



Reply of Shaw Cablesystems G.P.

Review of wholesale services and associated policies

Telecom Notice of Consultation CRTC 2013-551

October 24, 2014

I. INTRODUCTION & EXECUTIVE SUMMARY

1. This Reply of Shaw Cablesystems G.P. (**Shaw**) is filed pursuant to Telecom Notice of Consultation CRTC 2013-551, *Review of wholesale services and associated policies*, 15 October 2013, as amended (the **Notice**).¹
2. As the Chair noted at the Let's Talk TV and wholesale mobile wireless public hearings, choice and sustainable competition for the benefit of consumers are the key themes underlying the three major proceedings undertaken by the Commission this fall.
3. At Shaw, we have designed our corporate structure, philosophy and performance metrics around our customers and our brand promise that, when they choose Shaw, they won't miss a thing. Through efficient investment and creative innovation, we strive to enhance the network and content experiences we offer our customers, in response to their dynamic needs and tastes.
4. There is currently an unprecedented level of dynamic competition in Canada's wholesale and retail wireline telecom markets. Canadians now have access to a variety of competing facilities-based networks, including cable broadband, telco, wireless carriers with extensive LTE deployments, as well as FTTP, fixed-wireless and satellite networks. Other potentially disruptive networks and technologies will continue to emerge. There is intense facilities-based competition in the Western Canadian market in particular, as demonstrated by the evidence submitted by Shaw.² Shaw does not have market power; high speed access facilities can be, and have been, duplicated by numerous parties. The variety of platforms deployed by carriers, municipalities, ISPs and others are testament to this reality.
5. Against this backdrop, the key question in this proceeding is how to administer a wholesale wireline regulatory framework that puts consumers, not competitors, at its core. The principles in the *Telecommunications Act*³ (the **Act**) and the Policy Direction⁴ should guide the Commission to regulate efficiently and, in particular, rely on market forces to the maximum extent possible. The Commission should rigorously assess the current and future suitability of the various components of the wholesale framework and regulate only where necessary for the benefit of consumers. Since the introduction of competition in the wireline market, the Commission's balanced framework has succeeded in removing critical barriers to entry, and it is now time to let market forces move us forward without the encumbrance of unnecessary regulation.

¹ As revised by Telecom Notice of Consultation CRTC 2013-551-1.

² See Lemay-Yates Associates Inc., "Broadband Benchmarks and Discussion of EoI Regulation," 27 June 2014.

³ S.C. 1993, c.38.

⁴ SOR/2006-355.

6. Certain parties to this proceeding have proposed various fundamental revisions to expand and reformulate the wholesale regulatory framework. We believe that these and similar calls for more regulation do not reflect today's competitive era in wireline telecommunications, which is powered by mature inter-platform rivalry and new and disruptive platforms, such as fibre, LTE and WiFi. Shaw submits that the regulatory pendulum in wholesale wireline services should be moving towards less mandated access, not more. The resulting framework should maintain our evolution towards deregulation and must also respect the principle of technological and competitive neutrality.

Summary of Shaw's Reply

7. In Section II, we identify and discuss the regulatory context and principles that are most relevant to this proceeding. Canadian consumers have been well-served by Canada's facilities-based competition policies. We encourage the Commission to maintain these policies and move forward with the next natural stage towards deregulation.
8. Section III describes Shaw's specific proposal in response to the issues and positions raised in this proceeding. As we describe below, the intense competition among a variety of network platforms in retail high-speed broadband markets provides sufficient protection to consumers. This in fact describes the markets in which Shaw operates today. As a result, mandated access to wholesale high speed access services, including third-party internet access (**TPIA**), is no longer necessary.
9. Nevertheless, as explained in detail in Section III, Shaw acknowledges that a gradual shift to deregulation would be reasonable. We therefore propose the following:
 - a. First, there would be immediate forbearance of "next-generation access" wholesale services (speeds higher than 25 Mbps) in every market, thereby enhancing incentives for investment and innovation, and ensuring technological and competitive neutrality.
 - b. Second, in each "sufficiently competitive market":
 - i. There would be a phase-out period of five years for mandated access.
 - ii. Commencing at the end of the first year of the five-year phase-out period, all "high speed access" wholesale services (services at speeds of 25 mbps or lower)⁵ would remain mandated, but not subject to rate regulation.
 - iii. Upon removal of rate regulation pursuant to ii. above, rates would be determined through commercial agreement. If, after a period of 60 days of bona fide

⁵ This category would include all fibre-based services under such threshold.

negotiation, the parties cannot successfully reach an agreement, mandatory, confidential Commission staff-assisted mediation would be available to resolve the impasse. Parties may file evidence to support the reasonableness of their respective positions.

- c. In any market that does not meet the definition of a “sufficiently competitive market”:
 - i. High speed access wholesale services would continue to be subject to mandated access requirements.
 - ii. High speed access wholesale services would continue to be subject to rate regulation. However, parties would be free to negotiate commercial arrangements that include off-tariff rates.
 - iii. At such time as the market meets the definition of a “sufficiently competitive” market, it would be subject to the approach in b., above.
10. For purposes of our proposal, a “sufficiently competitive market” would be defined as a local exchange in which at least three unaffiliated facilities-based broadband providers operate (whether wireline, wireless, satellite, fixed wireless, etc.), two of which are capable of providing at least 25 Mbps service speeds.
11. Our proposal is designed to ensure that Canadian consumers will continue to enjoy the benefits of choice and sustainable competition in the residential wireline broadband market. It balances the desire of independent ISPs to build their business plans with reasonable access to mandated wholesale inputs during a transition period, while enhancing incentives for the investment and innovation that drive consumer benefit and choice. Our proposal reflects a practical approach that is consistent with the evolution of the market and regulatory environment; the principle of technological and competitive neutrality; and increased reliance on market forces with enhanced incentives for investment and innovation.
12. In the business market, there is only one ubiquitous access network for business locations: the ILEC copper network. Gradually, however, facilities-based new entrants such as Shaw have been extending their networks through substantial investment. Accordingly, Shaw proposes that DS0 and DS1 facilities also be phased out, as follows:
 - a. There would be a phase-out period of five years for mandated access.
 - b. Commencing at the end of the first year of the five-year phase-out period, all CDN DS0 and DS1 facilities would remain mandated, but not subject to rate regulation.

- c. Upon removal of rate regulation, rates would be determined through commercial agreement, and, if, after a period of 60 days of bona fide negotiation, parties could not successfully achieve an agreement, mandatory, confidential Commission staff-assisted mediation would be available to resolve the impasse. At that point, parties could file evidence to support the reasonableness of their respective negotiating positions.
13. This proposal for the business market maintains competitive access to facilities for a suitable period of time, while sending appropriate signals to the market encouraging the construction of competitive facilities to serve business locations.
14. Having outlined our proposal, our Reply then addresses the key issues raised in the Notice and by other parties, as they have evolved over the course of this year-long proceeding:
 - Section IV details Shaw’s positions on market definition and market conditions.
 - Section V sets out our views on the Essential Facilities Test and its application in light of current market conditions. Applying the Essential Facilities Test to the provision of wholesale high speed access services demonstrates that it is not an essential facility and should no longer be mandated.
 - Section VI presents our reply to specific proposals of CNOC and others.
 - Section VII addresses rate-setting. For those services that remain subject to rate regulation following this proceeding, Phase II costing remains appropriate. If correctly applied, Phase II costing allows carriers to recover their costs of providing the wholesale service, together with a reasonable return on investment, ensuring reasonable rates and setting an appropriate set of incentives in the marketplace for innovation and investment.
15. In this Reply, Shaw has responded to certain – but of necessity, not all – submissions made by interested parties. Failure to address any submission should not be taken as Shaw’s agreement and Shaw specifically denies any submission contrary to its interest.

II. REGULATORY CONTEXT & PRINCIPLES

16. Shaw wishes to build on the considerable successes of the Canadian market in providing telecommunications services for the benefit of consumers. To this end, Government policy and the Commission’s regulatory framework appropriately emphasize reliance on market

forces, regulation (where necessary) that is efficient and effective, facilities-based competition and technological and competitive neutrality.

17. It is important to view this proceeding in a broader context. The Chair noted this context at the recent Let's Talk TV public hearing when describing the "trio" of proceedings this fall; he echoed those remarks at last month's wholesale mobile wireless hearing:

The thread that runs through these three proceedings is choice and sustainable competition.

The Commission is reviewing its frameworks with its eyes firmly fixed on the future. We are seeking to ensure that Canadians are able to benefit from a world-class communication system for years to come, one in which they have access to compelling content as well as the choice of innovative wireless services and Internet services wherever they live in Canada.⁶

18. Shaw agrees that the overarching issue facing the Commission in these three proceedings is how to achieve the appropriate balance between market forces and regulatory intervention to ensure the outcome of "choice and sustainable competition" for Canadian consumers.
19. As Brad Shaw noted before the Commission during Shaw's appearance at the Let's Talk TV public hearing:

[W]e must allow market forces to be the primary driver of customer choice. We are not trying to preserve the status quo: there is no status quo in today's dynamically competitive environment ... We are willing to disrupt our business to seize the opportunities and to answer the challenges of today's digital environment.

...

[O]ur story is about serving Canadian customers. It's about providing choice. It's about competing. It's about innovating ... It's very difficult, and it's unnerving, but we believe that we can get there. We believe that we can provide more value and more choice and more competition...⁷

20. The record of this proceeding demonstrates a dynamic wireline telecom market characterized by a variety of mature and disruptive competing platforms seeking to win customers through investment, innovation and value. However, certain parties seek to overlook this competition and reverse the deregulatory trend in wholesale wireline services. Rather than looking to the future, these participants argue for new and complex access rules and forbearance criteria, effectively and unnecessarily entrenching the regulated status of certain facilities.

⁶ Transcript of Proceeding – Review of wholesale mobile wireless services, Vol. 1, 29 September 2014, paras. 5- 6.

⁷ Transcript of Proceeding – Let's Talk TV: A Conversation with Canadians, Vol. 4, 11 September 2014, paras. 8504, 8700 and 8707.

21. Shaw submits that these proposals, if adopted, would impede the positive evolution in the wireline market and be contrary to the existing regulatory framework, to the detriment of consumers and business customers. These proposals should therefore be rejected.

Minimally intrusive and flexible regulation for an evolving market

22. The arguments and proposals of parties seeking more regulation or re-regulation in this proceeding are based on the flawed premise that the Canadian wireline telecommunications market is static. This premise ignores the principle set out by the Commission in Telecom Decision 94-19: “regulations must...be flexible and responsive to change, unencumbered by objectives based on static definitions of markets or services.”⁸ Markets and services, by definition, must evolve, given the ever-changing needs of Canadian consumers. It is clear from the record of this proceeding, as well as generally evidenced in the current environment, that the wireline telecommunications market has evolved dramatically since the natural monopoly model was abandoned in favour of a facilities-based competition regime.⁹
23. Since the early 1990s, the Commission has identified several competitive markets where regulation is no longer necessary to protect the interests of consumers and business customers, and has taken steps to eliminate regulatory obligations. In the 1990s, the Commission removed rate regulation in the retail toll and Internet markets.¹⁰ In 2006, it set out a forbearance test for the retail local voice and business markets.¹¹ In 2008, the Commission removed mandated access to incumbent higher speed fibre access, transport and Ethernet facilities.¹² Following this gradual deregulation, robust facilities-based competition has flourished in the toll, Internet, local and business markets. Today, over 94% of Canadian telecommunications revenues are generated from forborne services or facilities.¹³
24. The Commission itself noted the dramatic change in the telecommunications market in its Notice that launched this proceeding. The Commission observed the need for a comprehensive review of “the pace of technological evolution and shifting consumer

⁸ Telecom Decision CRTC 94-19, *Review of regulatory framework*.

⁹ In 1998, the Internet was in its infancy and delivered primarily over copper phone lines (co-axial broadband accounted for less than 1% of the market). Less than two decades later, almost a quarter of all Canadian households – and 60% of households under the age of 35 – have no wireline home phone. See Telecom Decision CRTC 98-9, *Regulation under the Telecommunications Act of certain telecommunications services offered by “Broadcast Carriers” (TD 98-9)*, and Statistics Canada’s Residential Telephone Service Survey, 2013, 23 June 2014, online at <http://www.statcan.gc.ca/daily-quotidien/140623/dq140623a-eng.htm>, accessed 17 October 2014.

¹⁰ See Telecom Decision CRTC 97-19, *Forbearance – Regulation of toll services provided by incumbent telephone companies*, TD 98-9, and Telecom Order CRTC 99-592, *Forbearance from retail Internet services*.

¹¹ Telecom Decision CRTC 2006-15, *Forbearance from the regulation of retail local exchange services (TD 2006-15)*, as amended by Order Varying Telecom Decision CRTC 2006-15, SOR/2007-71.

¹² Telecom Decision CRTC 2008-17, *Revised regulatory framework for wholesale services and definition of essential service (TD 2008-17)*.

¹³ CRTC Communications Monitoring Report 2014, Table 5.0.2.

demands”, as well as the “numerous changes” in the telecommunications landscape at both the retail and wholesale levels since 2008.

25. As facilities-based competition in wireline markets has matured, the need for regulation has gradually declined. This was confirmed by the Government’s 2006 Policy Direction. A similar flexible and minimally intrusive approach to regulation was acknowledged by the Commission in its Let’s Talk TV Notice of Consultation:

Some of the objectives may be achieved without regulation, through the evolution of the marketplace or the changing technological environment. Regulatory intervention is only warranted where specific outcomes or objectives would not be achievable without it. Where regulatory measures are necessary, the Commission considers that they should be as simple as possible, proportionate, easily administered and adaptable to change.¹⁴

26. Canada’s wireline telecommunications market has evolved to a new paradigm of intense inter-platform competition consistent with the initial objectives conceived by the Government and the Commission in the 1990s. This has set the stage for incredible choice, value and innovation in the consumer’s broadband experience, and has produced high-quality wireline infrastructure that connects Canadians and empowers Canadian creators, driving the development of Canada’s digital economy.
27. Given the state of competition in the wireline telecommunications market, inflexible, complex and unnecessary regulation is not a prudent investment on behalf of consumers. The parties seeking regulation have not furnished evidence of market failure, nor have they demonstrated a clear and compelling consumer benefit to justify regulatory intervention and the associated costs and burdens on the regulator and industry alike. In the case of the wholesale framework, Shaw respectfully submits that the Commission should be focused on streamlining the rules, rather than extending them or making them more complex. Canadians deserve to fully benefit from today’s innovative, dynamic and competitive environment. We should be investing resources in networks, services, customer experiences and innovation.

Facilities-based competition

28. The benefits of facilities-based competition have been well-canvassed in a multitude of proceedings before the Commission and highlighted by the Government in its Policy Direction:

The Governor in Council considers that facilities-based competition is a durable form of competition that delivers the greatest benefits to consumers, imposes competitive

¹⁴ Broadcasting Notice of Consultation 2014-190, para. 35

market discipline on incumbents and strengthens investment in telecommunications infrastructure.¹⁵

29. Facilities-based competition has succeeded in promoting world-leading levels of investment in wireline broadband infrastructure, while delivering innovation, value, connectivity, performance and reliability. These successes are detailed in Shaw's first and second interventions and the reports of Lemay-Yates Associates Inc. (**Lemay-Yates**) filed by Shaw.

30. Rogers also noted the quality and choice of broadband services in the wireline market:

The significant increase in broadband service speeds, consumer take-up of higher speed services, decreasing prices of service tiers and high quality are consistent with a vigorously competitive market. The cable and telecom carriers compete intensely for subscribers by continuously investing in their infrastructure to enable higher quality services.¹⁶

31. Facilities-based competition is the optimal means to provide meaningful and effective choice that will discipline market power, thereby allowing for the eventual removal of regulation and stimulating a dynamic market that drives competitors to meet and exceed the expectations of consumers. As a result of facilities-based competition, the Canadian telecommunications market has seen a flourishing of inter-platform competition, with various networks competing to meet the escalating demands of Canadians for superior broadband experiences from telco wireline, cable broadband networks, LTE wireless and satellite.

32. Shaw submits that any policies adopted by the Commission in this proceeding must continue to support facilities-based competition. The record is replete with evidence and submissions supporting a continued focus on facilities-based competition as the approach that ultimately delivers the highest levels of innovation, investment and value to Canadians.

33. Telus has described the benefits of facilities-based competition over access-based competition as follows:

Inherent in the facilities-based competition policy approach is the definition of competition being one driven by investment *in* networks, rather than one driven by access *to* networks. Innovation rather than imitation, competition rather than artificial rivalry based on forced sharing of assets; therein lie the policy choices that underlie the distinction between long-term and short-term consumer benefit that the Commission must grapple with in this proceeding.¹⁷ [Emphasis in original]

¹⁵ Order Varying Telecom Decision CRTC 2006-15, SOR/2007-71.

¹⁶ Rogers' first intervention, para. 55.

¹⁷ Telus' second intervention, para. 17. This was echoed in the expert evidence of Dr. Jeffrey Church (filed with Bell's first intervention):

34. Facilities-based competition imposes market discipline on incumbents, resulting in significant benefits from enhanced innovation, investment and choice, all at reasonable prices. By contrast, service-based competition that requires a “continuous loop” of complex and inefficient access regulation does not provide such discipline. It results in a focus on the welfare of individual, or a class of, competitors, rather than that of consumers.
35. Even CNOC acknowledges the “aggregate infrastructure investment and the relatively high level of platform competition...”¹⁸ CNOC concedes that the report prepared for it by Analysis Group shows that “capital investment in telecommunications infrastructure in Canada is among the highest internationally” and that “the Canadian wireline broadband market already features stronger inter-platform, facilities-based competition than most other countries.”¹⁹ CNOC also acknowledges the evidence of “a negative correlation between access regulation and investments and infrastructure deployments.”²⁰
36. Despite the realities of the current market, CNOC continues to advocate for more emphasis on access regulation. Primus even opposes what it refers to as “over-reliance” on facilities-based competition.²¹ Paradoxically, CNOC appears to reject “inter-platform competition (i.e., facilities based)” in part on the basis that “full duplication of access networks contemplated in an inter-platform model may be overly difficult to achieve and ultimately economically inefficient.”²² The fundamental flaw in CNOC’s argument is demonstrated by evidence to the contrary, namely, an increasing number of multiple networks competing for wireline customers. The outcome of CNOC’s position, if accepted, would be fewer, not more, networks, having the perverse effect of reducing, rather than increasing, choice.
37. The roll-out of Shaw Go WiFi directly refutes CNOC’s argument that facilities-based competition promotes inefficient duplication of high speed access infrastructure: Shaw was (and continues to be) driven by the competitive threat of other facilities-based carriers to provide an innovative service based on disruptive technology, in a cost-effective manner. The launch of Shaw Go WiFi responded to our customers’ need for nomadic access to a premium

Inter-platform competition between the cable network and the ILEC network enables service providers to more effectively differentiate their services through investments in their networks, relative to the opportunities available to competitors using the same network. When competitors are substantially restricted to provide service on the same network their ability to differentiate their services and innovate will necessarily be limited. The nature of competition means that they will have relatively standardized products (determined by the characteristics of the monopoly network) and competition will be more on price than product characteristics. (Report of Jeffrey Church, paras. 196-197.)

¹⁸ CNOC’s second intervention, para. 19.

¹⁹ *Ibid.*, paras. 15 and 20.

²⁰ *Ibid.*, para. 12.

²¹ Primus’ first intervention, para. 11.

²² CNOC’s second intervention, para. 13.

Internet service, thereby creating an alternative to wireless data and enhancing the value of the broadband services our customers receive.

Competitive and technological neutrality

38. Carriers are continually adopting new and evolving technologies and platforms, leveraging them in different ways and along different timelines, depending on network architecture and consumer need. In this dynamic environment, Shaw respectfully submits that the Commission should not assess the health of Canada's broadband market based on metrics associated with a single facility, such as FTTP. This narrow view would fail to account for alternatives capable of providing similar customer experiences, while also ignoring the fact that many networks incorporate the underlying technology – fibre optic cable – in different ways.²³ More importantly, it would disregard how consumers experience broadband services: it is not the underlying facility that defines that experience, but the service attributes, such as reliability, speed, price, usage and other value-adds like Shaw Go WiFi. The Commission should be wary of picking technological “winners and losers” when it comes to network investment. This is the domain of consumers and the marketplace.
39. Consistent with the Policy Direction, the Commission must ensure ongoing competitive and technological neutrality in the regulatory regime, including any phase-out period. For example, the wholesale service of one carrier cannot continue to be mandated where the service offered by another carrier that is equivalent in the eyes of the ultimate consumer (e.g., a service offering equivalent speeds) is free from mandated access due to the specific technology.
40. If DOCSIS-based services were to be mandated while FTTP was left without such strictures, the result would be asymmetrical regulatory treatment, placing an undue burden on one competitor to the advantage of the other. Moreover, it would also promote inefficient allocation of capital, by encouraging the flow of investment into networks on the basis of regulatory advantage, rather than technological or market forces. This would distort the market and stunt the exercise of consumer choice.

III. PROPOSALS FOR DEREGULATION

Residential wireline broadband

41. Shaw is of the view that a high-speed broadband market that exhibits significant rivalry between a telco and broadband cable provider, along with the presence of other broadband access platforms, no longer requires mandated wholesale access in order to protect the interests of end-users. This in fact describes the markets in which Shaw operates today. In

²³ For example, Shaw has invested billions of dollars to build one of the most extensive and advanced fibre optic networks in North America.

such circumstances, wholesale high speed access services should appropriately be reclassified from conditional mandated non-essential to non-essential subject to phase-out. Such reclassification would be consistent with the Commission’s determinations in Telecom Regulatory Policy CRTC 2010-632, *Wholesale high-speed access services proceeding (TRP 2010-632)*.

42. Nevertheless, Shaw recognizes that complete and immediate forbearance of wholesale high speed access services may be impractical. With the foregoing regulatory principles in mind and as an alternative to the other proposals that have been introduced to date, Shaw sets forth below an approach for gradual deregulation.²⁴
43. Our proposal distinguishes between “high speed access” wholesale services (speeds of 25 Mbps or lower) and “next-generation access” wholesale services (speeds higher than 25 Mbps), regardless of the facility or technology used to deliver the services to consumers. Therefore, “high speed access” wholesale services would include fibre-based services delivering speeds of 25 Mbps or lower. We believe this distinction is appropriate: services at speeds of up to 25 Mbps currently meet the broadband needs of a large majority of Canadians.²⁵ Moreover, while next generation access services are provided over a variety of platforms in various levels of deployment, they are equivalent in the eyes of consumers and duplicable.
44. Our recommended approach contemplates the following:
 - a. First, there would be immediate forbearance of next-generation access wholesale services in every market,²⁶ thereby enhancing incentives for the investment and innovation that drive consumer benefit and choice, and ensuring technological and competitive neutrality.
 - b. Second, in each “sufficiently competitive market”:
 - i. There would be a phase-out period of five years for mandated access.

²⁴ Our proposal for the gradual deregulation of wholesale services should not be seen as a proxy for determining if or when a market is competitive. Rather, as noted, it is put forward as a workable and practical alternative to the other proposals that have been introduced in this proceeding to date.

²⁵ Indeed, the 2014 CRTC Communications Monitoring Report indicated that, in 2013, 68.7% of Canadians subscribed to services with speeds 15 Mbps or lower. See Table 5.3.10.

²⁶ Consistent with its ruling in TD 2008-17, the Commission would retain its powers under section 24 and subsections 27(2) and 27(4) of the Act, as well as subsection 27(3) as it pertains to the exercise of its powers under the preceding sections and compliance with powers and duties not forborne.

- ii. Commencing at the end of the first year of the five-year phase-out period, all high speed access wholesale services would remain mandated, but not subject to rate regulation.
 - iii. Upon removal of rate regulation pursuant to ii. above, rates would be determined through commercial agreement. If, after a period of 60 days of bona fide negotiation, the parties cannot successfully reach an agreement, mandatory, confidential Commission staff-assisted mediation would be available to resolve the impasse. Parties may file evidence to support the reasonableness of their respective positions.
 - c. In any market that does not meet the definition of a “sufficiently competitive market”:
 - i. High speed access wholesale services would continue to be subject to mandated access requirements.
 - ii. High speed access wholesale services would continue to be subject to rate regulation. However, parties would be free to negotiate commercial arrangements that include off-tariff rates.
 - iii. At such time as the market meets the definition of a “sufficiently competitive market”, it would be subject to the approach in b., above.
45. For purposes of our proposal, a “sufficiently competitive market” would be defined as a local exchange in which at least three unaffiliated facilities-based broadband providers operate (whether wireline, wireless, satellite, fixed wireless, etc.), two of which are capable of providing at least 25 Mbps service speeds.²⁷
46. The foregoing approach achieves the following objectives:
 - It promotes facilities-based competition.
 - It is minimally intrusive, providing the flexibility needed to keep pace with technological change and address regional and market differences.
 - It balances the desire of independent ISPs to build their business plans with reasonable access to mandated wholesale inputs during a transition period, while respecting the requirements of the Policy Direction and achieving the objectives of this proceeding.

²⁷ As all ISPs submit network coverage and service speed availability information as part of the annual Data Collection Surveys, the Commission will have the information necessary to make this assessment.

- It ensures Canadian consumers will continue to enjoy the benefits of sustainable competition in the residential high speed broadband market, enhancing incentives for the investment and innovation that drives choice and consumer benefit.
 - It is technologically and competitively neutral.
47. Shaw has reviewed the alternative approaches put forward by Bell and SaskTel for forbearance for unbundled local loops (ULLs) and aggregated mandated wholesale high speed access, including TPIA. In particular, the Bell proposal suggests that these services be forborne in urban areas, as these areas have “access to multiple facilities-based broadband providers, such as cable and wireless.”²⁸ In essence, by identifying Bands A and B as urban markets in which there is sufficient inter-platform competition, the Bell proposal suggests a workable proxy for forbearance, and recognizes the rural markets that should be excluded from a blanket, national approach.
48. This proposal generally aligns with Shaw’s own, as it readily identifies geographic markets where vigorous inter-platform competition between telcos and cable broadband providers is unquestionably present. These approaches stand in sharp contrast to CNOC’s unworkable and ultimately self-defeating proposal to create onerous additional conditions for forbearance, discussed later in our Reply.

Business services

49. In the business market, there is only one ubiquitous access network for business locations: the ILEC copper network. Gradually, however, facilities-based new entrants such as Shaw have been extending their networks through substantial investments, and the market is becoming more competitive. We encourage the Commission to continue on the path towards deregulation of the wholesale services that support the downstream business market; accordingly, Shaw proposes that DS0 and DS1 facilities also be phased out over the next five years.
50. The DS0 and DS1 geographic market could be reasonably defined as a single business location for the purpose of applying the Essential Facilities Test. In the absence of a competitor network to the building, the ILEC is the monopoly provider in the geographic market. Nevertheless, applying a competitor market test for the purpose of forbearance using this small geographic market would be administratively complex and burdensome for the Commission, incumbents and competitors alike.

²⁸ Bell’s first intervention, para. 144.

51. To avoid this undue complexity, Shaw proposes that the Commission proceed with a five-year phase-out period for CDN DS0 and DS1 facilities nationally:
- a. There would be a phase-out period of five years for mandated access.
 - b. Commencing at the end of the first year of the five-year phase-out period, all CDN DS0 and DS1 facilities would remain mandated, but not subject to rate regulation.
 - c. Rates would be determined through commercial agreement, and, if, after a period of 60 days of bona fide negotiation, parties could not successfully achieve an agreement, mandatory, confidential Commission staff-assisted mediation would be available to resolve the impasse. At that point, parties could file evidence to support the reasonableness of their respective positions.
52. This proposal will maintain competitive access to facilities for another five years while sending appropriate signals to the market encouraging the construction of competitive facilities to serve businesses that do not currently have choice. It is simple, minimally-intrusive, easy to administer and promotes the facilities-based competition that will provide the highest levels of choice and innovation for business customers.

IV. MARKET DEFINITIONS AND CONDITIONS

Competition in the broadband market

53. As discussed in the foregoing section, with two facilities-based wireline providers, as well as LTE mobile wireless, fixed wireless and satellite options, there is fierce competition for customers in the residential Internet market in Canada.²⁹ Indeed, the 2014 CRTC Communications Monitoring Report (CMR) indicates that:
- Canadians are well-served by over 500 Internet service providers.³⁰
 - Nearly 40% of Canadian households have access to four or more separate technology platforms delivering at least 5 Mbps broadband services.³¹
 - 98% of Canadian households have wireline broadband available at download speeds of 1.5 Mbps and 94% have availability of download speeds above 5 Mbps.³²

²⁹ In addition to inter-platform competition between ILECs and cable carriers, the Canadian wireline market now includes alternative networks. See Telus' second intervention, paras. 43-51, where it describes fibre builds by OneGigabit.ca, FibreMedia, Fibrenoire, Vianet, CityWest and Sogetel.

³⁰ See 2014 CRTC Communications Monitoring Report, Section 5.3.

³¹ See 2014 CRTC Communications Monitoring Report, Table 5.3.12.

³² See 2014 CRTC Communications Monitoring Report, Figure 5.3.13 and Figure 5.3.15.

- In one year, the average number of gigabytes downloaded per month increased by 58%, from 28.4 GB to 44.8 GB.³³
54. In an attempt to downplay the success of facilities-based competition, CNOC portrays Canada as lagging our trading partners due to the allegedly “sluggish deployment” of fibre. This statement is inconsistent with the weight of the empirical evidence on the record of this proceeding. In any event, CNOC’s sole focus on the deployment of fibre does not address the fundamental question relating to the appropriate regulatory framework. What is important is not the specific amount of fibre – as opposed to other technologies – deployed in Canada. Rather, it is customer access to reliable and innovative broadband services, independent of the technology employed.
 55. In Canada, users benefit from multiple types of infrastructure, all capable of delivering next generation services.³⁴ This includes not only FTTP, but also very high bit-rate Digital Subscriber Line (VDSL) and broadband cable through DOCSIS technologies.³⁵ CNOC’s focus on FTTP deployment as the singular metric by which the success of the regulatory framework is assessed is misplaced and risky. FTTP cannot be viewed in isolation: it is but one high speed access technology. CNOC’s approach would substitute regulatory fiat for the role of the market and consumer in determining technological development and evolution. This should be rejected by the Commission.
 56. CNOC also points to the speeds and prices of broadband services in Canada to call into question the competitiveness of the market. However, the data presented in the CMR and reports from Lemay-Yates (referred to above) and others counter CNOC’s assertions.³⁶ Furthermore, in assessing the health of the market, the significant overall quality, performance and reliability of broadband services must be taken into account, including innovative service add-ons that allow facilities-based ISPs to differentiate themselves in the market and add value for consumers.
 57. Shaw’s own conduct in the market-place demonstrates the innovation and choice that the highly rivalrous broadband market delivers for consumers. At Shaw, we are completely focused on providing customers with the best possible network and content experiences. We

³³ *Ibid.*, Table 5.3.0.

³⁴ Whereas in other countries next generation services may only or principally be available through the deployment of FTTP.

³⁵ The evidence of Professor Christopher Yoo attached to TELUS’ second intervention suggests that FTTP has remained a minor contributor to next generation service coverage, and those countries that emphasized FTTP represented the worst performers among the eight European countries studied. See Christopher S. Yoo, “U.S. vs. European Broadband Deployment: What Do the Data Say?” Appendix B to Telus’ second intervention, page 51.

³⁶ See, e.g., Robert Hahn, “Critique of Nordicity’s Report on Equivalence-of-Inputs Regulation in Canadian Telecommunications,” Attachment 2 to Bell Alliant’s second intervention, page 10.

assess our success in this regard through our customers' likelihood to recommend our services and we drive this success through investment and innovation designed around the needs of our customers.

58. Shaw has invested over \$4 billion in our networks during the past five years. We have developed and deployed Shaw Go WiFi, which already has over 45,000 access points. More than half a million customers take advantage of this value-add service, and over 1.25 million devices are on the network. Although this unique service does not provide a full-scale mobile alternative to the services provided by licensed carriers, it offers a compelling alternative to high cost wireless data plans. With Shaw Go WiFi, our customers can experience Shaw's Internet services on-the-go in locations where they spend time. Shaw Go WiFi is transforming the market in Western Canada, and we are committed to fully realizing its disruptive potential through more investment and deployment.
59. At the same time, licensed mobile carriers in Western Canada offer an alternative to Shaw's wireline Internet service, with the added feature of being mobile. In this dynamic environment, characterized by shifts in consumer needs, disruption and constant technological innovation, Shaw cannot be complacent. Our markets are characterized by significant consumer choice, early adoption and intense use of technology.
60. For example, the recent CMR demonstrates that the percentage of Western Canadians subscribing to Netflix is the highest among all Canadian regions (in particular, 40% higher than in Ontario).³⁷ In view of this competitive environment, Shaw has been compelled to design its corporate structure, philosophy and performance metrics around our customers.
61. We also note that vigorous inter-platform competition is not limited to retail markets. In the wholesale market, an incumbent such as Bell Canada, concerned with its ability to respond to competition, has increasingly relied on off-tariff negotiated agreements:

There is significant competition for many mandated wholesale services and at Bell Canada we are serious about expanding our wholesale business in this competitive environment. Indeed, even if services like ULLs or aggregated high speed access services were not regulated by the Commission, we would have a clear incentive to continue to provide them in order to maintain the revenue they generate. If we didn't, our competitors such as cable companies have wholesale infrastructure in place and would win the business. Regardless of whether access has been mandated, we cannot afford to cede this market and revenue opportunity to our largest competitors without a fight. Off-tariff negotiated agreements are a key tool that can allow us to compete effectively in that regard.³⁸

³⁷ 2014 CRTC Communications Monitoring Report, Figure 4.2.15.

³⁸ Bell's first intervention (28 May 2014 Supplemental), para. 204.

62. The Commissioner of Competition (the **Commissioner**, or the **Bureau**) has observed that mandated access to ULLs should be withdrawn in geographic markets where there is competition from a cable company.³⁹ On the basis of evidence filed in this proceeding, Shaw submits that it would be appropriate to extend this approach to wholesale high speed access facilities generally. Conditions are in place for withdrawing mandated access, not only for ULLs, but for other facilities that are subject to the same market conditions.⁴⁰

Relevant product market

63. The relevant market is defined as the smallest group of products and the smallest geographic area in which a hypothetical monopolist would impose and sustain a small but significant and non-transitory increase in price. With respect to wholesale high speed access services, the relevant downstream product market comprises high speed broadband services, regardless of whether such services are offered over wireline (including copper, coaxial, FTTN and FTTP), wireless or satellite facilities.
64. Consumers do not experience FTTN, FTTP or HFC facilities differently, nor do they differentiate them when purchasing services in the market. Consumers select services based on the features they require to meet their needs, such as reliability, speed, price, usage or other value-adds, like Shaw Go WiFi. It is indisputable that FTTN and DOCSIS over HFC are substitutes to broadband services delivered over FTTP facilities, thereby constraining market power.
65. In response to a Bureau interrogatory,⁴¹ Telus stated:

At this time, TELUS offers no services that it provides uniquely over FTTP. Some of these services, such as voice, can be provided over the legacy copper network, and all of the services currently provided over FTTP can also be provided over fibre-to-the-node (FTTN) Digital Subscriber Line (DSL) facilities. These services are also generally available over cable facilities. Many of these services are also available over multiple wireless networks. While it is difficult to make predictions in an environment where technological change and innovation are rapid, at this time TELUS does not anticipate that any services will be offered uniquely over FTTP in the next two years. Furthermore, if any such services were offered, they could presumably also be offered by cable companies, given the capabilities of their facilities.

³⁹ Bureau's second intervention, para. 23, referring to its submissions to the CRTC in CRTC 2006-14.

⁴⁰ According to the Bureau, these conditions include cable company sunk investments in residential neighbourhood networks, the lack of capacity constraints on cable carrier networks, the unlikely nature of coordinated conduct and market shares. (See the Bureau's second intervention, para. 26.) These competitive conditions apply to the downstream markets for all services in the same product market as those services provided over ULLs.

⁴¹ Interrogatory of the Commissioner of Competition, 31 July 2014, which asked parties to explain whether voice and broadband services provided through other facilities, including legacy copper, fibre-to-the-node, HFC used to provide third party Internet access services, and wireless technologies, are substitutes for FTTP services.

Product market definitions are for services, not technologies. There is no difference from the customer's point of view, for example, between voice or Internet service provided over FTTP and the same service provided over copper, FTTN, or cable facilities.⁴²

66. Bell arrives at the same conclusion, noting the substitutes for FTTP-based services offered by multiple providers over a variety of platforms.⁴³
67. In light of the foregoing, Shaw submits that services provided by FTTP are in the same product market as residential wireline access. As the Bureau noted: "[T]he conclusion that there is no retail market power follows" and the associated facilities should therefore not be treated as essential.⁴⁴ Accordingly, wholesale access to FTTP should not be mandated. It follows, logically, that substitutes for FTTP (i.e., DOCSIS-based broadband services) should also not be mandated.
68. As described above, Shaw's approach for gradual deregulation distinguishes between next-generation and high-speed access services.⁴⁵ Shaw agrees with the ILEC arguments that access to fibre network elements (including FTTP and FTTN) should not be mandated.⁴⁶ However, to ensure a technologically and competitively neutral application of the regulatory framework, any service that is equivalent from the consumer's perspective (e.g., a service offering equivalent speeds), and therefore a substitute, must be treated equally.
69. To be clear, Shaw does not believe the broadband market is actually two separate markets (high speed and next generation). Our proposal sets out this delineation simply as a practical way to transition to deregulation, given the competitive environment and the lack of any need for regulation of wholesale high speed access services currently, while preserving technological neutrality.

⁴² TELUS(The Bureau)31Jul14-1, page 1.

⁴³ Bell(The Bureau)31Jul4-1, page 6.

⁴⁴ Bureau's second intervention, para. 34.

⁴⁵ Support for the fact that the 25 mbps threshold is "technology agnostic" can be found in the following interrogatory response (Bell Canada(CRTC)31Jul14-13):

Although we bill ISPs based on whether the high-speed access service is "Legacy" or "FTTN", it is important to note that since we have stopped investing in our Legacy DSL platform these two qualifiers mostly relate to the access speed offered to the end-user as opposed to the underlying technology we may use to deliver the service. When an ISP requests a Legacy high-speed access service where we no longer have capacity in our Legacy DSL platform, we simply provision the service on our FTTN platform but the ISP is only charged the lower Legacy DSL rate. We do not keep track of this at an aggregated level so it is not possible to strictly rely on the service purchased to understand on what technology the end-user is provisioned."

⁴⁶ See, for example, the ILEC proposals discussed at Section 4.1 of the Rogers second intervention, referencing TELUS(Rogers)28Mar14-2 and Bell Canada(Rogers)28Mar14-3, Bell Aliant(Rogers)28Mar14-3, MTS Allstream(Rogers)28Mar14-2 and Sask Tel(Rogers)28Mar14-1.

Wireless substitution

70. As a wireline broadband provider, Shaw is very conscious of the compelling competitive alternative offered by mobile wireless. In our day-to-day business decision-making we treat mobile wireless as being part of the same product market.
71. In an attempt to counter this reality, CNOC filed a study prepared by Nordicity Group on wireless substitutability (the **Nordicity Study**) arguing, “[I]n the vast majority of circumstances, wireless and wireline data services cannot be considered substitutes for each other.”⁴⁷ While Shaw does not dispute that wireline data service is not a substitute for mobile wireless data service (because of the mobile feature that is critically important to consumers), Shaw submits that the Nordicity Study fails to refute the evidence that wireless broadband is a substitute for wireline broadband.
72. The interventions filed by Shaw and others have emphasized that, when considering the state of competition for broadband services, wireless voice and broadband services (both terrestrial and satellite-based) are substitutes for residential wireline services and are therefore part of the high-speed broadband market. The evidence submitted by the mobile wireless carriers in this proceeding, in particular, demonstrates both the interchangeability of the services from the perspective of the consumer’s experience, as well as an increasing level of actual substitution.
73. The dramatic increase in use of wireless broadband is detailed by Rogers:

The wireless technologies of mobile wireless, fixed wireless and satellite provide reasonable options for consumers seeking broadband services. These services are able to support Internet connectivity of at least 1.5 Mbps, and increasingly 5 Mbps or faster in the large majority of cases. The advances in wireless technologies enable these services to offer Internet service speeds that are often selected by residential consumers and meet the speed requirements of a number of commonly used online applications.

...

comScore Inc., which tracks trends in Internet use, found that Canadians are migrating their time spent online to smartphones and tablet devices, as indicated in its presentation, “Canada, Digital Future in Focus, 2014,” released March 31, 2014. Among the key findings in that presentation was that the “increase in smartphone penetration and 4G connectivity is driving increased usage of mobile content”. There is evidence in other countries of similar trends in the use of mobile connections as replacements for wireline connections, as noted at paragraph 151 of Rogers’ First Comments.

⁴⁷ CNOC’s second intervention, para. 30.

...

Wireless broadband services, including mobile wireless, are available to virtually all households, as indicated in the 2013 CMR, Table 6.1.3. Figure 6.1.6 further indicates that wireless technologies are widely available in rural areas as well, with HSPA+ enabling access to 97% of rural households and LTE providing access to 64% of households. The availability and capability of wireless broadband technologies is expected to continue to improve with the utilization of additional wireless spectrum.⁴⁸

74. The Nordicity Study contains the following flaws:

- It underestimates the technical capabilities of mobile broadband technology and services and fails to look at the relevant services through the eyes of the consumer.
- It incorrectly assumes that unless all wireline broadband subscribers could substitute their services for mobile broadband services, the latter is not a substitute for the former. This ignores the significant disciplining effect of mobile wireless on wireline broadband providers.
- It ignores important external validation of the substitution of mobile for wireline services. The Government acknowledged this in its 2007 Order in Council.⁴⁹ More recently, the Government endorsed wireless broadband as an eligible (if not preferred) technology/product in connecting unserved and underserved communities, as part of its Rural Broadband initiative.

75. Ultimately, the key criterion by which to assess substitutability is the customer's ability or willingness to switch from one product to another in response to changes in relative prices. The Nordicity Study ignores this principle in an effort to prove that wireline customers may in certain unlikely circumstances not have their needs met by replacing their wireline services with mobile services.

76. Nor is it appropriate to focus unduly on "the difference in capacity between fibre optic cabling and wireless spectrum" as Nordicity does.⁵⁰ Not surprisingly, looking at the "TOTAL theoretical capacity for ALL the spectrum up to 100GHz (of which mobile wireless is a very small slice) compared to the capacity per fibre optic strand" [emphasis in original],

⁴⁸ Rogers(the Bureau)28Mar14-2.

⁴⁹ See Order Varying Telecom Decision CRTC 2006-15, SOR/2007-71. It states, "[T]he Governor in Council considers that the use of mobile wireless technology by consumers is increasing and will likely continue to increase, and that for many consumers the exclusive use of mobile wireless services is an increasingly attractive alternative to wireline local exchange services".

⁵⁰ Nordicity Group, "Wireless Substitutability: Examination of the Substitutability of Wireless for Wireline Broadband Connectivity," 9 May 2014, appended to CNOC's second intervention (**Nordicity Report**), page 34.

Nordicity concludes that a “mobile wireless network will simply never have the capacity that can be realized by wireline systems, particularly fibre-optic based systems...”⁵¹

77. We respectfully submit that Nordicity has missed the point: theoretical capacity has little to do with how the consumer actually experiences the product. Furthermore, it does not logically follow that certain wireless services are not, functionally speaking, substitutes for wireline services, in particular where customers are likely to value other features such as mobility, over the singular feature of speed.

78. This has been corroborated by other parties in this proceeding. In a response to an interrogatory from the Bureau, Rogers noted:

As was the case in the Commission’s analysis of VoIP services, it is not necessary for each broadband service offering a different download speed or using a different technology to provide the same features or have the same set of limitations to be considered in the same relevant market. Rather, it is sufficient that the broadband services are able to serve the same fundamental purpose that allows consumers to use these services as replacements for each other.⁵²

79. Nordicity exaggerates the technical limitations of mobile, particularly in respect of actual speed performance, by citing data that has no bearing on or relevance to the Canadian market.⁵³ We would respectfully submit that Nordicity is not looking at the question through the most important perspective, that of the consumer.

80. The Nordicity Study also erroneously assumes that the minimum requirements of substitutability must be on an “all for all” basis in order to find that two services are in the same product market. Nordicity details a number of scenarios to examine the pricing implications of substitution, claiming it is modeling “*real world* substitutability, or *practical* substitutability.”⁵⁴ [Emphasis in original] In fact, Nordicity has distorted the analysis by ignoring available data regarding actual substitution in the Canadian marketplace in favour of constructing unrealistic substitution scenarios.

⁵¹ Nordicity Study, page 35.

⁵² Rogers(the Bureau)28Mar14-02.

⁵³ Nordicity relies on data that provide average speeds of all handset types (including non-Smartphones, which are not intended for mobile broadband use) all around the world, and are therefore not necessarily in line with the experience of Canadian consumers. The Rysavy data relied upon by Nordicity reveal different speeds – not even having the corroborating effect intended by Nordicity – but are also problematic because Rysavy fails to account for LTE Advanced. A recent study performed by PCMag in Canada provides a clearer picture. It reports that the national average download speed is 23 Mbps on Bell’s LTE network and 32.7 Mbps on Rogers’. See Sascha Segan, “Fastest Mobile Networks Canada 2014,” PCMAG, 22 September 2014, online at <http://www.pcmag.com/article2/0%2c2817%2c2468511%2c00.asp>, accessed 23 October 2014.

⁵⁴ Nordicity Study, page 49.

81. In its second intervention, Telus sets out Statistics Canada data regarding wireless-only voice households, as well as the use of wireless Internet connections.⁵⁵ These data demonstrate that actual substitution of wireline services for wireless services – both voice and data – is taking place in the Canadian market, at unprecedented rates. Rogers points to the same data:

The rate of adoption of wireless broadband services has been increasing in Canada. Statistics Canada's Survey of Household Spending indicates that 13% of all households had a wireless broadband connection in 2012, compared to 5% in 2010. Wireless broadband as a percentage of households with any type of Internet connection represents 16% of the total connections. This rate of adoption is comparable to the percentage of households that rely on wireless only for their voice service. During the same period, the percentage of household Internet connections using technologies based on cable or telecom (DSL, FTTx) connections decreased by more than 5 percentage points. This demonstrates a significant and growing propensity among consumers to rely on wireless broadband services as a substitute for wireline broadband services.⁵⁶

82. Shaw concedes that mobile providers pursue differentiated product strategies which lead to variations in the packaging and pricing of their services.⁵⁷ But that is not the question in issue. In order to constrain the market power of a wireline provider, it is not necessary that the existing prices offered for that customer's usage scenario by all mobile providers be comparable to those of wireline carriers. What is relevant is the existence of competitive discipline on the pricing of wireline services. Indeed, it is sufficient that a given mobile provider is willing and able to provide a pricing response to a wireline provider's exercise of its alleged market power.
83. In applying a static view of the pricing of Bell, Rogers and Telus mobile services, the Nordicity Study misses this market dynamic entirely. As a result, it does not provide a valid basis on which to conclude, as CNOC argues, that mobile broadband services are not substitutes for wireline broadband services.

Geographic markets

84. The wireline voice local exchange is the appropriate geographic market when assessing forbearance of mandated wholesale high speed access services. We acknowledge that Internet services, broadband networks and ISPs are not geographically constrained by local exchange boundaries in the same manner that wireline voice services are. However, the local exchange boundary provides an easily identifiable region, often encompassing a city, town or community, which appropriately reflects the social and economic attributes targeted by

⁵⁵ See Telus' second intervention, commencing at para. 33.

⁵⁶ Rogers(the Bureau)28Mar14-02.

⁵⁷ Nordicity Study, page 57. See for example Scenario 1 at page 59, where Nordicity points out that the option of using mobile wireless services has become quite expensive "for one provider at least."

carriers in their offerings. Moreover, the local exchange delineation is unlikely to contain pockets of uncontested residential Internet customers. Finally, this approach most effectively identifies rural areas that may not have two wireline facilities-based providers.

85. Turning to the business market, the DS0 and DS1 geographic market is reasonably defined as a single business location. However, this would be administratively impractical for purposes of assessing forbearance from wholesale DS0 and DS1 facilities. Given this challenge, and the increasing level of facilities-based investment across the country to serve business customers, our proposal contemplates a gradual, five-year phase-out period applied nationally.

V. APPLYING THE ESSENTIAL FACILITIES TEST: SERVICE CATEGORIES, CLASSIFICATION OF EXISTING AND NEW WHOLESALE SERVICES, AND FORBEARANCE

86. The Essential Facilities Test established by the Commission as part of its revised regulatory framework for wholesale services in Telecom Decision 2008-17 (**TD 2008-17**) is consistent with the Policy Direction and remains appropriate in today's market.⁵⁸ The test requires the satisfaction of all the following elements:
- a. The facility is required as an input by competitors to provide telecommunications services in a relevant downstream market;
 - b. The facility is controlled by a firm that possesses upstream market power such that withdrawing mandated access to the facility would likely result in a substantial lessening or prevention of competition in the relevant downstream market; and
 - c. It is not practical or feasible for competitors to duplicate the functionality of the facility.
87. As the Bureau has explained, the existing formulation of the Essential Facilities Test emphasizes competition in the downstream retail market, rather than focusing on wholesale services for their own sake. This appropriately focuses the analysis on consumer interests, rather than on individual, or a class of, competitors.
88. In the absence of a monopoly environment, forcing a business to share its facilities is an extraordinary measure. Nevertheless, the wholesale framework is meant to identify those rare circumstances where such sharing is for the benefit of customers, by ensuring healthy retail competition. The Essential Facilities Test is a fundamental component of this framework.

⁵⁸ *Supra* note 12. See, e.g., Bell's first intervention, page 25; and Bell's second intervention, paras. 36- 38.

Mandated wholesale high speed access services

89. In light of the market conditions described above, there is no basis for concluding that Shaw has market power such that withdrawing mandated access to TPIA would substantially lessen or prevent competition in the market for retail HSA services. Accordingly, wholesale high speed access services do not meet the second part of the Essential Facilities Test.
90. Furthermore, high speed access facilities can be, and have been, duplicated by numerous parties. The various fibre deployments by carriers, municipalities, ISPs and others throughout the country are testament to this assertion and serve as evidence that it is practical and feasible for competitors to duplicate the functionality of this facility. Since TD 2008-17, there are also fewer barriers to entry. The removal of the foreign ownership requirements for certain carriers⁵⁹ facilitates entry and affords new entrants better access to capital and expertise, making it increasingly practical and feasible for reasonably efficient competitors to enter the market. Spectrum releases have also facilitated, and will continue to facilitate, new entry.⁶⁰ Consequently, wholesale high speed access services do not meet the third part of the test.
91. Shaw therefore proposes that wholesale high speed access services be reclassified as non-essential and subject to phase-out in accordance with the approach set forth in Section III.

Ethernet services

92. Shaw notes that several participants – CNOC, Primus and MTS Allstream – argue for the re-regulation of Ethernet services. Shaw does not agree.
93. One of the important aspects of the decision to reclassify a service as being Non-Essential Subject to Phase-out is to send a signal to the marketplace that competitors will no longer be able to rely on mandated access, and must, within the phase-out period, consider alternatives to the ILEC facilities, including self-supply. This also creates an important opportunity for potential competitors to the ILECs in the wholesale market to construct competitive facilities.
94. Shaw not only received this signal, but acted upon it, investing heavily in network facilities to compete against the ILECs for the provision of wholesale Ethernet services. A key example is Shaw's purchase of Enmax Envision, the fibre arm of the Enmax utility in Calgary, Alberta. Re-regulation of Ethernet services would undermine these investments and

⁵⁹ The Act was amended in June 2012 by Bill C-38, the *Jobs, Growth and Long-term Prosperity Act* to provide that Canadian ownership rules no longer apply to a telecommunications common carrier if the carrier and all its affiliates have total annual telecommunications revenues that represent less than 10% of total Canadian telecommunications revenues, as determined by the CRTC.

⁶⁰ The 2008 AWS-1 spectrum auction, the 2014 700 MHz spectrum auction, the 2015 AWS-3 spectrum auction, and the 2015 BRS spectrum auction.

send the incorrect signal to the market that investments cannot be made in reliance on the Government's and Commission's facilities-based competition policy. This regulatory uncertainty could undermine investment and innovation in the marketplace.

Billing and Collection Services

95. Shaw and other participants have proposed that Billing and Collection Services no longer be mandated.⁶¹ Billing and Collection is not required for network interconnection and therefore should not be classified as falling within the Interconnection category.
96. As detailed in our second intervention, continuing to mandate Billing and Collection services would be inappropriate on the basis of the Essential Facilities Test.⁶² It cannot be said that it is not feasible to duplicate Billing and Collection Services. Billing and Collection services accordingly should be re-classified as Non-Essential Subject to Phase-Out.

Telus' proposal to forbear from mandated interconnection services

97. Telus has proposed forbearance from certain mandated local and toll interconnection services and equal access service obligations currently used to support local and long distance (**LD**) competition in Canada. Telus has indicated that mandated access is no longer required given that competitive local exchange carriers can now obtain alternative local interconnection arrangements and only a small percentage of consumers use alternative LD services.
98. Shaw agrees that eliminating mandated equal access service would not substantially lessen competition in the LD market. However, the mandated services from which Telus requests forbearance clearly fall within the Interconnection category of wholesale services. The record of this proceeding does not, to date, provide enough detail to examine the impact of Telus' proposal on efficient local and toll interconnection in Canada. Therefore, if the Commission wishes to fully explore Telus' proposal, Shaw recommends the Commission initiate a separate proceeding.

Use of negotiated agreements

99. Commercially negotiated arrangements are the cornerstone of a competitive market and should always be preferred to unnecessary and intrusive regulation that removes the incentive for mutually acceptable arrangements or innovative solutions in a competitive market. As we have stated previously in this proceeding, negotiated agreements represent a market-based solution that benefits customers. Notwithstanding the Commission's determinations in TD 2008-17, this approach should be applied to all mandated services, not only services categorized as Non-Essential and Subject to Phase-Out.

⁶¹ See, e.g., Shaw's second intervention, para. 34; Bell's first intervention, paras. 185-195.

⁶² See Shaw's second intervention, page 14.

100. Commercially negotiated agreements are particularly well-suited to the wholesale high speed access service relationship. At Shaw, we value the business of our TPIA customers who purchase wholesale services from us to provide Internet services in the retail market. We see the potential benefit of entering into commercially negotiated agreements to ensure they continue to offer their services over our network.
101. At a minimum, mandated wholesale access on commercially negotiated terms should be permitted for all services in the “Non-Essential Subject to Phase-Out” category, for the duration of the phase-out period (except as otherwise noted in our proposals for deregulation in Section III).

VI. SHAW’S REPLY TO SPECIFIC CNOC PROPOSALS

102. In this proceeding CNOC has introduced a number of proposals. For example, in its first intervention, CNOC proposed an Equivalence of Inputs (**EOI**) regime that would effectively break apart the wholesale and retail functions and governance structures of several Canadian carriers. This dramatic reconfiguration of the regulatory landscape would import an ill-suited solution from countries with no (or minimal) facilities-based competition, ignoring the competitive reality in Canada. In Shaw’s second intervention, we responded to the EOI proposal and presented evidence regarding other countries’ experiences with EOI regimes. (It is not clear from CNOC’s second intervention that it still promotes such a design for the wholesale services framework.) In this section, we respond to CNOC’s new proposals for “proxy tests” for forbearance and a new BAS service, as well as its various requests for clarification from the Commission.

Proxy tests for forbearance

103. The Commission’s current wholesale regime was introduced following the Cabinet’s direction to the CRTC regarding the framework for forbearance of regulation of retail local exchange service (the **Order in Council**),⁶³ which required the Commission to vary Telecom Decision CRTC 2006-15 (the **Local Forbearance Decision**). Now, some six years later, CNOC is proposing the re-introduction of far more onerous forbearance tests that would supplant the Essential Facilities Test, turning back the clock on the last several years of deregulation and facilities-based investment.
104. In respect of wholesale high speed access services, CNOC is proposing that the incumbent demonstrate, among other criteria, that there are, in addition to an incumbent, at least three unaffiliated facilities-based fixed line telecommunications service providers. This would represent a radical departure from the forbearance test established in the Local Forbearance

⁶³ Order Varying Telecom Decision CRTC 2006-15, SOR/2007-71.

Decision and Order in Council, which required only two additional facilities-based service providers, including mobile wireless providers at a time when wireless voice substitution was in a nascent stage. Shaw's proposals are much more in line with these important precedents in Canadian telecommunications policy.

105. As further requirements for forbearance, CNOC proposes both a 25% market share loss by incumbents and a 5% market share gain by each of two competitors. These criteria turn the Essential Facilities Test on its head, making fixed market share goals the objective, inappropriately shifting the focus from the consumer's interest to the competitor's.
106. Moreover, CNOC's onerous expectations for multi-platform competition contradict CNOC's own argument regarding the challenge and inefficiency of duplicating the incumbents' networks.
107. CNOC's proposals are simply unnecessary. The Essential Facilities Test, correctly and flexibly applied, provides the Commission the tools to determine when it is appropriate to forbear from mandating access to facilities. In this regard, CNOC quotes the Commission in TD 2008-17, when it stated that aggregated services can be forborne where "... it is demonstrated that a functionally equivalent, practical and feasible wholesale alternative exists ...".⁶⁴ However, CNOC conveniently ignores the Commission's more recent comments in TRP 2010-632, where it recognized the equal importance of retail service competition sufficient to protect the interests of end-users:

[A]ggregated ADSL access and TPIA services will eventually be phased out, either when there is a wholesale alternative available as described in the essential services decision, or when retail Internet service competition among wireline-, wireless-, and satellite-based retail Internet service providers is sufficient to protect the interests of end-users in these retail markets, absent wholesale services.⁶⁵ [Emphasis added]

108. Since there is sufficient retail competition to protect the interests of end-users, mandated wholesale alternatives, including the CNOC-proposed BAS service discussed below, are not necessary. Moreover, CNOC and other interveners have failed to demonstrate a need for such a product – especially on the broadband cable network.

Broadband Access Service

109. In its second intervention CNOC proposed that a BAS should be provided by both ILECs and cable carriers and would "serve as a foundation for competition going forward". As we noted in our response to the Commission's interrogatory on this proposal, CNOC has not provided a detailed description of the specific cable BAS that it asks the Commission to

⁶⁴ CNOC's second intervention, para. 79, quoting TD 2008-17 at para. 86.

⁶⁵ TRP 2010-632, para. 58.

mandate. However, Shaw understands that CNOc's proposed BAS service would allow independent ISPs to directly interconnect with Shaw's Internet network at all locations housing a Cable Modem Termination System (CMTS).⁶⁶

110. While the limited detail provided made it difficult for Shaw to comment on this proposal in its interrogatory response on the subject, Shaw identified three significant challenges to deploying the cable BAS proposed by CNOc, which make it anything but simple and cost effective to implement:

- First is the need for Shaw to redesign its broadband network architecture. As we indicated, it is impossible for Shaw to precisely estimate the cost and time involved in such an undertaking.
- Second, this proposal would create significant complexity with respect to management of the network, requiring further equipment at a significant cost.
- Third, the points of interconnection required for supporting BAS would likely make it uneconomic for ISPs to establish direct interconnection within Shaw's network footprint, compared to Shaw's current TPIA configuration.

111. Notably, CNOc's BAS proposal is antithetical to the natural evolution of our network, which is driven by innovation, technological developments and our fundamental imperative to respond to our customers. Implementing BAS would reverse, halt or require modifications to the network advancements that Shaw is making in order to create a better experience for our customers.⁶⁷ This proposal, and its potential impact on our plans for our network, illustrates how unnecessary and intrusive regulation curbs our ability to respond to market forces, slowing network evolution and harming customer choice.

112. CNOc has not provided evidence of any significant advantage to Canadian consumers associated with the BAS proposal. Furthermore, it is difficult to see how a proposal of such complexity and cost respects the Policy Direction's requirement for regulatory inefficiency and proportionality. Shaw questions whether disaggregation of its TPIA service would provide any discernible benefits to consumers or allow independent ISPs the ability to

⁶⁶ See Shaw(CRTC)31July2014-6.

⁶⁷ To satisfy the growth in Internet consumption by consumers, Shaw is leveraging high density network equipment in our access and transport networks. To ensure an efficient use of this network equipment, when feasible, multiple service offerings are consolidated over the network equipment. As a result of this network evolution, all services across our network infrastructure will exist as a logical configuration instead of requiring dedicated physical resources. This architecture further results in our network equipment directly connecting to our core network through the access layer at the highest capacity physical interfaces possible. With this network evolution, the introduction of dedicated network interfaces or devices will ultimately detract from the overall efficient use of our network to the detriment of our customers' services.

differentiate their services as has been suggested by CNOC. Shaw is also very concerned about our ability to recoup the start-up costs of this endeavour.

113. We also note that CNOC's proposed BAS is a complete reversal of recent ISP demands for greater aggregation to decrease TPIA interconnection points within Shaw's network. In fact, the cable BAS service would contravene the specific determinations made in TRP 2010-632, where the Commission directed the cable carriers to further aggregate traffic and reduce the points of interconnection required for TPIA services. There is no credible case for the regulatory investment that would be required to implement the BAS proposal. It would put to waste the work completed to support the Commission's directives in TRP 2010-632 and create further regulatory uncertainty in the market, all in the absence of any demonstrable benefit for consumers.
114. For the foregoing reasons, Shaw submits CNOC's BAS proposal should be rejected by the Commission.

Transfer of subscriber drop wires

115. CNOC has proposed a complex process for the transfer of ownership of subscriber drop wires in the event a retail customer changes its service provider. This proposed arrangement would completely undermine any incentive for carriers to invest in fibre drop facilities, having the immediate and direct impact of slowing the deployment of next-generation networks and reducing choice for Canadian consumers. If carriers are required to transfer ownership of a fibre drop and equipment to a competitor, it is possible that carriers would avoid installing fibre drops and premise equipment altogether. Other parties to this proceeding have highlighted the significant technical issues that would also arise under CNOC's proposal.
116. Importantly, the implementation of CNOC's proposal would have a significant and negative impact on the customer experience. Under the proposal, there is a high probability that any customer wishing to switch service providers would experience lengthy delays as the transfer paperwork and payment are processed by the carriers. In addition, in the case of a dispute between carriers over equipment ownership, transfer process or payment, the customer would be directly affected, while powerless to resolve the issue.
117. Finally, as Bell has pointed out previously, this proposal is self-serving and inequitable.⁶⁸ CNOC would have it apply only to the incumbents: if a non-incumbent ISP paid for the transfer of the fibre drop, a subsequent service provider would have no right to acquire the assets.

⁶⁸ Bell Canada(CRTC)31Jul14-8.

Other clarifications requested by CNOC

118. CNOC has inappropriately raised a number of issues regarding existing wholesale services that are not relevant to the issues in this proceeding. Shaw requests that these issues be disregarded by the Commission. However, to the extent that the Commission considers these submissions of CNOC, Shaw provides the following responses:

(i) Wholesale Access to Cable Carriers' Business Services

119. Claiming that Shaw and Videotron have refused to provide certain aggregated high speed access services to competitors, CNOC is requesting that the Commission clarify that cable carriers are not entitled to withhold wholesale services that match all of their retail Internet services.

120. As clarified in response to Shaw(CNOC)28 Mar14-148 (quoted by CNOC in its intervention), the services at issue consist of Internet speeds specifically designed to serve the business market. Accordingly, Shaw does not have an approved TPIA tariff for these speeds. Competitors can nonetheless serve the business market using Shaw's existing tariffed TPIA services, as Shaw does not place any restrictions on its TPIA customers that would prevent them from provisioning TPIA services at either residential or business locations, where coaxial facilities exist.

121. CNOC notes, "[N]one of the ILECs have adopted this approach." There are very good reasons for this. The purpose of the wholesale framework and Essential Facilities Test is to address situations where the denial of access to a wholesale service would lead to a substantial lessening or prevention of competition in a downstream market. This presumes that the entity with control over the service has market power to begin with.

122. Unlike the ILECs, the cable carriers are new entrants in business markets, which are different from residential markets. Accordingly, the position that Internet services designed for the business market are not subject to the Commission's speed-matching decisions is completely consistent with the wholesale framework. The Commission has not ruled otherwise, and unlike the ILECs, cable carriers have not been directed to file business-specific tariffs.

(ii) Synchronization of new wholesale high speed access services and enhancements with corresponding incumbent retail services

123. CNOC is requesting that the Commission require all incumbents to synchronize the introduction of new wholesale high speed access services and enhancements with the introduction of new retail services and enhancements by requiring incumbents to seek approval of wholesale tariffs prior to introducing such new services and enhancements. Other than asserting that the timing discrepancy between the introduction of the retail and

wholesale services “amounts to an undue preference”, CNOC fails to make a case for this extraordinary remedy.

124. As a matter of process, CNOC is suggesting that the ex parte tariff process be employed, but that interim approval be granted to wholesale services before the incumbent launches its own retail services. Such an approach would have obvious competitive implications, as it would effectively force a provider like Shaw to provide advance notice of a new retail service before launching it in the marketplace. This ignores the fact that incumbents compete vigorously with other network providers, and not just with entrants employing their wholesale services. CNOC’s proposal would not only distort the dynamic competitive marketplace, it would also potentially delay the introduction of new retail services for consumers.

(iii) Maintaining wholesale speeds despite withdrawal of a corresponding retail speed

125. CNOC’s request that the Commission clarify that the speed matching requirement will not automatically lead to the withdrawal or de-standardization of a wholesale high speed access service where a corresponding retail service is withdrawn amounts to a requirement that an incumbent maintain a service solely for its competitors.
126. In making this request, CNOC has completely distorted the speed matching requirements and the scope of the wholesale framework. It is one thing to mandate competitor access to a service provided by the incumbent; it is quite another thing to demand that an incumbent provide a wholesale service to an entrant even where the incumbent no longer provides that service in its own business.

(iv) Construction Charges

127. CNOC is requesting that incumbents be required to treat wholesale customers in an equivalent manner to their retail operations with respect to the application of construction charges. In doing so, it is conflating the two levels of trade.
128. First, in Shaw(CNOC)28Mar14-150, Shaw clarified that in the residential market, there are no situations in which Shaw levies construction charges where a customer is served by a competitor.
129. In the context of the business market, Shaw pointed out “there may be unique situations in which construction charges are levied to a TPIA reseller that would not apply if the service was purchased from Shaw Business. This is due to the fact that Shaw Business has a pricing

model that allows for absorption of a predefined amount of construction costs dependent upon service, length of contract, etc.”⁶⁹

130. In other words, when Shaw agrees with a business customer to extend its facilities to the business location, it will typically cover the construction and installation costs through rates and other terms and conditions. Clearly any reseller competing with Shaw over Shaw’s resold facilities can do the same when faced with the construction and installation costs to serve a business customer. CNOC’s request would deny Shaw the ability to recover its costs of providing the service, including exceptional construction and installation costs. It would also provide the reseller with an artificial advantage over Shaw in competing for the business customer, by not requiring the reseller to factor these construction costs into its pricing. This request of CNOC’s must therefore be rejected.

(v) Procedural Requirement for incumbents to provide the public with ready access to the most current version of tariffs and for cable carriers to provide access to information about cable modems

131. CNOC appears to be requesting special treatment, i.e., that it and other interested parties be provided copies of tariff notices, tariff pages and Part 1 application filings related to wholesale services automatically upon filing. Shaw does not understand CNOC’s concern. ISPs are copied on all filings that would affect them; they (as well as CNOC) also have access to the CRTC website where applications are made publicly available.
132. CNOC is also requesting that the Commission direct incumbents to publicly notify TPIA customers and all interested parties whenever a modem is added to, or removed from the list of modems that have passed second level modem testing.
133. Shaw already provides this information regarding certified modems to its TPIA customers, who need it in order to use the TPIA service and are bound by the confidentiality obligations in their TPIA agreements. Shaw does not normally make information regarding its network devices publicly available – there is no reason to create an exception for the information in question. Accordingly, the disclosure requested by CNOC is unnecessary, overbroad and should not be mandated.

VII. RATE SETTING FOR WHOLESALE SERVICE

134. Shaw submits that wholesale rates must be based on the cost of providing the service, plus a reasonable return on investment. Undermining cost recovery jeopardizes network investment, which impacts all customers on our network. Consequently, Shaw supports the current Phase II costing model. Applied in a fair, symmetrical and consistent manner, the model results in

⁶⁹ Shaw(CNOC)28Mar2014-150.

just and reasonable rates, as required by the Act, and allows carriers to recover their costs together with a reasonable return on investment, creating the predictability and stability in the marketplace that is vital to investment decisions.

135. It is critical that costing not be distorted to favour or facilitate a specific business model or network platform. This would be contrary to the Policy Direction, impact investment decisions and promote inefficient entry by competitors, ultimately hurting, not helping, consumer choice. It is also important that Phase II costing be based on a carrier's own costs and not the costs of other carriers. Benchmarking across the industry does not allow for the complete recovery of costs and introduces uncertainty to the regime.
136. Shaw's second intervention sets forth in detail our position on the appropriate approaches and principles to be relied on by the Commission in setting rates for wholesale services, including our views on the significant changes to the current Phase II costing model proposed by CNOC and Primus. We have not changed our position and it is therefore unnecessary to reiterate it in full here.

VIII. CONCLUSION

137. There can be no doubt that the unprecedented level of competition in Canada's wireline telecommunications market serves Canadians well. Facilities-based competition has succeeded in promoting word-leading investment in broadband infrastructure in Canada, while delivering innovation, value, performance and reliability. These are the drivers of the Canadian digital economy.
138. Canada's wireline telecommunications market is well-prepared for further deregulation. The approach recommended by Shaw above sets us on a path toward deregulation through a reasonable, practical and workable transition, one which, critically, can be realized in a competitively and technologically neutral manner. Whatever approach the Commission may choose at the close of this proceeding, it should allow market forces and facilities-based competition to thrive, all to the benefit of Canadian consumers.
139. Shaw appreciates the opportunity to file its Reply in this proceeding.

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