Canadian Radio-television and Telecommunications Commission
Conseil de la radiodiffusion et des télécommunications canadiennes

Telecom Regulatory Policy CRTC 2024-180

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Competition in Canada’s Internet service markets

Summary

The Commission is taking action to ensure that Canadians benefit from affordable access to high-quality Internet services.

In early 2023, the Commission launched this proceeding to renew its approach to Internet service competition. Since then, the Commission has built a robust public record with submissions from more than 300 parties and significant expert evidence. It also incorporates the perspectives of 22 groups, including large Internet service providers (ISPs), competitors, and consumers, provided during a week-long public hearing in February 2024.

Through that record, the Commission has heard the importance of moving quickly to improve Internet services in Canada. In doing so, the Commission is working to increase competition while ensuring continued investments in high-quality networks.

The Commission has moved quickly to achieve those objectives and to develop this regulatory policy. This policy will empower consumers with additional choices while encouraging companies to invest in connecting Canadians to higher-speed Internet services.

No later than **13 February 2025**, Canada’s largest telephone companies – Bell Canada, Saskatchewan Telecommunications (SaskTel), and TELUS Communications Inc. (TELUS) – must provide competitors with workable wholesale access to their fibre networks.

This access will allow competitors to bring innovative new Internet service plans to market. More than four million households in Canada currently buy Internet at gigabit speeds, and this regulatory policy will unlock new options for them when they choose a provider. Increased competition creates more choice and lower prices.

This regulatory policy extends the temporary wholesale access framework, in effect since May 2024. Competitors have already been using that framework to offer new fibre Internet service plans to consumers; this regulatory policy provides competitors with a longer-term opportunity to serve even more Canadians.

Canada

The Commission also wants to see all Canadians connected to higher-speed Internet services as quickly as possible. This regulatory policy includes two key components to support continued ISP investments in networks:

- First, any new fibre deployed by Bell Canada, SaskTel, and TELUS after today's date will not be eligible for wholesale access until 13 August 2029. This gives these companies greater opportunity to begin recouping their investments on new builds, which will encourage them to connect more Canadians to fibre sooner.

- Second, Canada's largest ISPs (including cable companies) will have to use their own networks to compete in the parts of the country that they have traditionally served. They must rely on their own investments in these areas, rather than on wholesale access to others' networks. Outside their existing territories, large ISPs can continue to use wholesale services to provide new competitive offers, for the benefit of consumers.

The Commission will set interim rates for wholesale fibre access by the end of 2024. Final rates will follow. Wholesale rates will be set to ensure that network operators recover their costs while giving competitors space to compete.

The Commission will not require cable companies to provide additional wholesale access to their fibre at this time. The limited amount of fibre built by cable companies to date, connecting just 5% of all households, does not currently justify an additional wholesale fibre requirement. However, cable companies must continue to allow competitors to use their cable networks to serve consumers at the highest available speeds. This will ensure equitable competitor access to gigabit-speed networks across Canada, regardless of whether those networks are owned by a cable company or a telephone company.

This regulatory policy is consistent with the objectives set out in the *Telecommunications Act* and the 2023 Policy Direction.[1]

The Commission will continue to closely monitor Internet service markets in Canada and will adjust its approach as necessary. This will include additional decisions and follow-up proceedings to cover topics raised during this proceeding that the Commission has not addressed in this regulatory policy.

Background

1. Most Canadians subscribe to Internet services through a wireline broadband connection provided by the local telephone company (incumbent local exchange carrier [ILEC]) or the local cable company. Collectively, these large Internet service providers (ISPs) sell Internet services to more than 80% of homes across the country.

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[1] *Order Issuing a Direction to the CRTC on a Renewed Approach to Telecommunications Policy*, SOR/2023-23, 10 February 2023

2. Major ISPs have consistently held dominant positions in this marketplace. Collectively referred to as the incumbents, these companies include the ILECs (in this regulatory policy, Bell Canada, including Bell Aliant, a division of Bell Canada [Bell Aliant] and Bell MTS Inc. [Bell MTS]; Saskatchewan Telecommunications [SaskTel]; and TELUS Communications Inc. [TELUS]) and the incumbent cable carriers (Cogeco Communications inc. [Cogeco]; Bragg Communications Incorporated, carrying on business as Eastlink [Eastlink]; Rogers Communications Canada Inc. [Rogers], and Videotron Ltd. [Videotron]).

3. The incumbents' significant market share gives them the ability to exercise market power in a way that could be harmful to the achievement of the Canadian telecommunications policy objectives set out in section 7 of the *Telecommunications Act* (the Act).

4. To address these concerns, the Commission has historically required the incumbents to provide wholesale high-speed access (HSA) services. Wholesale HSA services enable competitors to use the incumbents' networks to provide competing retail Internet services to Canadians.

5. Wholesale HSA services enable competitors to bring new offers to market. Canadians then benefit from this increased competition through additional choice in service plans and providers, as well as lower prices for their Internet services.

6. Wholesale HSA services have been made available to competitors using one or both of the following configurations:

    - aggregated wholesale HSA services (aggregated HSA), which enable competitors to connect to the incumbents' networks at as few as one centralized point of interconnection per province. Competitors then use the incumbents' transport and access infrastructure to offer Internet services to all end-users throughout the incumbents' serving territories; and

    - disaggregated wholesale HSA services (disaggregated HSA), which require competitors to interconnect to the incumbents' networks at a larger number of points of interconnection than aggregated HSA. Competitors then obtain their own transport and use the incumbents' access infrastructure to provide service throughout some or all of an incumbent's serving territory.

7. In recent years, however, rapidly changing market conditions have challenged the HSA framework's ability to promote competition. Consumer demand for higher-speed Internet services has grown rapidly and ILECs have swiftly deployed fibre-to-the-premises (FTTP) facilities. However, competitors have not been successful in making use of disaggregated HSA over FTTP (disaggregated FTTP services) and many have struggled to compete for customers at these higher speeds. This has contributed to market instability, and independent ISPs have found it increasingly challenging to bring attractive services to market.

Telecom Notice of Consultation 2023-56

8. The Commission issued Telecom Notice of Consultation 2023-56 (the Notice) on 8 March 2023 to address these issues. The Commission acknowledged in the Notice that its current wholesale HSA service framework was not effectively supporting competition.[2]

9. Through the Notice, the Commission established two concurrent processes:

   (i) an expedited process to urgently consider mandating aggregated HSA over FTTP services (aggregated FTTP services) on a temporary basis until a new wholesale HSA service framework could be finalized (the expedited process); and

   (ii) a broader review to finalize an updated wholesale HSA service framework (the broader review).

10. The expedited process resulted in Telecom Decision 2023-358, published on 6 November 2023. Based on the record of that process, the Commission directed Bell Canada and TELUS, in Ontario and Quebec, to begin offering aggregated FTTP services. These temporary services became available on 7 May 2024.

11. Following completion of the expedited process, the Commission continued its work to ensure that all Canadians could benefit from a wide range of affordable high-speed Internet services as rapidly as possible.

12. The broader review, which has led to this regulatory policy, saw participation from over 300 parties representing a diversity of perspectives. It included a public hearing held in Gatineau, Quebec, in February 2024, with participation from the incumbents; independent ISPs and associated organizations (including Community Fibre Company, National Capital Freenet, TekSavvy Solutions Inc. [TekSavvy], Xplornet Communications Inc., the British Columbia Broadband Association, Competitive Network Operators of Canada [CNOC], and First Mile Connectivity Consortium); consumer advocacy groups (the Manitoba Coalition, OpenMedia, and the Public Interest Advocacy Centre [PIAC]); a provincial crown corporation (Build Nova Scotia); the Competition Bureau; Vaxination Informatique; and two individuals.

13. Through the record of the broader review, the Commission heard the importance of delivering more choice to consumers while ensuring continued investments in high-quality networks. The Commission seeks to achieve these objectives through the adjustments to its regulatory framework that are set out in this regulatory policy.

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[2] In the Notice, the Commission reiterated a finding reached in Telecom Decision 2023-53.

Issues

14. The Commission has identified the following key issues to be addressed in this regulatory policy:

- What objectives should the Commission pursue through its wholesale HSA service framework?
- Should the Commission revise its previous findings on whether and which wholesale HSA services are essential?
- For any mandated wholesale HSA service:
  - How can the Commission support continued investment in higher-speed Internet networks?
  - What are the associated implementation details?

What objectives should the Commission pursue through its wholesale HSA service framework?

15. When developing a regulatory framework, the Commission generally establishes objectives to clarify how it will analyze the issues under consideration. When establishing objectives, the Commission takes into consideration the policy objectives of the Act and any applicable policy directions in force at the time.

16. As a starting point, the Commission notes that its previous wholesale service framework was largely established in Telecom Regulatory Policy 2015-326. In that regulatory policy, the Commission's objectives were to

- enhance the effectiveness of the wholesale service framework to facilitate vibrant and sustainable retail competition that provides Canadians with reasonable prices and innovative services of high quality that are responsive to their evolving social and economic requirements;
- incentivize efficient network investment to further the development of facilities-based competition;
- consider network efficiency, competitive neutrality, and technological neutrality when establishing wholesale regulations; and
- recognize differences in regional markets.

17. Since that time, the industry has continued to develop. The Commission observes the following:

- Consumers have fewer choices when buying Internet services: in recent years, competition has been declining. By the end of 2022, independent ISPs served significantly fewer customers than they did at the start of 2020. At the same time, several of the largest independent ISPs have been purchased by incumbents.

- The incumbents are using wholesale HSA services: various incumbents or their affiliates[3] are increasingly using wholesale HSA services both inside and outside their traditional serving territories. This is different than in the past, where independent ISPs accounted for substantially all use of wholesale HSA services.

- Not all Canadians are connected to higher-speed Internet services: while more than 83% of households and businesses reached by the incumbents have access to at least one gigabit-speed Internet connection, ISPs must continue to deploy and upgrade networks to ensure all Canadians can benefit from these services.

18. These facts suggest that the Commission’s prior regulatory approach, which prioritized facilities-based competition, has not brought about sustainable competition that delivers more choice and more affordable services to Canadians, nor has it resulted in universal access to higher-speed Internet services. The Commission must therefore set objectives that continue to incentivize network investment and facilities-based competition while supporting increased choice and greater affordability for Canadians.

19. To that end, the strategic objectives the Commission aims to achieve with this regulatory policy include

    - supporting vigorous competition in the retail Internet service market to foster greater affordability, increased choice, and differentiated service offerings for Canadians;

    - promoting investments in high-quality networks, particularly in underserved areas;

    - applying regulations in an efficient and proportionate manner based on sound and recent evidence so that they provide a transparent, predictable, and coherent path forward for the industry; and

    - ensuring the wholesale HSA service framework provides equitable regulatory treatment.

[3] Throughout this regulatory policy, the term “affiliate” has the same meaning as that set out in subsection 35(3) of the Act.

20. These objectives are founded on the policy objectives of the Act, as guided by the 2023 Policy Direction.[4] The implementation of these objectives will help bring more affordable, high-quality Internet services to Canadians by focusing on lowering barriers to entry and supporting all forms of competition and investment. They will also promote innovation in the marketplace by enabling the efficient deployment of new network technologies and encouraging differentiated service offerings.

21. To achieve these objectives, the Commission must first determine whether it should reconsider its previous findings on the essentiality of wholesale HSA services. From there, the Commission must set out any necessary changes to ensure that Canadians benefit from (i) increased competition when buying Internet services; and (ii) robust investment and deployment of Internet networks across the country.

Should the Commission revise its previous findings on whether and which wholesale HSA services are essential?

Changes are required to increase competition

22. Wholesale measures are one tool the Commission uses to increase competition in retail markets. Competitors use wholesale services to access the networks owned by the incumbents in order to offer retail services to Canadians, in direct competition with those incumbents.

23. In helping to determine whether wholesale measures are appropriate, the Commission typically relies on the essential services test (the Essentiality Test). This test assesses, among other things, whether competition will be lessened or prevented substantially in the relevant downstream markets (i.e., where retail end-users obtain services) if wholesale access is denied. Such competition serves to improve affordability, increase choice, and bring about greater levels of innovation, to the benefit of consumers.

24. In the Notice, the Commission suggested that much of its essentiality analysis from Telecom Regulatory Policy 2015-326 remained valid or could be reapplied with some adjustments. The Commission sought comments on whether there were any significant developments that would warrant adjusting its previous findings.

25. After considering parties’ submissions on this issue, the Commission confirms its view that many of the essentiality conclusions it reached in 2015 remain valid. For example, the incumbents continue to have power in the upstream market (i.e., where competitors obtain services from wholesale service providers) in the provision of wholesale HSA services, and denying wholesale access to competitors would negatively affect competition in the downstream market.

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[4] *Order Issuing a Direction to the CRTC on a Renewed Approach to Telecommunications Policy*, SOR/2023-23, 10 February 2023

26. However, the Commission considers that it must reassess one key element of its 2015 essentiality analysis. This element focuses on whether wholesale access should apply to all parts of the incumbents' networks. Such networks can be characterized into two parts: (i) the access part, which connects premises to local centres that aggregate Internet traffic from many users; and (ii) the transport part, which connects those local aggregation points together or to other more central parts of an incumbent's network.

27. While the Commission's approach to wholesale access seeks in part to lower barriers to entry so that competitors can bring additional options to consumers, the Commission generally only mandates the necessary aspects of such access and relies on market forces where they are sufficient to result in competition. In 2015, the Commission concluded that the transport part of the network could be effectively duplicated by competitors and that it was therefore unnecessary to impose a mandate on that part of the network.

28. In response to those determinations, the Commission moved away from aggregated HSA and towards disaggregated HSA. It established a transition plan to phase out aggregated HSA where disaggregated HSA was available. However, this did not deliver competitive outcomes for consumers. Competitors have struggled to effectively duplicate the end-to-end functionality of wholesale HSA services, which require both access and transport facilities, to be able to provide retail services to customers. By the end of 2022, competitors had fewer than 3,000 subscribers served over disaggregated HSA.

29. Accordingly, the Commission must adjust its considerations with respect to the duplicability of wholesale HSA services to ensure that its framework is effective in fostering the vigorous competition that will bring about greater affordability, additional choice, and increased innovation. The Commission therefore determines that its analysis of the duplicability of wholesale HSA services must consider the functionality of the service from end to end and not merely the individual components of that service. Using this lens, the Commission considers that competitors are unable to effectively duplicate wholesale HSA services.

30. A detailed assessment of the Commission's essentiality conclusions and the associated policy considerations is set out in the appendix to this regulatory policy. Based on that analysis, the Commission determines that all of the incumbents' wholesale HSA services, including aggregated HSA and disaggregated HSA provided over digital subscriber line (DSL), hybrid fibre-coaxial (HFC) cable, fibre-to-the-node (FTTN), and FTTP facilities, are essential and that aggregated HSA should be mandated.

Aggregated HSA is mandated with limitations

31. Given that aggregated HSA, including aggregated FTTP services, is determined to be essential, the Commission must now consider what limitations, if any, should apply to those services.

32. In assessing this issue, there were two key considerations on the record of this proceeding: (i) the effect that aggregated HSA could have on network investments; and (ii) what limitations, if any, should be implemented for aggregated HSA in order to protect those investments.

How can the Commission support continued investment in higher-speed Internet networks?

33. The Commission recognizes that all Canadians need access to higher-speed Internet services as quickly as possible. As many as 17% of Canadian households are not yet connected to a network capable of providing gigabit Internet speeds. The Commission must ensure that its decisions promote continued network investment.

34. The incumbents submitted that a Commission decision to mandate aggregated HSA is likely to reduce investment in high-speed networks. Evidence set out in expert reports commissioned by several parties, including the report that Rogers commissioned from the Brattle Group and the report that Bell Canada commissioned from Bates-White, demonstrated how such a decision could decrease network upgrades and prevent future network deployment.

35. The Commission recognizes that regulatory measures that reduce the incumbents' revenues can challenge the business case for the incumbents to deploy networks. The Commission must therefore apply appropriate measures to incentivize the incumbents' continued investment in high-speed networks, particularly outside urban areas.

No use of aggregated HSA by the incumbents in their wireline incumbent serving territories

36. One key area of concern is the threat that the incumbents' use of aggregated HSA may pose to network investment. Parties generally agreed that prohibiting the incumbents and their brands or affiliates from using aggregated HSA at tariffed rates, terms, and conditions (mandated aggregated HSA) within their traditional wireline incumbent serving territories (in-territory) would better protect incentives for the incumbents to continue to invest. The Competition Bureau agreed that such activity could harm competition in the long run.

37. The incumbents provided data showing that they already provide retail services, by themselves or on behalf of their brands and affiliates and using aggregated HSA in-territory, to approximately 150,000 households across Canada. In addition, Bell Canada expressed its intention to increasingly rely on aggregated HSA in-territory in areas where it has not yet deployed FTTP.

38. The Commission considers that continued in-territory use of aggregated HSA poses a risk that the incumbents will forgo upgrading their legacy and lower-speed networks. Instead, they may rely on the mandated aggregated HSA provided by the first incumbent to build infrastructure capable of delivering higher-speed Internet services. Such plans may also have the strategic effect of reducing or eliminating incentives for any incumbent to build a wireline network in areas where no such network presently exists.

39. The Commission considers that Canadians benefit when the incumbents have incentives to continue investing in their networks. Such investment will better ensure that Canadians have access to multiple high-speed wireline networks, which will increase competition and choice in the long run. It will also ensure that Canadians continue to benefit from the resiliency created by multiple networks.

40. In addition to claims that in-territory use could harm investment, several parties expressed concern that any use of wholesale HSA services by the incumbents could harm competition. These parties argued that the incumbents' use of wholesale HSA services – even outside their traditional serving territories (out-of-territory) – would enable the incumbents to undercut independent ISPs, particularly where the incumbents can bundle wireless and wireline retail services. However, OpenMedia, PIAC, TELUS, and Videotron submitted that the incumbents that can enter new markets can, in turn, disrupt those markets, to the benefit of consumers.

41. In setting out its regulatory framework, the Commission seeks to create opportunities for innovative competitors to differentiate themselves and offer new choices to consumers. This is not the same as guaranteeing that one type of competitor can profitably compete without risk. In respect of wholesale HSA services, the Commission enables wholesale access at just and reasonable, cost-based rates. It is then up to competitors to find commercial strategies that deliver an attractive value proposition that responds to consumers' needs.

42. The Commission considers that where an incumbent operates out-of-territory, it is acting as a new competitor with the potential to disrupt the status quo, to the benefit of consumers. Such access enables the incumbents to provide new competitive offers and puts pressure on all competitors to deliver additional benefits for consumers.

43. In light of the above, the Commission determines that the incumbents are no longer eligible to use mandated aggregated HSA in-territory. For greater clarity, this includes wholesale services based on HFC, DSL, FTTN, and FTTP. The incumbents will, however, be eligible to use mandated aggregated HSA out-of-territory.

44. In addition, the affiliates of those incumbents are no longer permitted to use mandated aggregated HSA in the traditional wireline serving territories of their affiliated incumbents, but are permitted to use mandated aggregated HSA outside those areas.

45. CNOC and TekSavvy suggested that the Commission should also prohibit the incumbents from offering wholesale HSA services to one another through off-tariff agreements (OTAs). These parties recommended that the Commission consider prohibiting OTAs or at least increasing the transparency of OTA use through updates to its OTA framework. The Commission considers that it does not have the record before it to amend the forbearance determinations reached with respect to OTAs for wholesale HSA services or to make informed decisions with regard to matters of transparency. As the Commission noted in Telecom Decision 2023-317, it intends to conduct a separate review of the OTA framework after this proceeding concludes.

46. Accordingly, the incumbents will not be permitted to use mandated aggregated HSA to sell retail services to customers in-territory. In addition, affiliates of the incumbents will not be permitted to use mandated aggregated HSA to sell retail services in the traditional wireline serving territories of their affiliated incumbents.

Cable carriers will not be mandated to offer aggregated FTTP services

47. The cable carriers' deployments of FTTP remain small compared to those of the ILECs. As a result, by the end of 2022, the cable carriers' FTTP reached just 5% of the homes they pass nationally, compared to over 60% for the ILECs. Almost all of the cable carriers' investments, which amount to billions of dollars, are in the next-generation HFC networks that span the vast majority of their footprint.

48. The Commission considers that the few areas where the cable carriers do provide FTTP service are generally located in new developments in densely populated areas. These areas are typically also covered by the ILECs' FTTP. Even without access to the cable carriers' FTTP, competitors can still rely on the ILECs' FTTP to provide service such that the competitive benefits of wholesale access are preserved.

49. Mandating the cable carriers to provide aggregated FTTP services would be costly to implement relative to the benefits it may bring to Canadians. It may also result in a loss of cable carriers investment. In the Commission's view, this loss of investment would also outweigh any competitive benefits that mandated cable carrier FTTP would offer (provided that the ILECs' FTTP is available and mandated).

50. In addition, the Commission recognizes that its current wholesale HSA service framework has resulted in asymmetrical wholesale regulation between the ILECs and the cable carriers. Given the shortcomings of disaggregated HSA, the cable carriers have been required to provide higher-speed wholesale HSA services over their HFC networks, while the ILECs have not been required to provide workable wholesale access to their fibre networks. This has resulted in a situation where the cable carriers are the primary providers of wholesale HSA services, and the only providers of higher-speed wholesale HSA services. The Commission considers that, if the cable carriers' FTTP services are not mandated, competitors would still largely have the choice of HFC or the ILECs' FTTP to meet consumer demand in most areas. Furthermore, some of the demand for the ILECs' wholesale services that was lost as consumers moved away from their FTTN would shift back to their FTTP. This would result in a wholesale HSA service framework that applies more equitably while maintaining the requirement for all incumbents to make wholesale access broadly available. Put simply, both the ILECs and the cable carriers will be required to provide aggregated HSA at the fastest speeds they offer to retail customers, across most of their network footprint.

51. The Commission therefore determines that Cogeco, Eastlink, Rogers, and Videotron will not be required to offer wholesale aggregated FTTP services at this time. A significant increase in the percentage of homes passed by the cable carriers’ FTTP may prompt a Commission review of whether the cable carriers should begin providing aggregated FTTP services.

52. The Commission recognizes that the above limitation could result in a situation where a competitor would lose access to higher-speed aggregated HSA in areas where an incumbent cable carrier upgrades its HFC network to fibre but where the ILEC continues to rely on legacy copper facilities. While the Commission considers that such circumstances would be rare, the potential disruption of service and loss of competitive choices for Canadians raises significant concerns. The Commission notes that various parties raised on the record of this proceeding issues related to the decommissioning practices of both the cable carriers and the ILECs. The Commission will address issues related to decommissioning practices through further process shortly. In the interim, to ensure that consumers are not negatively affected, parties are expected to avoid instances where competitors could lose access to higher-speed aggregated HSA. Should such situations arise, the Commission is prepared to address them expeditiously on a case-by-case basis.

A head start for future ILEC investments in FTTP

53. Several incumbents, including Bell Canada, Cogeco, Eastlink, and Rogers, argued that they should be allowed to recover their FTTP investments under normal market conditions before being required to offer aggregated access to those networks. Doing so, in their view, would help strengthen their business case to deploy new FTTP. In the alternative, many of these incumbents, including Bell Canada, suggested that a temporary period of network exclusivity, or a “head start,” would offset at least some of the negative effects of a mandate to provide aggregated FTTP services. Parties opposed to a head start generally argued that such a measure would limit consumer choice, particularly in rural and remote areas of Canada where FTTP networks will be deployed in the future, by preventing competitors from offering services over FTTP in these areas.

54. The Commission acknowledges the need to ensure that companies continue to invest in all regions of Canada. While the Commission notes that its rate-setting process is designed to be compensatory, it considers that a five-year head start would provide additional incentive for the incumbents to invest in areas where they have not yet built FTTP by giving them an opportunity to more rapidly recoup their initial investments. This would incentivize future network deployment, particularly in regions of Canada where the incumbents have yet to deploy FTTP access facilities.

55. The Commission acknowledges that because of this limitation, competitors would not be able to sell services over the ILECs’ new FTTP builds during the five-year head-start period. The Commission considers, however, that the long-term benefits of supporting investment and Canadians’ access to higher-quality networks outweigh the short-term benefits of more competitive options. Put plainly, a household cannot benefit from high-speed wholesale competition until an ISP is first willing to build the high-speed connection.

56. The issue of how to implement such a restriction is complex. For example, the Commission could allow an individual five-year exclusivity period for each new premises connected to FTTP. However, this would be challenging for all parties to track and enforce. It would be more appropriate to implement a head start that is applicable to all access network facilities built following the date of this regulatory policy, for a fixed period from that date.

57. In light of the above, the Commission grants the ILECs a time-limited exemption to the requirement to offer aggregated FTTP services. This exemption applies to any premises where the ILEC begins offering retail Internet services over FTTP for the first time on or after the date of this regulatory policy. This exemption will remain in place until **12 August 2029**, after which the ILECs must begin offering aggregated FTTP services to all previously exempted premises.

58. Furthermore, the Commission directs the ILECs to, by **12 September 2024**, compile a list of locations within their traditional wireline incumbent serving territories where FTTP services are available as of the date of this regulatory policy. Such lists are to be made available to competitors upon request and access to those lists can be made conditional to entering into a reasonable non-disclosure agreement.

What are the associated implementation details?

59. There remain two issues that the Commission must address to ensure a timely and effective transition to the new framework set out in this regulatory policy. The first is how quickly aggregated FTTP services must be made available to competitors. The second recognizes that the incumbents and their affiliates are no longer eligible to use the mandated aggregated HSA in their own incumbent serving territories or in the incumbent wireline serving territory of their affiliated carriers. It also sets out a plan for how existing customers provisioned over aggregated FTTP services are to be accommodated.

No more than six months to implement aggregated FTTP services

60. The ILECs proposed a 12-month timeline to implement aggregated FTTP services outside Ontario and Quebec. They generally focused on the need to develop information service and information technology systems, to integrate them with billing systems and configuration tools, to design aspects of the service and procure the required equipment, and to develop customer service and technical support capabilities. CNOC argued that where aggregated FTTP services are already available as a result of the temporary mandate imposed in Telecom Decision 2023-358, 30 days would be appropriate. It added that there is little functional difference between providing aggregated HSA over FTTN or providing it over FTTP; suggesting that 60 days would be appropriate in areas where the service is new. OpenMedia and PIAC argued that a maximum implementation time of six months will ensure that competitors have access to FTTP as quickly as possible following a long period without regulatory intervention.

61. Telecom Decision 2023-358 required Bell Canada and TELUS to establish aggregated FTTP services in Ontario and Quebec within six months of the date of that decision. In setting the six-month implementation timeline, the Commission underscored the ILECs' extensive experience in deploying aggregated HSA over FTTN. That conclusion has not changed.

62. The Commission therefore determines that Bell Canada, Bell Aliant, Bell MTS, SaskTel, and TELUS must begin offering aggregated FTTP services in their incumbent serving territories (where aggregated FTTP services are not currently available on a temporary basis) no later than **13 February 2025**. Bell Canada and TELUS must continue to offer temporary aggregated FTTP services in their serving territories in Ontario and Quebec until the tariff pages for their new aggregated FTTP services are approved. Following this approval, they must begin offering the new aggregated FTTP services effective immediately. The Commission expects there to be no disruption of service for end-users who are already subscribed to services that make use of temporary aggregated FTTP services.

A transition plan to protect existing customers served by incumbents over wholesale HSA services

63. The Commission has determined that the incumbents and their affiliates are no longer eligible to use mandated aggregated HSA in the traditional incumbent wireline serving territories of their affiliated carriers. As of the date of this regulatory policy, certain incumbents and their affiliates currently serve retail customers in those areas using the aggregated HSA of another incumbent. Therefore, to minimize disruption to consumers, the Commission must determine how to treat these customers.

64. Bell Canada, Cogeco, CNOC, and Rogers submitted that if the Commission limits the incumbents' eligibility to access wholesale HSA services at tariffed rates, terms, and conditions, it should establish a transition process to protect consumers. Rogers further argued that a short transition time frame would enable the incumbents to negotiate wholesale access arrangements or allow their subscribers whose services make use of wholesale HSA services to switch to an alternative ISP.

65. By the end of 2022, independent ISPs that have since been acquired by the incumbents served about 150,000 retail Internet customers using the aggregated HSA of those incumbents' in-territory rivals. The Commission considers that allowing customers to continue receiving service from their existing ISP will help minimize service disruptions.

66. Bell Canada and CNOC argued that the incumbents and their affiliates should not be permitted to add new subscribers using aggregated HSA where such use would violate any limitations on use by the incumbents. These parties further submitted that existing users should be protected when the new limitations are put in place.
Bell Canada recommended a transition period of 30 days to allow the incumbents to process outstanding orders and suggested that existing users should be permitted to remain on their current service and change speed profiles, but not change locations.

67. The Commission considers that the proposals put forth by Bell Canada and CNOC are reasonable. It therefore determines that the incumbents and their affiliates may only use mandated aggregated HSA within their traditional wireline incumbent serving territory for customers who are already subscribed to services that make use of mandated aggregated HSA, or who have already placed an order for such services. Customers on those pre-existing services will be allowed to change speed profiles but will not be permitted to be served by upgraded access technologies or to change locations under the mandated wholesale HSA service tariffs. The Commission further considers that a 30-day transition period is appropriate to allow any outstanding orders to be processed.

Directions

68. As discussed above, the Commission directs Bell Canada and TELUS to continue to offer temporary aggregated FTTP services in Ontario and Quebec until the tariff pages for their new aggregated FTTP services are approved and in effect. Following this approval, they must begin offering those new aggregated FTTP services effective immediately. The Commission further directs Bell Canada, Bell Aliant, Bell MTS, SaskTel, and TELUS to begin offering aggregated FTTP services in their incumbent serving territories in the rest of Canada by **13 February 2025**. The Commission also directs all incumbents to continue to offer aggregated HSA over DSL, FTTN, and HFC in their incumbent serving territories.

69. The incumbents are not permitted to make use of mandated aggregated HSA in-territory. However, each incumbent may continue to use mandated aggregated HSA in-territory to provide service to any of its own retail customers who are, by **12 September 2024**, already subscribed to or have submitted an order for services that make use of mandated aggregated HSA. The incumbents are permitted to change the speeds for any such customers on an ongoing basis at the customer’s request. However, they are not permitted to use mandated aggregated HSA to continue serving such a customer if the underlying access technology is upgraded, or if the customer changes locations for service. These determinations extend to the affiliates of the incumbents where the retail service is being provided in the traditional wireline serving territory of the affiliated incumbents.

70. The Commission directs Bell Canada, Bell Aliant, Bell MTS, SaskTel, and TELUS to file, by **19 August 2024** tariff pages for aggregated HSA over FTTP in all regions, including Ontario and Quebec, that reflect the limitations identified above, including the five-year head-start period. Furthermore, the Commission directs the ILECs to, by **12 September 2024**, compile a list of locations within their traditional wireline incumbent serving territories where FTTP is available as of the date of this regulatory policy. Such lists are to be made available to competitors upon request. Access to those lists can be made conditional to entering into a reasonable non-disclosure agreement.

71. The Commission further directs all incumbents to issue, by **19 August 2024**, updated tariff pages for aggregated HSA over DSL, FTTN, and HFC to reflect the limitations identified above. The tariff pages must also remove any restrictions that are no longer in place.

72. The Commission recognizes that it has not addressed the status of disaggregated HSA in this regulatory policy. At this time, these services will remain mandated subject to the existing tariffed rates, terms, and conditions. The longer-term regulatory status of disaggregated HSA, including whether such services can coexist with aggregated HSA, will be the subject of a subsequent Commission decision.

Rate setting

73. The Commission's review of the cost studies supporting wholesale HSA services is underway. Balancing the desire for both market certainty and timeliness, the Commission expects to issue interim rates, terms, and conditions for mandated aggregated FTTP services by the end of 2024, with final rates to follow.

Revisiting and monitoring

74. The Commission recognizes the importance of supporting market certainty for the purposes of business planning and network investment. As a result, the Commission does not intend to conduct a major review of the aggregated HSA framework approved herein any earlier than five years from the date of this regulatory policy. However, the Commission also recognizes that market conditions can change rapidly and that there is a need for the Commission to respond to those changes. To that end, the Commission is committed to closely monitoring market conditions and is prepared to intervene as necessary to ensure that the framework continues to achieve its policy objectives.

75. To support this work, the Commission intends to monitor the effectiveness of the framework through the collection of information such as (i) homes passed by various technologies (including FTTP) for the incumbents; (ii) the number of retail subscribers by ISP and the number of subscribers that make use of wholesale HSA services by ISP; (iii) use of mandated wholesale HSA services by the incumbents outside their incumbent serving territories, including both wholesale and retail demand of various technologies and speeds; (iv) acquisitions of independent ISPs by any of the incumbents or their affiliates; and (v) promotional and actual retail Internet pricing paid by Canadians. The Commission may require further processes to help establish an effective and robust monitoring regime to support the wholesale HSA service framework.

2023 Policy Direction

76. The Commission's determinations are consistent with all relevant sections of the 2023 Policy Direction. The Commission acknowledges that some sections of the

2023 Policy Direction are being contested before the courts.[5] However, its determinations are consistent with the remaining relevant sections and would stand regardless of the contested sections for the reasons set out below.

77. The Commission considers that its approach aligns with the 2023 Policy Direction by encouraging all forms of competition (paragraphs 2(e) and 8(a)) while reducing barriers to entry for smaller ISPs (paragraph 2(a)). This will further the Commission's goals of improved affordability (paragraphs 2(b) and 8(e)) and improved consumer choice (paragraph 8(c)).

78. Furthermore, the wholesale HSA service framework prioritizes innovation and investment considerations to better ensure that Canadians benefit from innovative services at reasonable prices (paragraphs 2(f) and 8(d)) while the incumbents continue to invest (paragraphs 2(a) and 8(g)). In implementing a head start for ILECs' FTTP and an exemption for the cable carriers' FTTP, the incumbents have incentives to rapidly invest in rural and remote areas (paragraph 2(c)).

79. Section 4 of the 2023 Policy Direction requires that the measures imposed by the Commission are efficient and proportionate to their purpose, while section 13 requires that its regulatory framework applies equitably to all carriers subject to the framework. The Commission considers that it would not be equitable, efficient, or proportionate to its purpose to mandate that the cable carriers offer aggregated HSA over their emerging FTTP networks while they are increasingly the principal providers of wholesale Internet services using aggregated HSA over their HFC networks.

Secretary General

Related documents

- *Review of the wholesale high-speed access service framework – Temporary access to fibre-to-the-premises facilities over aggregated wholesale high-speed access services*, Telecom Decision CRTC 2023-358, 6 November 2023

- *TekSavvy Solutions Inc. – Application to address undue preference arising from off-tariff agreements*, Telecom Decision CRTC 2023-317, 15 September 2023

- *Notice of hearing – Review of the wholesale high-speed access service framework*, Telecom Notice of Consultation CRTC 2023-56, 8 March 2023; as amended by Telecom Notices of Consultation CRTC 2023-56-1, 11 May 2023; 2023-56-2, 4 July 2023; 2023-56-3, 6 November 2023; and 2023-56-4, 8 April 2024

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[5] See Bell Canada's Notice of Appeal in *Bell Canada* v. *Beanfield Technologies Inc.* et al., Federal Court of Appeal file number A-134-24.

- *Network configuration for disaggregated wholesale high-speed access services,* Telecom Decision CRTC 2023-53, 8 March 2023

- *Review of mobile wireless services,* Telecom Regulatory Policy CRTC 2021-130, 15 April 2021

- *Review of wholesale wireline services and associated policies*, Telecom Regulatory Policy CRTC 2015-326, 22 July 2015; as amended by Telecom Regulatory Policy CRTC 2015-326-1, 9 October 2015

Appendix to Telecom Regulatory Policy 2024-180

Essentiality conclusions

1. The Commission typically relies on the essential services test (the Essentiality Test) to determine whether wholesale measures are appropriate to address retail market concerns. This test assesses, among other things, whether competition will be lessened or prevented substantially if wholesale access is denied. Such competition serves to improve affordability, increase choice, and bring about greater levels of innovation, to the benefit of consumers.

2. The Essentiality Test proceeds by first defining relevant markets, and then assessing three components: the input component, the competition component, and the duplicability component. A wholesale service must meet all three components, as described below, to be considered essential for competition. Each of these components can be described as follows:

    - Input component: is a service or facility required as an input by competitors to provide telecommunications services in a relevant downstream (retail) market?

    - Competition component: is a service or facility controlled by a firm (or firms) that has upstream (wholesale) market power such that withdrawing access to the service or facility would likely result in a substantial lessening or prevention of downstream competition?

    - Duplicability component: is it practical or feasible for competitors to duplicate the functionality of the service or facility?

3. The Commission has previously noted that the Essentiality Test does not stand alone, but rather is an initial step in determining whether to impose wholesale measures. The Essentiality Test applies narrow economic criteria and would not, absent further considerations, fully reflect the range of matters that section 47 of the *Telecommunications Act* (the Act) requires the Commission to take into account in exercising its powers (in particular, those under subsection 27(2) of the Act). Taken together, this framework has been used to assess, where appropriate, whether a wholesale telecommunications service provider's (TSP) conduct results in unduly preferring itself or disadvantaging a competitor or a group of subscribers, contrary to subsection 27(2) of the Act. As such, these criteria inform a specific method of identifying compliance with subsection 27(2).

4. Accordingly, the Commission may use a policy consideration to justify a decision to mandate the provision of a wholesale service that does not meet the Essentiality Test. Conversely, the Commission may use a policy consideration to justify a decision not to mandate the provision of a wholesale service that meets the Essentiality Test. The policy considerations that the Commission has historically applied are as follows:

- Public good: is there a need to mandate the service for reasons of social or consumer welfare, public safety, or public convenience?
- Interconnection: will the service promote the efficient deployment of networks and facilitate network interconnection agreements?
- Innovation and investment: will mandating the facility or wholesale service positively affect the level of innovation and investment in advanced or emerging networks or services for incumbents or competitors, or impact the associated level of adoption of advanced or emerging services by telecommunications users?

5. In respect of wholesale high-speed access (HSA) services, the Commission last applied the Essentiality Test in the proceeding that resulted in Telecom Regulatory Policy 2015-326. In Telecom Notice of Consultation 2023-56 (the Notice), which initiated the current proceeding, the Commission noted its preliminary view that much of the essentiality analysis from Telecom Regulatory Policy 2015-326 remains valid or could be reapplied with some adjustments. After considering parties' submissions on this issue, the Commission confirms its view that many of the essentiality conclusions it reached in 2015 remain valid. The details of this assessment are below.

Unchanged essentiality conclusions

Relevant product and geographic markets

6. Defining relevant product and geographic markets is an analytical tool that helps frame competition analysis. It proceeds by considering whether a hypothetical monopolist or group of dominant Internet service providers (ISPs), controlling some group of products, could profitably impose and sustain a small but significant and non-transitory increase in price (SSNIP).

7. Market definition focuses on customer responses to a SSNIP. It asks whether a sufficient number of customers would switch away from the hypothetical monopolist's or group of dominant ISPs' products such that the SSNIP would be unprofitable for the hypothetical monopolist or group of dominant ISPs. If so, then at least one other product must be included in the relevant market. The analysis proceeds until it finds some group of products where a hypothetical monopolist or group of dominant ISPs would profitably impose and sustain a SSNIP.

8. Crucially, assessing customer responses to changes in price is different than merely assessing whether two products offer the same end use. There are many different products that connect a user to the Internet; what is determinative, in a market definition exercise, is whether enough customers would switch to an alternative product in the face of a SSNIP.

9. In its assessment of the relevant product market in Telecom Regulatory Policy 2015-326, the Commission found that the relevant product market for the purpose of applying the Essentiality Test was wholesale HSA services. This included aggregated wholesale HSA services (aggregated HSA) and disaggregated wholesale HSA services (disaggregated HSA) offered over various wireline technologies, including digital subscriber line (DSL) over copper or over a hybrid of copper and fibre known as fibre-to-the-node (FTTN), hybrid fibre-coaxial (HFC) cable, and fibre-to-the-premises (FTTP) access facilities.

10. When defining markets for the purposes of applying the Essentiality Test, the Commission must consider the correct group of services for the purpose of assessing whether wholesale access should be mandated. In Telecom Decision 2019-343, the Commission indicated that both aspects of the product market are generally considered, namely, the downstream market (i.e., where retail end-users obtain services), and the upstream market (i.e., where competitors obtain services from wholesale service providers).

11. For the purposes of the Essentiality Test, the issue at hand is the definition of the upstream market to which the test should be applied. However, as noted above, the characterization of the downstream market is also relevant. It is therefore being addressed below.

12. Parties that commented on the issue generally agreed that the upstream product market in the context of this proceeding includes all wholesale HSA services, on an aggregated and disaggregated basis, offered over various technologies. The Competition Bureau commented that the types of wholesale inputs that are viewed as substitutes in that market can vary by, notably, technology and retail speed tier.

13. Other parties specifically referred to the downstream market. They generally argued that the product market definition established in Telecom Regulatory Policy 2015-326 should be expanded to include other technologies (e.g., fixed and mobile wireless, and satellite). Rogers Communications Canada Inc. (Rogers), citing a report it commissioned from the Brattle Group (the Brattle Report), indicated that Canadian consumers consider the speed-price-data bundle they purchase, not the technology underlying the offering. Some parties argued that both mobile wireless and satellite services are sufficiently close substitutes for wireline services to be considered part of the same relevant product market, arguing that there has been significant convergence between wireline, wireless, and satellite technologies since 2015. They argued that fixed wireless solutions are currently similar to wireline services in terms of speed and price.

14. The key issue at present is whether the product market should be expanded to include wireless and satellite technologies.

15. In the Commission’s view, grouping mobile wireless and satellite technologies into the same product market as wireline would significantly change the structure of the

market. Under this definition, the marketplace would appear to be much more competitive, with both competitors who rely on wholesale services and consumers having many more options for Internet access. This would have significant implications on the Commission's decision on whether to mandate the wholesale service in question.

16. The Commission considers, however, that there is no compelling evidence to demonstrate that wireless and satellite services are sufficiently close substitutes to wireline Internet services in the minds of competitors who use wholesale services, or in the minds of consumers, in either the upstream or downstream markets. Although the technological gap between wireline services and satellite and mobile wireless services may be shrinking, the Commission considers that there are still significant differences in terms of service capacity and price between wireline services and mobile wireless and satellite services.

17. Additionally, although satellite services are broadly available, consumers with high-quality fixed Internet access (e.g., those in urban areas) are not adopting them to any significant extent. Also, most households across Canada have both mobile wireless and fixed Internet service subscriptions, suggesting that these services address different needs, rather than acting as close substitutes.

18. Accordingly, the Commission finds that the appropriate upstream relevant product market remains aggregated and disaggregated HSA (wholesale HSA services) offered over various wireline technologies, including DSL, FTTN, HFC, and FTTP. For the downstream market, the Commission finds that the relevant market includes only wireline Internet services.

19. In Telecom Regulatory Policy 2015-326, the Commission found that, while the relevant geographic market could be as granular as an individual household, effective analysis and administration warranted aggregating the market based on incumbent serving territories.

20. While parties submitted geographic market proposals ranging from the individual household to a national market, the Commission finds that a level of aggregation higher than the individual household but lower than national is still required for effective analysis and ease of administration. The serving territories of the large incumbent local exchange carriers (ILECs) and the large incumbent cable carriers (collectively, the incumbents) remain the most appropriate basis of aggregation for geographic market definition.

Input component

21. In Telecom Regulatory Policy 2015-326, the Commission concluded that wholesale HSA services met the input component of the Essentiality Test in all the incumbents' serving territories.

22. In assessing the input component, the Commission must determine whether the facility associated with the wholesale service in question is required as an input by another firm to provide a downstream retail service. The Commission considers (i) the downstream market(s) for which the wholesale service is an input; (ii) the technical aspects of the wholesale service; (iii) the past, current, and anticipated demand for the wholesale service; and (iv) trends in demand to assess whether there is sustained growth or decline.

23. The input component is satisfied if the Commission finds that the wholesale service in question is a required input for competitors to provide downstream retail services, and if there is or will be sufficient demand for the wholesale service.

24. While parties such as Bell Canada, Videotron Ltd. (Videotron), and independent ISPs did not dispute that the Commission's previous conclusions on the input component remain true, several incumbents argued that they are no longer true because independent ISPs can compete in the downstream market using alternative facilities, including wireless and satellite. However, in its analysis of the product market above, the Commission determined that mobile wireless and satellite services are not part of the relevant product market. Therefore, these arguments cannot be determinative.

25. The Commission recognizes that demand for the ILECs' wholesale HSA services has declined. It is the Commission's view that this has occurred due to the current wholesale HSA service framework's inability to respond to changing market conditions. Over the past few years, consumers have demonstrated an increased preference for higher-speed retail services that are not supported by FTTN networks. The number of households that subscribe to plans with download speeds of 300 megabits per second (Mbps) or higher increased by more than 40% from the end of 2020 to the end of 2022, while those subscribed to plans with speeds of 1 gigabit per second or higher more than doubled.

26. During that time, the large ILECs were only required to provide disaggregated FTTP services. In Telecom Decision 2023-53, the Commission found these services to be unviable to support broad competition. As a result, competitors could rely only on HFC-based wholesale HSA services to meet the growing retail demand for higher speeds. Subscribers to services making use of the large ILECs' wholesale HSA services dropped by more than 40% from 2020 to the end of 2022, while those subscribed to the large cable carriers' wholesale HSA services remained stable. Meanwhile, the number of subscriptions relying on wholesale HSA services declined by 15% at the same time as the overall retail market saw a 5% increase in the number of subscribers. Given these data, it is the Commission's view that HFC-based wholesale HSA services are not sufficient on their own to ensure vigorous competition. Accordingly, it is likely that there is additional demand for wholesale HSA services that is not currently met due to the unavailability of workable wholesale FTTP access.

27. In light of the above, the Commission finds that wholesale HSA services continue to meet the input component of the Essentiality Test.

Competition component

28. In Telecom Regulatory Policy 2015-326, the Commission concluded that wholesale HSA services met the competition component of the Essentiality Test in all the incumbents' serving territories.

29. In assessing the competition component, the Commission will examine two elements: (i) the upstream market conditions, specifically, whether a firm or a group of firms have market power, and (ii) the impact that any upstream market power might have on competition levels in the associated downstream retail market(s).

30. The competition component is satisfied if the Commission finds that there is upstream market power and that competition in the associated downstream market(s) could be lessened or prevented substantially if it does not mandate the provision of the wholesale service.

31. Most incumbents argued that wholesale HSA services fail to meet the competition component of the Essentiality Test because the retail market is competitive. They noted a drop in wireline-based service prices and increased network investments across the country as evidence of intense facilities-based competition. The incumbents submitted several expert reports that aimed to demonstrate that competition in the retail market is healthy:

    - the NERA Economic Consulting report (the NERA Report) commissioned by TELUS Communications Inc. (TELUS), and the Analysys-Mason Report commissioned by Bell Canada, each of which focused primarily on international price comparisons;

    - the Brattle Report, which argued that recent improvements in coverage and speed, an increase in the number of available ISPs, and a decrease in the price of retail Internet service plans when adjusted for quality and speed all suggest that the retail market is competitive; and

    - the Bates-White Report commissioned by Bell Canada, which agreed with the Brattle Report's conclusion that competition between two service providers can be sufficient, citing both theoretical models and international precedent. The Bates-White Report further noted recent decreases in cable carrier market share as evidence of intensified competition.

32. The ILECs further argued that competition does not depend on wholesale HSA services provided over FTTP, since competitors have mandated access to aggregated HSA and, in some cases, disaggregated HSA over HFC provided by the cable carriers.

33. The Commission considers that its 2015 findings with respect to the upstream market continue to hold true. The incumbents continue to be the sole suppliers of wholesale services to competitors and collectively control the upstream market. Wholesale HSA services, and particularly wholesale FTTP services, have not been made broadly available by the industry on a voluntary commercial basis. Finally, there is a continued trend of limited rivalrous behaviour at the wholesale level between the incumbents to constrain upstream market power. While both the ILECs and the incumbent cable carriers meet their regulatory wholesale obligations, there is no evidence that the incumbents make substantial efforts to acquire other incumbents' wholesale customers. Based on the above, the Commission determines that the incumbents continue to collectively maintain upstream market power in the provision of wholesale HSA services and are unlikely to make these services widely and economically available in the absence of a mandate.

34. With respect to the downstream competition component, the Commission has previously found that failing to mandate wholesale HSA services would impair downstream competition, to the detriment of consumers. The Commission finds that this continues to be true. If wholesale HSA services were no longer mandated, the incumbents could withdraw wholesale access to their networks or increase wholesale HSA service rates to a point where they do not economically allow for the offering of competitive retail services. This would eliminate or limit the ability of smaller competitors to offer services and would reduce the number of competitive choices available to Canadians. Throughout most of the country, Canadians would have only two competitive options, leading to a duopoly. When the Commission reviewed the mobile wireless service market in Telecom Regulatory Policy 2021-130, it found that the three national wireless carriers held market power over the provision of retail mobile wireless services throughout most of Canada. Even in those circumstances, with three rather than two options, a wholesale solution was required to protect the interests of users.

35. Additionally, the Commission considers that market conditions in the period prior to the availability of temporary aggregated FTTP services, when there was no workable access to the incumbents' FTTP networks, clearly show the negative outcomes that result from the absence of viable wholesale access. During that time, the incumbents did not voluntarily provide commercially negotiated wholesale access to their FTTP facilities on a wide scale. As market demand shifted towards higher-speed services, competitors were unable to rely on workable access to wholesale FTTP services to deliver retail services. They instead provided services primarily by using wholesale HFC access. Accordingly, as noted above, while the number of customers served through wholesale HSA over HFC remained stable, the number served through the ILECs' FTTN and DSL declined. This led to customers having fewer viable options when buying higher-speed Internet services. Independent ISPs struggled to retain customers and many of them were acquired by incumbents.

36. As noted above, several incumbents filed expert reports during this proceeding purporting to show that prices in Canada are in line with those in other jurisdictions. The incumbents used these reports to argue that the competition component of the Essentiality Test cannot be satisfied, because markets in Canada are sufficiently competitive. The Commission considers that the expert reports provided limited insight into actual pricing behaviour in different countries, which is a function of many variables, including an individual country's gross domestic product, population density, service characteristics, and consumer preferences. While the NERA and Analysys-Mason reports used different modelling techniques in an attempt to adjust for such factors, the Competition Bureau demonstrated that methodological and data selection choices may render those reports unreliable. In doing so, the Competition Bureau pointed to reports from the Federal Communications Commission; Innovation, Science and Economic Development Canada/Wall Communications Inc.; and the Organisation for Economic Co-operation and Development, which demonstrated that retail Internet prices in Canada are high compared to international counterparts. The Commission therefore considers that these differing findings suggest that the international price comparisons filed on the record of this proceeding are inconclusive.

37. Beyond international price comparisons, the Brattle and Bates-White reports argued on a theoretical level that a market with few suppliers can still be intensely competitive. They did not, however, conclusively demonstrate that such a condition exists in the retail Internet service market in Canada. As noted by the Competition Bureau, retail Internet services are not homogenous, and neither are the marginal costs of the ISPs, as shown by differing tariffs for wholesale HSA services. This calls into question the applicability of the theoretical Bertrand model relied upon in the Brattle and Bates-White reports. The Brattle Report argued that the number of choices Canadians have for broadband service providers increased between 2017 and 2023. However, the Commission notes that the analysis included satellite services, which are not part of the relevant product market in this matter. Furthermore, the Brattle Report claimed that a shift in market share in favour of the large ILECs might suggest improved competition. However, the Commission considers that it could equally signal that the large ILECs' FTTP networks are regaining ground that was previously lost to early HFC deployments.

38. Finally, the Brattle and Bates-White reports also argued that recent increases in Internet service speeds coupled with decreases in retail prices suggest a healthy competitive retail Internet service market. The Brattle Report demonstrated that the average revenue per user per gigabyte of data usage and per Mbps of speed has decreased. However, Dr. Zhiqi Chen noted in a report commissioned by the Competitive Network Operators of Canada (CNOC), TekSavvy Solutions Inc. (TekSavvy), and Videotron that the analysis does not consider a comparative benchmark and could equally be explained by improvements in technology as by competitive behaviour. In the Commission's view, this evidence alone does not lead to a definitive conclusion that competition in the retail market is healthy.

39. The Commission therefore considers that the evidence is not sufficiently persuasive to call into question its previous conclusions that the incumbents collectively possess upstream market power, and that competition would be lessened or prevented substantially in the downstream Internet service market, in all incumbent serving territories, if it denied effective access to wholesale HSA services.

40. In light of the above, the Commission finds that wholesale HSA services continue to meet the competition component of the Essentiality Test.

Changes to the duplicability conclusions are required

41. The Commission established a product market in Telecom Regulatory Policy 2015-326 that consisted of all wholesale HSA services. This included services provided over both aggregated and disaggregated HSA. It then applied the input and competition components of the Essentiality Test to that product market and found that both components were satisfied.

42. In assessing the duplicability component, the Commission assesses whether it is practical or feasible for competitors to duplicate the functionality of a facility or service, through either self-supply or third-party supply. The duplicability component is met when the Commission finds that the functionality of a particular wholesale service cannot be practically duplicated by a reasonably efficient competitor on a sufficient scale.

43. However, when it applied the duplicability component of the Essentiality Test in Telecom Regulatory Policy 2015-326, the Commission deviated from this approach. Instead of applying the duplicability component to all wholesale HSA services, it considered separately the duplicability of the underlying access and transport network components that support those services. The resulting finding was that transport facilities were duplicable, while access facilities were not. This led to the decision to mandate disaggregated HSA and phase out aggregated HSA.

44. While many parties argued that the Commission’s duplicability analysis remains appropriate, TekSavvy submitted that the question of whether transport facilities are duplicable should not impact the Commission’s assessment of the duplicability component. It argued that this is because competitors require both access and transport facilities to feasibly make use of wholesale HSA services. OpenMedia and the Public Interest Advocacy Centre (PIAC) added that the Commission must mandate a wholesale HSA service that provides for the establishment of a connection between a given customer’s household and a location from which a competitor can effectively offer that customer competitive retail Internet services.

45. The Commission considers that competitors are not currently able to effectively duplicate the end-to-end functionality of the incumbents’ wholesale HSA services. This has been demonstrated in the market over the past six years. For example, independent ISPs were generally unable to use disaggregated HSA to create a retail

FTTP service offering for their customers. This was true even as the highest speeds that FTTP delivers became increasingly popular among consumers. When the Commission introduced disaggregated HSA in 2015, it expected that the service would be increasingly adopted by competitors and would encourage increased innovation and investment. However, in Telecom Decision 2023-53, the Commission determined that disaggregated HSA could not broadly support the competition required to respond to Canadians' needs. By the end of 2022, there were fewer than 3,000 wholesale-based subscribers whose services made use of disaggregated HSA.

46. Based on the evidence above of real-world competitor experiences, the Commission considers that reasonably efficient smaller competitors are not able to reproduce the end-to-end services supported by aggregated HSA and that this is sufficient for the purposes of this proceeding. With respect to transport services in general, there was limited evidence submitted in this proceeding to assess the effective duplicability of transport networks. The Commission indicated in the Notice that it will consider issues related to the availability of competitive transport services through a separate proceeding at a later date.

47. Accordingly, for the purposes of assessing duplicability, the Commission considers that it is the functionality of the service that matters. Since the incumbents' retail Internet services have not been and are not likely to be broadly duplicated by competitors absent aggregated access, the Commission finds that aggregated HSA meets the duplicability component of the Essentiality Test.

48. Given the above determinations, the Commission considers that both aggregated and disaggregated HSA meet the Essentiality Test.

Policy considerations

49. The Commission must now assess whether the policy considerations would inform, support, or justify reversing the determination to mandate the provision of wholesale HSA services. The Commission considers that the innovation and investment policy consideration is the appropriate lens for assessing whether wholesale HSA services should ultimately be mandated.

50. The innovation and investment policy consideration asks whether mandating the facility or wholesale service will positively affect the level of innovation and investment in advanced or emerging networks or services for the incumbents or competitors, or impact the associated level of adoption of advanced or emerging services by telecommunications users.

51. The incumbents generally argued that the greatest innovation arises from facilities-based competition that encourages investment and allows market forces to prevail. However, several other parties noted the benefits that smaller independent ISPs can bring to the market. CNOC, OpenMedia, PIAC, and TekSavvy generally argued that if independent ISPs are supported through lower barriers to entry, they

can bring service and price innovation to the market. OpenMedia and TekSavvy also cited several individual interveners who argued that promoting competition fosters more choice, encourages investment and innovation, and leads to more affordable Internet service.

52. The British Columbia Broadband Association submitted that competition is best done at a service level through innovation and price efficiencies. Videotron highlighted that the success of independent ISPs Oxio and VMedia, and their subsequent acquisitions by Cogeco Communications inc. and Videotron, is evidence of such innovation. CNOC argued that if the Commission provides an effective way for smaller providers to compete, they will make a positive contribution to future innovation and investment.

53. The Commission considers that the incumbents are innovating at the network level in terms of spending on research and development and the deployment of technical upgrades. At the same time, innovation can also occur at the service level. Companies can be said to be innovating when they introduce differentiated products that fill a market need or introduce novel practices in areas such as billing, marketing, and customer service. To maximize the potential for innovation, it is important to ensure that the marketplace includes a diverse mix of facilities- and service-based competitors. In this regard, the Commission considers that mandated wholesale HSA services support a diverse set of competitors and provide the opportunity for additional innovation, to the benefit of all Canadians. Furthermore, paragraphs 2(a), (e), and (f) of the 2023 Policy Direction articulate the value that all forms of TSP bring to the marketplace.

54. Several parties, however, expressed concern that the incumbents' use of wholesale HSA services could enable them to undercut independent ISPs. There was particular concern with the ability of Bell Canada, Rogers, and TELUS to bundle wireless and wireline retail services and price them aggressively. Rogers and TELUS argued, however, that allowing them to continue using wholesale HSA services would give them the opportunity to expand their services and provide consumers with the benefits of increased competition. OpenMedia, PIAC, TELUS, and Videotron added that incumbents that can enter new markets can, in turn, disrupt those markets, to the benefit of consumers. The Competition Bureau submitted that, while any bundling by the incumbents could be a barrier to entry for smaller ISPs, the competitive benefits of an incumbent accessing wholesale HSA services outside its footprint likely outweigh the risks.

55. In setting out its regulatory framework, the Commission seeks to create opportunities for innovative competitors to differentiate themselves and bring new choices to consumers. Importantly, this is not the same as guaranteeing that one type of competitor can profitably compete without risk. In respect of wholesale HSA services, the Commission enables wholesale access at just and reasonable, cost-based rates. It is then up to competitors to find commercial strategies that deliver an attractive value proposition that responds to consumers' needs.

56. The Commission considers that an important aspect of delivering innovation in retail markets is companies' ability to disrupt the status quo. The record of this proceeding shows that there is a trend toward larger incumbents using wholesale HSA services to expand beyond their traditional incumbent serving territories. In doing so, these companies can introduce new service offerings that put pressure on other incumbents to provide a competitive response that will benefit Canadians. By enabling the incumbents to compete against one another in new markets, mandated wholesale HSA services would encourage intensified competition, resulting in more choice of innovative service plans, and put downward pressure on Internet service prices for Canadians. As a result, the Commission will not impose limitations that fully restrict the incumbents from accessing wholesale HSA services.

57. While supporting innovation is a key policy consideration, the Commission must also ensure continued investment to expand high-speed networks, as well as the investment needed for the research and development into and deployment of new technologies. The Bates-White Report explained that wholesale regulation could increase the risk borne by facilities-based providers, in turn reducing their incentives to invest. The Brattle Report demonstrated the negative potential impacts on Rogers' cash flow and the resulting potential reduction in planned capital expenditures that a requirement to offer wholesale HSA services could cause. Both reports indicated that a mandate to provide wholesale HSA services could therefore negatively impact the business case for deploying fibre to areas that have not yet received FTTP. While the Commission notes that some of the risks to investment incentives can be tempered by just and reasonable rates, it considers that the concerns raised in these expert reports are credible. The Commission recognizes that it must therefore ensure that mandating wholesale HSA services does not have a significantly negative impact on the incentives for the incumbents to invest in their own networks.

58. The Commission must address the often-competing considerations of innovation and of investment. In so doing, it must apply appropriate measures to protect continued investment by the incumbents in their high-speed networks, particularly in rural and remote areas, where there is comparatively less availability of high-speed networks. Accordingly, the Commission will apply limitations to its framework that are designed to protect continued investment by the incumbents in their networks, to the benefit of Canadians. By applying limitations on who must provide wholesale HSA services and who can use them, the Commission considers that the framework will effectively satisfy the considerations of innovation and of investment, and ultimately support the decision to mandate wholesale HSA services.

59. In light of the above, the Commission considers that the innovation and investment policy consideration supports mandating wholesale HSA services. Such a mandate, with some limitations applied to mitigate potential negative impacts on investment, will facilitate the ability of ISPs, small and large, to bring innovation to the market through diverse and vigorous competition. This will, in turn, support more choice and lower prices for Canadians.

Updated essentiality conclusions and wholesale HSA service mandate

60. The Commission considers that the results of the updated application of the Essentiality Test demonstrate that all wholesale HSA services are essential. The Commission previously found wholesale HSA services that use FTTP access facilities to be essential and subject to being mandated – it merely limited the availability of that access to the disaggregated HSA that years of real-world experience ultimately proved unviable. The adjustments to the duplicability conclusions and policy considerations in this regulatory policy will result in regulatory treatment that ensures competitors have effective access to wholesale services. They advance the objectives of the wholesale framework and the Act and are consistent with the 2023 Policy Direction.[6]

61. As markets have developed, it has become clear that without viable aggregated access to the incumbents' networks, companies that rely on wholesale services have not been able to effectively compete and deliver additional innovation and choice to Canadian consumers. Because it can also be used to provide competing Internet services, disaggregated HSA also meets the Essentiality Test. However, disaggregated HSA is not sufficient on its own to guard against unjust discrimination and undue preference if mandated in isolation from aggregated HSA. Although disaggregated HSA is not viable to support broad competition, there may be some use cases for such a service if it is mandated in conjunction with aggregated HSA. This regulatory policy focuses on aggregated HSA, given the urgency to provide workable access to fibre. The Commission will issue its determinations on disaggregated HSA in a future decision.

[6] *Order Issuing a Direction to the CRTC on a Renewed Approach to Telecommunications Policy*, SOR/2023-23, 10 February 2023