



Telecom Decision CRTC 2019-344

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TELUS Communications Inc. – 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 TCI'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 TELUS Communications Inc. (TCI), dated 4 April 2018, in which the company requested that the Commission forbear from regulating its low-speed competitor digital network (CDN) access services. Specifically, TCI sought (i) a Commission finding that these services are no longer essential, and (ii) forbearance from the regulation of low-speed CDN access services and the related CDN central office (CO) link service, but only where it is used to facilitate an access service (collectively, CDN Services). Low-speed CDN access services used for interconnection purposes to competitors' points of presence were excluded from the application. TCI 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. TCI filed its application as both its own application under Part 1 of the *Canadian Radio-television and Telecommunications Commission Rules of Practice and Procedure* and as an intervention in support of an application by Bell Canada, dated 3 March 2018, in which Bell Canada requested that the Commission forbear from regulating its low-speed CDN access services. The Commission disposed of Bell Canada's application in Telecom Decision 2019-343.
3. The Commission received interventions regarding TCI's application from Allstream Business Inc., a wholly owned subsidiary of Zayo Canada Inc. (Allstream); the Canadian Network Operators Consortium Inc. (CNOOC); and Shaw Cablesystems G.P. (Shaw).

Background

4. 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 [Mbps]) speeds.
5. 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.
6. 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.
7. 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
8. 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

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

Should the Commission continue to mandate TCI's CDN Services?

Approach to the Essentiality Test

10. 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

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.

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

11. 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).

12. 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

13. In the Commission's view, TCI'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 TCI'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 CDN Services satisfy the three components of the Essentiality Test.

Relevant markets – Product market definition

Positions of parties

14. TCI 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.
15. TCI indicated that competitors lease CDN Services to provide their own retail data services to business end-users. The company submitted that the upstream product market is broad and could be defined by which options competitors can choose from to deliver services in the downstream market.
16. In this regard, the options include a number of data services such as Ethernet, wholesale high-speed access, and retail data services offered by the ILECs or over competitors' networks. In TCI's view, any service capable of providing speeds greater than 1.544 Mbps is a substitute for CDN Services. TCI submitted that there are other options as well. These include time-division multiplexing (TDM) emulation, which enables higher-speed Ethernet or IP-based services to be used in place of copper, without requiring end-users to replace their existing TDM customer premise equipment. Another option is for competitors to self-supply by building their own networks, which today would most likely be fibre or coaxial cable networks. TCI submitted that in cities where there are competitors, it is not uncommon for all competitors to offer network coverage and retail services to businesses via their own networks.
17. In assessing the alternatives to CDN Services, Shaw argued that Ethernet's 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 TCI do not exist at many locations, provide unnecessary capacity, or are unsuitable for business voice applications.
18. TCI submitted that the downstream market is retail data services provided to business end-users.

Commission's analysis and determinations

19. TCI 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.

20. The Commission considers that, based on the characteristics of CDN Services,³ 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 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.
21. Further, the Commission considers that TCI 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 ubiquitous availability. In the Commission's view, copper-based CDN Services are likely their own distinct upstream product market.
22. 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

23. 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).⁴
24. TCI submitted that the appropriate geographic market is the ILEC's operating territory (Alberta and British Columbia), noting that the Commission has the discretion to aggregate markets to reduce administrative burden.
25. 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.
26. CNOC stated that for various reasons, the relevant geographic market should be more narrowly defined than TCI's highly aggregated proposal, including that it should be sufficiently narrow to take into account regional differences, and should be no larger than a census metropolitan area (CMA).⁵ CNOC submitted that competitors do not

³ These characteristics include the ubiquity of the legacy copper-based TDM network, the circuit-switched nature of the service and its compatibility with existing customer premise equipment, guaranteed throughput levels, short repair time frames, and low speeds, which allow for lower prices.

⁴ 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.

⁵ 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.

have the ability to switch between suppliers of alternative services since CDN Services can be CO-specific.

Commission's analysis and determinations

27. The Commission considers that TCI'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 is a very large number of wire centres and exchanges across TCI's operating territory.
28. 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.
29. 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.
30. 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.
31. The Commission therefore determines that it has insufficient information to identify the appropriate geographic market with respect to TCI's application.

Essentiality Test

Positions of parties

32. TCI argued that CDN Services do not satisfy the three elements of the Essentiality Test. TCI noted that it has experienced declining demand for its CDN Services. It submitted that while its CDN Services are used as an input for downstream business data services, there are many alternative facilities that provide the same functionalities and are therefore substitutes. In its view, CDN Services are unique among these other services only in that they provide very low speeds that are surpassed by the alternative technologies.
33. TCI submitted that market share information for the product market was not available, and that the total wireline wholesale market is the only proxy available.

TCI pointed to the Commission's 2017 *Communications Monitoring Report*, in which the 2016 total wireline wholesale market share for all incumbents, by revenue, was 69%. TCI 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. TCI 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.

34. TCI submitted that the investments by competitors in networks and the resulting expansion in competitors' networks has increased the availability of newer technologies and other alternatives to competitors. TCI argued that it is the end functionality that matters, not the medium used to deliver services. TCI added that the functionality provided by CDN Services can now be achieved over other facilities, which are not copper-based but rather are IP-based, such as fibre and coaxial cable.

Commission's analysis and determinations

35. There were fundamental shortcomings with the information provided by TCI to support a proper application of the Essentiality Test, regardless of the product and geographic market used.
36. 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. TCI provided no information on these retail services.
37. 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. TCI submitted that market share information for the product market is not available and thus provided no specific information on its market share of CDN Services.
38. In order for the Commission to properly assess the duplicability component, evidence must be provided on both the practicality and feasibility of alternative solutions. TCI provided little to no evidence on the practicality of the alternative solutions it mentioned.
39. 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.
40. 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 TCI's CDN Services?

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

Conclusion

42. In light of all the above, the Commission **denies** TCI's application.
43. 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

44. The Policy Direction⁶ 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.
45. The Commission considers that, in deciding that there is insufficient evidence in TCI'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.
46. 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 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

⁶ *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