depending on the construction materials of your home, location and configuration of your Wi-Fi modem, location and capabilities of Wi-Fi devices, number of nearby Wi-Fi networks, number of active Wi-Fi devices or other factors.

Figure 17. Under the “Frequently Asked Questions” section below the internet plans, TELUS describes a 30-day satisfaction guarantee allowing customers to cancel a new internet service within 30 days of installation with all fees waived. Footnote 3 pertaining to TELUS’ Internet speeds qualifies that speeds may vary depending on various factors, including home construction materials, location and configuration of the Wi-Fi modem, and the number of active Wi-Fi devices.

Canadian consumers need and deserve more accurate, practical information about their service speeds before they buy into a plan. Though all three national ISPs provide some information on technical factors, in all cases most of this information is only available on the troubleshooting and support sections of the sites, which are separate from the shopping sections. Canadian ISPs are not subjected to any mandated obligations to allow consumers to exit or switch plans specifically when speed issues persist. Only TELUS, according to Figure 17, provides some self-imposed accountability in the guise of a penalty-free 30-day

cancellation policy, even though this guarantee is not explicitly dependent on whether advertised speeds are achievable. In its Residential Service Agreement, Rogers offers a policy where customers may cancel term services without an early cancellation fee if all equipment is returned in original condition within 30 days of the activation date.¹⁷² Customers are still billed for all charges incurred up to the cancellation date. Bell offers no trial period, and requires customers to pay all amounts owing upon cancellation, in addition to a “Cancellation Charge” if applicable, which is “an estimate of the damages suffered by Bell as a result of your early cancellation of Bell Services,” which in the case of a 2-year fixed term home internet contract, is \$150.¹⁷³ Evidently, there is no consistent contractual remedy among Canadian ISPs for customers who desire to exit service plans that do not meet advertised expectations at the outset, other than perhaps a general right under the Internet Code for consumers to exit contracts penalty-free within 15 days (30 days if self-identifying as person with disability). Outside of this 15 or 30 days, there are no mandated contractual remedies.

The only other option is for consumers to submit complaints to the Commission for Complaints for Telecom-television Services (CCTS) or the Competition Bureau, which does not guarantee a favourable resolution, and may take months to resolve. The CRTC advises consumers to simply switch providers, engage customer service, or contact the CCTS, which is largely an unhelpful set of suggestions compared to the remedies that the UK and Australian regulators have implemented.¹⁷⁴ Switching providers is not a valid solution where competition is already limited in the customer’s service area. Customer service, with all the escalations necessary to pursue a remedy, is often time-consuming, frustrating, and inadequate for many consumers. The CCTS, as mentioned, is limited in its mandate, the complaints process can also be time-consuming, and vulnerable consumers may have trouble advocating for themselves.

Unfortunately, the publicly available resources on the CRTC website starkly demonstrates the minimal protections consumers have regarding internet service quality. The CRTC’s page detailing “What you should know about Internet speeds” only lists performance factors that are either the onus of the consumer (age of computer, modem, number of devices being used, etc.), or outside consumers’ control altogether (site traffic, latency, packet loss, quality of connection).¹⁷⁵ To the question of “Are there minimum Internet speeds for Canadians?” the Commission references the minimum service “targets” of 50/10 Mbps speeds, which are neither guaranteed or as of yet universally available. No burden is placed on ISPs themselves to meet a minimum standard of service, or to test and remedy speeds.

7. Stakeholder Consultations

The focus of stakeholder consultations in this updating study is to obtain views and input specifically on the foreign broadband advertising reforms implemented since PIAC’s original study was conducted in

¹⁷² Rogers, “Rogers Residential Service Agreement”, online: <<https://www.rogers.com/cms/pdf/Rogers-residential-service-agreement.pdf>>.

¹⁷³ Bell, “Bell Terms of Service”, online: <https://www.bell.ca/Styles/common/all_languages/all_regions/pdfs/Bell_Terms_of_Service.pdf>.

¹⁷⁴ CRTC, “What you should know about Internet speeds”, online: <<https://crtc.gc.ca/eng/internet/performance.htm>>.

¹⁷⁵ *Ibid.*

2011-2012. The questionnaires used to collect these comments also included questions seeking specific responses based on the stakeholders' unique powers, expertise, experiences, and perspectives. In lieu of providing written responses, ACORN and NPF opted to conduct phone interviews. Responses are explored in detail below.

7.1 Consumer groups

Consultations with consumer organizations gave credence to the court's impression of the average consumer as "credulous and technically inexperienced," insofar as it "relates to the technical information contained in the advertisements." This was made starkly clear by consumer groups representing vulnerable groups like seniors, low-income Canadians, new immigrants, and other consumers that may not be technically savvy enough to effectively shop for services that meet their actual needs. In some cases, the inexperience can be profound, as representatives from ACORN and NPF expressed that consumer demographics such as the ones listed above are less likely to even grasp basic technical concepts that differentiate service options, like Mbps/Gbps speeds or data limits, let alone more complex technical factors affecting quality of service. Due to a lack of knowledge, these consumers sometimes accidentally purchase, or are sold services that are more expensive and that far exceed their actual needs. Such consumers also often have trouble communicating their needs in subsequent customer service calls requesting further explanation, aid, or a change in service. These customers are further confused when customer service agents explain options and/or limitations in technical terms that are too complex for the customer to understand.

One ACORN leader explained that customer service agents are sometimes irresponsible in selling packages to vulnerable customers; these agents fail to adequately explain the costs associated with the service requests of customers, who are later hit with higher bills than expected. Due to this lack of understanding at point-of-sale, combined with long customer service wait times and communication issues, customers sometimes have to rely on social support workers, volunteers, or family members to engage with customer service on their behalf. In the absence of this support, vulnerable low-income customers, especially seniors, are prone to give up and acquiesce to whatever the sales agent proposes. Without understandable explanations about the technical limitations of their broadband services, customers are often frustrated by their own inaccurate expectations that were never dispelled by sales agents who should have been alert to communication and knowledge barriers. The ACORN representative provided an example where one customer thought their internet service would provide television programs to their TV, like a traditional cable service.

Trish McAuliffe, President of the National Pensioners Federation (NPF), also expressed that seniors are often subject to complex technical terms and instructions during service interactions, and experience difficulties troubleshooting problems unless more tech savvy family members are available to assist. Union des consommateurs, in its response to PIAC's questionnaire, shared relevant feedback from focus groups it conducted in 2018, which revealed that a vast majority of participants had a very limited understanding of the technical aspects of broadband services. In particular, participants over the age of 40 admitted to selecting Internet plans according to designations of "high speed," without knowing what the actual numerical speeds represented. The Consumers Council of Canada (CCC) further noted that consumers waste a great deal of time trying to understand the source of their connection issues,

and less technically literate users may actually create new problems for themselves through ISPs' troubleshooting processes.

Ms. McAuliffe also highlighted that seniors have limited understanding of broadband advertisements, with many not knowing what "GBs of data" mean. Ms. McAuliffe stated that most seniors simply want internet service that works, with quick loading times when browsing the internet; beyond these requirements, seniors primarily shop for price, not speed. For many seniors who live in rural or remote areas, obtaining internet service that is both reliable and affordable is a significant challenge. These customers usually first try the cheaper plans, which often fall short of even the most basic speed claims in rural areas, therefore seniors are more willing to be upsold to more expensive plans simply to receive basic, reliable service. Ms. McAuliffe revealed that it is often inevitable for rural seniors starting with basic plans to upgrade, and even the higher tier plans come with reliability issues. For these customers, the frustration is palpable regarding why the basic plans are even offered in the first place.

The CCC has received complaints from members who experience internet performance issues on a daily basis. Commonly, users who should have sufficient broadband capacity to support one to two audio/video streams in both directions do not actually receive the necessary capacity, which affects activities like videoconferencing. The CCC emphasized that its members tend to judge performance based on their use of common applications as represented in ISPs' advertisements. The CCC also noted instances where consumers must repeatedly power cycle modems of ISPs to restore normal functioning or re-establish a basic connection, therefore more information should be made available about the reliability of in-home hardware so consumers can better assess whether to lease or buy equipment. The CCC also stated that customer service agents usually first place blame for internet issues on ISP-installed equipment or on the user themselves, rather than the network.

The CCC further suggested that due to the pandemic, consumers are coming to the view that they are paying for service potential that is not actually available to them, as the pandemic has forced many to push internet usage to levels closer to those the customers believe they have been paying for, only to encounter underperformance. The CCC noted that ISPs' advertising does not commonly highlight differences in service tiers, and tend to set performance expectations at the highest possible level of performance, if not higher.

Recommendations, and views on foreign reforms

The ACORN representative provided several considerations and recommendations to improve the shopping experience for low-income consumers. Firstly, ACORN emphasized that with so many public and private services shifting to online platforms, the government is responsible for ensuring everyone is included in this shift, yet many are still getting left behind. Public education and outreach are therefore key. ACORN also recommended that service agents be required to provide basic technical explanations in writing, while considering language barriers in all customer interactions. Ms. McAuliffe of the NPF elaborated on this point, expressing support for more informative, qualitative descriptions of the services that companies advertise, focusing on descriptions of functionality, like the number of simultaneous video streams that a plan can support. These clear, layman descriptions are more useful

and legible for seniors than technical features. The Union also supported the inclusion of “suitability” information on the face of the broadband ads.

The Union recommended that information about internet plan speeds should not leave any room for ambiguity, and be presented clearly and simply so that it can be understood by a consumer with a low level of technical literacy. Union generally expressed disappointment that the Commission permits ISPs to advertise and sell services that do not live up to representations and expectations, and which places the onus on consumers to determine who is telling the truth. Union further criticized the Commission’s approach of referring consumers to Commission studies evaluating provider networks, when in practice, consumers are often unaware of the very existence of the Commission, and even if consumers are made aware of such studies, they often do not have the knowledge, interest, or time to read and understand these materials. Finally, the Union concluded that the Commission’s approach ignores the huge asymmetry of power and information between consumers and ISPs, and fails to account for the low average level of technological literacy of Canadian consumers.

Ms. McAuliffe generally supported the UK’s implementation of a contractual right to exit contracts penalty-free within 30 days if internet performance fails to meet advertised claims, but also further recommended an extended 60-day trial period for seniors, who are less likely to use the internet often enough to identify performance issues within just one month. Union also added that this contractual right should include the right to return the devices supplied by the ISP, presumably at no extra cost. The CCC noted limitations of a potential contractual right to exit, that is, even if consumers are able to exit their contracts penalty-free, they still face no or few competitive alternatives in Canada, as some competitors use the same infrastructure that is already failing customers. As such, the process of contract termination and finding a new ISP can be a complicated, frustrating experience, particularly where broadband is bundled with other services.

With regard to consumer empowerment, the CCC suggested that consumers have access to a “free field test capability” to establish their common usage needs and then instantly adapt their service level based on real-life use. The CCC also generally supports a clear, standard schedule of redress when service interruptions or degradation results due to a fault on the ISP’s network.

Regarding rules on performance metrics adopted in Australia and the UK, ACORN and NPF strongly supported adopting a more qualitative, comparable framework for ISPs’ broadband service packages. Union also supported establishing standardized industry metrics for advertised speed representing the average or range of speeds that most customers can expect to receive during the peak evening period. Regarding the peak periods used in other jurisdictions, the CCC suggested that 7PM – 11PM may no longer be the peak usage period due to pandemic-driven shifts in the time and type of internet usage. The CCC expressed reservations about providing consumers with a detailed list of the technical factors potentially affecting internet performance. Specifically, the CCC pointed out that giving consumers a long list of potential points of failure does not provide adequate protections. Rather, consumers want more proactive measures from ISPs, like reliable ISP-provided interconnection devices that can fulfill performance claims, transparency around causes of performance failures, and commitments about the time taken to restore service. Union also warned that an excessively long and technical list of performance factors will ultimately be of little use to consumers.

7.2 Regulatory Authorities

Of the regulatory bodies we approached, only the Competition Bureau explicitly declined to provide comments, explaining that it is unable to provide comments about any ongoing investigations, which are conducted confidentially. Furthermore, current resources and priorities at the Bureau prevented it from completing PIAC’s questionnaire in the time span provided. Instead, the Bureau correspondent highlighted general strategic priorities as set out in the Bureau’s “2021-2022 Annual Plan: Supporting economic recovery through competition,” pointing specifically to the objective to “[i]ncrease proactive enforcement in order to address anti-competitive activity across Canada.”¹⁷⁶ PIAC did not receive a response from the Advertising Standards Council.

CCTS

Though the CCTS reiterated that issues relating to internet advertisements and broadband measurements are beyond its mandate, the CCTS shared in its questionnaire response data on the number of complaints received regarding “false/misleading advertising” specifically pertaining to internet services. From 2014 to 2021, there has been a steady increase of complaints relating to false or misleading advertising of internet services, reflected in the table reproduced below.

	2014-15 FY	2015-16 FY	2016-17 FY	2017-18 FY	2018-19 FY	2019-20 FY	2020-21 FY
Internet issues about: False/misleading advertising	24	66	71	66	116	128	153

The CCTS also highlighted the resolution rates over the same 7 fiscal years for two categories of internet service complaints most closely relating to internet speed: “Intermittent/Inadequate quality of service” and “Bandwidth usage.” The CCTS’ data indicated that while the number of such complaints increased steadily from 361 in 2014 to 2200 in 2020, the resolution rates for “Intermittent/Inadequate quality of service” improved slightly from 84% to 87%. For complaints relating to “Bandwidth usage,” the annual number of complaints and the resolution rate fluctuated for the 7 years, but the rate maintained an average of about 89%. See the below tables for the provided data.

	2014-15 FY	2015-16 FY	2016-17 FY	2017-18 FY	2018-19 FY	2019-20 FY	2020-21 FY
Internet issues about: Intermittent/Inadequate quality of service	361	444	662	1164	1338	1484	2200
Resolution Rate	83.6%	84.7%	89.5%	88.9%	87.6%	87.0%	86.9%

¹⁷⁶ Competition Bureau, “Archived – 2021-2022 Annual Plan: Supporting economic recovery through competition” (1 April 2021), online: <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04577.html>>.

	2014-15 FY	2015-16 FY	2016-17 FY	2017-18 FY	2018-19 FY	2019-20 FY	2020-21 FY
Internet issues about: Bandwidth usage	158	92	90	116	85	46	82
Resolution Rate	87.8%	90.2%	95.7%	88.5%	88.5%	83.6%	89.1%

Overall, the CCTS noted that the number of issues related to the delivery of internet increased in 2021 by 77%, with the most prominent of these issues being the loss of internet service, which increased by other 83% compared to the previous year. The CCTS noted several factors contributing to intermittent service or loss of service, including inefficient temporary towers; congestion during peak hours; improper installation; faulty equipment; timeouts; one Internet service provider buying out another provider’s customers, thereby generating more congestions; traffic management policy restrictions; technology not accommodating a customer’s needs (e.g., higher speeds required for gaming; and service throttling allegations.

The CCTS emphasized that it cannot help a consumer if the complaint relates to internet advertisement performance claims, though it does resolve complaints when, based on evidence, the consumer is receiving a speed pertaining to a lower tier than what they are paying for. In this case, the CCTS may recommend that the consumer pay for service in the lower tier. The CCTS did not provide any views specifically addressing aspects of the foreign reforms.

It is worth noting that all feedback from the consumer organizations above expressed that their members often have never heard of the CCTS, and more generally do not know where to take their complaints when ISPs fail to adequately address issues. In the case of NPF members, most seniors do not know about the CCTS unless they learn of it through educational seminars and workshops. Ms. McAuliffe further stated that, in her experience, the ISPs’ customer service agents do not direct customers to external complaints bodies.

CRTC

The Commission does not have power to regulate advertisements, but it does conduct and report on research relating to telecommunication services in Canada. The 2016 and 2020 SamKnows broadband measurement studies are examples of such research. The Commission also recently examined the sales practices of ISPs in its 2020 Report on Aggressive or Misleading Communications Retail Sales Practices.¹⁷⁷ However, the Commission confirmed in its questionnaire response that it does not currently regulate or intervene with the rates, quality of service issues, or business practices of internet service providers as they relate to retail customers. Specifically, internet performance claims in advertising fall outside of the Commission’s mandate and are not explicitly monitored. The Commission referred to the Wireless and Internet Codes as general codes of conduct that are meant to improve the consumer

¹⁷⁷ *Supra* note 40.

experience, though PIAC notes that neither code addresses how performance claims should be advertised and validated.

When prompted to explain the extent to which the 2016 and 2020 SamKnows reports are reflective of the consumer experience, the Commission expressed that the study “provided the CRTC with a high degree of confidence that the findings of the report are representative of the overall set of users for the service offerings tested.” The Commission further cited some advantages and limitations of the study methodology. The Commission cited several advantages, including:

- The use of ISP-independent and unbiased testing servers;
- Data collection from both peak and off-peak hours and for multiple days;
- Measure of the quality of the service arriving at the house [where LAN networking issues do not impact the results];
- Measurement when there is no user traffic present;
- Identification and verification of the registered service provider and correct plans;
- Only inclusion of data with good statistical sampling in the results; and
- No direct influence of the results by either the service provider or the CRTC.

The Commission also cited that the study had limitations, including the fact that only fixed wired broadband technologies (such as DSL, Cable and Fiber) have been tested, while fixed wireless, mobile wireless, satellite broadband technologies, as well as resellers were out of the scope of these reports. Another acknowledged limitation was that only internet service packages with more than 25 000 subscribers from the major ISPs were included in the study in order to have the best sample and coverage plan with the limited number of test boxes at hand. PIAC also identifies these as valid limitations. However, as PIAC has explained in our analysis of the SamKnows studies, some of the Commission’s cited “advantages” of the methodology are actually better characterized as limitations, in that they heavily limit the scope and utility of results for consumers. “Measure of the quality of the service arriving at the house” and “measurement when there is no user traffic present” do not provide any insight on how ISPs’ services hold up to normal usage within a house and when the household is actually using the connection.

The Commission declined to offer views on the broadband advertising practices of other jurisdictions, explaining that it is not their place to do so.

7.3 Industry

Few ISPs returned responses specifically addressing foreign practices in the previous 2011-2012 study period, but the two ISPs that did provide more substantive comments, Rogers and Distributel, expressed some willingness to adapt to a regulatory approach to broadband advertising claims as long as practices were adopted uniformly and certain caveats are implemented.¹⁷⁸

¹⁷⁸ *Supra* note 2 at 34.

Although PIAC reached out to most major national and competitor ISPs, the vast majority declined to provide comments. The one exception was TELUS. Notably in PIAC’s 2012 report, TELUS was the only ISP at the time who advertised its broadband services in terms of a range of speeds that any given customer can expect to experience, as opposed to “up to” speed claims.¹⁷⁹ TELUS, in its response to PIAC’s questionnaire for the current study, noted that “[d]ue to its investment in network technology, TELUS has transitioned from advertising its Internet plan options based on ‘speed ranges’ and now provides ‘up to’ Internet speeds associated with each Internet plan option.”¹⁸⁰ According to TELUS, this shift in practice was driven by a shift in subscriber base to a majority of PureFibre customers that use a dedicated FTTP connection, as opposed to copper-based DSL. TELUS asserted that PureFibre customers consistently achieve the advertised “up to” or even higher speeds, which are based on “conservative thresholds.” TELUS cited the Commission’s 2020 Measuring Broadband Report as verification that both TELUS’ DSL and PureFibre customers receive speeds that are faster than the advertised maximum.

Therefore, TELUS reasons that “up-to” speeds now represent clear and transparent guidance about the expected capabilities of PureFibre services, which are not subject to the occasional capacity constraints and environmental stresses that copper-based DSL services are vulnerable to.¹⁸¹ With regard to testing, TELUS stated that both download and upload speeds are verified through regularly scheduled network testing to ensure customers receive the advertised speeds, though no specifics were provided. TELUS also emphasized several features of its website, such as internet service ads that provide details about each plan, including the speeds that customers can expect to achieve and the number of devices customer can connect concurrently while enjoying those speeds. TELUS’ website and the TELUS Connect App allow customers to test and monitor their internet speeds, as well as access educational resources on optimizing Wi-Fi and further technical assistance. In addition, the TELUS website also provides an “Internet Wizard” quiz that asks customers about their needs and preferences, based on which the quiz will offer suitable plan options.

8. Conclusion and Recommendations

In the last decade, the considerable breadth of foreign reforms followed by new pro-consumer policies of foreign ISPs, particularly in Australia and the UK, starkly contrasts with Canada’s own stagnant state of broadband advertising. Furthermore, Canadian regulatory bodies have provided limited guidance on broadband advertising, indicating that there is an enduring need for more specific regulations that Canadian ISPs can be held accountable to. The results of the Commission’s two measurement studies are also incongruous to the experience of many consumers who consistently deal with broadband performance issues yet cannot obtain satisfactory or timely remedies. Furthermore, most consumers are unfamiliar with the differing limitations of the various speed testing platforms available to the public or employed by regulatory authorities. As such, when regulators or industry use tests to validate

¹⁷⁹ *Supra* note 2 at 14.

¹⁸⁰ PIAC’s consultation with TELUS, via completed questionnaire received on 1 March 2021.

¹⁸¹ *Ibid.*

performance claims, consumers should be more clearly informed about the degree to which test results actually reflect their real-world use of broadband services.

In our 2012 OCA research report, PIAC made general recommendations about how ISPs can provide more complete and precise disclosures about Internet performance in advertisements, and how various regulatory bodies can enhance their roles in supporting this reform. Those recommendations continue to apply a decade later, but now, based on lessons learned from other jurisdictions, further research and consultations, PIAC can offer more specific direction about what information best empowers consumers when shopping for broadband services. In the pandemic-driven shift to increased reliance on broadband to work, learn, and access services, accurate and comparable advertising is more important than ever, especially as ISPs push harder to provide and promote higher speed services. At the same time, many consumers still have limited or unreliable access to higher speed services. Other consumer groups – such as seniors, consumers with language-barriers, and generally consumers with a lower level of technical literacy - struggle to understand the technical and contractual bounds of their services based on the information provided to them in ads and at point of sale.

Based on the progress and ongoing reforms in the two countries studied in this report, and in light of the consumer views collected in this study, PIAC generally recommends that broadband advertising in Canada transition towards differentiating broadband plans based on suitable uses, rather than speed. In such a framework, customers' satisfaction with their broadband service would be premised on whether the chosen plan adequately supports their usage needs, instead of whether speeds measure up to advertised claims. It is then the responsibility of ISPs to provision a sufficient baseline of speeds to support each tier of usage. PIAC acknowledges that this is a paradigm shift that requires a return to the basics of how consumers, regulators, and the industry collectively frame the broadband industry, implicating the wholesale framework as well. PIAC therefore proposes an important question to consider even as we advocate for more accurate speed claims: Should ISPs sell broadband services based on arbitrary, continually shifting speed tiers, or based on whether services can support a graded scale of typical online activities? Or alternatively: Are consumers primarily concerned about whether their ISPs provide the paid-for speeds, or whether consumers can use their plan to conduct daily functions without discernable performance issues? PIAC hopes that more accurate speed claims, as supported in this report, is only a step towards a more consumer-centric broadband service framework.

The current state of the regulatory framework in Canada for broadband advertising also leaves something to be desired. With the Competition Bureau having direct jurisdiction over anti-competitive marketing practices yet remaining silent on broadband speed claims, and with other regulatory bodies denying direct jurisdiction yet indirectly addressing the issue through research or the complaints process, none seem to be taking the reins on fair and transparent broadband advertising. This lack of regulatory initiative, especially in comparison to the UK and Australia, leaves Canadian consumers with limited protection in a market that is currently thriving, at the expense of consumers, on inconsistent advertising practices, information vacuums, and no performance or contractual guarantees.

The section below reproduces the recommendations that PIAC made in 2012, then revises each recommendation according to the updated research in this report.

8.1 Revisions to PIAC's 2012 Recommendations: 10 years later

Recommendation 1 (2012)

ISPs should provide more complete and precise disclosure about various aspects of internet performance, such as download and upload speed and latency (responsiveness) and the reliability of these aspects. While absolute guarantees may be technically challenging for ISPs to provide, providing consumers with more forthcoming disclosure about what they can expect during peak and off-peak hours would greatly enhance consumers' ability to make informed choices for internet services. The ISP industry should consider standardizing their disclosures and internet performance claims and ensuring that these disclosures are prominent in advertising and in consumer contracts. Furthermore, ISPs should agree on how to measure speed and performance claims and place this information prominently on advertisements and contracts to better empower consumers to evaluate their satisfaction with the internet services they are receiving. ISPs should adopt the broadband disclosure statement template proposed by Consumers' International which would provide consumers with clear and thorough information about broadband speed and performance guarantees, if any, and the typical broadband performance that consumers can expect. This information would empower consumers to better compare and contrast the various tiers offered by an ISP against those of competing ISPs. Consumers would also be better equipped to assess the suitability of the internet service offer for his or her household's broadband needs.

Recommendation 1.2 (2022)

The same general recommendation applies regarding forthcoming disclosure of the speeds consumers can expect during peak and off-peak hours. Standardization and prominent display (in advertising, Critical Information Sheets, and in contracts) of tested performance claims across the ISP industry is still lacking in Canada. As recommended in 2012, PIAC reiterates that this information would better empower consumers to shop for services that meet their needs, and to compare competing options. Based on recent foreign approaches, PIAC recommends specific advertising parameters and contractual obligations as follows:

- i. Presentation of service speeds in broadband service advertisements as a tested, average speed or a range of typical speeds available to most customers during peak periods; "Up to" speed claims are not permitted as the primary identifier of service tiers;
- ii. Simple descriptions of the range of uses suitable to each plan, including how many users within a household each plan can support for bandwidth-heavy uses such as online gaming, high-resolution streaming, videoconferencing, and downloading/uploading of large files;
- iii. Easily accessible and visible information regarding: the frequency of testing that sets the advertised speeds, additional testing parameters (jitter, latency, etc.), and the ISPs' obligation to verify line speeds within the customer's home after new broadband services are installed;
- iv. Clear communication of the relevant technical factors affecting speed within the home, differentiated between which are under the customers' or the ISP's control; and
- v. A 30-day "cooling off period" during which customers can exit contracts penalty-free (including the refunding and free return of any rented/purchased equipment) if performance issues fail to

meet advertised claims and cannot be adequately remedied. Seniors should have an extended 60-day cooling off period on the same bases.

In reforming the format and content of broadband advertisements as above, the proper balance must be struck between the amount of information presented, and the ability of the average consumer to comprehend the material. Information should be communicated as simply and as visually appealing as possible. Overly complex explanations that use technical jargon is not appropriate, especially where that jargon is not explained. The reform process could develop innovative ways to present information, in ways that are visually familiar and easily facilitate comparison shopping – for example, the “nutrition label” format proposed by the FCC.

Recommendation 2 (2012)

The Competition Bureau has an integral role to play in monitoring the compliance of ISP speed and performance claims in advertising. While the Bureau has a number of guidelines outlining its expectations for full disclosure in advertisements and performance claims based on adequate and proper testing, ISPs commonly use disclaimers contained in footnotes to qualify their "up to" speed claims and do not make available the methodology or results of testing conducted to support their internet performance claims. Given these practices, the Bureau may wish to consider enforcement action or specific guidelines targeted to how advertising claims about internet speed performance are conveyed to consumers like the ACCC or UK ASA guidelines or how testing these claims should be conducted in order to be “adequate and proper”.

Recommendation 2.2 (2022)

Since 2012, the Competition Bureau has yet to publish specific requirements about the representation of performance claims in broadband service ads, what constitutes “adequate and proper testing” for broadband services, or on the information ISPs must provide about the methodology and results of testing. Canadian ISPs, as seen in the updated figures in Section VI of this report, still use “up to” speed claims that are qualified by briefly explained technical factors in the footnotes and fine print. No information is provided on whether and how specific broadband speeds are substantiated.

The Bureau should develop draft guidelines based on Recommendation 1.2 above, then conduct public and stakeholder consultations to finalize the specific parameters for Canadian ISPs (i.e., peak periods). In guidelines, the Bureau should also provide direction on the appropriate language for describing broadband services to the average consumer who is “credulous and technically inexperienced,” as determined in *Canada (Commissioner of Competition) v Chatr Wireless*. The Bureau’s guidance should also specify what additional information all ISPs must display prominently on the face of broadband ads, including the range of uses and simultaneous users that each broadband plan can support.

Recommendation 3 (2012)

The Canadian Radio-television and Telecommunications Commission also has an important role to play in monitoring the retail internet market. While the CRTC does not regulate internet advertisements, the

CRTC could address the clarity and content of internet service contracts for consumers. Namely, the CRTC could examine whether regulatory action is needed to provide consumers with clarity regarding advertised performance claims of internet services in a regulatory proceeding. The CRTC should also take on a more active role in monitoring the retail internet market by collecting its own data about the actual performance of internet received by Canadian consumers (such as through SamKnows) and how performance measures up to advertised claims. While the announcement of a CRTC pilot project to test broadband speeds is encouraging, few details are publicly available so it remains unclear whether this project will produce results that are representative of consumers' experiences with various ISPs. The CRTC's priority of monitoring industry progress toward the target speeds of 5 Mbps download and 1 Mbps upload in 2015 presents an opportunity to establish more transparent and comprehensive practices for measuring broadband performance by the regulator.

Recommendation 3.2 (2022)

While the CRTC's limited role in specifically regulating broadband ads has not changed since 2012, the CRTC has published the Internet Code, which provides more clarity regarding consumers' broadband contracts in general. The CRTC has an opportunity now to update the Internet Code to require ISPs to include in contracts specific obligations for ISPs to test new broadband connections, and if performance does not meet advertised claims, to allow customers to exit contracts penalty-free. This new right could be also attached to the trial period provisions under Section G of the Internet Code.

In 2012, PIAC noted the CRTC's then-upcoming pilot measurement project and speculated whether it would produce results that were representative of consumers' experiences with various ISPs. Now, with two projects completed by the CRTC, PIAC can conclude they are not fully representative. If the CRTC intends to continue these projects with SamKnows or other such companies, it should widen the sample demographic to include rural customers and be more forthcoming about the limits of the study methodology.

In 2016, the CRTC implemented a universal service objective of 50 Mbps download and 10 Mbps upload speeds with unlimited data allowance. PIAC suggests that even this standard is inadequate to support household usage demands today, in a world where all aspects of economic, educational, and cultural participation rely more heavily on broadband. Regulators – particularly the CRTC and the Competition Bureau - should work together to create a robust, enforceable framework to ensure consumers receive the services they pay for.

Recommendation 4 (2012)

Measurement Canada is a federal agency that “is responsible for ensuring the integrity and accuracy of measurement in the Canadian marketplace”. The agency:

- develops and administers the laws and requirements governing measurement,
- evaluates, approves and certifies measuring devices, and
- investigates complaints of suspected inaccurate measurement.

Measurement Canada is responsible “for the administration and enforcement of the Weights and Measures Act and Regulations, and the Electricity and Gas Inspection Act and Regulations”. However, there is no specific obstacle for Measurement Canada to set binding standards for ISPs on how to measure speeds and also monitor meters that are in use by ISPs. In fact, this new additional responsibility for Measurement Canada falls under its core responsibility of providing “fair measures for all”. By setting binding standards, Measurement Canada could provide consumers with recourse against flawed methodology determined by ISPs and flawed devices that determine speeds, including maximum advertised speeds and will provide an insight into what constitutes proper network testing. It should be noted that the Commissioner of the CCTS, Howard Maker, stated the following with respect to setting standards on how to properly measure speeds by ISPs:

“I don’t know much about Measurement Canada, but standardization and transparency in the way usage is calculated would benefit consumers and allow the industry to maintain and regain consumer trust.”

Recommendation 4.2 (2022)

Measurement Canada still has a potential role in implementing a uniform broadband testing framework. Broadband advertising reform must be founded on standardized measurements, as well as the uniform use of approved testing devices and/or methods. Measurement Canada could be an effective vehicle for setting and administering that standard, in conjunction with the Competition Bureau and the CRTC.

Recommendation 5 (2012)

Greater consumer education is needed surrounding broadband advertising claims. While standardization of ISP disclosures will enhance consumers’ ability to make informed decisions regarding their choice of ISP and package, consumers should be aware that many factors can affect their ability to achieve the advertised broadband speed. Consumers are encouraged to test their internet speed and performance using trusted tools, so that they can hold their ISPs accountable to their advertising claims and use regulatory tools such as the ITMP complaint framework established by the CRTC.

Recommendation 5.2 (2022)

The need for better consumer education is more important than ever, not only about performance-limiting factors, but also about the basic underpinnings of the internet and digital services. Consumers cannot understand the implications of speed tiers unless they also understand what “Mbps” means, as well as the amount of bandwidth and data required for various types of online activities. Without a fairly sophisticated grasp of these concepts and without reliable guidance, consumers can have trouble selecting an appropriate plan. The CRTC can have a valuable impact in educating the public about broadband services, but reach may be limited. PIAC reiterates that regulators, ISPs, and consumers can avoid much of this difficulty if broadband services were primarily advertised according to suitability of

use, and consumers could bring complaints and assert contractual rights based on these advertised qualities.

PIAC submits that stakeholder consultations conducted by the Competition Bureau, as recommended above, must place particular focus on what information is required for consumers – especially more vulnerable, technologically unsophisticated consumers – to self-select into a cost-effective plan that suits their needs. ISPs must also train sales agents to ask appropriate questions about the customer’s needs, typical usage activities, general home configuration, and geographic considerations, then to suggest a suitable plan.

Recommendation 6 (2012)

Finally, further consumer research needs to be done regarding claims about mobile internet performance. As noted, many claims about mobile internet are technology-based without accompanying explanations of what these technology claims mean or what types of conditions affect the consumer's experience. Given that the mobile internet space is evolving quickly, this area should be closely monitored by both the Competition Bureau and the CRTC.

Recommendation 6.2 (2022)

Continued consumer research is necessary to track not only consumers’ expectations about internet performance, but also affordability and changing usage patterns. As the fixed and mobile internet markets quickly evolve, consumers’ understanding of these changes is critical in empowering consumers to shop for broadband services that suit their needs and budget. Both the Competition Bureau and the CRTC, within their respective regulatory mandates, should conduct periodic reviews of Canadian ISPs’ advertising practices from the consumer perspective. Advertising regulations and codes should then be modified accordingly.