



Telecom Decision CRTC 2019-343

PDF version

Ottawa, 4 October 2019

Public record: 8640-B2-201801225

Bell Canada – Application for forbearance from the regulation of low-speed competitor digital network access services

The Commission determines that there is insufficient evidence to assess whether Bell Canada's low-speed competitor digital network access services should no longer be mandated. As a result, they will continue to be mandated, and the Commission will not consider forbearance from the regulation of these services at this time.

Application

1. The Commission received an application from Bell Canada, dated 3 March 2018, in which the company requested that the Commission forbear from regulating its low-speed competitor digital network (CDN) access services. Specifically, Bell Canada sought (i) a Commission finding that these services are no longer essential, and (ii) forbearance from the regulation of low-speed CDN access services that terminate at retail business end-users' premises and the related CDN central office (CO) link service, but only where it is used in conjunction with low-speed CDN access services (collectively, CDN Services). Low-speed CDN access services used for interconnection purposes to competitors' points of presence were excluded from the application. Bell Canada also sought a one-year phase-out period, at the end of which it would be permitted to provide CDN Services at non-tariffed rates or to stop providing the services altogether.
2. The Commission received interventions regarding Bell Canada's application from Allstream Business Inc., a wholly owned subsidiary of Zayo Canada Inc. (Allstream); the Canadian Network Operators Consortium Inc. (CNOC); Shaw Cablesystems G.P. (Shaw); and TELUS Communications Inc.

Background

3. CDN access services are wholesale business data services that enable the digital transmission of information from incumbent local exchange carriers' (ILEC) COs to competitors' customer premises. CDN Services transmit information at DS-0 (64 kilobits per second) and DS-1 (1.544 megabits per second) speeds.
4. In Telecom Decision 2008-17, the Commission determined that the provision of low-speed CDN access services should be mandated, given a number of factors related to the status of networks, technology alternatives, and the challenges faced by competitors in developing their networks and businesses.

5. Further, the Commission noted in that decision that technological advances and industry evolution may provide a wholesale alternative to the ILECs' low-speed CDN access services in the future.
6. In Telecom Regulatory Policy 2015-326, the Commission reviewed various wholesale wireline services and related policies. It indicated that it would base its decision to mandate the provision of regulated wholesale services on two elements: (i) the Essentiality Test, which includes three components that must be satisfied,¹ and (ii) a set of policy considerations that could lead to the modification of or support the Commission's decision to mandate (or not mandate) a service under the Essentiality Test.²
7. The Commission determined in Telecom Regulatory Policy 2015-326 that low-speed CDN access services should continue to be mandated. Moreover, the Commission stated that the wholesale services framework established in that decision would remain in place for a minimum of five years, during which time the Commission would monitor competitive conditions.

Issues

8. The Commission has identified the following issues to be addressed in this decision:
 - Should the Commission continue to mandate Bell Canada's CDN Services?
 - Should the Commission forbear from the regulation of Bell Canada's CDN Services?

Should the Commission continue to mandate Bell Canada's CDN Services?

Approach to the Essentiality Test

9. In order to determine whether a service should be mandated using the Essentiality Test, it is first necessary to determine the relevant markets for the wholesale service in question. This enables the Commission to examine the extent of the market power a firm possesses. The determination entails defining the smallest group of products/services and geographic area (i.e. the product market and the geographic market) over which a firm could profitably impose a significant and sustainable price increase. Two aspects of the product market are generally considered: (i) the downstream retail market, in which retail end-users obtain products or services from service providers; and (ii) the upstream market, in which competitive service providers obtain products or services from wholesale service providers to provide retail products or services to the competitor's retail end-users. The product and geographic markets may be modified so as to balance the need for meaningful defined

¹ The three components of the Essentiality Test are the input component, the competition component, and the duplicability component.

² The three policy considerations are public good, interconnection, and innovation and investments.

markets against the administrative burden imposed by individually examining a large number of smaller markets.

10. Following a finding regarding the relevant markets, the three components of the Essentiality Test are examined to determine if all three components are satisfied:

- Input component – competitors require the wholesale service to provide telecommunications services in a relevant downstream retail market. This includes considering the service’s downstream market, technical aspects of the service, demand for the service, and sustained growth or decline of the market.
- Competition component – a firm (or group of firms exercising collective market power) has upstream market power such that denying or withdrawing access to the service would likely result in a substantial lessening or prevention of competition in the relevant downstream retail market.
- Duplicability component – it is not practical or feasible for competitors to duplicate the functionality of a service (e.g. by self-supply or via a third party).

11. Following an analysis of the three components of the Essentiality Test, three policy considerations may be used to inform, support, or reverse a decision on whether to mandate a wholesale service:

- Public good status – there is a need to mandate the service for reasons of social or consumer welfare, public safety, or public convenience.
- Interconnection – the service would promote the efficient deployment of networks and facilitate network interconnection arrangements.
- Innovation and investment – mandating or not mandating the facility or wholesale service could affect the level of innovation or investment in advanced or emerging networks or services.

Commission's analysis and determinations

12. In the Commission's view, Bell Canada's application is deficient in that key information that the Commission requires to apply the Essentiality Test has not been provided. There is also a lack of relevant supporting evidence. The Commission identifies certain elements of Bell Canada's application below that exemplify the deficiency in the company's application and the record of this proceeding. These deficiencies have prevented the Commission from being able to perform a fulsome analysis and make any conclusive determinations as to whether the CDN Services satisfy the three components of the Essentiality Test.

Relevant markets – Product market definition

Positions of parties

Downstream market

13. Bell Canada stated that the majority of its low-speed CDN access circuits are used to provide large enterprise retail end-users with business data services. It submitted that the downstream market associated with CDN Services must be for business data services with a modicum of complexity, such as connections to multiple locations.
14. Bell Canada indicated that CDN Services are becoming just one of a broad portfolio of Internet Protocol (IP) services available to downstream end-users, since
 - CDN Services can be provided over coaxial cable;
 - fibre-optic facilities have been widely deployed;
 - time-division multiplexing (TDM) emulation over IP facilities provides CDN Services in a manner that is seamlessly understood by customer premise equipment (CPE);³ and
 - Ethernet services, which are considered to be the “gold standard” for retail data solutions, can be configured to emulate CDN Services and provide the same, if not better, level of security, reliability, and symmetrical speeds.
15. Allstream submitted that there are no alternative services within the same product market as CDN Services to support the downstream retail business service market, and that low-speed digital access services are distinct from high-speed digital access services and are therefore not in the same product market.

Upstream market

16. Bell Canada described the upstream product market for CDN Services as the options available for providing an access path from an ILEC’s CO to a business customer’s location within the ILEC’s operating territory.
17. Bell Canada identified different wireline services that are functionally equivalent to CDN Services, resulting in retail business service customers migrating to higher-bandwidth and feature-rich IP services. Some of the wireline alternatives noted by Bell Canada include
 - competitors’ use of their own networks to provide retail data services (self-supply),

³ TDM emulation is a network technique that provides TDM or circuit-switched functionalities over packet-switched networks, such as IP-based or Ethernet networks. Bell Canada submitted that it would soon provision new CDN installations using TDM emulation over fibre-optic facilities rather than over copper facilities.

- Ethernet services,
- TDM emulation, and
- ILECs' retail digital network access (DNA) services.

18. CNOC submitted that none of the alternative products or services discussed by Bell Canada are suitable substitutes for CDN Services for the following reasons:

- self-supply is not an economic alternative, since no competitor can ubiquitously supply throughout its territory;
- Ethernet services are not a viable alternative, since they are fibre-based and provide more functionality than what is required, at a higher cost, and are not ubiquitously available;
- high-speed access services are not functionally equivalent to CDN Services, since they are “best-effort” services, are not subject to service-level agreements (SLAs), and are more expensive;
- retail DNA service rates are considerably higher than CDN Service rates, which makes retail DNA services an uneconomic substitute for CDN Services.

19. In assessing the alternatives to CDN Services, Shaw argued that while Ethernet may be the gold standard for data services, its capacity and speed are not required for voice connectivity. Shaw also submitted that Ethernet services are often not available where it leases CDN Services. Shaw further submitted that other alternatives noted by Bell Canada do not exist at many locations, provide unnecessary capacity, or are unsuitable for business voice applications.

Commission's analysis and determinations

20. Bell Canada provided little information on how CDN Services are used in the wholesale service market in terms of the actual products and/or services provided to end-users. This information is necessary for the Commission to assess the product market because without it, only broad or general conclusions can be made, thus preventing the establishment of a narrower product market definition. Further, Bell Canada has, without adequate rationale, disregarded the Commission's past determinations on the appropriate product market for such services. For instance, in Telecom Decision 2008-17, the Commission considered that ILEC retail services were not an economic alternative to low-speed CDN access services.

21. The Commission considers that, based on the characteristics of CDN Services,⁴ it would not be appropriate to adopt a broad product market definition for its analysis. Compared to fibre-based, IP-based, or coaxial cable-based services, CDN Services provide fewer functionalities and much slower data transmission speeds. However, these limited functionalities and speeds with associated low-cost pricing are all that some business customers require. Further, fibre optic and coaxial cable facilities are not present in certain locations. This leaves copper-based CDN Services as the only option available to competitors to meet the needs of business service customers in those locations.
22. Further, the Commission considers that Bell Canada provided no clear arguments as to what the product market for CDN Services should be. While some wholesale services may provide similar functionality, the substitutability of such services is limited by significant differences in price and ubiquitous availability. In the Commission's view, copper-based CDN Services are likely their own distinct upstream product market.
23. However, there is insufficient evidence on the record of this proceeding for the Commission to make a conclusive determination on the appropriate product market for CDN Services.

Relevant markets – Geographic market definition

Positions of parties

24. Parties suggested a range of geographic markets, from the ILEC's entire operating territory (i.e. the largest practicable territory), to local exchanges, to wire centres (i.e. the smallest practicable territory).⁵
25. Bell Canada noted that the Commission has previously considered the regulatory framework for CDN Services on the basis of aggregated markets to balance the need for meaningfully defined markets with the administrative burden of examining a large number of small markets. The company therefore proposed that the relevant geographic market be its ILEC operating territory.
26. Bell Canada submitted that exchanges are no longer a relevant geographic construct in which to place potential CDN Service substitutes, since IP-based services enable access to retail business customers with few, if any, geographical limitations.

⁴ These characteristics include the ubiquity of the legacy copper-based TDM network, the circuit-switched nature of the service and its compatibility with existing CPE, guaranteed throughput levels, short repair time frames, and low speeds, which allow for lower prices.

⁵ A wire centre is switching equipment that serves a designated geographical area. A wire centre is housed in a CO building that may contain a number of wire centres.

27. Allstream argued that the most appropriate geographic market definition would be the wire centre or, alternatively, the exchange, consistent with the Commission's approach to retail local exchange services. Allstream submitted that CDN Services are copper-based and are subject to the conditions within each wire centre. It further argued that the availability of self-supply or third-party alternative services can vary widely between wire centres, from good to limited to no availability.
28. CNOOC stated that the relevant geographic market should be sufficiently narrowly defined to take into account regional differences, and should be no larger than a census metropolitan area (CMA).⁶ CNOOC submitted that competitors do not have the ability to switch between suppliers of alternative services since CDN Services can be CO-specific.

Commission's analysis and determinations

29. The Commission considers that Bell Canada's incumbent operating territory has a diverse range of population densities, network technologies, and alternative networks. Using the proposed ILEC operating territory for the geographic market would result in a loss of a degree of granularity that could be important in a Commission analysis. On the other hand, adopting the wire centre or exchange as the geographic market would be administratively burdensome since there are thousands of wire centres and exchanges across Bell Canada's incumbent operating territory.
30. The Commission considers that CMAs provide a reasonable level of aggregation that can be representative of population centres, with a reduced administrative burden. However, CMA boundaries follow municipal boundaries, and not the legacy TDM network topology, namely exchanges. This could pose problems in the analysis of CDN Services since they are provisioned on an exchange basis. Where a CMA boundary splits an exchange into two or more parts, the result could be different regulatory treatment of the services in different parts of the same exchange. Accordingly, CMAs would not be a suitable geographic market.
31. The Commission considers that local interconnection regions (LIRs) could represent an appropriate balance between ILEC operating territories and wire centres or exchanges. LIRs enable local exchange carriers to have a single point of interconnection (POI) for all the exchanges within an LIR boundary. In this regard, LIRs may provide an appropriate balance for a geographic market for TDM-based services such as CDN Services.
32. However, because there was no evidence filed on the record of this proceeding concerning the use of LIRs, their use as the geographic market cannot be assessed conclusively at this time.

⁶ CMAs consist of one or more neighbouring municipalities around a core community. There must be a minimum population of 100,000, of which at least 50,000 live in the core community.

33. The Commission therefore determines that it has insufficient information to identify the appropriate geographic market with respect to Bell Canada's application.

Essentiality Test

Positions of parties

34. Bell Canada submitted that CDN Services do not satisfy the three elements of the Essentiality Test and do not need to be mandated pursuant to policy considerations. Bell Canada indicated that demand for CDN Services is small and has been declining over the last several years, arguing that CDN Services have become a marginal input for wholesale customers because competitors can use a variety of other services to provide retail data services. Bell Canada expected a continued decline in demand for CDN Services as competitors move to newer alternative data protocols.
35. Bell Canada submitted that it is not possible to determine market share information for the upstream product market and, therefore, it was not possible to provide any market share information for CDN Services. Bell Canada noted that in 2016, competitors' market share in the retail business data market was 35%. Bell Canada argued that, given the availability of substitutes in the upstream market that provide equivalent functionalities to CDN Services in the downstream market, it did not possess sufficient market power to impede competition. Bell Canada concluded that if CDN Services were no longer mandated, with the alternatives available to competitors, the impact on the state of competition in the downstream market would be minimal.
36. Bell Canada argued that, with the extent of fibre deployment over the last 10 years by cable companies and others, this competitive deployment is such that the ILECs can no longer dominate the provisioning of CDN Services over copper facilities. Bell Canada noted that while there is an installed customer base on copper facilities, it is rapidly declining as wholesale customers migrate to their own networks and end-users migrate to superior IP protocols such as Ethernet, which the Commission has forbore from regulating.

Commission's analysis and determinations

37. There were fundamental shortcomings with the information provided by Bell Canada to support a proper application of the Essentiality Test, regardless of the product and geographic markets used.
38. For instance, for the Commission to determine whether CDN Services meet the input component of the Essentiality Test, a proper view as to the types of retail services that competitors provide to business customers when using CDN Services is required. This information is also necessary for the Commission to identify the appropriate downstream retail markets serviced by the upstream wholesale service. Bell Canada provided no information on these retail services.

39. With respect to the competition component, market share information for the relevant downstream retail market(s) is a useful indicator for the assessment of the competitive environment. Bell Canada provided no specific information on its market share of CDN Services.
40. In order for the Commission to properly assess the duplicability component, evidence must be provided on both the practicality and feasibility of alternative solutions. Bell Canada provided little to no evidence on the practicality of the alternative solutions it mentioned.
41. Due to the lack of information that is required to conduct a proper assessment, the Commission cannot conclusively determine whether CDN Services satisfy the three components of the Essentiality Test.
42. In light of the above, the Commission determines that CDN Services will continue to be mandated at this time.

Should the Commission forbear from the regulation of Bell Canada's CDN Services?

43. Given the Commission's determination that CDN Services are to remain mandated, it is not necessary that the Commission address Bell Canada's forbearance request.

Conclusion

44. In light of all the above, the Commission **denies** Bell Canada's application.
45. The Commission notes that it intends to conduct a proceeding to review wholesale wireline services. That proceeding may provide an opportune time for the Commission to assess the competitiveness of various wholesale wireline services, including CDN Services, and their associated downstream retail markets, so that it may determine whether the appropriate mix of services and competition exists to support the interests of users.

Policy Direction

46. The Policy Direction⁷ states that the Commission, in exercising its powers and performing its duties under the *Telecommunications Act* (the Act), shall implement the telecommunications policy objectives set out in section 7 of the Act, in accordance with subsection 1(a) of the Policy Direction, and shall specify how its decisions can, as applicable, promote competition, affordability, consumer interests, and innovation.

⁷ *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives to Promote Competition, Affordability, Consumer Interests and Innovation*, SOR/2019-227, 17 June 2019

47. The Commission considers that, in deciding that there is insufficient evidence in Bell Canada's application to support changing the mandated status of CDN Services at this time, its determinations in this decision are consistent with the Policy Direction.
48. In effect, the Commission considers that placing continued reliance on regulation of these services contributes to the implementation of the telecommunications policy objectives and the promotion of competition, affordability, consumer interests, and innovation. By maintaining the current regulatory framework for CDN Services, this decision preserves the impact that these services have on enabling competition, affordability, consumer interests, and innovation and on the implementation of the telecommunications policy objectives.

Secretary General

Related documents

- *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
- *Revised regulatory framework for wholesale services and definition of essential service*, Telecom Decision CRTC 2008-17, 3 March 2008