

**BEFORE THE CANADIAN RADIO-TELEVISION
AND TELECOMMUNICATIONS COMMISSION**

IN THE MATTER OF

**TELECOM NOTICE OF CONSULTATION CRTC 2017-49
*REVIEW OF THE COMPETITOR QUALITY OF SERVICE REGIME***

FINAL REPLY OF CANADIAN NETWORK OPERATORS CONSORTIUM INC.

SEPTEMBER 6 2017

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EXECUTIVE SUMMARY¹

ES1. CNOC maintains its position on the need for a modernized Q of S regime for local voice and wholesale HSA services. The modernized regime should include sets of Q of S features, a RRP and other features modeled after the design of the TD 2005-20 competitor Q of S framework.

ES2. While there have been incremental improvements to competition in retail Internet service markets, these improvements are overshadowed by the continued presence of incumbent market power. The presence of incumbent market power is supported by evidence of market concentration, supra-competitive pricing and supra-normal profitability. Most importantly, the presence of incumbent market power has been confirmed by the Commission.

ES3. So long as incumbents enjoy market power, competitors will be subject to substandard Q of S performance levels. This is because the presence of market power creates incentives for them to either willfully or negligently undermine wholesale service levels.

ES4. Bell's analysis of the Beard, Kaserman and Mayo (2001) research fails to account for critical features of Canada's incumbent dominated telecommunications service markets. Notably, Bell: (1) fails to explain and apply in the Canadian context its theory that an "effective competitor" can discipline incumbent incentives to "sabotage" Q of S levels; (2) greatly overstates the "choice of input suppliers" and its resulting benefits in Canadian marketplaces; and (3) overlooks indirect retail gains reaped from delivering poor wholesale Q of S performance.

ES5. Complaints about Q of S performance are substantiated by the CNOC Cable Q of S Application, CNOC's intervention and final reply in this proceeding and CNOC's RFI responses, including CNOC Member Worksheets, which present a telling sample of the severe and harmful Q of S issues faced by competitive service providers today. In addition, the Commission can assess disparities between retail and wholesale Q of S performance by reviewing confidential incumbent responses to RFIs from CNOC that were expressly intended to highlight such discrepancies.

ES6. Although wholesale services have benefited from certain incremental improvements, these incremental steps are incapable of resolving pervasive Q of S failures affecting the delivery of core

¹ For brevity, capitalized and abbreviated terminology in the Executive Summary holds the meaning set out in the body of CNOC's submission.

aspects of wholesale service provisioning. In addition, incremental improvements have been subject to lack of coordination by incumbents with their wholesale customers. Moreover, improvements that have occurred in the last few years were a direct result of Commission intervention and not due to incumbent initiatives. Furthermore, incumbent providers do not have adequate practices for monitoring wholesale customer satisfaction and responding to the needs of wholesale customers.

ES7. There is no denying the importance of customer experience in a service based industry. Competitors are prejudiced when incumbents reference high Q of S performance in retail advertisements while providing substandard Q of S levels to wholesale customers who, in turn, cannot match the incumbent's advertised retail benchmarks.

ES8. There are no solutions to wholesale Q of S problems other than a comprehensive modernization of the TD 2005-20 framework, as proposed by CNOC. Alternative options for relief such as off-tariff agreements, dispute resolution processes, Part 1 Applications and Commission investigative powers and AMPs powers are blunt tools that are incapable of addressing the scale and severity of wholesale Q of S problems in Canada on a continuous and comprehensive basis.

ES9. Bilateral negotiations and CISC working groups may have a role to play in a modernized Q of S regime when it comes to Q of S regulation implementation, establishing ordering procedures, etc. However, these tools are incapable of addressing situations when incumbents do not adhere to agreed processes or standards resulting from negotiations.

ES10. Negotiation mechanisms also do not create general precedents that can benefit other providers who suffer similar problems as the ones in dispute. These options are also costly for all parties and particularly so for smaller providers with limited resources. Furthermore, only Commission assisted dispute resolution can ensure that the incumbent does not abuse its bargaining power. In other words, negotiations without a Commission presence take place on an unequal playing field by default.

ES11. While CNOC agrees that the Commission ought to exercise its investigative powers and AMPs powers as necessary to address certain Q of S related situations, these tools cannot be relied

upon as primary enforcement. Rather these powers must be complimentary to a comprehensive framework regulating wholesale Q of S.

ES12. A cost-benefit analysis greatly favors the expansion of the Q of S regime, as proposed by CNOC.

ES13. The existing voice Q of S regime should be maintained. Q of S reporting results clearly demonstrate that incumbents are frequently missing acceptable service performance standards. It is therefore reasonable to expect that service standards would plummet for virtually all Q of S indicators if Q of S regulation of voice services was eliminated. Declining demand or phase-out status for certain services does not change the fact those services are currently mandated and warrant adequate Q of S protections so long as they continue to be mandated.

ES14. Given that the Commission has yet to finalize wholesale roaming tariffs, the Commission should undertake to monitor wholesale roaming Q of S performance levels and related complaints over a period of one to two years following the final approval of terms and conditions associated with wholesale roaming services in order to determine whether, and if so, how to include wholesale roaming services in the Q of S regime.

ES15. Northwestel must be subject to any Q of S requirements resulting from this proceeding. The harsh environments and high cost characteristics of Northwestel's serving area are considerations that support the need for Q of S protections. Low demand for Northwestel's mandated services is simply a reflection of competition levels in its serving territory and not a cause to forgo Q of S regulation. Also, tariffed terms and conditions for Wholesale Connect do not cover aspects of service provisioning that are under consideration in this proceeding, such as installation and repair service intervals. Finally, customer complaints regarding Northwestel's local interconnection services affirm the need for Q of S regulation.

ES16. No cost recovery via Phase II cost study and regulated rates or any other mechanism should be available to the incumbents for the costs associated with implementing Q of S measures to other mandated services as a result of the Commission's determinations in this proceeding. The investment in processes and operational resources that is required for compliance with a Q of S

regime is a cost of doing business. CNOC is unaware of any cost recovery mechanism for implementation of the current Q of S regime and RRP for voice services.

ES17. Neither the existing voice RRP nor CNOC's proposed modernized RRP can be considered punitive. These RRP's strike an appropriate balance in terms of being an effective deterrent without being punitive. In fact, CNOC's proposed repeat failure mechanism is expressly designed to not be punitive. The RRP's is important to provide wholesale customers compensation for the material loss of customers and goodwill that they endure when wholesale Q of S standards are not met. In this respect, they are no different than commercial SLAs coupled with corresponding rebate mechanisms.

ES18. Q of S regulation must be applied on a competitively and technologically neutral basis. The Commission should disregard arguments from incumbents that the current Q of S regime is bound to the history leading to its inception. To be clear, Q of S regulation should be viewed as "market power regulation" and not "monopoly-era regulation".

ES19. The question of whether an incumbent's supply chain, resources and processes are shared or distinct as between retail and wholesale does not obviate the need for a wholesale Q of S regime. This is because, ultimately, retail and wholesale Q of S levels are distinct from each other.

1.0 INTRODUCTION

1. Canadian Network Operators Consortium Inc. (“CNOC”) is pleased to submit its final reply in the proceeding initiated by Telecom Notice of Consultation CRTC 2017-49² (“TNC 2017-49”) to review the competitor quality of service (“Q of S”) regime.

2. Having reviewed the interventions and responses to requests for information (“RFI”) filed in this proceeding, CNOC remains confident that the modernized Q of S regime and RRP proposed in CNOC’s 24 April 2017 intervention is the most cost-effective model that is capable of safeguarding competition from the consequences of poor wholesale Q of S performance by incumbents.

3. Despite incumbents’ claims to the contrary³, poor Q of S performance at the wholesale level is a real and significant problem. The occurrence and severity of Q of S issues constrain competitors’ capacity to compete in downstream retail markets for telecommunications services. Fortunately, the blueprint for a solution to poor Q of S performance for mandated wholesale services including wholesale high-speed access (“HSA”) services is readily available for all to see. The existing Q of S framework for voice services provides a strong foundation that can be adapted and serve as a foundation for ensuring adequate Q of S levels for mandated wholesale services going forward. To this end, CNOC’s core recommendations remain as follows:

1. A wholesale HSA service Q of S framework with the following features:⁴
 - i. a set of guiding principles based upon those approved in TD 2005-20;⁵
 - ii. a set of company-wide Q of S indicators;⁶

² *Review of the competitor quality of service regime*, Telecom Notice of Consultation CRTC 2017-49, 23 February 2017.

³ See, for example, Cable Carriers intervention, at Section 4.2 and 4.3; See also Shaw intervention, at paras 26-28.

⁴ CNOC also wishes to direct the Commission’s attention to the series of CNOC responses to the Cable Carriers’ RFIs, which provide additional clarification regarding CNOC’s proposed Q of S indicators and RRP.

⁵ TD 2005-20, at para 41; See also CNOC intervention, at Section 2.6 for additional submissions on this point.

⁶ See the set of Q of S indicators proposed in CNOC intervention, at Section 2.7.

- iii. a set of competitor-specific Q of S indicators that are functionally equivalent to those approved in TD 2005-20⁷;⁸
 - iv. a RRP based on the same formula and process that applies to the local exchange service RRP⁹;¹⁰ and
 - v. a repeat failure mechanism.¹¹
2. Commission monitoring of Q of S performance levels and tracking of related complaints for wholesale roaming¹² services over a period of one to two years following the final approval of terms and conditions associated with wholesale roaming services in order to determine whether, and if so, how to include wholesale roaming services in the Q of S regime.¹³
4. For other mandated wholesale services, including those introduced in the future, CNOC recommends the following approach:¹⁴
- 1. A general practice of including all mandated wholesale services in the Q of S regime except where it can be demonstrated that it is not necessary; and
 - 2. A complaint monitoring approach for any mandated services that are not subject to the Q of S regime whereby a threshold of complaints regarding inadequate Q of S could trigger the inclusion of a mandated service type in the regime.
5. Incumbents including Bell Canada (“Bell”), TELUS Communications Company (“TCC”), Northwestel Inc. (“Northwestel”), Shaw Cablesystems G.P. (“Shaw”) and the Cable Carriers¹⁵ advocate strongly (i) for the elimination of all current regulatory Q of S requirements; and (ii)

⁷ TD 2005-20, at Appendix B.

⁸ See the set of Q of S indicators proposed in CNOC intervention, at Section 2.7.

⁹ TD 2005-20, at Section III.

¹⁰ See CNOC intervention, at Section 2.5 for CNOC’s proposals regarding a modernized RRP.

¹¹ See CNOC intervention, at Section 2.5 for CNOC’s proposals regarding a repeat failure mechanism.

¹² Global System for Mobile Communications (“GSM”)-based wholesale roaming services.

¹³ See CNOC intervention, at paras 5-7.

¹⁴ As further described in CNOC(Cable Carriers and Shaw)24May17-16.

¹⁵ Bragg Communications Inc., operating as Eastlink, Cogeco Communications Inc., on behalf of its affiliate Cogeco Connexion Inc., Quebecor Media Inc., on behalf of its affiliate Vidéotron, and Rogers Communications Canada Inc. (collectively, the “Cable Carriers”).

against the introduction of any new Q of S measures. This position is motivated purely by corporate self-interest that benefits from an uneven competitive landscape molded by poor wholesale Q of S performance. The balance of CNOC's final reply demonstrates why such positions against Q of S requirements are not justified and worse yet, harmful to competition and Canadian consumers of telecommunications services.

2.0 WHOLESALE AND RETAIL INTERNET SERVICE MARKET CHARACTERISTICS JUSTIFY Q OF S SAFEGUARDS

6. Incumbents argue that the current state of market forces does not warrant any form of Q of S regulation¹⁶. They point to alleged evidence of competitor success and claim that providers of wholesale services have inherent incentives to deliver high Q of S performance.¹⁷ Based on this evidence, the incumbents argue that all is well and all will be well, absent any additional Q of S requirements.

7. However, such arguments fail to mask the reality that Q of S problems are real and they impair the Commission's wholesale service frameworks from fully realizing their benefits. Some competitors have realized varying degrees of success absent Q of S protections. While these success stories absent Q of S regulation should not be discounted, the Commission should not, as encouraged by incumbent carriers in this proceeding, consider these examples as grounds to remove existing Q of S regulations or refrain from implementing new Q of S regulations. Rather, the Commission should focus on how much more competition could have been generated by competitive providers absent the pervasive Q of S problems that face the industry.

8. The incumbents will say that the *status quo* is good enough. The Commission should not settle for good enough. It should introduce the Q of S measures that will ensure that its wholesale frameworks are capable of realizing their full potential in terms of developing vigorous and sustainable retail competition.

9. This Part 2.0 of CNOC's final reply focuses on the economic arguments presented by incumbent objectors to Q of S regulation. These arguments consist of: (1) market indicators of

¹⁶ See, for example, Bell intervention, at para 2; Cable Carriers intervention, at para 5; and TCC intervention, at para 12.

¹⁷ *Ibid.*

competition in wholesale and retail Internet service markets; and (2) claims that incumbent providers of wholesale services have inherent incentives to deliver high Q of S performance.

2.1 Internet service market characteristics and competitor growth

10. Advocates against Q of S regulation claim that competition in wholesale and retail Internet markets is robust and sustainable without any form of wholesale HSA Q of S requirements.¹⁸ They cite evidence including:

- Competitors accounted for 51% of all new net Internet subscriptions in 2015;¹⁹
- The rate of wholesale HSA service access line growth;²⁰
- Increases in competitor residential Internet market share;²¹
- The number of competitive ISPs in the country;²²
- The effect on competition of internet penetration at near saturation;²³
- The effect of technological advances on competition;²⁴
- The presence of two major providers (ILECs and cable companies) in many areas;²⁵ and
- The existence of negotiated off-tariff agreements between wholesale providers and their customers;²⁶

11. CNOC does not dispute that some of these market indicators suggest incremental improvements to competition in retail Internet service markets. This evidence is merely a testament to the effectiveness of the Commission's wholesale services frameworks to date. However, as explained in the introduction of this submission, the Commission should not be content with

¹⁸ Cable Carriers intervention, at para 5; Bell intervention, at para 2; TCC intervention at para 2.

¹⁹ Bell intervention, at para 26.

²⁰ Cable Carriers intervention, at para 21; Shaw intervention at para 16.

²¹ Shaw intervention, at para 15.

²² *Id.*, at para 13.

²³ Cable Carriers intervention, at para 26.

²⁴ *Id.*, at para 27.

²⁵ Bell intervention, at para 5.

²⁶ Cable Carriers intervention, at para 23.

regulatory outcomes that are suppressed, and hence sub-optimal, due to poor Q of S performance at the wholesale level.

12. The incumbents' focus on indicators of incremental improvements to competition is intended to distract from the only relevant consideration for assessing whether Q of S regulation is necessary: the presence of market power. The presence of market power must be the focus of the Commission's assessment because, as explained in section 2.2 below, wherever incumbents enjoy market power there is a natural incentive to avoid efforts to maintain and improve wholesale Q of S performance, to the benefit of incumbents and the detriment of competition.

13. The Commission confirmed the existence of incumbent market power with respect to wholesale HSA services in Telecom Regulatory Policy CRTC 2015-326²⁷, stating: "the Commission finds that the incumbent carriers collectively have upstream market power in the provision of wholesale HSA services, including those over FTTP access facilities, within their serving regions".²⁸

14. Indeed, even accounting for incremental increases to competitor market shares of residential Internet service subscriptions, ILEC and cable companies retain 88% of that market. While not determinative, the concentration of this market constitutes significant evidence of the market power held by incumbents.²⁹ Other market characteristics further underscore the presence and influence of incumbent market power. Consider the following evidence of supra-competitive pricing cited by the Public Interest Advocacy Centre ("PIAC"), listing price premiums of 20-70% being charged by incumbents relative to competitors (which PIAC calls resellers) for equivalent service:³⁰

²⁷ *Review of wholesale wireline services and associated policies*, Telecom Regulatory Policy CRTC 2015-326, 22 July 2015, at para 124.

²⁸ *Ibid.*

²⁹ See also OpenMedia intervention, at para 14.

³⁰ PIAC intervention, at para 47.

Canadian Fixed Broadband Internet Rates – Incumbents versus Reseller

		<9 Mbps	<15 Mbps	<40 Mbps	<100 Mbps	>100 Mbps
Unweighted Average rate	Incumbent	\$52.89	\$61.30	\$62.78	\$79.13	\$112.47
	Reseller	\$34.05	\$36.10	\$44.64	\$66.10	n/a
	Inc. Price Premium	55%	70%	41%	20%	n/a

15. CNOC also wishes to highlight the evidence of supra-normal profitability cited in the PIAC intervention, with special emphasis on the following excerpt of the Brattle report commissioned by the Competition Bureau in 2014: “TELUS and Rogers Communications’ (Rogers) wireless businesses are generally earning above-normal returns on their investments, consistent with the exercise of market power.”

16. Overall CNOC submits that recent evidence of market share and concentration, supra-competitive pricing and supra-normal profitability affirm the Commission’s finding that the incumbents collectively have upstream market power in the provision of wholesale HSA services and wholesale mobile wireless roaming services.

17. TCC goes to great lengths to paint Q of S regimes and RRP as “monopoly-era” regulation. This characterization merely attempts to obscure the fact that Q of S regulation has always been market power regulation from the beginning. Given the existence of market power, incumbent claims regarding the state of competition are not credible grounds for opposing Q of S regulation. To the contrary, Internet service market characteristics discussed in this section fully justify CNOC’s recommendations in this proceeding for Q of S indicators and a RRP for wholesale HSA services.

2.2 Incumbents lack incentives to provide adequate Q of S levels absent regulatory intervention

18. Bell attempts to make the case that economic theory supports the notion that vertically integrated providers have incentives to compete both on price and quality.³¹ The Cable Carriers³² and TCC³³ also argue that incumbents have incentives to deliver high Q of S levels.

19. Intuitively, CNOC agrees that incumbents should stand to gain significantly from consistently delivering high Q of S levels. This reputation could be leveraged to attract additional wholesale customers and business via both tariffed arrangements and off-tariff commercial arrangements. Wholesale services are also a lucrative business that can meaningfully supplement retail revenues. Moreover, wholesale services are a vehicle that carriers can utilize to efficiently sell vast amounts of capacity that would otherwise lay fallow.

20. And yet, as explained in CNOC's intervention³⁴, notwithstanding all the legitimate reasons why incumbents ought to be incented to provide high Q of S levels, incumbents appear to believe that they stand to gain more from delivering poor Q of S levels, whether wilfully or negligently, than making an effort to meet or exceed minimum wholesale service standards. After all, every incumbent failure to perform at the wholesale level frustrates a competitor's capacity to perform at the retail level. In addition, resources that may be necessary to meet or exceed bare minimum Q of S standards can be reallocated to an incumbent's retail arms. As a result, poor wholesale Q of S levels lead to competitive advantages for incumbents.

21. With a view to dispelling such notions, Bell applies complex economic theory with reference to a study by Beard, Kaserman and Mayo (2001)^{35,36} As will be demonstrated in the subsequent paragraphs, Bell's analysis fails to account for critical features of Canada's incumbent

³¹ Bell intervention, at para 33.

³² Cable Carriers intervention, at para 141.

³³ TCC intervention, at para 42.

³⁴ CNOC intervention, at para 22.

³⁵ Beard, T.R., D.L. Kaserman and J.W. Mayo, (2001) "Regulation, Vertical Integration, and Sabotage" *The Journal of Industrial Economics*, XLIX: 319-333. (the "Beard, Kaserman and Mayo Study") Sabotage in this setting refers to a firm engaging in non-price discrimination against its rival which raises their rival's costs.

³⁶ See the reference in Bell intervention, at para 29.

dominated telecommunications service markets. CNOC therefore submits that the Commission should reject Bell's economic analysis in its entirety.

22. Bell seems to fixate on one particular conclusion from the Beard, Kaserman and Mayo Study which purports that "a large, effective 'fringe' can make sabotage an unprofitable activity."³⁷ Based on this finding, Bell extrapolates that if there is an effective competitor at wholesale to the single dominant provider, market forces will be sufficient to ensure that the dominant provider offers competitive terms and quality of service to its wholesale customers.³⁸

23. Bell fails to adequately explain the relevance of this theory to the matters in review in this proceeding. For instance, Bell does not demonstrate which provider or class of providers would meet the definition of an "effective competitor". In light of the substantial market power exercised by the dominant firms in Canadian Internet markets, CNOC can think of no single "effective competitor" that could discipline incumbent incentives to "sabotage" Q of S levels.

24. Bell goes on to suggest that the Bear, Kaserman and Mayo findings are strengthened on account of the presence of at least two vertically integrated providers in Canada – a cable company and telecommunications (formerly telephone) company. According to Bell, "Economics tells us that such a situation increases competition in the wholesale market by offering access seekers a choice of input suppliers, and increases competition in the retail market by having facilities-based competition that does not require access to another provider's facilities."³⁹ However, non-price competition between facilities-based incumbents in Canada is tenuous – at best. Generally, what competitors see in the wholesale tariffs of the incumbents is what they get, nothing more. As it happens, the tariffs do not address critical Q of S aspects of service provisioning such as intervals for installation, repair and disconnection processes in the context of wholesale HSA services. Moreover, competitors face significant barriers to switching suppliers. CNOC described these barriers in detail in response to CNOC(CRTC)24May17-3. As a result of these factors, the benefits of a "choice of input suppliers" are greatly overstated by Bell.

³⁷ Beard, Kaserman and Mayo Study, at p. 329.

³⁸ Bell intervention, at para 31.

³⁹ *Ibid.*

25. Bell goes on to explain: “the vertically integrated input provider that reduces quality is faced with a certain loss in the wholesale market and an uncertain gain in the retail market, since the retail customers that may leave the access seeker can also obtain service from other retail providers rather than the vertically integrated provider.”⁴⁰ If actual incumbent Q of S performance is any indication, the vertically integrated input providers have undoubtedly placed their wagers in favor of “uncertain” retail gain. That is because the “uncertainty” of retail gain is far more predictable than Bell leads on. Consider the following scenarios (which utilize the same nomenclature applied by Bell):

1. Scenario 1: A retail customer leaves the “first access seeker” due to the trickle down of poor Q of S performance by the vertically integrated supplier. The customer decides to subscribe to services with the “second access seeker” – who also happens to be supplied by the same vertically integrated provider that supplied the first access seeker.
2. Scenario 2: A retail customer leaves the “access seeker” due to the trickle down of poor Q of S performance by the “first vertically integrated supplier”. Frustrated by the consistently poor service delivered by “access seekers” as a class (again, due to the trickle down of poor Q of S performance by the incumbent supplier), the retail customer decides to subscribe for services from the retail arm of a “second vertically integrated supplier”.

26. In Scenario 1, the vertically integrated supplier loses nothing whatsoever. In fact, it may gain additional revenues from tariffed charges relating to disconnections, installations and other service orders required to facilitate the retail customer’s transition from the first access seeker to the second. And while the vertically integrated provider remains whole or incurs a small gain from its poor Q of S delivery, the “first access seeker” suffers a certain loss on account of this conduct.

27. In Scenario 2, the “first vertically integrated provider” does not appear to gain a direct benefit from the loss of a wholesale revenue. However, the “vertically integrated providers” benefit as a class because they are the only providers who are not compelled to rely on suppliers imposing

⁴⁰ *Id.*, at para 32.

poor Q of S performance. Thus, over time, the reputation of the “access seekers” as a class deteriorates, to the benefit of the entire “vertically integrated providers” class, including, of course, the first vertically integrated provider. Once again, the access seeker in this scenario suffers a certain loss.

28. There is a third scenario where the vertically integrated provider wins the former customer of the access seeker who switched providers due to the trickle down of poor Q of S from the same vertically integrated provider. This is the most lucrative outcome of poor Q of S performance from the vertically integrated provider.

29. Ultimately, in all of the above scenarios, the greatest loss is experienced by the retail customer who is denied quality service at affordable levels from the access seeker and forced to unnecessarily switch providers one or more times.

30. In summary, Bell, TCC and the Cable Carriers have not demonstrated that incumbents have incentives to provide quality mandated wholesale services. Nor have the incumbents demonstrated that they have acted upon such incentives. These claims and the in-depth economic analysis offered by Bell do not account for the features of the Canadian Internet services markets which are characterized by significant market power exercised by the vertically- integrated dominant firms. Absent Q of S regulation, there are no incentives that can ensure that incumbents will deliver even the lowest acceptable Q of S standards. As will be shown in the next section, this lack of incentives has manifested as a daunting barrier to competition.

3.0 COMPETITION IS HARMED BY Q OF S PROBLEMS

31. Parties objecting to Q of S regulation assert that the industry faces no Q of S problems.⁴¹ As demonstrated in this Part 3.0 of CNOC’s final reply, such broad sweeping claims are inaccurate, unsubstantiated and should be rejected.

⁴¹ See for example, Cable Carriers intervention, at Section 4.2 and 4.3; See also Shaw intervention, at paras 26-28.

3.1 Complaints about Q of S performance are substantiated

32. The Cable Carriers and Shaw reference prior requests for Q of S regulatory relief by competitors.⁴² Most notably, these incumbents focus on CNOC's September 2013 Part 1 Application requesting relief to address the unduly discriminatory Q of S levels applicable to wholesale HSA services provided by cable carriers⁴³ ("CNOC Cable Q of S Application"). According to the Cable Carriers, "The Commission did not find any evidence of discriminatory behaviour and did not agree to CNOC's request for a C Q of S regime."⁴⁴ This is not an accurate representation of the Commission's determinations in Telecom Decision CRTC 2015-40⁴⁵ ("TD 2015-40"). In reality, the Commission determined that unjust discrimination provisions of the *Telecommunications Act* were an unduly narrow lens through which to evaluate CNOC's concerns.⁴⁶ The Commission then proceeded to direct several issues to bilateral and multilateral negotiations.⁴⁷ Importantly, the Commission also undertook to collect additional information to address outstanding items.⁴⁸

33. The present proceeding initiated by Telecom Notice of Consultation CRTC 2017-49⁴⁹ ("TNC 2017-49") consists of the "broader lens" through which to evaluate Q of S problems. Contrary to the suggestion of the Cable Carriers, the fact that the Commission has not yet approved Q of S measures for wholesale HSA services is not, by default, an indication that Q of S performance is strong.⁵⁰ Indeed, further requests for regulatory relief with respect to Q of S performance since TD 2015-40 have undoubtedly been deferred until consideration in this proceeding, which has been included in the Commission's three-year plans since the 2014.⁵¹

⁴² Cable Carriers intervention, at paras 35-39.

⁴³ Namely Cogeco, RCCI"), Shaw and Videotron.

⁴⁴ Cable Carriers intervention, at para 37.

⁴⁵ *Canadian Network Operators Consortium Inc. - Application to improve the quality of wholesale high-speed access services provided by cable carriers to independent Internet service providers*, Telecom Decision CRTC 2015-40, 12 February 2015.

⁴⁶ TD 2015-40, at para 18.

⁴⁷ *Id.*, at para 23.

⁴⁸ *Id.*, at para 24.

⁴⁹ *Review of the competitor quality of service regime*, Telecom Notice of Consultation CRTC 2017-49, 23 February 2017.

⁵⁰ See Cable Carriers intervention, at Section 4.0.

⁵¹ See, CRTC Three-year Plan 2014-2017, <http://www.crtc.gc.ca/eng/BACKGRND/plan2014.htm>; CRTC Three-year Plan 2015-2018, <http://www.crtc.gc.ca/eng/backgrnd/plan2015/plan2015.htm>; CRTC Three-year Plan 2016-

34. More importantly, CNOC submits that the evidence provided in the “CNOC Member Worksheets” submitted in response to RFIs⁵² from the Commission and incumbent providers in this proceeding represents a telling sample of the severe and harmful Q of S issues faced by competitive service providers today. The CNOC Member Worksheets outline incumbent wholesale service intervals with respect to installations, repairs and disconnections.⁵³ The CNOC Member Worksheets also describe significant Q of S issues affecting wholesale HSA service provisioning.⁵⁴ Based on these examples alone, CNOC objects to frivolous claims that Q of S complaints are unsubstantiated.

35. CNOC addressed RFIs to the incumbents that were intended to elicit additional evidence of the disparity between the incumbents’ retail and wholesale Q of S performance. Unfortunately, the evidence requested was either not tracked by the responding incumbent or submitted in confidence.⁵⁵ CNOC requests that the Commission closely scrutinize the confidential responses to CNOC RFIs with a view to determining the extent of differential Q of S treatment experienced by incumbent wholesale customers relative to retail customers. To this end, the following guidance may be helpful to the Commission:

1. Responses to ____ (CNOC)24May17-1 can be compared to the responses of ____ (CNOC)24May17-2 in order to determine disparities between retail and wholesale with respect to trouble ticket numbers, escalations and resolution times; and
2. Responses to ____ (CNOC)24May17-3 can be compared to the responses of ____ (CNOC)24May17-4 in order to determine disparities between retail and

2019, <http://www.crtc.gc.ca/eng/backgrnd/plan2016/plan2016.htm>; CRTC Three-year Plan 2017-2020, <http://crtc.gc.ca/eng/backgrnd/plan2017/plan2017.htm>.

⁵² CNOC(CRTC)24May17-2; CNOC(Cable Carriers and Shaw)24May17-2; CNOC(Bell Canada)24May17-1

⁵³ Worksheet 1 of each individual CNOC Member Worksheet contains the information that is relevant to CNOC(CRTC)24May17-2, which seeks information about CNOC Members’ average service delivery time associated with the provision of mandated services.

⁵⁴ This information, relating to CNOC(Cable Carriers and Shaw)24May 17-2 is set out in Worksheet 2 of each individual CNOC Member Worksheet 2 of each individual CNOC Member Worksheet.

⁵⁵ For example see Rogers(CNOC)24May17-1, Rogers(CNOC)24May17-2, Rogers(CNOC)24May17-3, Rogers(CNOC)24May17-4; Shaw(CNOC)24May2017-1, Shaw(CNOC)24May2017-2, Shaw(CNOC)24May2017-3, Bell et al(CNOC)24May17-1 TNC 2017-49, Bell et al(CNOC)24May17-2 TNC 2017-49, etc.

wholesale with respect to service orders, installations, repairs, missed appointment windows, cancelled or changed appointments and disconnections

3.2 Significant Q of S problems exist despite incremental service improvements

36. Incumbent interveners attempt to leverage incremental service improvements as evidence that Q of S problems do not exist.⁵⁶ For example, referenced service improvements include reduced truck rolls⁵⁷, web portal implementation and changes⁵⁸, Border Gateway Protocol (“BGP”) implementation⁵⁹, Bidirectional Forwarding Detection (“BFD”) implementation⁶⁰, an address verification tool⁶¹ and other tools and functionalities⁶².

37. CNOC and its members welcome these improvements. However, it is important to qualify the nature of these improvements in the context of this proceeding.

38. First, these are merely incremental improvements to service provisioning processes. Without a modernized Q of S regime, such incremental steps are incapable of resolving pervasive Q of S failures affecting delivery of core aspects of wholesale service provisioning including service orders / installations, repairs and disconnections.

39. Second, many of these improvements only occurred following the Commission’s determinations in TD 2015-40,⁶³ and not as a result of incumbent initiatives. This suggests that incumbents are unlikely to develop even minor wholesale Q of S service improvements unless ordered to do so by the Commission.

40. CNOC also agrees with TekSavvy Solutions Inc. (“TekSavvy”) that the uncoordinated development of incremental improvements like those listed above, the lack of co-development with

⁵⁶ See for example, Bell intervention, at paras 23-24; See also Cable Carriers intervention, at paras 73-81.

⁵⁷ Bell intervention, at paras 23-24.

⁵⁸ Cable Carriers intervention, at para 82.

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² *Ibid.*

⁶³ For example, the Appendix to TD 2015-40 set out the following items to be resolved through CISC or bilateral discussions: Status of Installation orders and trouble tickets, Trouble escalation process, Advance notice of network changes, TPIA [third-party Internet access] service sign-up process, Mistaken disconnections due to inconsistent tagging of TPIA cable connections, Network safeguards (Bidirectional Forward Detection) and Internet Protocol address allocation and usage reports.

wholesale customers and the decision not to adopt an application program interface (“API”) in the way that CLOGs do for other areas of the telecom sector, represent coordination failures.⁶⁴ Such coordination failures further undermine the potential benefits of other efforts made by incumbents to improve wholesale service levels, however slightly or incrementally.

41. Finally, as revealed by responses to _____(CNO)24May17-10, incumbents do not have a practice of surveying wholesale customer satisfaction with the provisioning of wholesale high-speed access services (i.e. installations, repairs, carrier service group responsiveness, etc.).⁶⁵ Instead, incumbents note that they attend the same conferences as their wholesale customers to meet with them in person and “obtain their feedback on our products more directly”⁶⁶. Other incumbents respondents noted that wholesale customers could provide feedback to their customer service departments.⁶⁷ Other respondents refused to respond to this RFI, claiming that it was irrelevant and immaterial.⁶⁸ These approaches to assessing wholesale customer needs with respect to Q of S levels are wholly inadequate and yet another indication that incumbent providers are unwilling to take wholesale Q of S performance seriously in the absence of a regulatory obligation to do so.

3.3 Incumbent advertisement campaigns exacerbate the impact of wholesale Q of S problems

42. While most incumbents dismissed as irrelevant CNO’s RFI⁶⁹ with respect to advertisements relating to retail Q of S⁷⁰ levels, some of the respondents did acknowledge in passing that their advertising materials do include claims surrounding installation and repair times or other Q of S aspects.⁷¹ At least one incumbent, namely Saskatchewan Telecommunications (“SaskTel”) was helpful and forthcoming in its response to SaskTel(CNO)24May17-11, which

⁶⁴ TekSavvy intervention, at para 15.

⁶⁵ Bell et al(CNO)24May17-10 TNC 2017-49.

⁶⁶ *Ibid.*

⁶⁷ Bragg(CNO)24May17-10.

⁶⁸ Cogeco(CNO)24May17-10 TNC 2017-49; Rogers(CNO)24May17-10.

⁶⁹ _____(CNO)24May17-11.

⁷⁰ See for example, Shaw(CNO)24May2017-11; Cogeco(CNO)24May17-11; Bell et al(CNO)24May17-11 TNC 2017-49; Bragg(CNO)24May17-10; Rogers(CNO)24May17-11; TELUS(CNO)24May17-11.

⁷¹ Bell et al(CNO)24May17-11; Shaw(CNO)24May2017-11.

highlighted examples of marketing materials emphasizing SaskTel's customer satisfaction record.⁷²

43. Even without any additional confirmations from incumbents, there is simply no denying the importance of customer experience in a service based industry such as telecommunications. CNOC's members pride themselves on customer service performance and tailor their marketing materials accordingly. The difference however, is that unlike incumbents like Bell who advertise installation and repair times, competitors are constrained by wholesale Q of S issues on these core aspects of service provisioning. Competitors are therefore compelled to innovate in other ways when it comes to customer service. Yet, even when customer service innovations prove successful, there will always be an uneven playing field attributable to poor incumbent Q of S performance at wholesale.

44. In short, incumbents utilize advertising to leverage the competitive advantage that they enjoy by subjecting wholesale customers to poor Q of S levels. This is yet another reason that begs for Q of S regulation.

4.0 COMPETITORS ARE UNABLE TO OVERCOME Q OF S PROBLEMS ABSENT A REGULATORY REGIME RESULTING FROM THIS PROCEEDING

45. Incumbent providers argue that any competitor Q of S complaints can be resolved by off-tariff agreements, dispute resolution processes, Part 1 Applications (i.e. a "complaints-based system"), Commission investigative powers and AMPs powers.⁷³ As CNOC demonstrates below, these options are blunt tools that are simply incapable of universally increasing Q of S levels to acceptable standards that can allow for the development of sustainable downstream competition on an continuous and comprehensive basis.

46. First, as CNOC noted in response to a Commission RFI⁷⁴, no CNOC members appear to have been able to negotiate the inclusion of Q of S intervals in any off-tariff agreement for wholesale services.

⁷² SASKTEL(CNOC)24MAY17-11 NC 2017-49 including Attachments 1-4.

⁷³ See for example, Cable Carriers intervention, at paras 116-120; TCC intervention, at paras 33-36.

⁷⁴ CNOC(CRTC)24May17-4.

47. Notably, Bell states that it has entered into “numerous off tariff agreements”⁷⁵. Yet, Bell does not clarify whether those agreements include non-price terms, such as service interval commitments for installations or repairs.

48. For their part, the Cable Carriers exclaim: “As IISPs have increased their share of the market and gained experience with WHSA services, they are better positioned to bargain with competing wholesale service providers for the best combination of price and non-price terms to meet their needs.”⁷⁶ This notion is completely divorced from reality. As explained in Part 2.0 of these reply comments, incumbent providers hold commanding and unfaltering market power in spite of very slight market share gains by competitive providers. Within these power dynamics, competitors have little leverage to negotiate with a dominant provider. Contrary to the assertions of the Cable Carriers⁷⁷, competitors are presented no opportunities from incumbents to obtain wholesale service quality commitments at reasonable commercial rates. The fact that no CNOC members have obtained such commitments is incontrovertible evidence on this point.⁷⁸

49. Second, incumbent providers argue that competitors already have ample options to address Q of S problems, such as alternative dispute resolution mechanisms (bilateral and multilateral negotiations, Commission assisted mediation) and Part 1 Applications. These options are incapable of proactively addressing the pervasive Q of S problem that is affecting the industry. The Commission has already determined that even a Part 1 Application like the CNOC Cable Q of S Application confront the problem through an overly-narrow lens.⁷⁹ It therefore follows that the relief that is necessary to address these issues must be delivered via a comprehensive review of regulatory policy, such as the present proceeding initiated by TNC 2017-49.

50. Similarly, bilateral negotiations and CISC working groups may have a role to play in a modernized Q of S regime when it comes to Q of S regulation implementation, establishing ordering procedures, etc. However, these tools are incapable of addressing situations when incumbents do not adhere to agreed processes or standards resulting from negotiations.

⁷⁵ Bell et al(CRTC)24May17-3 TNC 2017-49.

⁷⁶ Cable Carriers intervention, at para 25.

⁷⁷ *Ibid.*

⁷⁸ CNOC(CRTC)24May17-4.

⁷⁹ TD 2015-40, at para 18.

51. Negotiation mechanisms also do not create general precedents that can benefit other providers who suffer similar problems as the ones in dispute. These options are also costly for all parties and particularly so for smaller providers with limited resources. Furthermore, only Commission assisted dispute resolution can ensure that the incumbent does not abuse its bargaining power. In other words, negotiations without a Commission presence take place on an unequal playing field by default.

52. Finally, while CNOC agrees that the Commission ought to exercise its investigative powers and AMPs powers as necessary to address certain Q of S related situations, these tools cannot be relied upon as primary enforcement. Rather these powers must be complimentary to a comprehensive framework regulating wholesale Q of S.

53. For these reasons, CNOC submits that there are no options to overcome the Q of S problems facing the industry other than a modernized regulatory regime resulting from this proceeding. CNOC is confident that its proposed design for such a regulatory regime, consisting of a set of Q of S indicators and a RRP rooted in the precedent that exists for the voice regime, is the most cost-effective model for eliminating an omnipresent threat to competition.

5.0 A COST-BENEFIT ANALYSIS FAVORS EXPANSION OF THE Q OF S REGIME

54. Incumbent advocates against a modernized Q of S regime argue that this regulation is costly and time consuming to implement.⁸⁰ For instance, the Cable Carriers and Shaw referenced the development of the current voice Q of S framework over a period of multiple years and with estimated costs at \$10 million.⁸¹ They contend that these investments cannot be justified on a cost-benefit analysis.⁸²

55. CNOC does not dispute that a modernized Q of S regime will require a concerted industry effort to develop. However, CNOC does dispute that these time and resource commitments cannot be justified based on a cost-benefit analysis. In fact, CNOC submits that the cost of implementing its recommended design for a modernized Q of S regime is a nominal price for achieving a

⁸⁰ See for example Bell intervention, at para 57; Cable Carriers intervention, at paras 31-32, 84-91; Shaw intervention, at paras 37-39.

⁸¹ Cable Carriers intervention, at para 86; Shaw intervention, at para 37.

⁸² See for example, Cable Carriers intervention, at paras 106-112.

monumental step towards vigorous and sustainable competition. Any cost at the backend of this regime will be far exceeded by the consumer benefits that will be generated going forward, including greater levels of choice when it comes to providers, services, service features and – quality of service.

56. In addition, unlike the novel processes required to develop the voice Q of S regime, the industry and Commission now have a strong foundation upon which to modernize Q of S regulation going forward. CNOC’s proposals intentionally leverages the existing foundation created by the voice Q of S regime as much as possible to capture efficiencies when it comes to the implementation of modern Q of S regulation to mandated wholesale services generally.

57. CNOC therefore submits that a cost-benefit analysis greatly favors the expansion of the Q of S regime, as proposed by CNOC.

6.0 THE EXISTING VOICE Q OF S REGIME SHOULD BE MAINTAINED

58. No intervener in this proceeding has offered compelling reasons for why the modernization of the Commission’s Q of S frameworks should not maintain the indicators and RRP that currently apply to voice services.

59. Incumbent providers merely contend that the wireline voice telephony market is sufficiently competitive⁸³ or that the administrative burden and costs associated with tracking and monitoring voice service Q of S indicators cannot be justified.⁸⁴ Bell and TCC focus in particular on the fact that demand for Unbundled Local Loops (“ULLs”) and Competitor Digital Network (“CDN”) services, Local Service Requests, and Local Number Portability (“LNP”) is declining.⁸⁵ They also emphasize that ULLs are in the process of being phased out.⁸⁶

60. The Commission has the benefit of a wealth of reporting information with respect to incumbent performance under the voice Q of S regime. CNOC submits that these reporting results contradict any notion advanced by incumbents to the effect that customers of wholesale voice

⁸³ Cable Carriers intervention, at para 125.

⁸⁴ TCC intervention, at para 28.

⁸⁵ *Id.*, at para 28; Bell intervention, at para 10-18.

⁸⁶ *Ibid.*

services can obtain acceptable service standards absent Q of S regulation. As summarized in Section 2.1 of CNOC's intervention, ILECs have repeatedly failed to satisfy Q of S standards for the following indicators: 1.18, 2.8A, 1.8, 1.13, 1.14, 2.7, 2.7A, 2.9 and 2.12. Paragraphs 18-21 of the PIAC intervention also illustrate incumbent failures to meet several Q of S indicators.

61. In other words – even with a Q of S regime – incumbents are frequently missing acceptable service performance standards. Based on this fact alone, it is reasonable to expect that service standards would plummet for virtually all voice Q of S indicators if Q of S regulation of voice services was eliminated.

62. Declining demand or phase-out of mandated status for services subject to the Q of S regime is also not an appropriate ground for eliminating or cutting back Q of S regulation as an outcome in this proceeding.

63. Declining demand does not change the fact that CDN services are mandated and therefore essential facilities over which the incumbent provider holds market power. CNOC therefore submits that demand is an irrelevant consideration for determining whether or not a service should continue to be subject to Q of S regulation.

64. With respect to ULLs, the Commission should ensure that these services are included in the Q of S regime so that wholesale customers are more likely to benefit from adequate Q of S levels leading up to the phase-out. This will ensure a smooth transition to alternative arrangements for forborne ULLs or alternative solutions.

65. In sum, declining demand or phase-out status for certain services does not change the fact those services are currently mandated and warrant adequate Q of S protections so long as they continue to be mandated.

7.0 THE COMMISSION SHOULD MONITOR WHOLESALE ROAMING Q OF S

66. Incumbent interveners in this proceeding oppose Q of S regulation of wholesale roaming services.⁸⁷ According to these parties, wholesale roaming services are not supplied in a way that would allow for traditional tracking of the installation and repair metrics that are “the essence of

⁸⁷ Bell intervention, at para 59; TCC intervention, at para 5; Cable Carriers intervention, at para 29.

[Q of S] regulation”^{88, 89} CNOC agrees that the service provisioning processes surrounding wholesale roaming services are distinct from those associated with voice services or wholesale HSA services. However, contrary to the claims of Bell and TCC,⁹⁰ differences in service provisioning processes does not necessarily render wholesale roaming services incompatible with Q of S regulation.

67. Ultimately, however, given that the Commission has yet to finalize wholesale roaming tariffs, and the current voice Q of S framework may not be fully adaptable to wholesale roaming services, CNOC maintains the position taken in its intervention and recited at the outset of these reply comments: the Commission should undertake to monitor wholesale roaming Q of S performance levels and related complaints over a period of one to two years following the final approval of terms and conditions associated with wholesale roaming services in order to determine whether, and if so, how to include wholesale roaming services in the Q of S regime.

8.0 NORTHWESTEL MUST BE SUBJECT TO THE Q OF S REGIME

68. As argued in CNOC’s intervention⁹¹, Northwestel should be subject to Q of S requirements resulting from this proceeding. In CNOC’s view, this should include all requirements stemming from the existing voice Q of S regime as well as all of CNOC’s proposed requirements for wholesale HSA services, which should apply equally for Northwestel’s Wholesale Connect service.

69. Northwestel contends that the cost of implementing regulatory Q of S requirements would exceed resulting benefits.⁹² Northwestel raises four arguments in support of this position:⁹³

1. Northwestel requires more flexibility when it comes to service intervals due to the unique operating conditions of the far North;

⁸⁸ TCC intervention, at para 5.

⁸⁹ Bell intervention, at para 59.

⁹⁰ *Ibid.* See also TCC intervention, at para 5.

⁹¹ CNOC intervention, at paras 61-62.

⁹² Northwestel intervention, at para 21.

⁹³ *Id.*, at para 5.

2. Northwestel has experienced limited demand for services currently covered by the voice Q of S regime;
3. Northwestel's Wholesale Connect has its own reporting and tariffed rebate mechanism; and
4. No competitors have escalated complaints regarding Northwestel's local interconnection circuits or LNP orders.

70. The first point is not a legitimate excuse for Northwestel to remain outside of the Q of S regime. The Far North is undoubtedly a unique serving area characterized by harsh environmental conditions. This happens to be part of the reason why these areas of the country are in such desperate need of competition in all telecommunications service markets. In response to this lack of competition, the Commission should not shield Northwestel from regulatory requirements. To the contrary, the Commission should prioritize the roll-out of Q of S requirements in the North to establish the wholesale conditions that are necessary for the development of downstream competition.

71. It also bears noting that the service standards incorporated in CNOC's proposed Q of S indicators for wholesale HSA service are based on the incumbent provider's own retail standards. In other words, Northwestel should be expected to apply the same "degree of flexibility"⁹⁴ to wholesale service intervals that is applied to equivalent service intervals for its own retail operations.

72. Second, for the same reasons set out in Part 6.0 of this submission, low demand is not a valid reason for creating exceptions to regulatory Q of S requirements. Low demand in Northwestel's serving area is correlated with equally low levels of competition. Thus, demand levels in Canada's North support a case for Q of S regulation.

73. Third, Wholesale Connect's tariffed rebate system applies to Service Level Agreements ("SLAs") which set metrics for technical service metrics including latency, service availability,

⁹⁴ With reference to Northwestel's comment at para 5 of its intervention that it requires "more flexibility simply creating pre-determined service intervals related to installations or repairs."

packet loss and jitter.⁹⁵ These tariffed terms and conditions do not cover aspects of service provisioning that are under consideration in this proceeding, such as installation and repair service intervals.

74. Fourth and finally, the fact that competitors have not escalated complaints regarding Northwestel's local interconnection circuits or LNP orders does not constitute proof that neither of these services are subject to Q of S problems. Indeed, the record of this proceeding affirms that competitors have experienced significant Q of S problems with these services. Consider the following excerpts from SSI's intervention:

“The history of SSI's difficulties in negotiating local interconnection between its own fully operational facilities and the much older Northwestel network is instructive in the present context. First and foremost, it demonstrates clearly that market forces are not sufficient to ensure that Northwestel provides competitor services at an acceptable quality. Regulatory measures are certainly required.”⁹⁶

“SSI's difficulties in achieving LNI with Northwestel further demonstrate that an ILEC that is not subject to CQOS regulation may well – and, in Northwestel's case, certainly does – take advantage of that gap to seek advantage through bilateral negotiation with the would-be competitor...”⁹⁷

75. Overall, CNOC submits that Northwestel has failed to make a case for why the Commission should not include it within the class of carriers that are subject to Q of S obligations. For the reasons set out above, CNOC urges the Commission to implement Q of S requirements throughout Northwestel's serving territory consistently with the regulatory obligations that shall apply in southern Canada.

⁹⁵ Northwestel Access Service Tariff for Interconnection with Interexchange Carrier CRTC 21480, Item 300.

⁹⁶ SSI intervention, at para 20.

⁹⁷ *Id.*, at para 21.

9.0 OTHER Q OF S MATTERS

9.1 New Q of S obligations should not have an effect on tariffed service rates

76. CNOC notes that the Cable Carriers argue that wholesale rates should be increased to recover any additional costs of implementing and maintaining a competitor Q of S regime.⁹⁸ CNOC objects to this proposal.

77. As explained in a RFI response to the Cable Carriers⁹⁹, the investment in processes and operational resources that is required for compliance with a Q of S regime is a cost of doing business. CNOC is unaware of any cost recovery mechanism for implementation of the current Q of S regime and RRP for voice services. Based on this precedent, no cost recovery via Phase II cost study and regulated rates or any other mechanism should be available to the incumbents for the costs associated with implementing Q of S measures to other mandated services as a result of the Commission's determinations in this proceeding.

9.2 RRP regimes are not punitive

78. Bell and Northwestel have also put forward unconvincing claims that RRP's are punitive.¹⁰⁰ To be clear, neither the existing voice RRP nor CNOC's proposed modernized RRP can be considered punitive. RRP rebates do not constitute arbitrary punishment imposed on incumbents. These rebates are purely compensatory for competitors who are subject to substandard wholesale Q of S levels which create material losses for their businesses both in terms of customer loss and loss of goodwill. In fact, an RRP regime is conceptually and in practice not different than a commercial service level agreement ("SLA") coupled with rebates, when contracted service levels under the SLA are not met.

79. By definition, a RRP must include an effective deterrent. Otherwise, the carriers who are subject to the RRP will have no incentive for compliance. Under both the existing voice Q of S RRP¹⁰¹ and CNOC's proposed RRP¹⁰², the total potential rebate amount is 5% of the amounts

⁹⁸ Cable Carriers intervention, at para ES21.

⁹⁹ CNOC(Cable Carriers and Shaw)24May17-1.

¹⁰⁰ See Bell intervention, at paras 39, 43, 44-46 and 48; Northwestel intervention, at para 22.

¹⁰¹ *Finalization of quality of service rate rebate plan for competitors*, Telecom Decision CRTC 2005-20, 31 March 2015, at para 74.

¹⁰² CNOC intervention, at Section 2.5.

billed to a competitor for services covered by a Q of S indicator with activity in that month. Unless the incumbent fails every single indicator with activity for that month, the actual rebate amount is generally much less than 5%.¹⁰³

80. In CNOC's view, less than 5 % is a figure that strikes an appropriate balance in terms of being effective for incenting compliance without being punitive.

81. Bell also complains that trailing indicators are punitive because the problem that caused the incumbent to fail an indicator often remains present in the trailing category.¹⁰⁴ Ironically, that is the entire point of a trailing indicator – to provide additional incentive to correct the original Q of S failure. On this note, CNOC wishes to reiterate that its proposed repeat failure mechanism¹⁰⁵ is designed to alleviate the Commission's concerns that repeat failure mechanisms proposed in the proceeding leading to TD 2005-20 could be punitive in effect.¹⁰⁶ Specifically, CNOC's repeat failure mechanism incorporates the following new features:

- (1) the repeat factor would be subject to a maximum cap of six so that rate rebates do not increase *ad infinitum*; and
- (2) the repeat factor shall reset as soon as an incumbent meets the requirements of an indicator after it has failed to do so for one or more preceding periods. In other words, once the service standard is met for one month, the repeat factor is reset to one.

¹⁰³ For reference, the complete formula is as follows:

- i. the total potential rebate amount (TPRA) for a month is equal to 5 percent of the amounts billed to a competitor for services (existing plus incremental ordered during the month) covered by a Q of S indicator with activity in that month;
- ii. each Q of S indicator with activity in that month is given equal weight and the potential rebate amount (PRA) for an indicator is the TPRA divided by the number of active indicators for the month; and
- iii. the total rebate payable to a competitor for a month is the PRA multiplied by the number of Q of S indicators for which the ILEC failed to achieve the minimum performance standard that month.

¹⁰⁴ Bell intervention, at para 48.

¹⁰⁵ For reference, CNOC's proposed repeat failure mechanism would operate as follows: The applicable rebate for a given indicator will be multiplied by that indicator's repeat factor. Initially, the repeat factor is set at one and is increased by one for every month in which the incumbent reports a below standard Q of S result, up to a maximum of six months. Once the incumbent delivers service at the approved standard for one month, the repeat factor is reset to one.

¹⁰⁶ CNOC intervention, at Section 2.5.

82. In summary, no feature of either the existing voice Q of S regime or CNOC's proposed modernized Q of S regime can be considered punitive. CNOC therefore requests that the Commission reject any submission to the contrary.

9.3 Q of S regulation must be applied on a competitively and technologically neutral basis

83. CNOC notes that the Cable Carriers claim that Q of S regulation is underpinned by the unique factors leading to its inception for ILECs with respect to voice services (e.g. ILEC monopoly history and changes in the wireline voice markets).¹⁰⁷ The Cable Carriers further argue that these factors have no parallel in the high-speed Internet or mobile wireless markets.¹⁰⁸ Thus, according to the Cable Carriers, these distinctions weigh against adopting a competitor Q of S regime for wholesale HSA services or mobile wireless services.

84. These arguments are unconvincing. Q of S regulation in Canada is not bound to its origins in the wireline voice markets. As emphasized in this submission, Q of S regimes should be viewed as market power regulation – not “monopoly era” regulation. What's more, this form of regulation should not be artificially contained as a one-time solution but rather, wielded as a flexible tool to address Q of S problems for mandated services generally in most cases, and wherever else they may arise in Canadian telecommunications service markets.

85. CNOC disputes the claim by Cable Carriers' that there are no parallels between the origins of the wireline voice telephony Q of S regime and today's high-speed Internet and mobile wireless markets. The history and circumstances enveloping each of these service markets all share the fundamental condition justifying Q of S regulation: the presence of market power that has manifested as wholesale Q of S failures.

86. Q of S regulation must be applied on a competitively and technologically neutral basis.

¹⁰⁷ Cable Carriers intervention, at Section 5.0.

¹⁰⁸ *Id.*, at para 59.

9.4 Shared resources between retail and wholesale arms do not prevent Q of S problems

87. Bell¹⁰⁹, Cogeco¹¹⁰ and the Cable Carriers¹¹¹ make the point that wholesale services are provided over the same network facilities that are used to provide the retail services. Some of these incumbents emphasize that they do not differentiate between wholesale and retail end-users on their network facilities.¹¹² Others¹¹³ note that common underlying facilities allow them to pass on service improvements to both wholesale and retail services.¹¹⁴

88. In CNOC's view, shared network facilities between retail and wholesale arms has little relevance to wholesale Q of S performance. Instead, it is the systems, processes and personnel that manage wholesale service provisioning, appointment scheduling and technician appearances which have a direct influence on wholesale Q of S levels. At least one incumbent provider has confirmed that those resources are not shared between wholesale and retail operations.¹¹⁵ CNOC expects that this is generally the case with incumbent providers, who, in most cases, have staffed dedicated wholesale services teams or company divisions tasked with wholesale service provisioning and customer management.

89. In the end, the question of whether an incumbent's supply chain, resources and processes are shared or distinct as between retail and wholesale does not obviate the need for a wholesale Q of S regime. This is because, ultimately, retail and wholesale Q of S levels are distinct from each other. As argued throughout CNOC's submission, there is no doubt that substantial wholesale Q of S performance gaps exist and substantially impede competition in downstream markets for telecommunications services.

¹⁰⁹ Bell et al(CNOC)24May17-8 TNC 2017-49.

¹¹⁰ Cogeco(CNOC)24May17-6.

¹¹¹ Cable Carriers intervention, at para 41.

¹¹² *Ibid.*

¹¹³ Cogeco(CNOC)24May17-6.

¹¹⁴ These service improvements consist of the types of incremental service improvements that are discussed in Section 3.2 of these reply comments.

¹¹⁵ Bell et al(CNOC)24May17-8 TNC 2017-49.

10. CONCLUSION

90. The incumbents have failed to present a case against a full-scale modernization of the competitor Q of S regime according to the model recommended by CNOC. The record of this proceeding demonstrates that incumbents have neglected wholesale Q of S levels. This result is both an outcome and catalyst of market power. Fortunately, a blueprint already exists for the type of regulation that can resolve this market failure.

91. The regime established by TD 2005-20 provides strong and proven foundations that can be easily adapted to today's market conditions and regulatory policies. Rather than reinventing the wheel, CNOC's proposals update and improve the TD 2005-20 framework. CNOC is confident that these measures will have an immediate and long lasting positive effect on the levels of competition in downstream retail markets for local exchanges services and Internet access services.

92. Finally, CNOC wishes to thank the Commission for initiating this important proceeding. We are grateful for the opportunity to share the experience of our members as it concerns the substandard wholesale Q of S levels that impact their retail operations so profoundly and to propose solutions for rectifying this situation.

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