CLEARWATER COUNTY COUNCIL AGENDA
August 11, 2015
9:00 A.M.
Council Chambers
4340 – 47 Avenue, Rocky Mountain House AB

10:00 A.M. DELEGATION: STARS – Shock Trauma Air Rescue Society
10:30 A.M. DELEGATION: RMH SAR – Rocky Mountain House Search & Rescue
11:00 A.M. DELEGATION: Rocky Rod & Gun Club
12:30 P.M. DELEGATION: AAMDC – Alberta Association of Municipal Districts & Counties

A. CALL TO ORDER

B. AGENDA ADOPTION

C. CONFIRMATION OF MINUTES

1. July 28, 2015 Regular Meeting Minutes

D. PUBLIC WORKS

1. Town of Rocky Mountain House Wastewater Facility Update Q2, 2015

E. COMMUNITY & PROTECTIVE SERVICES

1. Creation of a Standing Committee of Council – High Speed Internet Terms of Reference
2. 10:00 A.M. Delegation: STARS – Glenda Farnden, Sr. Municipal Relations Liaison
3. 10:30 A.M. Delegation: SAR – Edward Van Heeren, President
   Integration to Support RMH Search & Rescue within the Clearwater County Community & Protective Services Department

F. MUNICIPAL

1. 11:00 A.M. Delegation: Rocky Rod & Gun Club – Mike Maki and Steve White
2. 12:30 P.M. Delegation: AAMDC Executive Board – Al Kemmere, President;
   Earl Graham, Director District 2 Central; and Gerald Rhodes, Executive Director

G. INFORMATION

1. CAO's Report
2. Public Works Director's Report
3. Councillors' Verbal Report
4. Accounts Payable Listing
5. Councillor Remuneration

H. IN CAMERA*

1. Third Party Interest

* For discussions relating to and in accordance with: a) the Municipal Government Act, Section 197 (2) and b) the Freedom of Information and Protection of Privacy Act, Sections 21 (1)(ii); 24 (1)(a)(c) and (g); 25 (1)(c)iii; and 27 (1)(a)

I. ADJOURNMENT

TABLED ITEMS

Date	*Item, Reason and Status*
02/24/15	073/15 Invitation from Mayor's Office, Drayton Valley STATUS: Pending Information, Municipal

AGENDA ITEM

PROJECT: Town of Rocky Mountain House, Wastewater Facility Update Q2, 2015		
PRESENTATION DATE: August 11th, 2015		
DEPARTMENT: Public Works	**WRITTEN BY: Kurt Magnus**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: Theme 2: Well Governed and Leading Organization	**PRIORITY AREA:** Objective – 2.6 Ensure timely compliance with statutory and regulatory obligations.	**STRATEGIES:** Ensure the County operates effective and efficient water and wastewater systems that meet or exceed Provincial requirements.
RECOMMENDATION: That Council accepts this item as information.		
ATTACHMENT(S): Wastewater Treatment and Septage Receiving Station Report. Lagoon – Effluent CBOD Results		

BACKGROUND:

As Council may recall, so as to accommodate external hauling, Clearwater County, in the year 2013, approved funding the required upgrades to the Rocky Mountain House Wastewater Treatment Facility. The two main components of the required upgrades included additional aeration and the construction of an automated receiving station.

As part of the agreement, the Town of Rocky Mountain House is to provide quarterly reports regarding the operations of the wastewater facility. On April 28th, the first quarter results, for 2015, were presented to Council. This particular quarterly report focus' on the wastewater treatment results measured in Carbonaceous Biochemical Oxygen Demand (CBOD) and the volume of bulk sewage received, based on cubic metres received per month, since the septage receiving station (SRS) opened on January 6th, 2014.

Attached is both a graph showing the CBOD results from January 2008 to June 2015 and a table showing the same results listed numerically.

TOWN OF ROCKY MOUNTAIN HOUSE

REPORT TITLE: Wastewater Treatment & Septage Receiving Station – 2015 Q2 Update	
PRESENTER: Kris Johnson, P.Eng. **Director of Engineering & Operations**	**FILE #: OP 2014/0026 (Wastewater Agreement)**
DEPARTMENT: Engineering & Operations	**AGENDA DATE: July 21, 2015**
DISCUSSIONS:	**ATTACHMENTS:** • **CBOD Results - 2008 to Now**
APPROVALS: **Department Head** **Date** **CAO** **Date**	

Conformance to existing laws and Town Council Plans:

Conforms with:	Yes/No/ Partial/NA	Comments:
Bylaws/Laws/Policies	NA	
Sustainability Plan	NA	
Council Strategic Plan/Priorities	Yes	This report is a requirement as per item 11.1 of the wastewater agreement between the Town and County.
Budget/Long Term Plans	NA	
Effects on future budgets	NA	
Regional Impacts	NA	

Background/Introduction

As per item 11.1 of the Wastewater Agreement between the Town and County, "the Town will provide to the County a summary report of the lagoon operations, compliance, usage and capacity on a quarterly basis in the months of March, June, September and December." It was mutually agreed upon that the report to council dates will occur in April, July, October and January to ensure all sample results for the quarter are received prior to reporting.

This report will focus on the wastewater treatment results measured in CBOD and the volume of bulk sewage received based on cubic metres received per month since the septage receiving station (SRS) opened on January 6, 2014.

Definitions:

- BOD (Biochemical Oxygen Demand) - The amount of oxygen needed by aerobic microorganisms to decompose all the organic matter.
- CBOD (Carbonaceous Biochemical Oxygen Demand) - The amount of oxygen required to oxidize carbon containing matter present in water. A measurement of carbon mater contained in sewage effluent.

TOWN OF ROCKY MOUNTAIN HOUSE

Analysis:

Wastewater Treatment Results

Attached is a graph showing the CBOD results from January 2008 to June 2015 for you reference. These same results are listed numerically in the table below. Note that the wastewater effluent shall have a CBOD of less than 25mg/L limit as per the Town's approval from Alberta Environment. Any results that exceeded this limit have been highlighted.

Table 1: Effluent Sample Results shown in CBOD (mg/L)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	AVE.
2008	15.3	28.0	41.5	27.0	21.0	14.5	16.2	10.8	7.9	6.1	12.0	14.3	**17.9**
2009	26.2	30.8	49.7	37.4	21.9	18.7	14.4	23.2	14.6	6.9	7.4	14.0	**22.1**
2010	22.4	32.9	32.5	24.7	18.4	14.7	12.4	11.3	10.7	11.5	13.3	16.4	**18.4**
2011	20.1	28.5	37.7	32.9	21.0	14.8	14.8	13.1	4.4	2.8	6.8	11.5	**17.4**
2012	13.7	19.4	12.3	15.9	17.3	9.9	14.8	12.3	8.7	4.5	8.3	13.8	**12.6**
2013	12.2	15.3	15.3	15.7	19.2	8.8	14.2	9.8	9.9	4.3	16.1	19.1	**13.3**
2014	19.1	13.9	15.7	15.7	15.3	12.0	13.2	5.5	2.6	2.7	6.2	11.7	**11.1**
2015	10.4	12.0	13.2	15.0	18.5	13.3							

The CBOD results increased in May and June but are still well below our approval requirement of 25 mg/L.

SRS Sewage Volumes

Wastewater volumes received to date in 2015 along with volumes from 2014 are listed below:

Table 2: Sewage Volume Received at the SRS

	Volume (m^3)	
	2014	2015
January	355.36	691.81
February	485.32	777.98
March	714.41	1,414.10
April	853.77	982.95
May	1,308.33	1,588.84
June	1,548.78	2,156.28
July	2,836.72	
August	2,790.33	
September	1,378.65	
October	1827.92	
November	740.85	
December	805.24	
TOTAL	**15,645.68**	**7,611.96**

TOWN OF ROCKY MOUNTAIN HOUSE

The bulk dump cell was de-sludged on June 23 which is a scheduled maintenance item for this system. We will continue to clean out this cell twice per year in approximately June and October.

Recommendation:

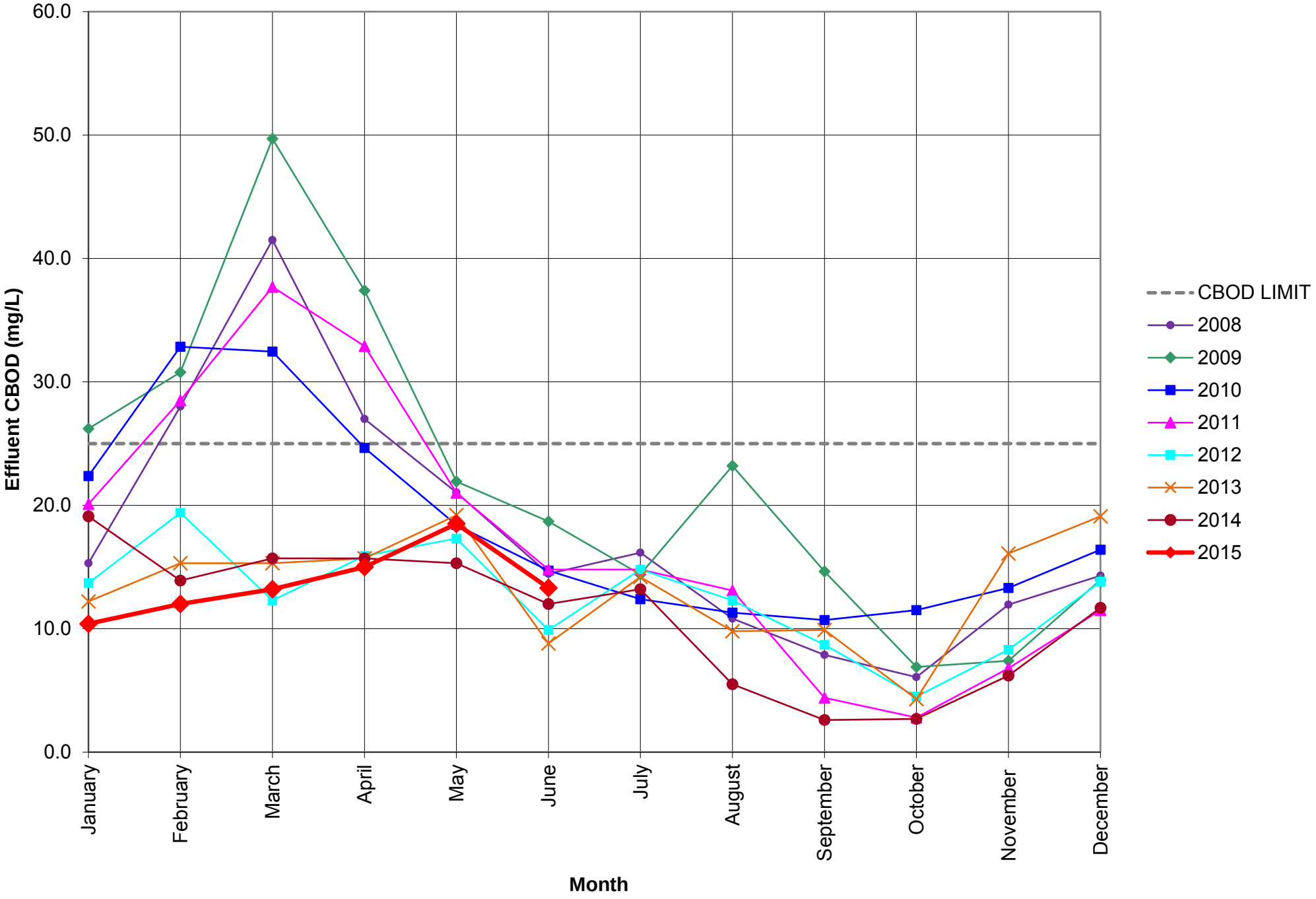
That Council accepts this report as information.

External Communications:

Clearwater County - for their next Council meeting on July 28, 2015

D1

Lagoon - Effluent CBOD Results



AGENDA ITEM

PROJECT: Creation of a Standing Committee of Council - High Speed Internet Terms of Reference		
PRESENTATION DATE: August 11, 2015		
DEPARTMENT: Community & Protective Services	**WRITTEN BY: Ted Hickey**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☐ N/A ☐ Funded by Dept. ☒ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: **1: Managing our Growth**	**PRIORITY AREA:** **Local Economy**	**STRATEGIES:** 1.3.3 Advance the findings of the Reeves Economic Summit by partnering with local Chambers of Commerce, businesses or other stakeholders to initiate or support marketing programs that will generate economic activity. 1.3.4 Initiate programs, which may include installation of communication towers and/or fiber optic cable, to support "Final Mile" connectivity for residents, business, and industry within Clearwater County. 1.3.5 Monitor current and projected growth of businesses and population, and, to respond to the various trends, impacts and demands affecting land development or the economy within Clearwater County. 1.3.6 Develop and market the community of Nordegg, as financial resources permit and in accordance with the Nordegg Development Plan and Design Guidelines.

RECOMMENDATION:

That Council amend and adopt the terms of reference for the Standing Committee of Council - High Speed Internet

ATTACHMENT(S):

1. **July 28, 2015 Agenda Item Creation of a Committee of Council - High Speed Internet**
2. **Canadian Radio-television and Telecommunications Commission Regulatory Policy 2015-326**
3. **Draft Flow Chart Regarding High Speed Internet and Future Decisions/Direction.**
4. **Standing Committee of Council - High Speed Internet Terms of Reference**

BACKGROUND:

Upon the direction of Council on July 28, 2015, Administration has completed a draft Terms of Reference for the Committee of Council - High Speed Internet.

AGENDA ITEM

PROJECT: Creation of a Committee of Council - High Speed Internet		
PRESENTATION DATE: July 28, 2015		
BUDGET IMPLICATION: ☐ N/A ☐ Funded by Dept. ☒ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: **1: Managing our Growth**	**PRIORITY AREA:** **Local Economy**	**STRATEGIES:** 1.3.3 Advance the findings of the Reeves Economic Summit by partnering with local Chambers of Commerce, businesses or other stakeholders to initiate or support marketing programs that will generate economic activity. 1.3.4 Initiate programs, which may include installation of communication towers and/or fiber optic cable, to support "Final Mile" connectivity for residents, business, and industry within Clearwater County. 1.3.5 Monitor current and projected growth of businesses and population, and, to respond to the various trends, impacts and demands affecting land development or the economy within Clearwater County. 1.3.6 Develop and market the community of Nordegg, as financial resources permit and in accordance with the Nordegg Development Plan and Design Guidelines.

WRITTEN BY: TED HICKEY
REVIEWED BY:
DEPARTMENT:

RECOMMENDATION:

1. That Council establish a Committee comprised of members of Council and community stakeholders to evaluate what if any role Clearwater County should have in addressing the gaps in rate payers' and business' access to and/or improved capacity of high speed internet throughout Clearwater County.
2. That Council direct the Committee to establish a Terms of Reference to assist in the evaluation process using a 20 Mb/sec internet speed as a baseline performance measure.
3. That the Committee report back to Council by October 31, 2015 with its findings and recommendations.

ATTACHMENT(S):

BACKGROUND:

Clearwater County Strategic Plan 2015 – 2018 recognizes a focus and potential greater involvement of the County towards addressing the gaps in rate payers' and business' access to and/or improved capacity of high speed internet throughout Clearwater County. Council has discussed its possible involvement in addressing an ongoing private sector gap in internet service to current and future rate payer's residents and businesses. Final Mile Grant funding through a Federal program was sought but was not approved.

Studies detailing an option of wireless (broadband using a 1.5 Mb/sec measure) and fiber connection have been completed and reported to Council. These reports have identified that a majority of the County's rate payer's residents (61.5%) and businesses are not currently served or underserved in their ability to connect to high speed internet or having poor levels of service when able to connect using a wireless option. Analysis completed to date includes:

1. *Identify the current broadband coverage/capacity for selected townships.*
2. *Identify the gaps between the current broadband coverage/capacity and the Industry Canada coverage/capacity maps.*
3. *Provide recommendations for alternative rural communication strategies to fill the gaps.*
4. *Provide a high level budget for each of the rural communication strategies.*
5. *Identify barriers, such as technical, capital investment, for each of the strategies.*
6. *Identifying current or future partnerships for each of the strategies.*
7. *Provide an economic analysis for a rural fiber optic network.*

3.6 Results

The details of coverage/capacity analysis are provided in Appendix A: Wireless Coverage/Capacity Results. Fifty-two (52) WISP towers were analyzed and as a result ninety-five (95) townships were classified as either unserved, unserved, and underserved. The breakdown is provided in Table 3: Township Analysis.

Table 3: Township Analysis

Classified	Townships		Percentage		Population		Percentage	
Unserved		*47*		*49.5%*		*520*		*8%*
Served		*21*		*21%*		*2506*		*38.5%*
Underserved		*28*		*29.5%*		*3486*		*53.5%*
Total:		***95***		***100%***		***6512***		***100%***

Clearwater County Rural Communications Strategy Report, VITEL Consultants

Delegations involved in informing and/or reporting to Council have used varying internet speeds as baselines in establishing capabilities and limitations of high speed internet connection. A recommendation from Administration is that Council establish a 20 Mb/sec internet speed as the standard baseline performance measure.

Options for Council to Consider Include:

1. Council continue to lobby private sector service providers to adequately address gaps in internet service.

2. Council determines a level of service for internet speed and directs the Administration to develop a deployment strategy to best address gaps in internet service within fiscal limitations determined by Council.

3. Council determines a level of service for internet speed and establishes a Committee of Council comprised of members of Council and community stakeholders to evaluate what if any role Clearwater County should have in addressing the gaps in rate payers' and business' access to and/or improved capacity of high speed internet throughout Clearwater County.

Administration believes that the formation of a Committee of Council comprised of members of Council and other community stakeholders will help provide clarity as to determining the community's needs and provide helpful insights towards any future decision of Council. This Committee's function would include evaluating what if any role Clearwater County should have in addressing the gaps in rate payers' and business' access to and/or improved capacity of high speed internet throughout Clearwater County.

Suggested Committee Membership:

Clearwater County Council:	(Council to determine number of members)
Members At Large:	(Council to determine number of members)
Chamber(s) of Commerce:	(Council to determine number of members)
Municipalities:	(Council to determine number of members)
Industries:	(Council to determine number of members)

Council may wish to appoint members of the Committee or advertise positions and review applications to the Committee. Application reviews could be completed by Council as a whole or Council may want to create a subcommittee of Council to complete this process. Entities such as Alberta Health Services, the Wildrose School Division and others may be included in an advisory capacity.

Telecom Regulatory Policy CRTC 2015-326

PDF version

Route references: 2013-551 and 2013-551-1

Ottawa, 22 July 2015

File number: 8663-C12-201313601

Review of wholesale wireline services and associated policies

The telecommunications industry in Canada is supported by a wholesale services framework that sets out the rates, terms, and conditions under which incumbent telecommunications service providers are required to make available parts of their respective networks to competitors. These leased parts are referred to as wholesale services, and are used by competitors to provide services, such as local phone, television, and Internet access services, to their retail end-customers.

The Commission's determinations in this decision are the result of a public proceeding to review wholesale wireline services and associated policies, including an oral hearing held in Gatineau, Quebec. As part of this proceeding, the Commission reviewed the existing wholesale services framework, various wholesale wireline services, and the approach it uses to set the rates for wholesale services to determine whether changes to the existing regulatory landscape are appropriate.

The Commission has made its determinations set out in this decision with a view to achieving various objectives, notably to provide Canadians with more choice for high-speed connectivity, thereby enabling them to fully leverage the benefits of the broadband home or business. Increased choice is expected to drive competition, resulting in further investment in high-quality telecommunications networks, innovative service offerings, and reasonable prices for consumers.

The Commission has adjusted its mandating criteria for wholesale services, and sets out the reasoning behind its determinations to mandate – or not – the provision of particular wholesale services. Pursuant to its mandating criteria, the Commission has made the following determinations regarding the regulatory status of the following wholesale services:

- *Wholesale high-speed access services, which are used to support retail competition for services, such as local phone, television, and Internet access services, will continue to be mandated; however, the provision of aggregated services will no longer be mandated and will be phased out in conjunction with the implementation of a disaggregated service. Incumbent carriers are **directed** to begin implementing disaggregated wholesale high-speed access services, in phases;*

- *The requirement to implement disaggregated wholesale high-speed access services will include making them available over fibre-access facilities;*

- *Unbundled local loops, a legacy service used primarily to support retail competition for local phone services and lower-speed Internet access, will no longer be mandated and will be phased out; and*

- *Ethernet and high-speed competitor digital network services, which are primarily used to support retail competition in the business data services market, will remain forborne and not mandated.*

In addition, the Commission has rendered determinations on issues such as the costing methodology to be applied to wholesale services and the request to implement an equivalence of inputs wholesale regime.

The wholesale services framework established in this decision will remain in place for a minimum of five years.

The dissenting opinion of Commissioner Shoan is attached.

Introduction

1. Wholesale telecommunications services (hereafter referred to as wholesale services) are the services that telecommunications companies provide to each other, and are integral to the overall development of the Canadian communications system.

2. The provision of wholesale services primarily supports competition in various retail service markets, such as local phone, television, and Internet access service markets, by enabling competitors to access certain telecommunications facilities and network components from incumbent carriers, such as incumbent local exchange carriers (ILECs) and cable companies, so that competitors can extend their networks where necessary to provide their own services to consumers. Wholesale services also play a supporting role in the overall telecommunications system – for example, by ensuring the efficient interconnection of competing networks, by ensuring public safety through the provision of emergency services, and by optimizing the use of support structures such as poles and conduits.

3. Over the years, the Commission has established various policies, rules, and regulations to govern the provision of wholesale services. These regulatory measures are necessary because incumbent carriers have had considerable advantages over competitors. Without wholesale regulation, fewer competitive service options would be available to Canadians.

4. Throughout the 1990s and early 2000s, the Commission focused its wholesale service regulation on improving competition in the long distance and local voice telephony markets. Over the past decade or so, the Commission has gradually shifted its focus away from legacy voice services and towards improving competition for broadband services.

5. The Commission’s general approach towards wholesale service regulation has been to promote facilities-based competition wherever possible. Facilities-based competition, in which competitors primarily use their own telecommunications facilities and networks to compete instead of leasing from other carriers, is typically regarded as the ideal and most sustainable form of competition. Examples of telecommunications facilities include the

copper, coaxial, and fibre connections that connect households and businesses, fibre-optic cables connecting communities, and the various routers, switches, and interfaces located within incumbent carrier data centres.

6. Conceptually, facilities-based competition is best achieved by requiring incumbent carriers to make available facilities that are "essential" for competition. These facilities, sometimes referred to as bottleneck facilities, are, generally speaking, network components that cannot be readily duplicated and that are controlled by incumbent carriers, which gives them the market power to substantially prevent or lessen retail competition if they were to deny competitors access to those facilities. To determine whether to mandate facilities, the Commission has applied a specific set of criteria, set out in paragraph 15 of this decision.

7. If the Commission finds that a facility should be made available to competitors, the next question it assesses is how the facility should be configured and what rates, terms, and conditions should apply. The degree to which incumbent carriers' networks are made available to competitors depends on a variety of factors, including the policy objectives set out in section 7 of the *Telecommunications Act* (the Act), technical issues, operational requirements, and the Commission's regulatory policies. The desired outcome is that once competitors are given access to certain facilities (for example, access facilities), they are incented to enter the market and invest in other parts of the network, eventually leading to lower prices, innovative service offerings, and greater choice for consumers.

8. Regarding the provision of broadband services, the Commission has, in recent years, and for a variety of reasons, opted to allow competitors access to a wholesale service that did not require material investment in facilities, by mandating the provision of a comprehensive wholesale service from incumbent carriers, known as aggregated wholesale high-speed access (HSA) service. This service has enabled competitors to lease a package of both the access facilities they need to connect to customer locations, and transport facilities, through which large amounts of traffic can be sent and received, without requiring them to invest substantially in their networks.

9. A central debate in this proceeding is whether this type of "aggregated" approach continues to be the appropriate means to foster retail competition for broadband services now and into the future. Another issue is whether the fibre-access facilities being deployed by incumbent carriers ought to be included in any wholesale HSA service that is made available to their competitors.[1]

Telecom Notice of Consultation 2013-551

10. On 6 December 2013, in Telecom Notice of Consultation 2013-551, the Commission initiated a proceeding to review issues related to wholesale services and their associated policies.[2] Specifically, the Commission stated that it intended to examine (i) the

[1] In Telecom Regulatory Policy 2010-632, the Commission determined that the obligation to provide wholesale HSA services would apply to existing technologies, including hybrid copper-fibre facilities and hybrid fibre-coaxial cable facilities, but did not extend the obligations to fully fibre-based network solutions.

[2] As a separate matter, the Commission later initiated Telecom Notice of Consultation 2014-76 to consider whether the wholesale wireless service market is sufficiently competitive and, if not, what regulatory measures are required.

appropriateness of the previously established wholesale service categories and of mandating any new or forborne wholesale services; (ii) whether its existing wholesale service policies appropriately balance incentives for innovation and investment in the construction of telecommunications network facilities, resulting in more sustainable competition and the provision of high-quality retail telecommunications services; (iii) the product and geographic markets for wholesale services; and (iv) its rate-setting approaches for wholesale services.

The proceeding

11. The following parties participated in the proceeding: Bell Aliant Regional Communications, Limited Partnership (Bell Aliant)[3] and Bell Canada (collectively, the Bell companies); MTS Inc. (MTS) and Allstream Inc. (collectively, MTS Allstream); Saskatchewan Telecommunications (SaskTel); and TELUS Communications Company (TCC)[4] [all of which are referred to collectively as the ILECs]; Bragg Communications Incorporated, operating as Eastlink (Eastlink); Cogeco Cable Inc. (Cogeco); Quebecor Media Inc., on behalf of its affiliate Videotron G.P. (Videotron); Rogers Communications Partnership (RCP); and Shaw Cablesystems G.P. (Shaw) [all of which are referred to collectively as the Cablecos]; the British Columbia Broadband Association (BCBA); the Canadian Network Operators Consortium Inc. (CNOC);[5] Distributel Communications Limited; Fibernetics Corporation (Fibernetics); and Primus Telecommunications Canada Inc. (Primus) [all of which are referred to collectively as the Competitors]; OpenMedia.ca (OpenMedia), the Public Interest Advocacy Centre and the Consumers' Association of Canada (PIAC), as well as l'Union des consommateurs (all of which are collectively referred to as the Consumer Groups); the SSI Group of Companies; TBayTel; Vaxination Informatique; and VMedia Inc.; Aurora College; and School District #67 (Okanagan Skaha); CANARIE Inc.; Cybera; the Canadian Cable Systems Alliance; the Canadian Federation of Independent Business; the Canadian Independent Telephone Company Joint Task Force; the Competition Bureau; Fiber to the Home Council Americas; and i-CANADA; the City of Calgary; the City of Coquitlam; and the Yukon Government; and several individuals.

12. The proceeding included a public hearing, which began on 24 November 2014. The public record of this proceeding, which closed on 19 December 2014, is available on the Commission's website at www.crtc.gc.ca or by using the file number provided above.

This proceeding relied on the wholesale services framework established in Telecom Decision 2008-17, and resulted in Telecom Regulatory Policy 2015-177.

[3] Originally, Bell Aliant filed on behalf of itself; DMTS; KMTS; NorthernTel, Limited Partnership; and Télébec, Limited Partnership (Télébec), while Bell Canada provided its own submissions. However, as the proceeding progressed, the Commission received joint submissions from Bell Aliant and Bell Canada. These two companies have been referred to collectively in this decision as the Bell companies.

[4] TCC includes its operations in the province of Quebec (TELUS Québec inc.).

[5] CNOC is a regulatory association that represents competitive service providers such as TekSavvy Solutions Inc.

Objectives of the wholesale service regime

13. The Commission's wholesale service regime encompasses a wide range of wholesale services provided by the ILECs and the Cablecos (hereafter collectively referred to as the incumbent carriers), and ultimately impacts various downstream retail markets, including the Internet access, local and long distance telephony, television, and business communications markets. During the course of the proceeding, the potential implications of the Commission's determinations with respect to broadband services were of particular interest, given the role that these services play in the lives of Canadian citizens and the success of Canadian businesses, since these services enable participation in the digital economy by providing access to a range of content, other services, and applications.

14. The Commission's determinations in this proceeding take into consideration the policy objectives set out in section 7 of the Act, as well as the Policy Direction.[6] Furthermore, the determinations below were also made with a view to achieving the following objectives:

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

Regulatory framework for wholesale services

15. The Commission has endorsed the concept of essential services in the context of wholesale regulation since the late 1990s. More recently, in Telecom Decision 2008-17, the Commission established an essential services test (hereafter referred to as the Essentiality Test), with three components:

    - the facility[7] is required as an input by competitors to provide telecommunications services in a relevant downstream market[8] (the input component);
    - the facility is controlled by a firm[9] that possesses upstream market power such that denying (or withdrawing) access to the facility would likely result in a substantial

[6] *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, P.C. 2006-1534, 14 December 2006

[7] In this decision, a reference to a facility or service may be taken as a reference to a facility, function, or service (or all three), as appropriate in the context.

[8] Generally, the downstream market represents the market for retail services that rely on underlying telecommunications facilities as an essential input. In contrast, the upstream market represents the market for the underlying telecommunications facilities themselves.

[9] In the context of this decision, the term "firm" includes a group of firms exercising collective market power.

lessening or prevention of competition in the relevant downstream market (the competition component); and

- it is not practical or feasible for competitors to duplicate the functionality of the facility (the duplicability component).

16. However, in practice, essentiality has been only one factor that the Commission has considered in its decision whether to mandate the provision of wholesale services. Wholesale services serve other purposes, such as ensuring the efficient interconnection of competing networks, ensuring public safety through the provision of emergency services, and optimizing the use of support structures such as poles and conduits.

17. In Telecom Decision 2008-17, the Commission decided to phase out the mandatory provision of, and forbear from regulating, certain non-essential wholesale services. In addition, the Commission decided to create new categories[10] of wholesale services, the provision of which was mandated for reasons other than essentiality, after considering, among other things, the decision to mandate the provision of aggregated wholesale HSA services. As part of this proceeding, the Commission re-examined its regulatory framework for wholesale services and its approach to classifying these services.

Positions of parties

18. Parties were generally of the view that the Essentiality Test remains the appropriate means for determining whether a wholesale service ought to be mandated. Most parties favoured retaining the definition and service categories established in Telecom Decision 2008-17.

19. Certain parties considered that the Commission's general approach towards mandating wholesale services should be clarified and simplified, for example, by consolidating or eliminating some of the categories.

20. Parties generally agreed that in certain circumstances, the Commission's decision to mandate a wholesale service may be based on policy considerations unrelated to the Essentiality Test, particularly with respect to services related to interconnection or public good.

21. TCC indicated that it was generally satisfied with the Commission's existing Essentiality Test, but stressed that, with the exception of public good and certain interconnection services, wholesale services should only be mandated if they meet the Essentiality Test.

22. CNOC proposed two wording changes to the Essentiality Test, as follows (changes are in italics): (i) the facility is required as an input by competitors to provide telecommunications services in a relevant downstream market; (ii) the facility is controlled by a firm that possesses upstream market power such that *not providing* access to the facility would likely result in a substantial lessening or prevention of competition in the relevant downstream market; and (iii) it is not *economically efficient* for competitors to duplicate the functionality of the facility. CNOC indicated that the first change would allow for a "no head-start rule,"

[10] Six categories of wholesale services were established in Telecom Decision 2008-17: essential, conditional essential, conditional mandated non-essential, public good, interconnection, and non-essential subject to phase-out.

which would enable competitors to launch new retail services in the same time frame as incumbent carriers. CNOC argued that its second change would serve to minimize the duplication of facilities that are inefficient from a macro-economic perspective.

23. Several incumbent carriers opposed CNOC's proposed changes, arguing that they could have a significant impact on the application of the mandating criteria and would inappropriately result in various non-essential services being mandated.

Commission's analysis and determinations

24. The Commission's framework for determining whether wholesale services should be mandated should be predictable and practical for the industry and should constitute an efficient regulatory regime that provides a high degree of regulatory certainty to both incumbent carriers and competitors. In order to achieve these goals, modifications and clarifications to the Commission's approach to mandating wholesale services are appropriate.

25. Furthermore, it is important to outline how the Commission intends to apply its wholesale services framework going forward. The following sections provide information on (i) the Commission's general approach for determining whether a wholesale service ought to be mandated, (ii) the components included in the Essentiality Test, (iii) how the Commission intends to apply the Essentiality Test, and (iv) the additional policy considerations that the Commission may use to inform a decision whether or not to mandate the provision of a wholesale service.

General approach

26. The general approach for determining the regulatory treatment of a wholesale service depends primarily on whether the service in question (i) is a new service, (ii) has previously been forborne,[11] or (iii) is a regulated service.

27. If a wholesale service would constitute a new service or if it has previously been forborne, the Commission will consider the state of competition in one or more of the affected retail markets to help determine whether regulatory intervention is appropriate. For example, the Commission may examine whether competition is sustainable or whether there are significant barriers to entry into the retail market for competitors.

28. If the Commission finds that competition in one or more of the affected retail markets has been substantially lessened, it could then proceed, where appropriate, to consider whether previous forbearance findings ought to be displaced or whether a new wholesale service ought to be mandated, by conducting a market power test with respect to the wholesale service in question. If the evidence demonstrates that the circumstances that gave rise to forbearance have changed to the extent that the Commission's original findings are no longer consistent with section 34 of the Act, the Commission will re-assert its jurisdiction by

[11] The Commission forbears, or refrains, from regulation when it finds that a service is subject to sufficient competition, or when forbearance is consistent with the Canadian telecommunications policy objectives set out in section 7 of the Act. When a service is forborne, it is generally not subject to a Commission-approved tariff, although the service may still be regulated with respect to other aspects.

reapplying the appropriate sections of the Act. Once forbearance has been displaced, or for any new wholesale service, the Commission would proceed with the same approach used with respect to established regulated wholesale services, as discussed below.

29. For regulated wholesale services, the Commission will base its decision to mandate the provision of a wholesale service on two elements: (i) the Essentiality Test, and (ii) a set of policy considerations that could modify or support its decision.

30. Since both the Essentiality Test and the market power analysis used to inform the Commission's forbearance-related determinations contain many of the same analytical elements, these analyses could be performed in conjunction with each other. Based on the results of the retail market assessment, the upstream market power analysis, and the application of the Essentiality Test and policy considerations, the Commission would then determine the specific regulatory measures that should be applied, including whether to mandate the provision of the wholesale service in question.

Components of the Essentiality Test

31. As noted above, except for CNOC, there was general consensus among parties that the current definition and structure of the Essentiality Test, including the three components – namely the input component, the competition component, and the duplicability component – that were established in Telecom Decision 2008-17, remain appropriate.

32. The current definition of an essential facility was developed based on a significant amount of expert testimony and evidence filed in previous Commission proceedings, and no party submitted evidence demonstrating that changes are necessary or appropriate. Regarding CNOC's proposed wording modifications, the Commission does not consider that they would improve the clarity or the predictability of the Essentiality Test, given that the existing definition includes similar language. The Commission therefore finds that the current definition and structure of the Essentiality Test remain appropriate for determining whether the Commission should mandate the provision of a particular wholesale service.

Application of the Essentiality Test

33. Parties' comments on this subject focused mainly on defining the relevant geographic market associated with a given wholesale service. Parties generally agreed that the Commission's use of a national geographic market in Telecom Decision 2008-17 was too broad for most wholesale services, and that a smaller geographic region, such as a province, a census metropolitan area, a community, or an exchange would be more appropriate, depending on the wholesale service in question. Other parties indicated that, in theory, the relevant geographic market for a wholesale service could be as small as the individual household or business premises; however, in practice, it is necessary and appropriate to aggregate such markets into larger analytical units that share characteristics regarding competition.

34. The first step in applying the Essentiality Test is to define the relevant markets for the wholesale service in question, which include product and geographic components. These markets are typically characterized as the smallest group of services and geographic area

over which a firm could profitably impose a significant and non-transitory (i.e. sustainable) price increase.

35. However, some degree of aggregation may be appropriate, since it would be exceedingly onerous to gather data for every wholesale service product market for every location (e.g. community or exchange) in the country, and since certain markets share similar competitive market conditions. As such, a balance must be struck between the use of meaningful and practical definitions for product and geographic markets, as well as the administrative burden associated with gathering and processing large amounts of data.

36. Once the relevant markets are defined, the Commission assesses the wholesale service in question against each component of the Essentiality Test, described in further detail below. In some cases, the availability and/or quality of the evidence and the specific facts associated with a particular wholesale service will dictate the factors to which the Commission will give more or less weight. For a wholesale service to meet the Essentiality Test, all three components must be satisfied.[12]

Input component

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

38. If the Commission finds that the wholesale service in question is a required input for competitors to provide downstream retail services, and that there is and will continue to be sufficient demand for the wholesale service, the input component would be satisfied.

Competition component

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

40. When assessing upstream market power, the Commission will consider various factors, such as upstream market share, demand conditions (e.g. the availability of substitutes and customer switching costs), supply conditions (e.g. competitor capacity constraints and the likelihood of competitive entry), and evidence of rivalrous behaviour (e.g. competitive bidding for wholesale contracts, promotions, and service improvements).

41. However, the presence of upstream market power alone is not sufficient to meet the competition component. There must also be the potential for a substantial lessening or

[12] It may not be necessary for the Commission to assess all three components of the Essentiality Test should its analysis of one component demonstrate that the wholesale service in question does not satisfy the Test.

prevention of competition in a corresponding downstream retail market(s) should access to the upstream input be denied. In assessing the retail impacts, the Commission will examine downstream retail market share, the number and character of firms and/or customers that might be affected in the absence of the wholesale service, the availability of retail substitutes, customer switching costs, and other retail indicators that may be specific to the wholesale service in question. While the Commission's assessment may focus on one relevant downstream retail market, it does not preclude additional assessments pursuant to different downstream retail markets.

42. If, on balance, the Commission finds that there is upstream market power and that the associated downstream retail market(s) could be negatively impacted to a substantial degree if it does not mandate the provision of the wholesale service, the competition component would be satisfied.

Duplicability component

43. The Commission will assess whether it is practical or feasible for competitors to duplicate the functionality of a facility, either through self-supply or third-party supply.

44. Consistent with its approach in Telecom Decision 2008-17, the Commission will assess duplicability from the perspective of a reasonably efficient competitor. Specifically, the Commission will assess economic considerations (e.g. capital costs and construction time frames), legal or regulatory considerations (e.g. government approvals and access to rights-of-way), and technical impediments (e.g. network or technological issues) or other impediments faced by new or expanding competitors.

45. Scale is also important, since competitors' capacity for isolated or limited duplicability does not necessarily indicate that they are able to deploy facilities on a widespread basis sufficiently to discipline the exercise of incumbent carriers' upstream market power in relation to relevant downstream markets. Accordingly, the geographic area used to define the relevant market for the wholesale service in question is typically the appropriate scale for assessing duplicability.

46. If the Commission finds that the functionality of a particular wholesale service cannot reasonably be duplicated by a reasonably efficient competitor on a sufficient scale, the duplicability component would be met.

Policy considerations

47. Throughout the proceeding, almost all parties agreed that certain wholesale services that support the public good, such as emergency and support structure services, as well as services that support network interconnection, should generally be mandated. Parties generally viewed these types of services as falling outside the essential service analysis.

48. Most parties did not propose any specific policy criteria that could inform the Commission's decision whether to mandate the provision of a wholesale service. However, there was support for certain concepts, such as incenting network investment, encouraging network innovation, encouraging facilities-based competition, maintaining regulatory symmetry and

technological neutrality, ensuring consumer choice, and accounting for regional market differences.

49. The Commission agrees with parties that wholesale services that serve the public good and those related to network interconnection should be given special treatment for policy reasons not captured by the Essentiality Test.

50. Further, investment and innovation considerations are also important now and in the future. The telecommunications industry is in a transitional phase between the traditional circuit-switched legacy networks, and more advanced technologies, such as packet-based transport over fibre and wireless facilities. Therefore, the addition of investment and innovation as a policy consideration could encourage the transition away from investment in legacy networks and incent companies to invest in advanced network technologies to benefit Canadians.

51. In light of the above, the Commission will apply the following policy considerations to inform, support, or reverse a decision to mandate the provision of a wholesale service:

- *Public good* – there is a need to mandate the service for reasons of social or consumer welfare, public safety, or public convenience.

- *Interconnection* – the service would promote the efficient deployment of networks and facilitate network interconnection arrangements.

- *Innovation and investment* – mandating or not mandating the facility or wholesale service could affect the level of innovation/investment in advanced or emerging networks or services for incumbents, competitors, or both, or impact the associated level of adoption of advanced or emerging services by users of telecommunications services.

52. The Commission may use a policy consideration to justify a decision to mandate the provision of a wholesale service that does not meet the Essentiality Test. Conversely, the Commission may use a policy consideration to justify a decision not to mandate the provision of a wholesale service that meets the Essentiality Test. Finally, the policy considerations could be used to support the Commission's decision to mandate the provision of a wholesale service following its application of the Essentiality Test.

53. The Commission notes that, as a result of the above approach, there are now only two categories of wholesale services: those that are mandated and those that are not, based on the Essentiality Test and/or the policy considerations.

Assessment of the mandating criteria for wholesale services

Wholesale HSA services

54. Wholesale HSA services provide a high-speed path between a competitor's end-customer premises (e.g. a house) and an interface on an incumbent carrier's network where the competitor connects and routes its end-customer traffic onto its own network. Competitors

use wholesale HSA services to offer various services, including local phone, television, and retail Internet access services.

55. As a result of the proceeding, the Commission must consider whether or not to mandate the provision of two types of wholesale HSA services in Canada: (i) aggregated wholesale HSA services, and (ii) disaggregated wholesale HSA services.[13] Wholesale HSA services may be provisioned over incumbent carriers' existing wireline access network technologies [i.e. digital subscriber line (DSL)[14] technology over copper cable for ILECs, Data Over Cable Service Interface Specification (DOCSIS)[15] over hybrid fibre-coaxial (HFC)[16] cable for cable companies, and fibre-to-the-premises (FTTP)[17] access facilities for both ILECs and cable companies].

56. Aggregated wholesale HSA service provides competitors with high-speed paths to end-customers' premises throughout an incumbent carrier's entire operating territory from a limited number of interfaces (e.g. one interface per province). This path includes an access component, a transport component, and the interface component. The inclusion of the transport component enables competitors to provide their retail services with minimal investment in transmission facilities.

57. Disaggregated wholesale HSA service would provide competitors with high-speed paths to end-customers' premises served by an ILEC central office or a cable company head-end through a local interface at the ILEC central office or cable company head-end. These paths include an access component and the interface component. To provide service to their own end-customers, competitors would have to (i) invest in transmission facilities to each central office or head-end where they have end-customers, or (ii) lease these facilities from another carrier.

58. FTTP access facilities could be incorporated into either aggregated or disaggregated wholesale HSA services, resulting in multiple configurations depending on the underlying access technology.

59. In Telecom Decision 2008-17, the Commission mandated wholesale HSA services for both the ILECs and the cable companies that were subject to that decision. Specifically, the Commission mandated disaggregated wholesale HSA services,[18] finding them to be

[13] Over the course of the proceeding, disaggregated wholesale HSA services were referred to as broadband access services (BAS).

[14] DSL is a data communications technology used by ILECs that provides digital data transmission over a copper local loop.

[15] DOCSIS is a telecommunications standard used by cable companies to support high-speed access over cable infrastructure.

[16] HFC is the facility used by cable companies in their access network that connects customer premises to a head-end.

[17] FTTP is the fibre-optic access facility connecting an individual customer premises to a central office or head-end.

[18] These earlier disaggregated wholesale HSA services later became known as central office-based asymmetric digital subscriber line (ADSL) access services.

conditional essential services. The Commission also mandated aggregated wholesale HSA services, despite finding them to be non-essential services, given its view that withdrawing mandated access to these services would likely result in a substantial lessening or prevention of competition in retail high-speed Internet access service markets.

60. In Telecom Regulatory Policy 2010-632, the Commission reaffirmed the obligation of the ILECs and the Cablecos to provide mandated access to aggregated wholesale HSA services, but specified that this obligation was limited to existing technologies. In the case of the ILECs, these technologies comprise all DSL-based facilities, including fibre-to-the-node (FTTN)[19] facilities. In the case of the Cablecos, these technologies comprise DOCSIS facilities. Consequently, there is currently no obligation for the ILECs and the Cablecos to provide wholesale HSA services over FTTP access facilities.

61. Also in that decision, the Commission determined that it would not mandate disaggregated wholesale HSA services, concluding that, given the availability of aggregated wholesale HSA services, there would not be a substantial lessening of competition in the absence of disaggregated wholesale HSA services. The Commission also re-affirmed its requirement for the ILECs and the Cablecos to make aggregated wholesale HSA services available to competitors at speeds matching their own retail service offerings to enable greater competition in the retail Internet access services market. In addition, the Commission required the Cablecos to provide a greater degree of aggregation for their wholesale HSA services, to be similar to the ILECs' service offerings.

62. Since 2010, the Commission has addressed various issues associated with aggregated wholesale HSA services in a series of decisions. Notably, the Commission decided that there are two acceptable billing models for aggregated wholesale HSA services. The first is a capacity-based billing model, in which competitors pre-purchase the amount of capacity that they expect to need to serve their own end-users on a monthly basis while paying a monthly access fee for each of their end-users. The second model is a flat-rate model, in which competitors pay a flat monthly fee for each end-user regardless of usage. As a result of subsequent applications from incumbent carriers, the Commission reviewed aggregated wholesale HSA service costs, and made corresponding adjustments to the rates where appropriate. In addition, the Commission modified its policy with respect to business markups, and decided that the rates for business wholesale HSA services should equal the rates for comparable residential wholesale HSA services.

63. In this proceeding, parties argued over the merits of mandating the provision of various wholesale HSA services, namely aggregated wholesale HSA services and disaggregated wholesale HSA services that use existing technologies, and wholesale HSA services that use FTTP access facilities.

[19] FTTN technology upgrades the ILEC's access network by extending fibre-based facilities closer to the end-customer premises (but not directly to the premises as with FTTP) in order to provide increasingly high-speed access services.

Positions of parties – Aggregated wholesale HSA services

64. Competitors argued that the ILECs' and the Cablecos' aggregated wholesale HSA services should continue to be mandated, since the rationale that the Commission relied upon in Telecom Decision 2008-17 to mandate such services continues to apply. This rationale is that there would be a substantial lessening or prevention of competition in the retail high-speed Internet access market without the mandated provision of aggregated wholesale HSA services. Competitors also submitted that they have no feasible option other than to buy aggregated wholesale HSA services from the incumbent carriers to implement their own retail Internet access service offerings.

65. CNOC submitted that aggregated wholesale HSA services enable competition in the retail Internet access services market, which brings pricing discipline, innovation, and choice to Canadian consumers. Primus indicated that competitors are a valuable source of rivalry in the marketplace, as evidenced by their market share growth since 2009.

66. The Consumer Groups generally submitted that the public interest is served by a wholesale regulatory regime that fosters a competitive marketplace that is not limited to the ILECs and the Cablecos, but also includes other competitors.

67. The ILECs and the Cablecos were generally against the continued mandated provision of aggregated wholesale HSA services. These parties argued that the main source of competition for retail Internet access services is facilities-based service providers, and that other competitors that use leased facilities offer little to no benefits to consumers.

68. The Bell companies indicated that the retail Internet access services market in Canada is very competitive, and that this is due primarily to the vigorous rivalry between facilities-based ILECs and cable companies. They argued that competitors are largely concentrated in Ontario and Quebec, and are not a significant market factor in Atlantic or Western Canada, yet retail competition outside Central Canada is just as robust, and consumer outcomes just as positive, as in Ontario and Quebec.

69. Bell Canada submitted that it would continue to offer aggregated wholesale HSA services even if these services were no longer mandated, since there is an economic incentive for it to do so. Bell Canada argued that it is more advantageous for it to lose a customer to a competitor leveraging its wholesale service, rather than to a cable company or another competitor that uses the cable company's network.

70. MTS Allstream indicated that, with the potential exception of core urban areas, mandated access to aggregated wholesale HSA services should continue given the limited number of effective alternatives or substitutes and the impact that removal of this mandated access could have on competition in retail markets.

71. SaskTel submitted that there is limited demand for aggregated wholesale HSA services in its serving territory, and that it viewed the use of these services as limited to niche markets. Consequently, SaskTel argued that the mandated provision of aggregated wholesale HSA services, or any other wholesale HSA service, is unnecessary since it would not have a meaningful impact on competition, especially within its serving territory.

72. TCC argued that aggregated wholesale HSA services should no longer be mandated since the retail Internet access services market is sufficiently competitive. TCC submitted that there is no evidence that the mandated provision of aggregated wholesale HSA services benefits consumers in the long run, and that this mandated provision has had a negative impact on incentives to invest in network facilities.

73. Cogeco submitted that there is vigorous competition among itself, Bell Canada, RCP, and Videotron for wholesale customers in Ontario and Quebec. Cogeco proposed that the Commission adopt an *ex-post* regulatory framework based on negotiated agreements for aggregated wholesale HSA services to reduce the regulatory burden for incumbent carriers and to enable greater reliance on market forces.

74. RCP submitted that the current regulatory framework for aggregated wholesale HSA services is not achieving a balance between encouraging innovation and investment in facilities, and enabling consumers to choose from a wide variety of telecommunications service providers, including competitors.

75. To achieve better balance, RCP proposed that no new aggregated wholesale HSA services be mandated going forward, and that all services through which download speeds greater than 50 megabits per second (Mbps) are offered be subject to a moratorium on mandated provision for the next five years. RCP argued that this moratorium should be applied equally to all incumbent carriers, regardless of the underlying technology they use to provide those services. RCP added that existing end-users of wholesale customers that provide services at these higher speeds should be grandfathered, and that speeds up to and including 50 Mbps should continue to be mandated for a period of five years.

76. Shaw indicated that Western Canadians enjoy all the benefits of a highly competitive market, notwithstanding the relatively weaker presence of competitors in the West. Shaw argued that facilities-based competition is the primary driver of rivalry, investment, and consumer benefits in wireline retail markets, thereby questioning the need for the mandated provision of aggregated wholesale HSA services.

77. Eastlink and Videotron indicated that a gradual relaxing of the regulatory requirements regarding aggregated wholesale HSA services would be appropriate to encourage competitors to develop their own networks and offer their own unique services.

78. The incumbent carriers generally submitted that broadband service obtained through mobile wireless service was a factor to consider when evaluating substitutes for wireline broadband services and the need to mandate aggregated wholesale HSA services. While the incumbent carriers generally agreed that broadband service obtained through mobile wireless service is not a perfect substitute for all end-users at this time, they argued that it is a substitute for certain end-users, and that substitutability will only increase over time as mobile wireless technology continues to improve.

79. In contrast, the Competitors and the Consumer Groups did not generally consider mobile wireless data to be a substitute for wireline Internet services. While these parties did not dispute that wireless substitution was a significant trend for wireline telephony services, they

considered that the technical and pricing differences between mobile wireless data and wireline Internet access services severely limited their potential substitutability.

Positions of parties – Disaggregated wholesale HSA services

80. CNOC indicated that, in addition to mandating the continued provision of aggregated wholesale HSA service, the Commission should mandate a disaggregated service. CNOC submitted that a disaggregated wholesale HSA service would serve as the foundation for competition going forward, as it would ensure that competitors can substitute competitive transport supply in place of the bundled transport component of existing aggregated wholesale HSA services – thereby enhancing competitor control over the costs of service inputs and the ability to differentiate service offerings. CNOC added that competitors leveraging a disaggregated wholesale HSA service would invest in middle-mile transport facilities to connect between their sites and the ILECs' central offices and the Cablecos' head-ends, resulting in greater facilities-based competition.

81. Primus supported CNOC's proposal, and argued that a disaggregated wholesale HSA service would enable competitors to offer more innovative services and avoid the traffic management practices of the incumbent carriers. Primus submitted that the economic feasibility of aggregated wholesale HSA services is expected to diminish over time, given the general appetite of consumers for greater bandwidth and services, as well as the associated network challenges.

82. Several Competitors indicated that they would gradually migrate their existing end-users served through aggregated wholesale HSA services over to the disaggregated service if it were mandated, resulting in various new network investments by these companies.

83. Fibernetics also supported the mandated provision of a disaggregated wholesale HSA service in addition to the existing aggregated wholesale HSA service offerings. Fibernetics submitted that while aggregated services foster competitive retail Internet access service offerings on a broad provincial basis, competitors wishing to provide services to consumers in localized markets can only do so economically through an appropriately priced disaggregated service.

84. The ILECs and the Cablecos opposed the mandated provision of a disaggregated wholesale HSA service, generally indicating that this would not materially impact competition, and that it would introduce network complications and substantial costs.

85. The Bell companies argued that there would not be a substantial lessening or prevention of competition in the retail Internet access services market without the mandated provision of disaggregated wholesale HSA services, since the retail Internet access services market is already intensely competitive.

86. Bell Canada argued that disaggregated wholesale HSA services would not likely be financially desirable for competitors, except in a very small number of cases in Ontario and Quebec. Bell Canada submitted that the Competitors had not put forth credible evidence of demand for disaggregated wholesale HSA services, and that the costs of developing these services would likely outweigh any associated benefits.

87. Certain of the incumbent carriers, including MTS Allstream and SaskTel, submitted that, given the limited existing demand for aggregated wholesale HSA services within their respective serving territories, they did not consider that the demand for disaggregated services would be sufficient to recover the associated costs.

88. TCC argued that disaggregated wholesale HSA services would require a significant redesign of the incumbent carriers' networks. TCC indicated that, consistent with the disinterest expressed by the BCBA for a disaggregated service over the course of the proceeding, there would be insufficient demand to warrant its implementation in its incumbent serving territories of Alberta and British Columbia.

89. Videotron submitted that before the Commission mandated aggregated HSA services for the Cablecos, it had voluntarily agreed to provide a single aggregated point of interconnection to its customers, and that no customer had subsequently requested a disaggregated solution. Videotron submitted that it had serious doubts that there would be demand for disaggregated wholesale HSA services.

90. Cogeco submitted that requiring the Cablecos to reverse course and provide disaggregated wholesale HSA services following a three-year transition period to aggregate their existing wholesale HSA service offerings would be costly, unjustified, and inappropriate.

91. RCP submitted that introducing disaggregated wholesale HSA services would not provide any material benefits for consumers and should be rejected. RCP argued that disaggregated services would not result in product differentiation or significant cost savings for competitors to encourage their investment in middle-mile facilities. RCP indicated that competitors have repeatedly sought to have both aggregated and disaggregated wholesale HSA services mandated, but that the Commission has repeatedly rejected such requests. RCP added that there are no new or compelling reasons for the Commission to overturn its previous determinations.

92. RCP submitted that if the Commission were to mandate the provision of disaggregated wholesale HSA services, this requirement should be limited to specific head-ends and to wholesale customers that provide a bona fide request for the disaggregated services, and that the incumbent carriers should be provided six months to implement the disaggregated services.

93. Shaw indicated that, in certain regions of its serving territory, competitors have confirmed that they do not foresee using disaggregated wholesale HSA services given the limited potential cost savings. Shaw submitted that there would also be technical challenges with respect to implementing disaggregated services, depending on the incumbent carrier's network architecture, thereby complicating the incumbent carrier's ability to manage its own network.

94. Shaw submitted that, in the event that the Commission mandates disaggregated wholesale HSA services, the requesting competitor should be required to bear the full implementation costs upfront. If another competitor were to come forward to request the service, it should be required to reimburse the first competitor for a share of the upfront costs.

95. Most of the ILECs and Cablecos submitted that a requirement for them to implement disaggregated wholesale HSA services would divert time, energy, and resources from their core operations, and could negatively impact their ability to provide new innovative services to customers, as well as certain corporate investment decisions.

Positions of parties – FTTP access facilities

96. The Competitors and the Consumer Groups supported the mandated provision of wholesale HSA services over FTTP access facilities to prevent a duopoly in next-generation Internet access competition. In their view, mandating access to such facilities would not have a significant impact on the investment decisions of the incumbent carriers.

97. CNOC submitted that a competitor's ability to compete is tied to its ability to offer service speeds that are comparable to those of the incumbent carriers, and that the Commission's wholesale service policy must be extended to the service speeds that are only available over FTTP access facilities and similar emerging technologies. CNOC indicated that without competitor access to higher-speed wholesale HSA services, there would be a substantial lessening or prevention of competition in the retail Internet access services market.

98. CNOC stated that, while the needs of most consumers may currently be satisfied by service speeds between 25 and 50 Mbps, peak connection speeds are growing exponentially, and competitors must have the opportunity to compete for leading-edge, high-usage consumers who drive innovation. Otherwise, adoption of the higher service speeds available over FTTP access facilities will be suppressed, and the incumbent carriers will exercise market power over such services.

99. CNOC added that if wholesale HSA services over FTTP access facilities are not mandated, there would be many areas where the incumbent carriers would have significant market power over all customers served via their FTTP access facilities, for example, where copper facilities are removed, in greenfield developments,[20] and in various multi-dwelling units.

100. CNOC argued that FTTP access facilities are not practically duplicable by competitors, and that even if they were, any such duplication would be economically inefficient. CNOC considered that the existence of small-scale competitive fibre networks that serve select non-urban areas or buildings in large urban areas was not evidence that it would be possible to duplicate the incumbent carriers' FTTP access facilities on a sufficient scale to compete effectively and efficiently.

101. CNOC did not consider that a Commission decision to mandate the provision of wholesale HSA services over FTTP access facilities would materially impact an incumbent carrier's decision to deploy such facilities. On the contrary, CNOC argued that the risky business decision for incumbent carriers would be to not invest heavily in this technology, given the demands of the market and the need to remain competitive.

[20] A greenfield development is the installation and configuration of a network where none existed before, for example, a new housing development.

102. The BCBA indicated that the incumbent carriers are able to remove copper infrastructure when fibre is introduced, thereby limiting the potential addressable market of competitors to the detriment of consumers. The BCBA added that investment in FTTP access facilities is currently underway in British Columbia, despite the possibility of associated regulation, and that it did not consider that the incumbent carriers would stop investing in FTTP access facilities if they were mandated.

103. Some of the Consumer Groups considered that wholesale HSA services over FTTP access facilities should be mandated, and downplayed the potential investment risk for the incumbent carriers, given their need to compete against one another to survive. Moreover, OpenMedia argued that the potential for mandated FTTP access facilities should be expected in a regulated industry. PIAC indicated that the Commission's mandate does not entail protecting particular business decisions made by the incumbent carriers, nor does it include shielding them to incent their deployment of FTTP access facilities.

104. The City of Calgary submitted that the incumbent carriers have a competitive advantage in building out FTTP networks because of their existing access to support structures and municipal rights-of-way. The City of Calgary submitted that FTTP networks should be deployed as efficiently as possible and with a view to minimizing costs and inconvenience born by municipalities when rights-of-way are accessed. Accordingly, the City of Calgary supported the mandated provision of FTTP access facilities to competitors.

105. The ILECs generally argued that the retail market for Internet access services is subject to vigorous competition across numerous platforms, and that the mandated provision of FTTP access facilities is not required because retail customers already benefit from an abundance of choice. Accordingly, the ILECs considered that FTTP access facilities were in the same relevant product market as FTTN access facilities.

106. The ILECs submitted that there is little demand for retail Internet access services at the higher speeds that are currently available only over FTTP access facilities, and that non-FTTP platforms, such as the ILECs' DSL over copper cable (both with and without FTTN) and the Cablecos' HFC, would meet consumers' needs for several years. In addition, ILECs such as Bell Canada considered that the growth in competitor market share for retail Internet access service subscribers demonstrates that the mandated provision of FTTP access facilities is not necessary at this time.

107. The Bell companies argued that the ILECs will likely voluntarily offer wholesale services over FTTP access facilities to competitors, but that this can only happen after such facilities have been built, and that it should be left up to the market, and not to Commission regulation, to decide on the associated timing and terms.

108. Some of the ILECs submitted that there is extensive evidence of competitor deployment of FTTP access facilities in Canada, demonstrating that it is feasible to duplicate the functionality of FTTP access facilities. This included fibre deployments by certain small ILECs, non-dominant carriers, and municipalities.

109. All of the ILECs raised concerns regarding the impact that mandating the provision of FTTP access facilities could have on their investment decisions. For example, the Bell companies argued that the business case for investment in FTTP access facilities was challenging, and would only worsen if the Commission proceeded to mandate the provision of wholesale HSA services over these facilities. Bell Aliant cited its FTTP deployment program in Ontario, which it scaled back in light of unforeseen costs, to demonstrate the fragility of the business case. Moreover, Bell Aliant argued that mandating the provision of FTTP access facilities may reduce or delay future technology upgrades in areas currently served by FTTP, thereby broadly harming consumers.

110. Similarly, TCC argued that the mandated provision of FTTP access facilities would result in less fibre deployment, and that this would occur not just in lower-density areas, where the already-challenging business case will be eliminated, but more broadly throughout Canada. TCC indicated that if the Commission is not prepared to reject the mandated provision of FTTP access facilities, the negative effects of this regime on investment in next-generation broadband facilities should be attenuated through a moratorium on mandated access to Internet access services at higher speeds.

111. The Bell companies submitted that if the provision of FTTP access facilities were mandated, there would need to be a larger upfront service charge, an end-user term commitment from competitors, and a higher markup than what currently applies for FTTN today in order to appropriately compensate for the costs of deploying the facility.

112. While the Cablecos recognized that they currently have a limited deployment of FTTP access facilities, they did not support mandating the provision of such facilities given their view that the retail Internet access services market is already competitive, and that no incumbent carrier could exercise market power to the detriment of consumers in such circumstances.

113. Notwithstanding the above, certain Cablecos indicated that the Commission's decision with respect to mandating the provision of FTTP access facilities should be technologically neutral in relation to comparable technologies/speeds deployed by other incumbent carriers. Consequently, they argued that if the Commission does not mandate the provision of FTTP access facilities, it should limit the obligations of the Cablecos that provide wholesale HSA services at comparable speeds.

Commission's analysis and determinations

114. While parties articulated their positions with respect to the mandated provision of aggregated wholesale HSA services, disaggregated wholesale HSA services, and wholesale HSA services over FTTP access facilities separately, the Commission will not apply the Essentiality Test on a service-by-service basis, given that these services collectively form part of a larger product market. These services represent variants of high-speed access facilities that enable similar downstream retail services to be provided to end-users, and represent sufficiently close substitutes in that they have the potential to enable competition in the various associated downstream markets. Moreover, end-users may be unaware of the specific underlying wholesale service/facility that is being used to provide their retail

services, and may be indifferent so long as their needs are met and there is reasonable overlap in the spectrum of retail services that are enabled by the various upstream services. By adopting a broader lens to its product market assessment, and determining whether that larger product market satisfies the Essentiality Test, the Commission can more appropriately move on to consider which particular wholesale service(s) forming part of that product market ought to be mandated, if any.

115. As a result, the appropriate relevant product market is considered to be wholesale HSA services, which includes aggregated and disaggregated wholesale HSA services offered over various technologies, including DSL over copper or over a hybrid of copper and fibre (including FTTN), HFC cable, and FTTP access facilities. Notwithstanding the Commission's view that wholesale HSA services provisioned over FTTP access facilities are in the same relevant product market as wholesale HSA services provisioned over other broadband technologies, additional analysis with respect to the assessment of FTTP access facilities in relation to the Essentiality Test is provided in subsequent sections of this decision.

116. As for the relevant geographic market, given that the ILECs and the Cablecos generally operate exclusively in their traditional serving territories, particularly in residential markets, and given the need to balance administrative efficiency, the Commission is of the view that the incumbent carrier's serving region is the appropriate basis upon which to make decisions with respect to the mandated provision of wholesale HSA services.

117. The Commission notes that wholesale HSA services may be used to offer a variety of retail services, including local phone, television, and Internet access services. Retail Internet access services permit users to access a wide variety of services, including email services, the World Wide Web, and audio and video services. By majority decision, the Commission's assessment of whether wholesale HSA services meet the Essentiality Test will focus on their associated impact on the main downstream retail market, namely the retail Internet access services market. With respect to this issue, the dissenting opinion of Commissioner Shoan is attached to this decision.

Application of Essentiality Test – Input component

118. There is currently demand for wholesale HSA services in all regions of the country.[21] Competitor use of wholesale HSA services is mainly concentrated in Ontario and Quebec, which are largely served by Bell Aliant, Bell Canada, Cogeco, RCP, and Videotron, with moderate usage in Alberta and British Columbia and low usage in the rest of Canada. Notwithstanding current usage levels, competitor usage of wholesale HSA services is generally expected to increase in all incumbent carriers' serving regions in Canada, given the overall demand for retail Internet access services, and the valuable role that they play in the lives of Canadians.

[21] The Northern regions of Canada are excluded from this statement given that these regions are served by Northwestel Inc., which was not included in the scope of this proceeding.

119. While end-user demand for the higher speeds (i.e. speeds greater than 50 Mbps), such as those supported by FTTP access facilities, is currently relatively small, the demand for service speeds supported only by FTTP access facilities and other comparable technologies will likely increase as end-users migrate to higher-speed Internet access services to support their growing usage of existing and future applications.

120. Based on the current and projected demand levels, the Commission therefore finds that wholesale HSA services, including those provided over FTTP access facilities, meet the input component of the Essentiality Test in all the incumbent carriers' serving regions.

Application of Essentiality Test – Competition component

121. The ILECs and the Cablecos own and control the underlying wireline access facilities associated with wholesale HSA services that competitors rely upon to provision retail Internet access services, including those associated with FTTP access facilities. Together, the incumbent carriers are the sole suppliers of the underlying wholesale services available to competitors, and together have the entire upstream market. In general, wholesale HSA services have not been provided voluntarily by the industry, requiring regulatory intervention to do so, and there is no convincing basis upon which the Commission could conclude that this will change in the foreseeable future.

122. There are limited economical substitutes for wholesale HSA services provided over wireline technologies, including those over FTTP access facilities. Based on the significant disparity in price, quality, speed, and capacity, reliance on wireless wholesale alternatives would not enable competitors to effectively compete with the wireline broadband services offered by the incumbent carriers within their serving regions.

123. Moreover, neither the ILECs nor the Cablecos would be able to easily absorb the wholesale operations of the other absent significant network modifications/equipment investment, thereby limiting the effectiveness of potential supply responses in curbing the exercise of market power. In addition, there is limited competition for wholesale HSA services between the ILECs and the Cablecos, and what competition that does exist today is largely, if not entirely, a result of regulatory intervention. Consequently, there is limited rivalrous behaviour to constrain upstream market power.

124. In light of the above, 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.

125. With respect to the potential impact that denying or withdrawing access to wholesale HSA services would have on the retail Internet access services market, the Commission has previously decided to mandate certain wholesale HSA services on the basis that failing to do so would impair competition to the detriment of consumers' interests. Despite incumbent carriers continuing to dominate the retail Internet access services market, an increasing number of retail Internet subscribers have enjoyed the choice enabled by wholesale HSA services by subscribing to a competitor's service.

126. An important consideration relates to the availability of substitutes for retail Internet access services provisioned over wireline facilities. In the Commission's view, most consumers have retail Internet usage and speed requirements that can only be served through wireline services, thereby limiting consumers' viable options. Fixed wireless and satellite-based services are mainly options in rural or high-cost serving areas, where wireline Internet access is limited or not available. These services typically have limited bandwidth capacity and higher prices compared to retail wireline services and, as such, are generally not effective substitutes. Although mobile wireless services support retail Internet access, the higher prices for data usage over mobile wireless networks limit their substitutability – the speeds, prices, quality, reliability, and capacity of broadband over wireline facilities are far superior to those available over wireless facilities at the present time, and this will likely continue into the foreseeable future.

127. If the provision of wholesale HSA services were no longer mandated, most retail Internet subscribers currently being served by competitors would likely be required to migrate to incumbent carrier retail Internet service offerings over time, given the potential for incumbent carriers to phase out wholesale HSA services, or given their ability to increase the rates for the associated wholesale services, squeezing out competitor service offerings.

128. In the case of FTTP access facilities, consumers do not currently have competitive choice regarding such facilities, although some consumers have access to comparable high-speed Internet services provided by certain Cablecos. As a result, the competitive impact of not mandating the provision of wholesale HSA services over FTTP access facilities would be relatively small in the short term. As FTTP deployment increases, however, the potential impact on competition will increase as more and more consumers desiring higher-speed Internet services would have fewer competitor alternatives to choose from.

129. While the retail impact of a decision not to mandate access to wholesale HSA services, including those over FTTP access facilities, would be felt most strongly and immediately in Ontario and Quebec, where demand for competitor service is highest, competition in other incumbent carrier serving regions would also be prevented to a substantial degree given that these areas are beginning to show signs of competitive growth and higher-speed Internet access services are increasingly being adopted. Consequently, without the mandated provision of wholesale HSA services, most retail customers in Canada would eventually be left with a very limited choice of Internet service providers.

130. Based on the above, the Commission finds that there would be a substantial lessening or prevention of competition in the downstream retail Internet services market, in all incumbent carrier serving regions, by denying access to wholesale HSA services, including those over FTTP access facilities.

Application of Essentiality Test – Duplicability component

131. In assessing the duplicability of wholesale HSA facilities, there are two components to consider: the access component and the transport component. The access component can consist of a variety of physical media, including copper, fibre, a combination of copper and fibre, and a combination of coaxial and fibre. For the purpose of this analysis, the

Commission considers that the access component of wholesale HSA services represents the connection between the customer's premises and the ILEC central office or the Cableco head-end. The transport component generally consists of the ILEC or Cableco network that carries end-customer traffic between ILEC central offices or Cableco head-ends and a competitor point of interconnection.

132. In Telecom Decision 2008-17, the Commission found that the access component of a wholesale HSA service, which was then known as asymmetric digital subscriber line (ADSL) access service, was not duplicable. The Commission also found that transport components were duplicable, as there was evidence showing a high incidence of competitor self-supply or alternative supply of fibre-based transport facilities.

133. The Commission remains of the view that competitors cannot feasibly or practically duplicate last-mile HSA facilities on a scale sufficient to compete effectively with incumbent carriers within their serving regions. There continue to be significant barriers to duplicating access facilities, including securing sufficient capital, securing rights-of-way, and construction challenges that require significant lead time to complete.

134. With respect to FTTP access facilities, the barriers to duplicating such facilities are also present in all incumbent carrier serving regions. Although there is deployment of non-incumbent carrier FTTP access facilities on a very small scale by certain small ILECs, municipalities, and other service providers, addressing larger markets would represent a significantly larger challenge. For example, the capital investment required by competitors to reproduce the deployment of an ILEC's FTTP access facilities in their serving territory would be very significant, excluding the additional challenges associated with the myriad of other network facilities, infrastructure, office facilities, and back office support staff and systems that would be required. To that end, the incumbent carriers' ability to deploy such facilities is largely based on their decades of incumbency in the provision of wireline services, with all the associated advantages, including established brands and customer bases, existing network infrastructure including support structures, national fibre backbone networks, pre-existing municipal access agreements, various economies of scale, and greater access to capital markets.

135. In contrast, the transport component of wholesale HSA services remains generally duplicable in all incumbent carrier serving regions from an economic, technical, and implementation perspective, and no compelling evidence was filed in this proceeding to demonstrate that this is no longer the case. As a result, the Commission remains of the view that competitors are generally able to self-supply or find an alternate supply of transport facilities connecting to ILEC central offices and Cableco head-ends.

136. In light of the above, the Commission finds that it is not practical or feasible for competitors to duplicate the access component of wholesale HSA services, including those over FTTP access facilities. The Commission considers that this finding applies to each of the incumbent carriers in their respective serving regions. Moreover, the Commission finds that it is generally practical and feasible for competitors to duplicate the transport component of wholesale HSA services.

Application of mandating criteria – Policy considerations

137. Given the outcome of applying the Essentiality Test broadly to wholesale HSA services, which supports mandating the access component, including FTTP access facilities, but not mandating the transport component, the analysis of the policy considerations will include an assessment of the implications of such outcomes for the specific services under consideration. In this context, the policy consideration for investment and innovation is relevant.

138. With respect to aggregated wholesale HSA services, a decision to no longer mandate the provision of such services would not impact investment in high-speed access facilities by incumbent carriers or competitors, nor would it significantly affect consumer adoption of Internet access services, so long as a disaggregated service is made available. For example, investment in access components would be unaffected given that such components would continue to be made available under the disaggregated service.

139. Regarding disaggregated wholesale HSA services, there are relevant investment and innovation implications associated with a decision to mandate the provision of such services. On one hand, implementing a disaggregated wholesale HSA service within the incumbent carriers' networks raises certain concerns, particularly in relation to the recovery of the associated costs and the disruption in potential network evolution plans through the required network modifications. On the other hand, implementation of a disaggregated wholesale HSA service would enable competitors to become more innovative by giving them a greater degree of control over their service offerings. Moreover, a disaggregated wholesale HSA service could encourage competitor investment in alternate transport facilities, thereby serving to develop a more robust telecommunications system.

140. While the Commission acknowledges the previous investments that the Cablecos have made in transitioning to aggregated points of interconnection, which have enabled increased competition, the Commission considers that a disaggregated solution is the appropriate means forward to support the sustainability of competitive service offerings.

141. With respect to disaggregated wholesale HSA services over FTTP access facilities, the potential disincentive that a decision to mandate the provision of such services could have on investment was the predominant reason given by the incumbent carriers that the Commission should reject such a proposal. There are several reasons, however, why the negative impact on investment is not likely to happen to any significant degree, particularly in more urban areas. First, the Commission expects that the incumbent carriers will generally continue to invest in FTTP access facilities in order to provide enhanced retail Internet access services in response to consumer demand, as well as to compete effectively and efficiently with the Cablecos. In addition, mandating the provision of disaggregated wholesale HSA services over FTTP access facilities would be predicated on wholesale rates that are compensatory and that provide a reasonable rate of return, resulting in profit on the associated investment.

142. Given the above considerations, adoption of an appropriate transition and implementation plan to migrate from the current aggregated wholesale HSA service model towards the

disaggregated wholesale HSA service model would substantially alleviate the various investment and innovation concerns identified above. In addition, and as stated above, any investment risks associated with mandating the provision of wholesale HSA services over FTTP access facilities can be attenuated by providing the incumbent carriers with a reasonable rate of return.

143. In light of the above assessments, the Commission determines that disaggregated wholesale HSA services, including those over FTTP access facilities, are to be mandated for the incumbent carriers subject to this decision. Moreover, the Commission determines that aggregated wholesale HSA services will no longer be mandated for the incumbent carriers under certain conditions and subject to an appropriate transition plan. This transition plan will serve to ensure that wholesale access to the access facilities required to provision downstream retail services is always provided for.

Implementation of mandating decision

144. While the determination to mandate the provision of disaggregated wholesale HSA services, including over FTTP access facilities, and to phase out aggregated wholesale HSA services pursuant to an application of the Essentiality Test may be consistent with economic principles, it also raises certain challenges and opportunities for the industry and consumers.

145. On one hand, moving to a disaggregated wholesale HSA service model will better support the sustainability of competition and can be expected to provide benefits, such as reasonable prices and innovative services, to consumers. One of the main drawbacks of the current aggregated HSA service is the high cost incurred by competitors when transporting large amounts of traffic over incumbent carriers' facilities. These costs are expected to exacerbate as consumption increases over time, given that a competitor must pay for all of its data traffic to be routed back to a central point of aggregation, no matter how far away a subscriber is located. The result is an expensive and often inefficient use of the network that will challenge the sustainability of competitors in the years ahead.

146. In addition, the aggregated wholesale HSA service model enables competitors to rely almost entirely on an incumbent carrier's network, and is therefore dependent on the Commission to set the correct rules and prices. Consequently, an important benefit of moving to a disaggregated HSA service model is to lessen competitor dependence on price regulation and give competitors more control over their cost structure.

147. On the other hand, moving to a disaggregated wholesale HSA service model, including over FTTP access facilities, raises concerns, notably with respect to its implementation within the various incumbent carriers' networks. For example, given that the ILECs and the Cablecos have materially different network architectures, the proposed configuration for each incumbent carrier's respective disaggregated wholesale HSA service could vary significantly.

148. Further, the implementation of a disaggregated wholesale HSA service should be demand-based in order to minimize regulatory intervention and allow for the market to develop. There may initially be limited demand for such a service broadly across the country, given that the existing demand for wholesale HSA services is predominantly within Ontario and

Quebec, and given the preference of some competitors to continue to use only aggregated, rather than disaggregated, wholesale HSA services in the near term. Consequently, incentives will be required to encourage migration to a disaggregated wholesale HSA service, which will result in minimizing regulation to just the essential access facilities, as discussed below.

149. Finally, while the transport facilities that support a disaggregated wholesale HSA service model were previously forborne from price regulation on a national basis, there is a risk that, in specific geographic markets, there may be limited availability of such facilities. While investment in and deployment of competitive transport facilities was no doubt impacted by the availability of aggregated wholesale HSA services, it may take time for competitors to build the necessary transport facilities, a factor to consider when phasing out aggregated wholesale HSA services.

150. The ultimate goal is to have a smooth transition, over time, where competitor adoption of disaggregated wholesale HSA services increases, spurred by increasing consumer demand for higher-speed services, over an increasingly broader geographic area, with a corresponding reduction in aggregated HSA service coverage.

151. Given the above, the Commission considers that the measures identified below are appropriate to support the implementation of disaggregated wholesale HSA services.

152. First, since the demand for wholesale HSA services is currently focused within certain geographic markets, disaggregated wholesale HSA services should be implemented in phases, starting with Ontario and Quebec. Other phases targeting the implementation of disaggregated HSA services in other geographic markets will be identified at a later stage. Implementation of the disaggregated wholesale HSA service in the designated geographic markets will be triggered by competitor requests for the service at specific central office and head-end locations. Incumbent carriers are to consult with their wholesale HSA service customers to identify the specific central office and head-end locations where a disaggregated wholesale HSA service will be in demand.

153. As previously established, the Commission will not mandate the provision of aggregated wholesale HSA services, including over FTTP access facilities. Consequently, competitors desiring access to customers served by FTTP access facilities will only be able to do so by using a disaggregated wholesale HSA service.

154. A speed threshold will also be imposed for the service speeds available over aggregated wholesale HSA services, such that download speeds in excess of 100 Mbps will be required to be made available to competitors only through the implementation of the disaggregated service. This speed threshold takes into account trends in consumption and technology, and is set at an appropriate level to minimize short-term disruptions to end-consumers. The removal of the obligation to provide aggregated wholesale HSA services capable of supporting speeds in excess of 100 Mbps will take effect within an incumbent carrier’s serving territory once the associated disaggregated wholesale HSA tariff is approved on a final basis. Incumbent carriers are to grandfather existing aggregated wholesale HSA customers that are served above the speed threshold, at that time.

155. In support of competitive wholesale alternatives, aggregated wholesale HSA services will be phased out for each respective incumbent carrier in the geographic markets where the disaggregated service is in-service. The phasing out of the obligation to provide aggregated wholesale HSA services in any given central office or head-end will only apply to the incumbent carriers that provide a disaggregated service. In order to provide competitors sufficient time to invest in, migrate to, or negotiate appropriate alternatives, the Commission considers that a three-year phase-out period, once the disaggregated service is implemented, would be appropriate. Incumbent carriers are expected to continue to file tariffs regarding the introduction of or modifications to the provision of aggregated wholesale HSA services until such services have been phased out within their respective serving territories.

156. After the phase-out period, incumbent carriers will have the ability to continue offering the aggregated wholesale HSA service at tariffed rates, cease providing the service for the regions served by the disaggregated wholesale HSA service, or file for forbearance one year prior to the end of the phase-out transition period if they wish to continue to provide the service on a forborne basis. The market conditions associated with the provision of appropriate transport facilities will be assessed during the forbearance process.

157. Finally, in order to encourage reliance on market forces, incumbent carriers and competitors will continue to be allowed to enter into off-tariff agreements for wholesale HSA services, consistent with the disclosure requirements that were established in Telecom Regulatory Policy 2012-359.[22]

158. In light of the above, the Commission will, as a first phase, initiate a follow-up implementation proceeding to consider the appropriate configurations of a disaggregated wholesale HSA service, including over FTTP access facilities, for the incumbent carriers operating within the larger markets within Ontario and Quebec. The main objectives for this implementation proceeding will be to assess demand forecasts, review and establish proposed configurations for disaggregated wholesale HSA services, and determine how FTTP access facilities will be integrated as part of the disaggregated service. Bell Aliant, Bell Canada, Cogeco, RCP, and Videotron are therefore **directed** to file updated configurations for their proposed disaggregated wholesale HSA service for their Ontario and Quebec serving territories within **30 days** of the date of this decision. Further details associated with this follow-up proceeding are provided by way of a separate letter released concurrent with this decision.

159. The tariff process will begin after the configurations for disaggregated wholesale HSA services are approved by the Commission. As part of the tariff process, the Commission will consider the proposed markups, methods of cost recovery, and implementation timelines.

[22] The incumbent carriers are accordingly required to file a general summary of their off-tariff wholesale HSA agreements on the public record that would (i) indicate the existence of the negotiated agreement; (ii) provide notice of whether forborne aggregated wholesale HSA services and/or regulated aggregated/disaggregated wholesale HSA services are subject to the off-tariff agreement, without identifying the specific services; (iii) identify each service element that deviated from the tariff (where applicable); and (iv) indicate the reasons that the off-tariff agreement deviated from the tariff.

160. The incumbent carriers operating in other territories will be expected to identify appropriate configurations and implementation plans for their respective disaggregated wholesale HSA services at a later date, depending on demand considerations.

Unbundled local loops

161. Unbundled local loops (ULLs) provide a transmission path by means of copper facilities between an end-user's premises and an ILEC's central office that can be used by competitors to provide local telephony and Internet access services to residential and business customers.

162. In Telecom Decision 97-8, the Commission required the ILECs to unbundle their local access facilities to make ULLs available on a wholesale basis to competitive local exchange carriers (CLECs) to support competition.[23]

163. In Telecom Decision 2008-17, the Commission maintained the existing obligation imposed on the ILECs to provision ULLs on the basis that competitors did not have any viable wholesale alternatives to the service, and that it would not be practical or feasible for competitors to duplicate the functionality of such services.

Positions of parties

164. The Bell companies proposed that the wholesale provision of ULLs in rate bands A and B (generally in the major urban areas in Canada) no longer be mandated and be forborne from regulation.

165. Bell Canada submitted that the demand for ULLs has decreased significantly since 2006, and considered that this trend would likely continue. Bell Canada also submitted that less than 1% of retail local telephony customers are provided services by means of ULLs, and argued that there are abundant competitive retail service alternatives available for consumers who do not depend on ULLs.

166. Bell Canada stated that if the Commission no longer mandated the provision of ULLs, the company would continue to make ULLs available to competitors, since ULLs represent valuable sources of revenue.

167. TCC argued that the ILECs' access networks have been broadly duplicated in both the residential and business telephony markets and that, accordingly, the mandating of ULLs can no longer be justified. TCC submitted that ULLs should be put on a path to forbearance within two to five years, and that the Commission should be open to applications for destandardization or market-value pricing of ULLs.

168. The Competition Bureau was of the view that the ILECs do not have market power for residential wireline services (telephony and Internet), given the competitive service offerings within the same product market and the erosion of the ILECs' shares of residential

[23] In a letter dated 21 September 2000, the Commission directed the ILECs to also provide ULLs to DSL service providers at the same rates and under the same terms and conditions as those provided to the CLECs.

lines since 2006. The Competition Bureau submitted that, in light of the costs of mandated access, the Commission should withdraw the mandated provision of ULLs.

169. MTS Allstream submitted that there is a continued need for mandated access to ULLs, if not universally, then certainly for use in business telephony markets. They argued that there are no effective substitutes for ULLs, even in urban areas.

170. CNOC was of the view that ULLs should continue to be mandated, since they are the only reasonable means of providing (i) traditional telephony services to subscribers who do not perceive voice over Internet Protocol (VoIP) to be a substitute, and (ii) affordable low-speed Internet access services.

171. Primus submitted that ULLs remain a critical input for the provision of traditional telephony and Internet access services, and that they should therefore continue to be mandated in both urban and rural markets. Primus argued that if the Commission were to cease mandating and forbear from regulating the wholesale provision of ULLs, consumers would be deprived of competitive alternatives for their telephony and Internet access services, and current customers of competitors would be forced to stop receiving services from these competitors. The company also expressed concern over the equipment that it had invested in to make use of ULLs, and the potential that any such investments would be stranded should the service no longer be mandated.

Commission's analysis and determinations

172. In terms of market definition, ULLs form their own distinct upstream product market. While some wholesale services provide similar functionality, specifically certain low-speed competitor digital network (CDN) access facilities, the substitutability of such services is limited by important differences in price.

173. Given that ULLs are made available by the ILECs at their central offices at rates based on rate bands[24] and are also used by competitors to provide exchange-based services, the appropriate geographic market for ULLs is the ILEC exchange. For administrative purposes, however, the Commission will apply its analysis on a more aggregated basis using rate bands.

174. Finally, ULLs are currently being used by competitors primarily to provide local telephony services, and to a lesser extent, Internet access services, to both residential and business customers. However, Internet speeds using ULLs are limited when compared to those achievable through high-speed Internet access facilities, resulting in fewer and fewer consumers accessing their Internet services through ULLs over time. As a result, the Commission considers that the primary relevant downstream retail market for ULLs is the local wireline voice market, including both residential and business markets.

[24] A rate band represents a group of exchanges or wire centres with similar characteristics, such as number of lines and loop length. While the criteria applied to classify exchanges into bands are uniform across the country, band costs may vary by ILEC or by region within the ILECs' serving territories.

Application of the Essentiality Test – Input component

175. Based on the information gathered in this proceeding, overall competitor demand for ULLs provided by all the ILECs decreased by approximately 50% from 2009 to 2013.

176. At present, the vast majority of ULLs are provisioned in ILEC exchanges in rate bands A, B, C, and D within the provinces of Alberta, British Columbia, Ontario, and Quebec. While the downward trend in demand for ULLs is expected to continue, ULLs in these areas continue to be an input for competitors to provide voice telecommunications services in the downstream local wireline residential and business markets.

177. With regard to ILEC exchanges in rate bands E, F, and G within the provinces of Alberta, British Columbia, Ontario, and Quebec, ULLs are not typically used by competitors to provide voice telecommunications services in the downstream local wireline residential and business markets.

178. Finally, there is little or no current and future expected demand for ULLs in ILEC exchanges in all rate bands within the Atlantic Provinces, Manitoba, and Saskatchewan.

179. Accordingly, ULLs (i) meet the Input component of the Essentiality Test for the exchanges in rate bands A, B, C, and D within the provinces of Alberta, British Columbia, Ontario, and Quebec; (ii) do not meet the Input component of the Essentiality Test for all exchanges in rate bands E, F, and G within the provinces of Alberta, British Columbia, Ontario, and Quebec; and (iii) do not meet the Input component of the Essentiality Test for all exchanges within the Atlantic Provinces, Manitoba, and Saskatchewan.

Application of the Essentiality Test – Competition component

180. As indicated earlier, ULLs are only accessible from the ILECs' central offices, and are therefore controlled by these companies. While other wholesale services provide similar functionalities, such as low-speed CDN services, these services are not appropriate substitutes for ULLs for the reason noted above. As such, the ILECs possess upstream market power with respect to the provision of ULLs.

181. In assessing whether the withdrawal of mandated access to ULLs would likely result in a substantial lessening or prevention of competition, the Commission must consider the primary relevant downstream markets for ULLs, which are, as discussed above, the local retail wireline residential and business voice services markets. However, the Commission's conclusions on this issue would also extend to other downstream retail services, such as Internet access services.

182. As discussed above, the vast majority of ULLs are provisioned in the ILEC exchanges in rate bands A, B, C, and D within the provinces of Alberta, British Columbia, Ontario, and Quebec. However, subscribers that currently rely on ULLs for access to local voice services in these exchanges represent a very small percentage of the overall total number of subscribers to local voice services, both residential and business. Furthermore, and as noted above, the trend in use of ULLs has been steadily declining over the years. Accordingly, the withdrawal of mandated access to ULLs in these exchanges would not have a significant

impact now and in the future on competition for residential and business local voice services.

183. With regard to ILEC exchanges in rate bands E, F, and G within the provinces of Alberta, British Columbia, Ontario, and Quebec, as well as all exchanges within the Atlantic Provinces, Manitoba, and Saskatchewan, the withdrawal of mandated access to ULLs would also not have a significant impact now and in the future on competition for local voice services in these exchanges because of the state of demand for the service.

184. If mandated access to ULLs was to be withdrawn, the ILECs could choose to continue to provide competitors access to such services, given their established operations and associated business cases. Nonetheless, certain subscribers who obtain their local service(s) from competitors that use ULLs could be required to change local service providers in the event that the ILECs withdraw the provision of ULLs. In such circumstances, these subscribers would typically still have access to several alternative service offerings, including wireless voice services that are widely available across Canada and that are increasingly being used as a substitute for local wireline voice service.

185. In light of the above, ULLs do not meet the Competition component of the Essentiality Test, given that the withdrawal of mandated access to ULLs would not likely result in a substantial lessening or prevention of competition in the local retail wireline residential and business voice services markets, regardless of the exchange or the ILEC serving territory.

Application of Essentiality Test – Duplicability component

186. In order to duplicate the functionalities of ULLs, competitors would have to replicate the ILECs' local access network on a large scale. Moreover, there are impediments to such duplication, such as securing significant capital and rights-of-way, addressing construction challenges (e.g. trenching and timelines), or in the case of wireless technology, obtaining wireless spectrum and access to towers. As well, alternate technologies are available through which local telephony service can be provided (e.g. cable, wireless, and VoIP technologies).

187. Consequently, ULLs meet the Duplicability component of the Essentiality Test, given that it is not practical or feasible for competitors to duplicate the functionalities of ULLs.

Application of mandating criteria – Policy considerations

188. An important policy consideration related to the issue of whether the provision of ULLs should be mandated is the impact that no longer mandating access to ULLs may have on investment and innovation. A decision to no longer mandate the provision of ULLs could lead to a greater adoption of advanced or emerging services by consumers. For example, competitors that migrate their end-users from retail Internet access services provisioned over ULLs to services provisioned over wholesale HSA services would enable their end-users to access new content and applications that were previously inaccessible.

189. On the other hand, the provision of ULLs has resulted in a certain level of investment by competitors that have co-located in the ILECs' central offices, and some of this investment

could be stranded as a result of a non-mandating decision. However, the adoption of an appropriate phase-out transition period for ULLs should provide competitors with adequate time to reconsider their current provisioning requirements and to make alternate arrangements, as necessary. In this context, a three-year phase-out period for ULLs is appropriate.

Conclusion

190. In light of the above, ULLs do not meet all three components of the Essentially Test across the country, and there is no valid policy reason supporting a need to continue mandating the provision of these facilities. Therefore, ULLs are not essential, and are no longer mandated. The Commission no longer requires that ULLs be provided by the ILECs subject to this decision, subject to the phase-out transition period discussed below. During this transition period, the obligation to provide ULLs will remain in place.

Implementation of the mandating decision

191. As mentioned above, the establishment of a phase-out period associated with the obligation to provide ULLs would provide competitors with adequate time to reconsider their current provisioning requirements and to make alternate arrangements, as necessary. The transition period would also assist in attenuating any impact that the removal of the obligation to provide ULLs may have on certain end-users.

192. The establishment of a three-year phase-out period, from the date of this decision, would provide competitors with a reasonable period of time to review their provisioning requirements and take appropriate measures. However, in exchanges for which an ILEC subject to this decision does not currently have ULL customers, no phase-out period is needed as the concerns identified above have no application.

193. Accordingly, a phase-out period of three years with respect to the existing obligation to provide ULLs is instituted for those exchanges where there is present demand for this service. The phase-out period takes effect from the date of this decision.

194. While the Bell companies proposed that the Commission forbear from regulating ULLs, they did not provide justification why the scope of forbearance they were requesting was consistent with section 34 of the Act. Given the lack of evidence in the proceeding to support the findings of fact necessary to justify in-service forbearance at this time, ULLs are to continue to be made available in exchanges where there is demand, based on Commission-approved tariffs for at least the duration of the three-year phase-out period. However, ULLs should be forborne in exchanges where there is no current demand.

195. In those exchanges where there are no ULLs in service, forbearance with respect to the provision of ULLs would be consistent with the policy objectives set out in section 7 of the Act and the Policy Direction. The ILECs can choose to make ULLs available, or cease providing ULLs.

196. Pursuant to subsection 34(1) of the Act, the Commission may forbear where it finds that to do so would be consistent with the policy objectives set out in section 7 of the Act. Where

there is no current demand for ULLs, the Commission finds, as a question of fact, that to forbear to the extent set out below with respect to the regulation of ULLs would be consistent with the policy objectives set out in paragraphs 7(*f*) and (*g*) of the Act, and with the Policy Direction.

197. Regarding subsection 34(3) of the Act, the Commission, in making its determinations, has found evidence that the demand for ULLs is decreasing, and that this trend is expected to continue over time. Accordingly, where there is no current demand for ULLs, forbearance will not likely impair unduly the establishment or continuance of a competitive market.

198. Pursuant to subsection 34(4) of the Act, the Commission declares that, effective the date of this decision, sections 25, 29, and 31, and subsections 27(1), 27(5), and 27(6) of the Act do not apply with respect to exchanges where there is no demand for ULLs as of the date of this decision. However, subsections 27(2) and 27(4) of the Act should be retained to address any issues of unjust discrimination or undue preference.

199. As discussed above, in exchanges where there is demand for ULLs, as of the date of this decision, ULLs will continue to be made available for a three-year phase-out period.

200. If an ILEC's intent is to continue to make ULLs available in concerned exchanges after the expiry of the phase-out period, the ILEC can choose to file a forbearance application regarding the provision of its ULLs. Such applications should not be filed earlier than one year prior to the end of the phase-out period. The ILECs are encouraged to put forth an analytical framework or a "test" that the Commission could use to assess forbearance in an administratively efficient manner, and are required to justify why their request for forbearance would not impact local forbearance decisions that the Commission has previously made on the basis of ULLs being available.

201. If, however, an ILEC's intent is to cease making ULLs available, that ILEC will be required to provide written notice to existing customers and the Commission one year prior to the end of the phase-out period. This notice should include details on the specific exchanges that will be affected, the date on which the ULLs will no longer be available in those exchanges, and any potential alternate arrangements that may be available to wholesale customers. Similar to the above, the ILECs will be required to justify why ceasing making ULLs available would not impact local forbearance decisions that the Commission has previously made on the basis of ULLs being available.

202. The ILECs are to file updated tariffs identifying the exchanges that will continue to support ULLs during the phase-out period, consistent with the above determinations. These tariffs are to be filed within **30 days** of the date of this decision.

Ethernet and high-speed CDN services

203. Wholesale Ethernet and high-speed CDN services are generally used by competitors to provide voice and data services to medium and large businesses, or to connect small networks in multiple locations to a single large network. The access component of CDN services connects a customer location to an ILEC's central office, whereas the transport component connects the ILECs' central offices.

204. In Telecom Decision 2008-17, the Commission applied its Essentiality Test to wholesale Ethernet and high-speed CDN services, focusing on whether or not the services were duplicable. Given the high incidence of competitor self-supply of wholesale Ethernet and high-speed CDN services and the view that there was competition in the upstream market for such facilities, the Commission concluded that such services were not essential, and that Commission-mandated access to these services would be phased out over a transition period, after which the services would be forborne. By 2013, the provision of Ethernet and high-speed CDN services was no longer mandated, and the services were forborne from rate regulation.

Positions of parties

205. CNOC and MTS Allstream argued that wholesale Ethernet services should be mandated, indicating that the Commission's decision to no longer mandate the wholesale provision of these services and to forbear from the regulation of these services was premature and should be reversed. CNOC and MTS Allstream indicated that they had been subject to significant rate increases since these decisions took effect, which they argued demonstrated that the ILECs had market power in the provision of the services. Moreover, they questioned the duplicability of wholesale Ethernet services, given that there are geographic markets where there are no alternate access facilities that connect to an ILEC's network. Finally, they argued that competition in the business market would be negatively impacted if forbearance from the regulation of wholesale Ethernet and high-speed CDN services were maintained and the wholesale provision of these services were not mandated.

206. MTS Allstream acknowledged that they had recently entered into negotiated agreements for wholesale Ethernet services with various ILECs; however, it considered that a more permanent solution was required. Accordingly, MTS Allstream proposed that the Commission mandate the ILECs to provide wholesale Ethernet services, including their access, metro, and regional transport facilities, subject to commercial negotiations backstopped by the Commission's dispute resolution process.

207. CNOC considered that wholesale high-speed CDN services were subject to similar conditions as wholesale Ethernet services and that they should therefore be re-regulated and that their provision should be mandated. In contrast, MTS Allstream considered that, given that wholesale high-speed CDN services are based on a legacy technology, mandating access to such services would not be useful.

208. The Bell companies argued that no party had brought forward evidence that the retail markets associated with wholesale Ethernet or high-speed CDN services are uncompetitive, or that forbearance from the regulation of these wholesale services has had any adverse effect on these retail markets.

209. The Bell companies argued that, since the Commission's removal of the obligation to provide wholesale Ethernet and high-speed CDN services and forbearance from the regulation of these services, there has been significant duplication in alternative relevant facilities in all regions of the country. In this regard, the Bell companies indicated that

competitor facilities can now reach a number of buildings comparable to that reached by the ILECs.

210. The Bell companies also argued that competitive end-to-end retail Ethernet solutions could be assembled by competitors using (i) a tariffed retail Ethernet access service, (ii) forborne transport service purchased from incumbent carriers or competitors on a case-by-case basis, (iii) broad negotiated agreements, and (iv) competitors' own deployed transport. They argued that competitors' ability to assemble such solutions effectively limit any potential upstream market power held by the incumbent carriers.

211. The other ILECs and the Cablecos generally agreed that the provision of wholesale Ethernet and high-speed CDN services should continue to not be mandated and should be forborne from regulation. They argued that these services remain widely duplicable and available, and that retail competition in the business services markets has not lessened since the Commission removed the obligation to provide these services and granted forbearance.

Commission's analysis and determinations

212. While parties raised certain issues with respect to the provision of wholesale Ethernet and high-speed CDN services, for example, with respect to rates, these parties did not provide specifics as to how, if at all, these issues impacted the associated downstream retail markets. In this regard, neither CNOC nor MTS Allstream provided any compelling evidence to demonstrate that legitimate concerns exist with respect to the sustainability of competition in the downstream retail markets associated with wholesale Ethernet and high-speed CDN services.

213. The retail business services markets[25] are competitive, given changes in retail market shares, expansion of competitive choice, and generally stable retail revenues,[26] all indicating signs of sustainable competition.

214. In light of the above, the Commission is not persuaded that it would be appropriate to reverse its decision to remove the obligation to provide wholesale Ethernet and high-speed CDN services and to grant forbearance with respect to the provision of these services. Consequently, the regulatory status of wholesale Ethernet and high-speed CDN services will remain unchanged.

Other wholesale services

215. The regulatory status of various other wholesale services were raised over the course of the proceeding, with various parties in support of or opposed to proposed changes for the following wholesale services:

[25] The retail business services markets include services such as Session Initiation Protocol trunking (which uses VoIP to facilitate the connection of a private branch exchange (PBX) to the Internet) and virtual private network (VPN) services (which extend a private network across a public network), which may be provisioned using various high-speed access and transport facilities, such as Ethernet and high-speed CDN.

[26] For example, as set out in the Commission's 2014 *Communications Monitoring Report*, retail data service revenues making use of Ethernet protocol have remained flat since 2009.

- low-speed CDN access service;[27]
- CDN transport and channelization;[28]
- local transit and extended area service (EAS) transport;[29]
- wireless access service;[30]
- services associated with equal access and billing and collection;[31]
- other interconnection services;[32]
- co-location services;[33]
- dark fibre;[34] and
- services associated with Internet Protocol television (IPTV).[35]

[27] Low-speed CDN access service provides a dedicated digital access path from ILEC central offices to customer locations, and enables competitors to provide local telephony and data services to business customers, generally small and medium-sized businesses.

[28] CDN transport facilities provide dedicated digital transport paths between ILEC central offices, whereas CDN channelization allows for multiple channels to be carried on a single CDN access facility.

[29] Local transit enables CLECs to complete calls to the customers of other CLECs within the EAS area, the local interconnection region (LIR), or any exchange within the EAS area of any exchange within the LIR. EAS transport enables CLECs to complete calls to ILEC customers within the EAS area, thereby enlarging the area covered by an interconnection arrangement.

[30] Wireless access service provides a wireless carrier with one option to interconnect its network with a local exchange carrier (LEC) so that the wireless carrier's end-customers can make calls to, and receive calls from, the LEC's end-customers and all other entities connected to the LEC's network.

[31] Services associated with equal access enable consumers to seamlessly access competitive long distance service providers in the same manner that they would be able to access the long distance services provided by their serving LEC, e.g. by dialing 0 or 1 plus a ten-digit telephone number. Services associated with billing and collection enable, for example, long distance service providers to include on ILEC telephone bills charges for long distance services that they provide to the ILEC's end-customer, thereby enabling consumers to receive one bill at the end of the month.

[32] These services include dialed number transport capability (which is an access service through which the toll-free number that was dialed by a caller is transported to the switched local facilities of an alternate long distance service provider's subscriber); network portability access service [which provides the central office equipment and facilities necessary for the interconnection of a customer-provided network portability service to the ILEC's public switched telephone network (PSTN)]; and Internet telephony access service (which provides the central office equipment and facilities necessary for the interconnection of an Internet service provider's voice service with the ILEC's PSTN).

[33] Co-location services provide competitor access to and use of certain ILEC central office building space, associated power, and environmental conditioning for the purpose of interconnecting with the ILEC network facilities or accessing ILECs' unbundled network components.

[34] Dark fibre refers to optical fibre infrastructure, such as cables, that is currently in place but is not being used by an incumbent carrier.

216. However, parties did not provide sufficient evidence in this proceeding to allow for a meaningful application of the Essentiality Test for these other wholesale services to justify a change in their existing regulatory status. In the case of new or forborne wholesale services, parties did not provide evidence of a problem at the retail level to demonstrate that intervention at the wholesale level may be warranted. Without such evidence, the Commission is not persuaded that it would be appropriate to reconsider, or consider for the first time, whether the provision of such wholesale services should be mandated.

217. Accordingly, the regulatory status of the other wholesale services identified in this section remains unchanged.

Approach to setting rates for wholesale services

218. The Commission's approach to setting rates for wholesale services is based upon the use of incremental costing, which is then supplemented by an approved markup to establish the appropriate rate. Pursuant to the Commission's approach, company-specific costs are generally used in the calculation of costs, which are measured by the incremental, forward-looking costs causal to the provision of that wholesale service.

219. Markups are intended to contribute to the fixed and common costs of the company. However, markups have varied over time depending on a number of factors, including whether the wholesale service is essential, as well as whether there may be additional risk to network investment if the wholesale service is mandated (referred to as a risk premium).

220. Incumbent carriers are required to provide costing information to support their proposed rate for any new wholesale service, or when they want to amend an approved rate for a specific wholesale service, or if the Commission deems that a specific wholesale service's rate should be re-examined.

Positions of parties

221. RCP disputed the effectiveness of incremental costing, arguing that it is overly complex, lacks transparency, and results in rates that do not always recover incumbent carriers' costs. Accordingly, RCP proposed that prices for wholesale HSA services be based on the retail price for an Internet access service, less the costs that the incumbent carriers do not incur when they deal with a wholesale customer rather than a retail end-user (also known as the retail-minus approach). RCP argued that a retail-minus approach would be easy to implement, would ensure that incumbent carriers recover their incurred costs, and retain incentives for the incumbent carriers to make network investments.

[35] These services include virtual local area networks or VLANs (which represents a logical group of workstations, servers, and network devices that appear to be on the same local area network despite their geographical distribution); multicasting (which is a technology used for efficient simultaneous delivery of information through a network to a group of end-users. A single copy of the information is introduced into the network from a source, and the network replicates copies to those who have requested the information); and caching (which enables videos to be downloaded to caching servers in off-peak times and directly delivered to customers from these servers on demand, in order to reduce the costs of delivering the same video content to multiple customers).

222. Most other parties, however, considered that a retail-minus approach for wholesale rate setting would not be appropriate because (i) retail prices change frequently; (ii) it is difficult to assess retail prices when services are offered in bundles; and (iii) the estimation of the costs saved from providing service to wholesale customers can be as contentious as the incremental costing approach.

223. CNOC proposed that the Commission adopt a modified incremental costing approach based on the use of an "efficient competitor model." Under this approach, a single costing model would be developed for the ILECs and another for the Cablecos for each wholesale service, rather than the current company-specific costs, which would then be used as the basis for setting wholesale rates.

224. The incumbent carriers, however, opposed CNOC's proposal, submitting that a single costing model would be inappropriate given the different operating conditions prevailing between the various companies, including differences in network design, specific equipment used, and operations.

225. In contrast to the proposed retail-minus and efficient competitor model approaches, many parties were of the view that rates for wholesale services ought to be related to company-specific costs, and that, therefore, incremental costing remains the appropriate approach.

226. With respect to markups, CNOC submitted that the fixed and common costs that are to be recovered by markups have decreased significantly since they were last reviewed by the Commission, and that it was time that they be reassessed. CNOC also proposed that, if there is to be a risk premium allowed to services provided over next-generation networks, such as those deployed over FTTP access facilities, the premium should be reflected in the cost of capital of the incumbent carrier rather than being added as a premium to the markup.

227. The incumbent carriers generally opposed CNOC's markup proposals, indicating that a review of fixed and common costs would require extensive time and effort, requiring a separate proceeding. Moreover, the ILECs submitted that the Commission's practice of providing a risk premium to account for risks inherent in next-generation networks was appropriate and should continue, and that such risks are better accounted for in the markup rather than as a component of the cost of capital. The Cablecos submitted that if risk premiums are included in the markups for wholesale services provided by the ILECs, then an equivalent premium should be included in the markups for wholesale services provided by the Cablecos.

228. In addition to the above rate-setting issues, the Bell companies made several proposals to streamline the regulatory burden associated with rate-setting for certain wholesale services.

229. First, the Bell companies proposed that the Commission adopt a "small service" waiver for certain mandated wholesale services. Under this waiver, the Commission would exercise its discretion to waive the requirement to file cost studies for wholesale services with limited demand and associated revenues.

230. Second, the Bell companies proposed that the filing of a cost study not be required in cases where the study period captured by a previously submitted cost study associated with the

service has not yet elapsed. Should any issues regarding the prices or the costs of that service or a similar service arise, the Commission would rely upon the previously filed cost study to inform its decision.

231. Finally, the Bell companies proposed that the rates for certain wholesale legacy services (which they defined as ULLs, legacy DSL services, and low-speed CDN access services) not be reduced, even if there is evidence that costs have decreased, so as to discourage end-users from remaining on legacy facilities instead of adopting services carried over next-generation technologies. The Bell companies proposed, however, that the rates for such services still be permitted to increase if the incumbent carriers provide evidence that costs have increased.

232. No party specifically opposed the Bell companies' first two proposals, while CNOC, MTS Allstream, and Primus opposed the proposal regarding legacy services. Objections were generally based on the view that rates for wholesale services can be considered just and reasonable only if they are based on current costs.

Commission's analysis and determinations

233. No party provided compelling evidence to justify a deviation from the current incremental costing approach or to demonstrate that the retail-minus or efficient competitor model approaches would be better alternatives.

234. First, no evidence was provided to suggest that the incremental costing approach results in rates that are not just and reasonable. Second, there is no evidence to suggest that developing alternative costing approaches would improve regulatory efficiency, as both proposed approaches include assessing contentious costing elements that would be subject to significant scrutiny and debate. Finally, adopting and implementing any alternative costing approaches, as proposed by both CNOC and RCP, would require extensive follow-up proceedings which would inappropriately create uncertainty in the various markets.

235. Accordingly, the existing company-specific incremental costing approach remains the appropriate approach for rate-setting for mandated wholesale services. Notwithstanding this conclusion, the Commission may adopt other costing approaches, where appropriate and on a case-by-case basis, in order to improve regulatory efficiency or to further certain policy objectives.

236. With respect to markups, while parties raised legitimate concerns regarding the need to reconsider certain markup policies, the record of this proceeding is insufficient to address any specific concerns. A reconsideration of markup policies, including a review of fixed and common costs, as well as risk premiums, would require significant time and effort from the Commission and the interested parties. Accordingly, it is not appropriate to make any changes to its approach to markups at this time.

237. All current markups to wholesale services mandated as a result of this proceeding will remain unchanged, and the establishment of any additional markups for wholesale services will be determined on a case-by-case basis.

238. With respect to the Bell companies' streamlining proposals, the Commission generally supports such initiatives, so long as they maintain the integrity of the costs established. In this context, the Commission is open to the adoption of a small service waiver for wholesale services. However, the Commission is unable to approve this initiative at this time, given the need for further information, such as the basis on which the Commission could ensure that rates for services subject to this waiver would be ascertained as being just and reasonable.[36]

239. Conversely, the Bell companies' proposal to use the length of the study period to determine the need to submit a new cost study would unduly limit the Commission's flexibility to consider the impact of changed circumstances on wholesale service costs, which could impair the Commission's ability to ensure that rates remain just and reasonable. Accordingly, the Commission **denies** the Bell companies' proposal.

240. With regard to the Bell companies' proposal concerning wholesale legacy services, adoption of this proposal would serve to lower the regulatory burden associated with cost study filings without impairing the Commission's ability to find rates just and reasonable. However, in order to balance the interests of the incumbent carriers and competitors, the proposal to freeze the rates for wholesale legacy services should be applied with respect to both cost decreases and cost increases.

241. Accordingly, the Commission determines that the rates for the wholesale legacy services, defined as ULLs, DSL services not provided over next-generation mixed fibre/copper networks, such as FTTN, and low-speed CDN access services (i.e. DS-0 and DS-1 CDN accesses),[37] provided by the incumbent carriers are frozen at existing rate levels,[38] as of the date of this decision. As a result of this decision, any identified service whose rate is interim is made final. The incumbent carriers are to file tariffs within **30 days** of the date of this decision to reflect this determination. A complete list of the services subject to this decision is provided in the Appendix to this decision.

Other wholesale service issues

Equivalence of inputs

242. CNOC and Primus proposed implementing an Equivalence of Inputs (EOI) wholesale regime, such that any wholesale service offered by an incumbent carrier to a competitor be provided at the same price, quality, terms and conditions, and timescale, using the same systems and processes that incumbent carriers' use in their wholesale operations to supply their own retail operations. Further, the provision of any wholesale service would be effective as of the date the associated retail service is made available.

[36] For example, a small service cost study waiver currently applies to retail services, with justness and reasonableness being largely determined on the basis that the associated rates were negotiated directly between the concerned parties.

[37] A DS-0 represents a channel capable of digital transmission at a rate of 56 kilobits per second, equivalent to 1 voice circuit. A DS-1 represents a channel capable of digital transmission at a 1.544 Mbps rate, equivalent to 24 voice circuits.

[38] Existing rate levels refer to rate levels approved on an interim or final basis.

243. CNOC and Primus argued that the adoption of an EOI wholesale regime would significantly reduce the ability of the incumbent carriers to discriminate against them, in terms of pricing and non-pricing issues (e.g. service standards), and would improve competition to the benefit of consumers.

244. The ILECs and the Cablecos uniformly objected to these parties' proposal. They argued that implementing an EOI wholesale regime would introduce significant regulatory costs, given the intrusive and complex processes that would need to be applied to their operations. These parties generally indicated that implementing an EOI wholesale regime would represent a significant undertaking, requiring significant time and money per incumbent carrier.

245. Further, the ILECs and the Cablecos generally argued that there was little evidence to demonstrate that implementing an EOI wholesale regime would produce any material benefits to consumers, and would not represent proportionate regulation.

Commission's analysis and determinations

246. Implementation of an EOI wholesale regime would require major and extensive revisions to the systems and processes that currently exist for each incumbent carrier to support the provision of all wholesale services. Adoption of this EOI wholesale regime would therefore significantly increase the regulatory burden on the incumbent carriers.

247. CNOC and Primus have not substantiated why an EOI wholesale regime is required in light of the current competitive landscape, where competitors are generally increasing their market share for key services, such as retail Internet access services. Further, these entities did not provide details as to how implementing an EOI wholesale regime would support and proportionately serve the interests of consumers.

248. The Policy Direction requires that the Commission use regulatory measures that are efficient and proportionate to their purpose and that interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives of the Act. Implementation of an EOI wholesale regime would represent an overly intrusive regulatory measure, which would neither be efficient nor proportionate to its purpose. Therefore, the Commission **denies** CNOC's and Primus's request.

Application of the wholesale services framework and timing of future review

249. Parties held various views as to which service providers should be subject to the wholesale services framework established in this proceeding, although most parties agreed that the ILECs and Cablecos should be made subject to the framework.

250. Some parties argued that smaller companies or affiliates should be excluded from the wholesale services framework. For example, TCC proposed that its Quebec operations, under the name of TELUS Québec inc. (TCC in Quebec), be considered in a separate proceeding. Other parties proposed that the wholesale services framework be extended to include, for example, both large and small cable companies and/or be extended to capture affiliates of the incumbent carriers.

251. Parties also held various views as to when the Commission should initiate another review of its wholesale services framework, with some parties indicating that no planned future review is necessary, while most parties proposed that the Commission initiate another wholesale service review within a three- to ten-year time frame.

Commission's analysis and determinations

252. The last wholesale services framework applied to the ILECs, including Télébec and TCC in Quebec, as well as the majority of the Cablecos, namely Cogeco, RCP, Shaw, and Videotron. While Eastlink was not specifically made subject to the previous wholesale services framework, the Commission has since identified certain wholesale service obligations that it expects the company to provide.[39]

253. Given their relative market power within their respective incumbent serving territories and the significance that this market power has and can have on the implementation of the policy objectives set out in section 7 of the Act, the wholesale services framework established in this decision will apply to the ILECs [i.e. Bell Aliant, Bell Canada, MTS, SaskTel, and TCC (including TCC in Quebec)], and the Cablecos (i.e. Cogeco, RCP, Shaw, Videotron, and Eastlink). The Commission does not consider it necessary or appropriate to extend the application of the wholesale services framework beyond these entities at this time. In this regard, the small incumbent local exchange carriers, as well as Northwestel Inc., were excluded from the scope of this proceeding.

254. The wholesale services framework established in this decision will be used for considering whether to mandate the provision of any future wholesale services.

255. The wholesale services framework established in this decision should remain in place for a sufficient period of time to allow for the development of sustainable competition, and to encourage continued innovation and investment in high-quality telecommunications facilities, in particular with respect to broadband services. Accordingly, the wholesale services framework established in this decision will remain in place for a minimum of five years, during which time the Commission will monitor competitive conditions. Moreover, any future wholesale service review should include all wholesale services, including wireline and wireless wholesale services.

Policy Direction

256. The determinations made in this decision are consistent with the Policy Direction for the reasons set out below.

257. The Policy Direction states that the Commission, in exercising its powers and performing its duties under the Act, shall implement the policy objectives set out in section 7 of the Act, in accordance with paragraphs 1(*a*), (*b*), and (*c*) of the Policy Direction.

258. The issues under consideration in this decision relate to the provision of wholesale services and their associated impact on competition in the respective downstream retail markets,

[39] See Telecom Decision 2012-141.

including whether any associated regulatory measures are required. Therefore, subparagraphs 1(*a*)(i) and (ii)[40] and subparagraphs 1(*b*)(i), (ii), and (iv)[41] of the Policy Direction apply to the Commission's determinations in this decision.

259. In compliance with subparagraph 1(*b*)(i) of the Policy Direction, the Commission considers that the policy objectives set out in paragraphs 7(*a*), (*b*), (*c*), (*f*), (*g*), and (*h*) of the Act[42] are advanced by the regulatory measures established in this decision.

260. Consistent with subparagraph 1(*a*)(i) of the Policy Direction, the Commission has, for example, with respect to aggregated wholesale HSA, ULL, and Ethernet and high-speed CDN services, relied, to the maximum extent feasible, on market forces by putting such services on the path towards forbearance or by continuing to forbear from the regulation of these services. With respect to disaggregated wholesale HSA services, including over FTTP access facilities, the Commission considers that reliance on market forces would not satisfy the Commission's policy objectives, in particular to support the efficiency and competitiveness of the retail Internet access services market.

261. Consistent with subparagraphs 1(*a*)(ii) and 1(*b*)(ii) of the Policy Direction, the Commission considers that the regulatory measures approved in this decision are (i) efficient and proportionate to their purpose, and minimally interfere with market forces, and (ii) neither deter economically efficient competitive entry into the market nor promote economically inefficient entry. In this regard, the Commission notes its determinations regarding disaggregated wholesale HSA services, as well as the associated requirements regarding FTTP access facilities. With respect to disaggregated wholesale HSA services, reliance on market forces is insufficient as a means of achieving the policy objectives. The Commission also considers that the measures identified in this decision are efficient and proportionate to their purpose and interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives.

[40] Paragraph 1(*a*) states that "the Commission should (i) rely on market forces to the maximum extent feasible as the means of achieving the telecommunications policy objectives, (ii) when relying on regulation, use measures that are efficient and proportionate to their purpose and that interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives."

[41] Paragraph 1(*b*) states, among other things, that "the Commission, when relying on regulation, should use measures that satisfy the following criteria, namely, those that (i) specify the telecommunications policy objective that is advanced by those measures and demonstrate their compliance with [the Policy Direction], and (ii) if they are of an economic nature, neither deter economically efficient competitive entry into the market nor promote economically inefficient entry, ... and (iv) if they relate to network interconnection arrangements or regimes for access to networks, buildings, in-building wiring or support structures, ensure the technological and competitive neutrality of those arrangements or regimes, to the greatest extent possible, to enable competition from new technologies and not to artificially favour either Canadian carriers or resellers."

[42] The cited policy objectives of the Act are 7(*a*) to facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions; (*b*) to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada; (*c*) to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications; (*f*) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective; (*g*) to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services; and (*h*) to respond to the economic and social requirements of users of telecommunications services.

262. Consistent with subparagraph 1(*b*)(iv) of the Policy Direction, the Commission's determinations, as they relate to network interconnection arrangements or regimes for access to networks, are technologically and competitively neutral and do not artificially favour either Canadian carriers or resellers. In this regard, the Commission notes that its determinations regarding disaggregated wholesale HSA services apply to all incumbent carriers, and require such services to be provided over any underlying technology, including FTTP access facilities.

Secretary General

Related documents

- *Regulatory framework for wholesale mobile wireless services*, Telecom Regulatory Policy CRTC 2015-177, 5 May 2015
- *Review of wholesale mobile wireless services*, Telecom Notice of Consultation CRTC 2014-76, 20 February 2014, as amended by Telecom Notices of Consultation CRTC 2014-76-1, 25 April 2014; and 2014-76-2, 5 September 2014
- *Review of wholesale services and associated policies*, Telecom Notice of Consultation CRTC 2013-551, 15 October 2013, as amended by Telecom Notice of Consultation CRTC 2013-551-1, 8 November 2013
- *Bell Aliant Regional Communications, Limited Partnership and Bell Canada – Application for revised filing requirements associated with wholesale negotiated agreements*, Telecom Regulatory Policy CRTC 2012-359, 3 July 2012
- *PIAC – Application regarding the provision of third-party Internet access service in Bragg Communications Inc.'s operating territory*, Telecom Decision CRTC 2012-141, 8 March 2012
- *Wholesale high-speed access services proceeding*, Telecom Regulatory Policy CRTC 2010-632, 30 August 2010
- *Revised regulatory framework for wholesale services and definition of essential service*, Telecom Decision CRTC 2008-17, 3 March 2008
- *Local competition*, Telecom Decision CRTC 97-8, 1 May 1997

Appendix

Wholesale services with rates frozen at existing levels

The wholesale services with rates frozen at existing levels are listed below. For each of the listed wholesale services, a reference, by impacted ILEC, is provided for the tariff item under which the rates for the service are specified. The services and tariff references are current as of the date of this decision.

Unbundled loops

Company name	Tariff reference
Bell Aliant	CRTC 21491 item 646 – Local Network Interconnection and Component Unbundling: 646.3 d), e), f), and g)
	CRTC 21562 item 105 – Local Network Interconnection and Component Unbundling: 105.4 (c)
Bell Canada	CRTC 7516 item 105 – Local Network Interconnection and Component Unbundling: 105.4 (c)
MTS	CRTC 24006 item 105 – Local Network Interconnection and Component Unbundling: 105.4 C.
SaskTel	CRTC 21414 item 610.18 – Local Network Interconnection and Component Unbundling: 610.18.4.2 a)
TCC	CRTC 1017 item 105 – Local Network Interconnection and Component Unbundling: 105 D 3 (b)
	CRTC 18008 item 215 – Local Network Interconnection and Network Component Unbundling: 215.4.2 a. i. (a) and (b)
	CRTC 25082 item 1.05 – Local Network Interconnection and Component Unbundling: 1.05.04 c. (3)
Télébec	CRTC 25140 item 7.8 – Local Network Interconnection and Component Unbundling: 7.8.4.7.

CDN DS-0 and DS-1 access

Company name	Tariff reference
Bell Aliant	CRTC 21491 item 612 – Competitor Digital Network Service: 612.4 a) and b)
	CRTC 21562 item 130 – Competitor Digital Network (CDN) Services: 130.4 a)
Bell Canada	CRTC 7516 item 130 – Competitor Digital Network (CDN) Services: 130.4 (a)
MTS	CRTC 24006 item 125 – Competitor Digital Network (CDN) Services: 125.4 A. and B.
SaskTel	CRTC 21414 item 650.28 – Competitor Digital Network (CDN) Services: 650.28.4 (a)
TCC	CRTC 21462 item 225 – Competitor Digital Network Access (CDN Access): 225.3.1. and 225.3.2.

Legacy aggregated wholesale high-speed access services

Freezing of rates applies to monthly access rates and charges for service speeds provided over non-FTTN DSL technologies.

Company name	Tariff reference
Bell Aliant	CRTC 21491 item 624 – ADSL WAN Service: 624.3
	CRTC 21491 item 626 – ADSL Access Service: 626.3
	CRTC 21560 item 5410 – Gateway Access Service: 5410.4 (f) (1) (a) and (b)
Bell Canada	CRTC 6716 item 5410 – Gateway Access Service: 5410.4 (f) (1) (a) and (b)
MTS	CRTC 24002 item 5820 – Asymmetric Digital Subscriber Line (ADSL) Data Access Service: 5820.6.
SaskTel	CRTC 21414 item 650.32 – Aggregated Asymmetric Digital Subscriber Line (ADSL) Service: 650.32.7.2.

TCC	CRTC 21462 item 226 – Wholesale Internet ADSL Service: 226.3 a.
	CRTC 21462 item 227 – Wide Area Network ADSL Service: 227.3
	CRTC 25082 item 4.06 – Wholesale Internet ADSL Service: 4.06.03 b. and d.
	CRTC 25082 item 4.07 – ADSL Wide Area Network Service: 4.07.03

Dissenting Opinion of Commissioner Raj Shoan

This opinion reflects a different perspective on the matters before the Commission in this hearing; specifically, I agree with the decisions of my colleagues regarding the wholesale services to be mandated and those to be phased out, subject to a reasonable transition regime. In particular, I agree with the majority that access to high-speed networks on a disaggregated basis should be a mandated service pursuant to our wholesale wireline access regime, and that such access should include access to fibre facilities.

For the purpose of the subject matter of this hearing, this dissent has a very narrow focus. To be clear, I do not challenge the determinations of my colleagues with respect to the application of the *Telecommunications Act* and its associated regulations and policies. My concern, and the focus of this dissent, is with the lack of broadcasting analysis under the *Broadcasting Act*, given the overwhelming evidence provided at the hearing and during this public process.

Convergence has long been a buzzword in both the broadcasting and telecommunications industries. In the simplest terms, it refers to the coming together of two or more technologies on one device or platform. As was discussed thoroughly throughout this hearing, the retail telecommunications services that consumers receive through wholesale access are being increasingly bundled and are seamlessly integrating applications of all types – including those that fall under the *Broadcasting Act*. In my view, CRTC policies and frameworks need to reflect, rather than ignore, this reality. In some cases, we have a legal obligation to do so – a fact that is curiously absent from the majority decision.

With respect to the broadband access service (BAS) analysis under the Essentiality Test, I agree that the relevant upstream market is access to high-speed networks. At paragraph 117 of the majority decision, however, with respect to the relevant downstream markets, the evidence indicates, in my view, that there are actually three of them, each of which must be analyzed differently according to the applicable legislative and policy framework. Ignoring these analytical differences not only ignores the existence of broadcasting on these "pipes" but also abdicates the Commission's legal responsibility to apply the provisions of the *Broadcasting Act*. The totality of evidence provided in this hearing tells us that, in the future, broadcasting activity will dominate the bandwidth on these high-speed networks. It is time our policies reflect, or at least acknowledge, that fact.

The evidence demonstrates that we are moving to a wireline world in which there is one pipe to the consumer with up to three distinct services from a regulatory perspective: licensed or exempt Internet Protocol television (IPTV) broadcasting undertakings, exempt broadcasting services delivered over the infrastructure of telecom carriers via retail Internet services and, lastly, retail Internet services without a broadcasting component. I will examine the policy and legislative implications of these three downstream markets below with reference, where appropriate, to the new Essentiality Test, as well as legislative provisions not contemplated or applied in the majority decision.

There is, however, a larger conceptual challenge and it is two-fold. Firstly, we, the Commission and the industry, need to confront the reality that we are rapidly evolving to a world where everything is delivered to the consumer over one pipe or one wireless connection – broadcasting

and telecom services co-inhabiting networks, wired and wireless. This has major policy implications that have yet to be truly reflected in our policies and regulations. As discussed below, there have long been aspects of this evolution in play: the twisted copper pair (i.e. local loop) carrying both telephony and IPTV, or coaxial cable networks offering digital television and retail Internet services – what is changing is the fact that, today, it is becoming the norm and, as Internet Protocol (IP) technology is adopted by undertakings in both the broadcasting and telecommunications industries, bandwidth will be dynamically and seamlessly allocated between broadcasting and telecommunications activities, such that differentiating between a broadcasting and a telecommunications undertaking will require a new analysis.

Secondly, however we may have defined retail Internet service in the past, the evidence in this proceeding is clear that the lion's share of Internet bandwidth has evolved, in the last ten years, from being dominated by primarily alphanumeric text-based services focused on private communications to one increasingly dominated by audio and visual programming intended for reception by the public. In essence, under the current legislative framework, the Internet, through market forces, consumer use, and industry development, is evolving from a telecommunications service *into a broadcasting service*. The implications of this evolution are profound for not only the Commission's regulatory frameworks, but all Canadians and the public interest.

Background

It became evident very early in this hearing that video distribution and consumer demand for video programming was the primary driver underpinning requests for wholesale access to high-speed networks, justifying network expansion and the request for a disaggregated BAS.

In a written submission, VMedia stated the following:

> VMedia hopes that in the course of these proceedings there is a recognition that wholesale internet access cannot be considered in isolation, without an awareness of the fact that video distribution on the Internet is the ultimate "killer application" for the Internet.[43]

In its opening remarks at the hearing, Shaw commented that:

> Canadian consumers, creators, and businesses have clearly embraced the Internet age. We spend more time online than any other nation. ***We are the most intensive consumers of online video in the world***. This is all encouraged and powered by dynamic broadband networks like Shaw's.[44] (my emphasis)

The notion of Canadian consumers being intense consumers of online video and the corresponding pressure it applies to network operators was also confirmed in an exchange between Vice-Chairman Pentefountas and VMedia:

[43] VMedia Intervention, 31 January 2014, paragraph 9

[44] Transcript, Volume 5, 28 November 2014, Shaw Communications, line 5846

6298 COMMISSIONER PENTEFOUNTAS: Okay. So you may have disagreed at the time, you may still disagree, but you knew the rules of the road before you got into the BDU business.

6299 Now, I can understand some ISPs saying, "Well, there has been an explosion in consumption of video," but your entire business case or a large part of it would be based on consumption of video if you are going to be an IPTV provider. So why are we responsible for your math?

6300 MR. BURGER: Actually, it's precisely because of a recognition of that that we are so focused on the triple play bundle aspect of our offering, because the reality is that we concluded that whether we are in the BDU business or not, ***as an ISP we are going to get chewed up by the drive to video***. I think the reality is, somebody is going to be doing it, whether it is going to be watching Netflix on HD or 4K, or whatever the demand is going to be in the future, that bandwidth is going to get chewed up.[45] (my emphasis)

Later, in the same exchange between Vice-Chairman Pentefountas and VMedia, Mr. Tchernobrivets, VMedia's CEO, commented that "it's a fact that for any ISP, about 30 percent of the traffic is due to Netflix and YouTube."[46] Third-party research points to a more significant allocation; according to a 2014 Sandvine report, Netflix accounts for 34.9% of downstream traffic of total peak period traffic on North American networks; YouTube accounts for an additional 14%.

In an exchange between Vice-Chairman Menzies and the Canadian Network Operators Consortium (CNOC), costs associated with the distribution of video over these networks was cited as a large challenge:

1781 Right now if you are going to use CBB to deliver multiple different kinds of applications, you are paying for all that CBB regardless of what the application is you are putting across it. It's one rate.

1782 So for video where you are putting 5, 8, 10 megabits for a single channel and you are still paying $14 per megabit just to carry it during peak hour, it's too expensive to carry that kind of an application. On the other hand, voice isn't terribly expensive, but it still has a different profile from sort of general internet use. So that's what I was trying to get across.

1783 So if you are trying to pick one rate that suits all of those application types, it would have to be a dramatically lower rate.

1784 COMMISSIONER MENZIES: So this is primarily related to changes in consumer behaviour and demand --

1785 MR. STEIN: Yes.

[45] Transcript, Volume 5, 28 November 2014, VMedia

[46] Transcript, Volume 5, 28 November 2014, VMedia, line 6325

1786 COMMISSIONER MENZIES: -- in recent years.

1787 MR. TACIT: That's part of it.

1788 MR. STEIN: Their appetite for different applications, their appetite for different usage patterns, et cetera.

1789 COMMISSIONER MENZIES: Video.

1790 MR. STEIN: Video. Whether that is over-the-top video in certain respects or IPTV.[47]

An exchange between Commissioner Molnar and Primus highlighted what access to a disaggregated wholesale BAS would permit third parties in terms of relevant downstream markets:

2709 I just have one more question. You spoke in your remarks here, and I know in your submission as well, about the ability to offer customers a triple play package and to move into video. To what extent do you see the absence of video as impacting your business today and going forward?

2710 MR. NOWLAN: It's a very significant impact on growth in the residential sector. The bundle has taken on ever-increasing significance in the marketplace and so being able to have an environment that allows us to offer that triple play bundle is a significant component, and that's why our disaggregated model, getting more control of those cost elements, is all part of that to facilitate that ability to bring that triple play, to bring that video component.

2711 Brad, did you want to add anything from a product perspective?

2712 MR. FISHER: Yeah. Well, I think we see very high rates of attachment, having numbers where video customers, 85 percent of them will buy broadband from usually the same provider and this is in part the power of the bundle, and I think this is a part of the market we've really had trouble addressing, you know.

2713 In spite of the fact we differentiate on a number of fronts with respect to the broadband offering itself, we're very value conscious with respect to unlimited services both for business and consumers, but the video piece, it's a gap in terms of breaking into that segment of the market that has already moved to a bundle. It's very difficult to disrupt that and to bring that separate piece by itself to a home without the triple play.

2714 COMMISSIONER MOLNAR: Okay, thank you. I just --

2715 MR. NOWLAN: It just really hits on part of the philosophy that our company has been so focused on, and really, it's bringing that choice for the customers and it just gives them -- we have the scale in the marketplace with our presence to bring this

[47] Transcript, Volume 2, 25 November 2014, CNOC

competitive choice from a competitive video offering. So it's just giving more choice in that marketplace, away from that duopoly play that they currently have in the market.

2716 COMMISSIONER MOLNAR: Right. And I just want to make sure I understand before I pass you on to my colleagues here.

2717 So the ability to deliver video would open up a new customer segment to you; is that what it is? It opens up the market further versus your market is being squeezed?

2718 MR. FISHER: I think it gives us the ability to address the full market.

2719 COMMISSIONER MOLNAR: A new market.

2720 MR. FISHER: The full market.[48]

The foregoing testimony accorded with the Commission's own research into the matter. According to the Cisco Visual Networking Index (Cisco VNI),

a. Global IP traffic has increased more than fivefold in the past five years, and will increase nearly threefold over the next five years;

b. Globally, consumer Internet video traffic will be 80% of all consumer Internet traffic in 2019, up from 64% in 2014. The sum of all forms of video (TV, video on demand [VOD], Internet, and peer-to-peer [P2P]) will be in the range of 80-90% of global consumer traffic by 2019; and

c. Internet video to TV[49] doubled in 2014. Internet video to TV will continue to grow at a rapid pace, increasing fourfold by 2019. Internet video to TV traffic will be 17% of consumer Internet video traffic by 2019.

In short, the fact that video consumption – both present and future – on high-speed networks is driving network expansion and dominating bandwidth use was an uncontested truth in this proceeding. Video distribution – or the transmission of programming for reception by the public – is, under current legislation, a broadcasting activity.

Analysis

My analysis differs markedly from that of the majority, in my view, because I readily accept a reality that has yet to be truly reflected in Commission decision-making or policies: we are rapidly evolving to a world where everything is delivered to the consumer over one pipe or one wireless connection – broadcasting and telecom services co-inhabiting networks, wired and wireless.

While a seemingly self-evident and obvious notion, this reality has significant implications for CRTC policy-making. In its January 2014 intervention for this proceeding, CNOC very neatly

[48] Transcript, Volume 2, 25 November 2014, Primus

[49] For example, Netflix through Roku.

describes this phenomenon as the growth of the system from the pre- to post-Internet world. In the pre-Internet world, two distribution networks with distinct engineering and different legislative frameworks were dominant: the public switched telephone network (regulated by the *Telecommunications Act*) and the cable television system (regulated by the *Broadcasting Act*). Each of these systems developed independently of the other and, as CNOC notes, each had a particular business model, network architecture, and regulatory challenges.

The rise of IP and IP-based networks and the subsequent creation of the Internet changed everything. In addition to facilitating greater competition, it allowed facilities previously limited to one functionality to become capable of more. The IP suite was designed to carry packets of data – data that could include both voice and video. The end result, as CNOC noted, was that networks that were formerly specialized, such as cable and telephone systems, were no longer constrained in such a way. These networks became capable of carrying and offering both telecommunications and broadcasting services simultaneously.

Vaxination Informatique submitted the following at the hearing:

The "facilities based" doctrine dates from the last century where a physical cable supported one high-priced regulated monopoly service, either telephone or television. Convergence of multiple services delivered on a single pipe has made this doctrine obsolete. This pipe is a utility built with commodity equipment, with the innovation occurring further out on the Internet. That's where the action is happening.[50]

Unfortunately, as this network evolution has occurred, the Commission has been slow to update its policies and regulations to reflect the new multi-faceted nature of IP-enabled networks. In effect, networks that it has traditionally labelled as solely “broadcasting” or “telecommunications” remain so today despite the fact that their operators and retail consumers are using them for a myriad of activities – some broadcasting, some telecommunications, and all virtually unregulated. When confronted with an assessment of relevant downstream markets in the case of BAS, the majority of the Commission chose to focus solely on retail Internet services despite the preponderance of evidence that demonstrated far more than telecommunications activity was occurring on these high-speed networks.

In my view, the majority’s narrow approach does a disservice to the public interest insofar as it ignores evidence and facts that clearly demonstrate the existence of multiple types of services and activity occurring on the high-speed networks in question. Acknowledging these services and activities is not only prudent from a regulatory perspective, it is arguably a legal obligation of the Commission given that each applicable statute has its particular policy objectives and governing principles. The Commission cannot and should not remain wilfully blind to the existence of new services and activities on these networks, especially in light of its *Broadcasting Act* obligations.

The second development that is implicit in the reasoning for my dissent is likely to be far more contentious. The Commission has, since the early 1990s, treated retail Internet service as a telecommunications service. But the Internet has evolved substantially since that time; it has

[50] Transcript, Volume 9, 4 December 2014, Vaxination Informatique, line 11397

evolved from a communications platform that was focused primarily on private communications through alphanumeric text (i.e. email, chat rooms, websites, message boards) to one whose bandwidth is increasingly dominated, today, by video distribution. Netflix did not exist in the 1990s. YouTube did not exist in the 1990s. Shomi and Crave TV did not exist at this time last year. As noted in paragraph 15 above, according to the Cisco VNI, the sum of all forms of video (TV, VOD, Internet, and P2P) will be in the range of 80-90% of global consumer Internet traffic by 2019.

It is clear through the majority decision that my Commissioner colleagues on the panel still view retail Internet service as a purely telecommunications service. It is worth exploring, however, whether the definition of retail Internet service needs to be re-examined given the current legislative framework in Canada. Is it evolving into a broadcasting service? Is it a hybrid telecommunications/broadcasting service? Should it remain as a purely telecommunications service? These are important questions from a public policy perspective and certainly worthy of closer examination and discussion in a different forum or proceeding.

My analysis for this dissent includes the application, or potential application, of certain provisions of the *Telecommunications Act* and the *Broadcasting Act*, to which my colleagues did not turn their attention. Specifically, I refer to the following legislative provisions:

> *Section 4 of the* Telecommunications Act*:*
>
> 4. This Act does not apply in respect of broadcasting by a broadcasting undertaking.
>
> *Section 28 of the* Telecommunications Act*:*
>
> 28. (1) The Commission shall have regard to the broadcasting policy for Canada set out in subsection 3(1) of the Broadcasting Act in determining whether any discrimination is unjust or any preference or disadvantage is undue or unreasonable in relation to any transmission of programs, as defined in subsection 2(1) of that Act, that is primarily direct to the public and made
>
> (*a*) by satellite; or
>
> (*b*) through the terrestrial distribution facilities of a Canadian carrier, whether alone or in conjunction with facilities owned by a broadcasting undertaking.
>
> *Definition of 'broadcasting' pursuant to the* Broadcasting Act*:*
>
> "broadcasting" means any transmission of programs, whether or not encrypted, by radio waves or other means of telecommunication for reception by the public by means of broadcasting receiving apparatus, but does not include any such transmission of programs that is made solely for performance or display in a public place

Application of the Broadcasting Act*:*

4. (3) For greater certainty, this Act applies in respect of broadcasting undertakings whether or not they are carried on for profit or as part of, or in connection with, any other undertaking or activity.

4. (4) For greater certainty, this Act does not apply to any telecommunications common carrier, as defined in the *Telecommunications Act*, when acting solely in that capacity.

*Paragraph 9(1)(*f*) of the* Broadcasting Act*:*

9. (1) Subject to this Part, the Commission may, in furtherance of its objects,

(*f*) require any licensee to obtain the approval of the Commission before entering into any contract with a telecommunications common carrier for the distribution of programming directly to the public using the facilities of that common carrier;

At paragraph 117 of the majority decision, in applying the new Essentiality Test, the Commission has limited its analysis of the relevant downstream market to retail Internet services. I disagree with this approach. In fact, a credible argument could be made that the Commission has made an error in law by not applying the provisions or objectives of the *Broadcasting Act* to the analysis. According to the evidence in this proceeding, in my view, there are at least three relevant downstream markets:

a. licensed or exempt IPTV broadcasting undertakings;

b. exempt broadcasting services delivered over the infrastructure of telecom carriers via retail Internet services; and

c. retail Internet services without a broadcasting component.

It is necessary to examine each of these markets independently given that each raises differing policy and legislative analyses pursuant to current legislation.

Licensed or exempt IPTV broadcasting undertakings

The provision of an IPTV service was a major focus of attention during this hearing when discussing the potential mandating of a disaggregated, wholesale high-speed access Internet service. In fact, one could surmise that the primary purpose of mandating access to high-speed networks was to allow third-party providers to offer bundles of services that included a meaningful video offering, such as IPTV, over a managed portion of the network. As indicated by parties at the hearing, the provision of a reasonably priced bundle of services – one that included a television-equivalent service – was critical to ensuring a competitive landscape for third parties on a going-forward basis.

I do not disagree with these arguments. My difficulty arises with the analytical tool employed by the Commission in the provision of access to this wholesale service.

IPTV is – without question or debate – a broadcasting service. IPTV undertakings operate according to either a broadcasting exemption order or a licence, but that fact does not fundamentally alter the fact that they are broadcasting undertakings. As stated in section 4 of the *Telecommunications Act*, this Act does not apply to broadcasting by broadcasting undertakings. Thus, there is an analytical quandary: how can the Commission provide access to high-speed networks to third parties, under the *Telecommunications Act*, in order to allow them to provide a broadcasting service?

The answer, in my view, is quite simple: it cannot. The *Telecommunications Act* does not and cannot apply to such undertakings. Further, telecom carriers or resellers cannot claim to have no knowledge or control of the content offered by such undertakings, as the record of this proceeding clearly refutes such arguments: IPTV offerings are separate from what it is colloquially referred to as the "open Internet." They are managed network offerings by the carrier or reseller in question. In other words, the IPTV provider is fully aware of and involved in the distribution of the service over the high-speed network.

The majority decision to apply the *Telecommunications Act* to mandate access to high speed networks in order to allow for, in part, the provision of IPTV to consumers is particularly peculiar given that a legislative provision exists at paragraph 9(1)(*f*) of the *Broadcasting Act* that specifically addresses this very situation.

Given the facts and evidence, in my view, the provision of wholesale access to high-speed networks for the purpose of offering an IPTV service – and any associated costing or licensing implications – should properly have been considered under the *Broadcasting Act*.[51]

Exempt broadcasting services delivered over the infrastructure of telecom carriers via retail Internet services

The evidence in this hearing demonstrated that Internet service providers (ISPs) are readily able, to varying degrees, to identify bandwidth-intensive applications over their high-speed networks. Invariably, those applications are online video services. Exempt broadcasting services, such as Netflix and YouTube, have risen in prominence and popularity since the last wholesale wireline proceeding.

Unlike IPTV offerings, exempt broadcasting services operate over the open Internet pursuant to the Commission's Digital Media Exemption Order[52] and not a private, managed network. While such services can be either distribution undertakings or programming undertakings, it is the exempt programming undertakings that have to date gained the most popularity amongst Canadians. As noted in paragraph 12 above, depending on the ISP, consumption of these services can comprise, at peak hours, between 30% and 50% of the bandwidth of a retail Internet

[51] By logical extension, there is an argument to be made that the application of capacity-based billing rates on IPTV undertakings – a major area of concern at the hearing – should also properly be examined under the *Broadcasting Act*. At a minimum, section 28 of the *Telecommunications Act* would seem to apply to the concerns of third parties respecting the potentially preferential use of virtual local area networks and multicasting by large incumbents.

[52] The validity of the regulatory distinction between services operating on the same pipe but distinguishing themselves on the basis of being subject to a private, managed network and those operating over the open Internet has never been directly subject to a public proceeding in the broadcasting context.

service offering. Furthermore, the Cisco VNI indicates that online video services will only continue to increase their share of overall bandwidth available over high-speed networks in the near future.

Section 28 of the *Telecommunications Act* imposes a positive obligation on the Commission to establish an analytical framework respecting the transmission of programming over the networks of telecommunications common carriers in order to guard against undue preference and/or unjust discrimination.

The majority decision sets out a revised approach to the Essentiality Test. In tweaking the Essentiality Test, the Commission has adopted a new analysis respecting policy considerations that may inform, support, or reverse a decision to mandate a wholesale service. Such policy considerations include public good, interconnection, or investment and innovation. I agree with this approach, as the Essentiality Test, while largely effective, is not necessarily designed to capture wholesale services that require special treatment or consideration. In this respect, I do not view the aforementioned list of policy considerations as an exhaustive list.

In my view, in mandating access to a disaggregated BAS, the Commission missed an opportunity, under the new Essentiality Test, to add a policy analysis required pursuant to section 28 of the *Telecommunications Act*, namely, what impact the mandating or not mandating of a wholesale service would have on *Broadcasting Act* policy objectives. This is particularly important in the case of the disaggregated BAS, as the Commission does not regulate the provision of retail Internet services and will be phasing out, subject to a transition regime, aggregated wholesale high-speed access services. As such, it is not readily apparent in what context other than the provision of wholesale access to high-speed networks that the Commission can apply the required analysis pursuant to section 28.

Alternatively, the Commission could have included such an analysis under the umbrella of "investment and innovation."

The absence of a section 28 analysis may have a notable impact on the development and provision of online video applications over high-speed networks, given concerns expressed by parties at the public hearing of incumbents utilizing equipment denied to third parties in order to more effectively manage network congestion due to the transmission of programming over their networks. The application of section 28 would also be an effective tool for the Commission to pre-emptively establish what factors would constitute undue preference/unjust discrimination as high-speed networks rapidly transition to becoming predominantly video distribution platforms.

Retail Internet service without a broadcasting component

The last relevant downstream market, in my view, is the market which the Commission assessed in its majority decision: retail Internet services.

The lone distinction I would make to the Commission's analysis would be to establish a mechanism or proxy by which to acknowledge what proportion of network traffic of that service on that ISP was related to video distribution intended for reception by the public – in other words, the definition of broadcasting. That portion of the network would be subject to an analysis that incorporates a consideration of broadcasting policy objectives, as noted above.

What remains on the network, i.e. non-broadcasting-related material, would properly be subject to the *Telecommunications Act*.

Conclusion

In writing this dissent, I became attuned to the fact that some may interpret this dissent as advocating for the dissolution of net neutrality principles in Canada. Nothing could be farther from the truth. I am not proposing in this dissent the creation of Internet "fast" or "slow" lanes. I am not proposing Internet traffic prioritization. The fact is that the operational separation of these high-speed networks into private, managed networks and the open Internet is happening today, at this very moment, on certain incumbent and small incumbent networks. In my view, the Commission should acknowledge these new network configurations and address them in an open and direct manner. I am not advocating regulation for the sake of regulation. I am advocating for a fact-based exploration of network evolution in this country and what such evolution means for our various regulatory frameworks.

The analysis I have proposed is a three-pronged approach that essentially captures all of the activity that would typically occur over wholesale high-speed networks. It is not the only approach that could be employed; there are many that could allow for a comprehensive capture of the various activities occurring over high-speed networks in this country. Rather than focusing on the specific merits of the approach I have suggested in this dissent – an approach I fully acknowledge will not be to the liking of many in the communications industry – I hope the ultimate takeaway will be an understanding of the essential point that I have attempted to convey: as everything moves onto one pipe to the home (or one wireless connection to the car), the Commission will need to re-evaluate every policy and regulatory approach that it has created to date. This proceeding could have set the Commission on its first step of that journey. I fear we may have missed that opportunity in this decision.

In its January 2014 intervention, VMedia stated the following:

> The impact on our culture of the internet, with its diversity, ease of access, and, properly priced, its universal affordability, is transformative. The entertainment, the knowledge, and the interconnection that video content over the internet affords offers previously unimagined benefits.[53]

I could not agree more. If the Commission has missed an opportunity here, then I am optimistic that there will surely be others in the future. It is important, however, to begin the conversation. Without a conversation, there cannot be change. I hope to have played a small part in starting that conversation with this dissent.

[53] VMedia intervention, 31 January 2014, paragraph 30

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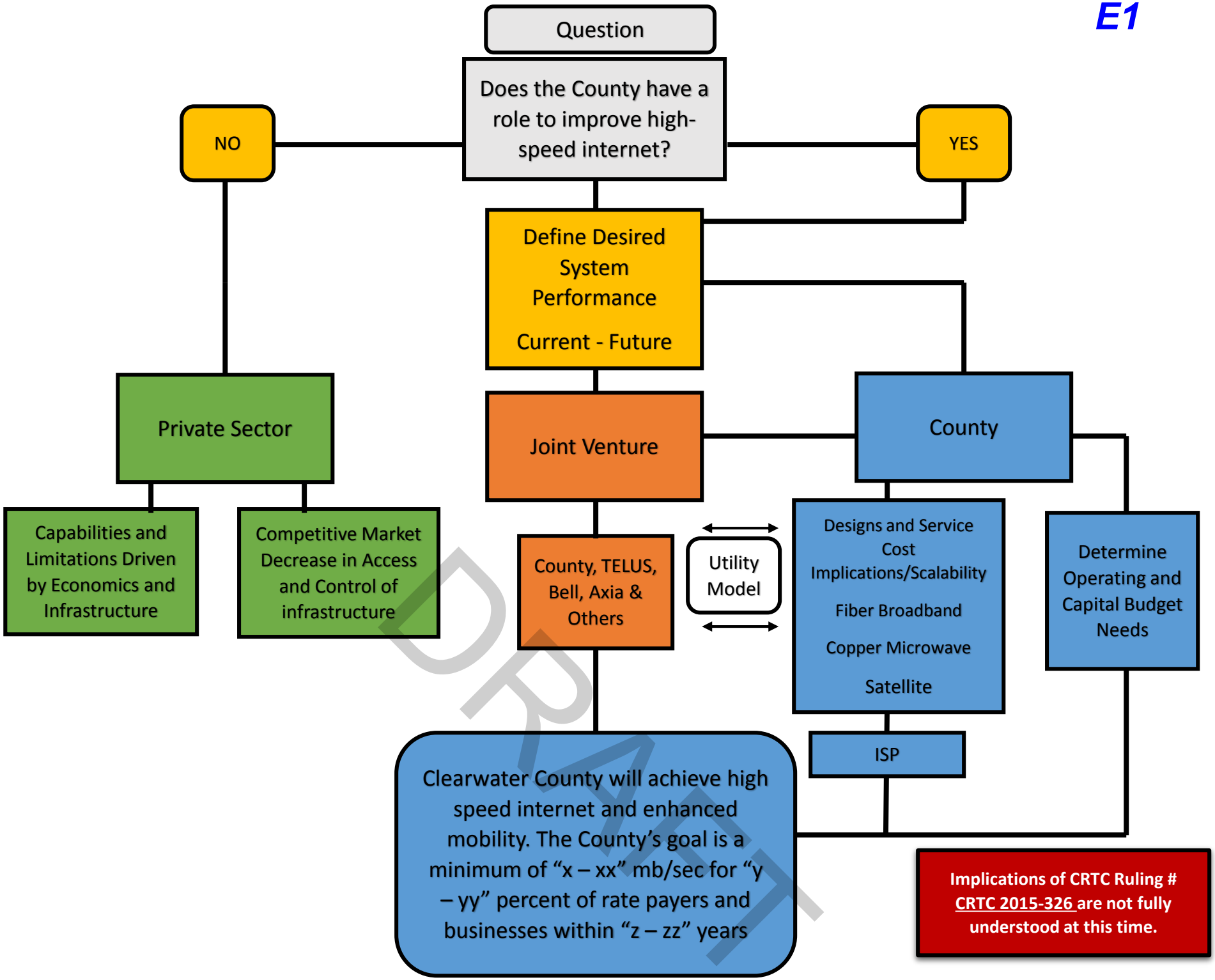

Question
Does the County have a role to improve high-speed internet?
NO
YES
Define Desired System Performance
Current - Future
Private Sector
Joint Venture
County
Capabilities and Limitations Driven by Economics and Infrastructure
Competitive Market Decrease in Access and Control of infrastructure
County, TELUS, Bell, Axia & Others
Utility Model
Designs and Service Cost Implications/Scalability
Fiber Broadband
Copper Microwave
Satellite
Determine Operating and Capital Budget Needs
ISP
Clearwater County will achieve high speed internet and enhanced mobility. The County's goal is a minimum of "x – xx" mb/sec for "y – yy" percent of rate payers and businesses within "z – zz" years
Implications of CRTC Ruling # CRTC 2015-326 are not fully understood at this time.

Clearwater County High Speed Internet
Standing Committee of Council
Terms of Reference
August 2015

PURPOSE

The Clearwater County High Speed Internet Standing Committee is formed to provide a recommendation and supporting information towards:

- Is it a responsibility of Clearwater County to advance rural communication services including fiber, broadband (internet), mobility (cellular), and public safety (police, fire, ambulance) to foster economic and community development?

If yes to the above:

- What is the base line **level of system performance** goal to be achieved as related to High Speed Internet speed? (Example: 80% at "X" Mb/sec)
- What is the base line goal of **percentage of Clearwater County townships/population to be served** using various technologies? (Example: 80% of all residences/businesses)
- **In what time frame** are the above two performance measures to be achieved when considering necessary allocations of resources? (Example: 80% completion within 3-5 years)
- **Does Clearwater County provide a utility model frame work to leverage connection?**
- **Does Clearwater County become an independent Internet Service Provider** or **seek out private sector involvement/partnerships?**
- **Does Clearwater County continue with the current decision making by private sector to provide solutions to** rural communication services including fiber, broadband (internet), mobility (cellular) to foster economic and community development?

Additional goals of The Clearwater County High Speed Internet Standing Committee may include:

- Seeking out information and best practices on designing, building and operating rural communication networks
- Explore initial joint market opportunities for partnerships/tenants to use communication networks
- Advocate to the Federal/Provincial governments on the merits of any communication network and lobby for supportive policy, legislation and grant funding.

- Advocate to the Federal/Provincial governments on the merits of a utility communication network and lobby for supportive policy, legislation and grant funding.
- Encourage cooperation between levels of government, municipalities, associations and/or service providers when building or expanding networks, with an emphasis on fiber or other wired infrastructure and tower and site collocation for wireless infrastructure to maximize benefit and reduce duplication.
- Promote additional partnerships with governments, industry and other agencies.

MEMBERSHIP

Membership will be open to two (2) to three (3) currently elected Clearwater County Councillors, one (1) member from each Chamber of Commerce located within Clearwater County, a maximum of 7 members at large representative – one from each of Clearwater County's municipal electoral Division.

STRUCTURE AND MEETINGS

The Clearwater County High Speed Internet Standing Committee Chair shall be an elected Clearwater County Councillor.

The role of the chair is to facilitate meetings and ensure the keeping of necessary records. The resources necessary to perform these tasks will be provided by Clearwater County municipal staff.

The Chair will serve as a single point of contact when required.

VOTING

The work of the Clearwater County High Speed Internet Standing Committee is to be collaborative and respectful of the independence of each member. Any representatives will not impose the will of one or more members on another.

FINANCIAL

Unless otherwise decided by Clearwater County Council, The Clearwater County High Speed Internet Standing Committee has no authority to enter into contracts or indebt any of its members.

Any work agreed to be done will be on a project by project basis with Clearwater County entering into its own individual contract/agreement with a proponent.

INTELLECTUAL PROPERTY

The Clearwater County High Speed Internet Standing Committee members agree that all work completed with respect to any work completed or information obtained through

meetings and processes as a committee or individually shall be the property of Clearwater County.

CONFIDENTIALLITY

Notwithstanding the desire to share all information within the committee, it is understood that any work completed or information obtained through meetings and processes between or by each individual are to be considered confidential and will not be shared.

Membership endorsement of Terms of Reference:

	Name of Member	**Date**
Clearwater County	_____	_____
Clearwater County	_____	_____
Clearwater County	_____	_____
Chamber of Commerce	_____	_____
Chamber of Commerce	_____	_____
Chamber of Commerce	_____	_____
Member at Large Division 1	_____	_____
Member at Large Division 2	_____	_____
Member at Large Division 3	_____	_____
Member at Large Division 4	_____	_____
Member at Large Division 5	_____	_____
Member at Large Division 6	_____	_____
Member at Large Division 7	_____	_____

AGENDA ITEM

PROJECT: Delegation - Shock Trauma Air Rescue Society - STARS		
PRESENTATION DATE: August 11, 2015		
DEPARTMENT: Community & Protective Services/CREMA	**WRITTEN BY: Ted Hickey**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: 3. Community Well-Being	**PRIORITY AREA:** Health Objective – 3.4 Advocate for a dependable, modern and accessible health service system.	**STRATEGIES:** 3.4.1 Support and lobby for the future healthcare needs of community and aging population. 3.4.4 Monitor health service delivery and community risk through partnerships with Alberta Health Services (AHS), Rocky hospital and health care practitioners.
RECOMMENDATION: 1. Council accept the presentation material as information.		
ATTACHMENT(S): STARS Power Point Presentation		

BACKGROUND:

The original name was the Lions Air Ambulance Service. The Lions Club provided the first helicopter, a white BK117 with the Lions Club banner on the side. The Lions Air Ambulance Service's first mission was in December 1985.

In 1988 the **Shock Trauma Air Rescue Society** (STARS) was recognized as an essential service and is currently a non-profit helicopter air ambulance organization funded by individual donors, service groups, corporate donors and government contributions. STARS provides rapid and specialized emergency care and transportation for critically ill and injured patients. STARS operates from bases in Calgary, Edmonton, Grande Prairie, Regina, Saskatoon and Winnipeg.

STARS was formed in Calgary, Alberta to provide emergency medical care and transport to the critically ill and injured by the founder Dr. Gregory Powell. The Foundation created its working arm, Shock Trauma Air Rescue Society (STARS), which carried out its first mission on December 1, 1985. *https://en.wikipedia.org/wiki/Shock_Trauma_Air_Rescue_Society*

STARS Air Ambulance currently provides services within Clearwater County.

SHOCK TRAUMA AIR RESCUE SOCIETY

STARS

STARS AIR AMBULANCE

Who we are

- Available 24 / 7;
- Night vision capable;
- (11) Helicopter fleet = (8) BK117 & (3) AW139
- Average 8 missions per day;
- Six bases: Calgary, Edmonton, Grande Prairie, Saskatoon, Regina, Winnipeg
- 3 provinces: Alberta, Saskatchewan, Manitoba
- Non-profit charitable organization.

FINDING THE PATIENT

STARS Emergency Link Centre

- Oversees all communication and transport;
- Coordinates all medical consultations;
  - (2014) Over 6500 medical calls in rural areas
- Maintain up to 4,500 (avg.) registered sites daily;
  - Industrial / Municipal / Individuals

CARING FOR THE PATIENT

Critical care teams / Leading edge technology

- Airborne Intensive Care Unit environment;
- Medical oversight from transport physicians on every mission;
- Video Laryngoscope – Leading edge
- New! Universal blood products onboard

EDUCATING THE PROVIDERS

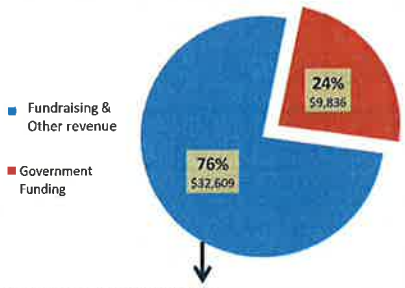
Advancing critical care

- Critical care education and simulation training
  - 2 Mobile Education Units (Alberta);
  - 847 Medical personnel / 51 communities in Alberta (2014)
- Outreach Training; Safety and emergency preparedness
  - 1495 Landing zone officers in Alberta (2014)

FUELED BY GENEROSITY

Achieving successes together

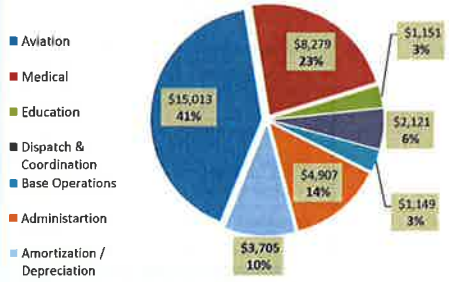
STARS ALBERTA REVENUES



Fundraising revenue in thousands

Fundraising	$	16,549	51%
Lottery	$	10,661	33%
Calendar	$	1,012	3%
Other Revenue	$	4,387	13%
Total Fundraising	$	32,609	100%

STARS ALBERTA EXPENDITURES (3 BASES)



HELICOPTER EMS

Benefits and Value

Early Intervention

- direct impact on survival rates
- decreased hospital stay & rehabilitation

Significant Cost Savings

- Overall Healthcare System
- Can relate up to $1M savings per patient
  - i.e. stroke / heart attack

"Patients transported by Helicopter EMS tend to be more severely injured than those transported by ground (ambulance) but, are also more likely to survive."

Gestring, Mark
The Journal of Trauma: Injury, Infection and Critical Care 2010

CLEARWATER COUNTY

Mission Breakdown

Clearwater County	2010	2011	2012	2013	2014	2015	Total
Caroline Scene calls	4	1	3	2	6		16
Cline River Scene calls				1	1		2
Condor Scene call					1		1
Harlech Scene call			1				1
Nordegg Scene calls		1	1	2	1		5
Nordegg River Scene calls	1	3	3	2	2		11
O'Chiese IR Scene calls	1		1				2
Rocky Mountain House Inter-facility	19	31	21	27	31	3	132
Rocky Mountain House Scene calls	9	6	6	11	11	2	45
Sunchild IR Scene call					1		1
Ya Ha Tinda Ranch Scene calls		2			1		3
Total (avg. 43 per yr. = 3-4 per mo.)	34	44	36	45	55	5	219

MUNICIPAL INITIATIVE

Leadership Above and Beyond

REALITY

- Alberta - Growing - Aging - Economic challenges
- Increasing Call Volume = Increasing Operational Costs
- Protective Services – Vital Critical Care Resources
  - All options available - RCMP / Fire / Ground ambulance / Fixed wing / STARS
- 249 Alberta communities served (2014)
- Albertans – One of a privileged few
- Partners to save lives - 2/3 of Alberta municipalities
  - Municipal commitments range up to $65 per capita
- Early Intervention Saves Lives
  - Our contribution is for everyone who may need the help of STARS Former Saddle Hills County Reeve Tim Slone

CLEARWATER COUNTY

Leadership Above and Beyond

Thank you for your commitment and partnership that saves lives!

Since 1989, Clearwater County has contributed $73,000.00.

OUR REQUEST

We kindly request your consideration of a life-saving pledge of support to STARS @ $2 per capita for a 3 year term (2016, 2017, 2018).

CLEARWATER COUNTY & STARS

Partners in saving lives!

AGENDA ITEM

PROJECT: Integration to Support Search and Rescue – Rocky Mountain House within the Clearwater County Community and Protective Services Division		
PRESENTATION DATE: August 11, 2015		
DEPARTMENT: Community & Protective Services/CREMA	**WRITTEN BY: Ted Hickey**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☐ N/A ☐ Funded by Dept. ☒ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: 2: Well Governed and Leading Organization	**PRIORITY AREA:** 2.1 Build community trust through socially responsible governance for long term sustainability.	**STRATEGIES:** 2.1.1 Proactive policy development and evaluation of municipal programs and services. 2.1.2 Fiscal management and reserve management strategy. 2.1.3 Complete an inventory of all County assets and liabilities, developing an operational plan to manage these resources, and assessing the value and need of all land holdings.

RECOMMENDATION:

1. **Council directs the Administration to pursue and complete the analysis of SAR-RMH integration within Clearwater County Community and Protective Services Division while ensuring the maintaining of SAR-RMH's registered society status.**

2. **(A) Council directs the Administration to complete, upon confirming a mutual agreement between SAR-RMH and Clearwater County, a Memorandum of Understanding that defines the organizational structure, Clearwater County's annual budgetary requisition requests and Clearwater County's administrative assistance/oversight resources where needed.**

ATTACHMENT(S): Search and Rescue Rocky Mountain House Power Point Presentation

BACKGROUND:

Rocky Mountain House Search & Rescue (SAR–RMH) was formed in 1991 as a result of a 23 months of age child's death that inspired the community to form Rocky Mountain House Volunteer Search & Rescue. Rocky SAR was the first ground search and rescue team formed in

Alberta, and was also one of the founding members of the Search and Rescue Alberta organization.

Rocky Mountain House Search and Rescue now has approximately 45 members whose ages range from 18 to 84! On average, SAR- RMH is now called out 25 times a year and operates with a 10 person executive board.

The team is also home to the only civilian Mountain Rescue Association accredited technical Mountain Rescue Team in Canada. The team is required to recertify with the MRA every five years. They meet and practice once a month.

Clearwater County, the Town of Rocky Mountain House, jointly located residents and businesses have and continue to be a source of support for SAR-RMH through various efforts and contributions. Currently, ongoing cooperative relationships between SAR-RMH and RCMP, Clearwater County Highway Patrol, Clearwater Regional Fire Rescue Service and Clearwater Regional Emergency Management Agency.

SAR–RMH are experiencing challenges to continue the ongoing abilities in service provision and in focusing services within its mandate of services to be provided. Initial discussions between Clearwater County Administration and SAR–RMH Executive have resulted in the exploration of a number of options to consider. All options are focused towards ensuring the abilities of SAR-RMH being maintained as best as possible currently to the midterm time frames. A longer term vision and decision is yet to be finalized.

Options Explored:

1. SAR-RMH continue as an autonomous organization with status quo assistance continuing.

2. SAR-RMH move under CRFRS' organizational structure with integration into the CRFRS service delivery model under the current service delivery model.

3. SAR-RMH continue as an autonomous organization in maintaining its registered society status and enter into a Memorandum of Understanding that directly links SAR-RMH within the Clearwater County Community and Protective Services Division organizational structure, annual budgetary requisition requests and administrative assistance/oversight where needed.

Future Options Yet to be Explored:

1. To explore and confirm the possible inclusion of RMH-SAR within the Clearwater Regional Emergency Management Agency organizational structure, annual budgetary requisition requests and administrative oversight.

Strategic Plan

Rocky Mountain House SAR

February 2015

Mission Statement

- The Mission Statement of the Rocky Mountain House Volunteer Search and Rescue Society is to train and supply equipment and personnel for the public sector.

Who We are and What we do

- Rocky SAR was started in response to the tragic loss of a toddler in the Rocky Mountain House Area almost 25 years ago.
- At the time Rocky was the only volunteer SAR group in the province
- Members of Rocky SAR were called upon for missing persons all across the province.
- Rocky routinely fielded at least 15 persons for every search call.

History Cont.

- The team had very little equipment or resources.
- Members paid for all their equipment and training.
- Members had less disposable income and more free time.
- There was a lower expectation/requirement for the level of training.
- We had a high membership (over 100)

Who We Are!

- We are trained volunteers.
- We are community minded.
- A non-profit registered charity
- We want to help lost or injured persons.

What do We Do.

- Ground SAR
- Swift Water Rescue
- Ice Rescue
- Technical Rescue
- Incident Command
- Civil Emergency Response.
- Training

What We Do Cont.

- Mountain Rescue
- Preventative SAR (Education)
- Community Outreach

What We Don't Do

- Vehicle Extrication
- Industrial Confined Space Rescue
- Dive Rescue
- Wildland or Structural fire fighting
- Hazardous Material incident response

Who We Are Not

- A Fire Department
- An Ambulance Service

Current Strengths and Weaknesses

Strengths

- Well Trained in multi disciplines.
- Small Core of Dedicated individuals.
- Community supported.
- Most SAR Vehicles and rescue equipment are current.
- Many years of experience.

Weaknesses

- General members not engaged
- Coordination and delivery of training is time consuming.
- Fund raising is very time consuming. (burnout is occurring)
- Search call volume is down.
- Third Party training is expensive.
- Rely on individuals to supply personal equipment and vehicles for missions.
- No capital replacement program.

Opportunities and Threats of CRFRS/County Merger

Opportunities

- potential access to more members - larger 'club'
- shared training
- training coordination
- capital replacement schedule
- Remuneration, and reduced requirement for fund raising
- Decreased (quicker) response time

Threats

- Loss of autonomy
- Capital managed by umbrella agency (vehicles, ATV, buildings, command post)
- Erosion of membership
- potential loss of community support?
- Relationship with RCMP in question?
- Unknown expectations; response time, stand by, etc.

Opportunities and Threats without CRFRS/County Merger

Opportunities

- Status quo
- Retain Autonomy

Threats

- Loss of members through inactivity
- Burnout of Exec. And core members
- Potential loss of Club

Long-term Strategic Objectives (3-5 years)

- Maintain Mountain Rescue Association (MRA) certification.
- Able to staff every ground SAR incident with a minimum of 6 persons for the first two operational periods.
- Able to staff every water rescue incident with a minimum of 4 persons within 20 minutes of receiving a call.
- Able to staff every Mountain rescue incident with a minimum of 4 persons within 20 minutes of receiving a call.
- Able to staff every Misc. rescue incident with a minimum of 4 persons within 20 minutes of receiving a call.
- Have and maintain at least 6 certified Swift Water Level 1 responders.
- Maintain or exceed at least 80% of active members meet minimum membership requirements yearly.

Short Term goals (2-3 yrs.) (to achieve long term strategic objectives)

- Reduce fund raising requirements so more time is available for training.
- Address small vehicle ,OHV, needs so personal vehicles not required.
- Address command post replacement.
- Complete and deliver comprehensive yearly training plan.
- Increase member engagement. (more training opportunities, cross training, etc.)
- Maintain or increase current membership levels.
- Reevaluate strategic plan every 3 years.

Action Items/Plans

- Consideration towards integration with CRFRS to help address short term goals.
- Preferred Action Item/Plans is **integration within Clearwater County through the Clearwater County Community & Protective Services Division** to help address short to mid term goals and future evolution to determine addressing long term goals.

Financial Assessment

- Yearly expenses incurred by SAR are estimated at $40,000.00 - $50,000.00
- Yearly Income $44,000.00 ($18,700 through casino and training grant, $26,000 through donations and fund raising) **(Note: Current economic realities may have a negative impact upon current and future fund raising revenues, and donations.)**
- Current Approved grant application for rescue truck $45,000.00
- Long term capital replacement plan is yet to be finalized.

AGENDA ITEM

PROJECT: Rocky Rod and Gun Club		
PRESENTATION DATE: August 11, 2015		
DEPARTMENT: Municipal	**WRITTEN BY: Denniece Crout**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: Community Well being	**PRIORITY AREA: Services**	**STRATEGIES: 3.1.6** Continue to rely on volunteers, profit and not-for-profit organizations
RECOMMENDATION: That Council accepts the information as presented.		
ATTACHMENT(S): 1. Correspondence from Rocky Rod & Gun Club Board of Directors 2. PowerPoint Presentation		

BACKGROUND:

The Rocky Rod and Gun Club have been operating in the Clearwater area for decades and 2 representatives are here to give a brief overview of their operations.

At a later date the organization may be back in front of Council requesting a property tax exemption under MGA Section 364 (1)

F1

August 4, 2015

Clearwater County
P.O. Box 550
Rocky Mountain House, AB
T4T 1A4

Council Members of the Clearwater County:

Perhaps the sign at the entrance to our site “Rocky Mountain House Shooting Sports” more clearly defines the nature of our organization, but we are the Rocky Rod and Gun Club.

The ranges of the Rocky Rod and Gun Club operate under the watchful eye of the Chief Firearms Officer (CFO) for Alberta, and The Range Safety Officer (RSO) at the local level.

Two of the club’s objectives are: “to promote and disseminate a knowledge of and proper practices of firearm use and proficiency in the shooting sports and allied activities among the population in our region” and ”to promote and encourage the education of safe and responsible firearms use to the youth in our region”.

We have donated range time to the Sea Cadets and in 2014 we partnered with the Junior Forest Wardens at an event at the range.

In 2014 there were approximately 700 primary members and 340 family members. Most of the membership is from that Clearwater County area but we have members from Edmonton area and Calgary. We have hunters that use the range for sighting in a hunting rifle and a surprisingly large number that shoot paper or steel target only.

Founded in 1970, the club has grown into one of the premier clubs in the province with ten active ranges including a long range of up to six hundred meters serviced by 14 shooting benches. For the handgun enthusiasts there are 4 dedicated handgun ranges. We haven’t forgotten the shotgunner as there is a range for trap shooting and hopefully we will have the skeet shooting operational the fall of 2015. The other shooting sport offered at the site is archery and there is a 100 meter range, and a trail with about thirty 3D targets that takes about two hours to walk around.

We wouldn’t be where we are today without the generous donations of time and equipment from contractors in Clearwater County.

After 45 years of service to the community and having taxation exempt status for that time, we are understandably confused over the change of the Clearwater County’s interpretation of our tax exempt status. We would ask your support in granting tax free status for the Rocky Rod and Gun Club.

We look forward to meeting with you August 11 to discuss this matter.

Respectfully,

The Board of Directors,
Rocky Rod and Gun Club

Rocky Rod and Gun Club

Tax exemption

Rocky Rod and Gun Club

Founded in 1970 as a non-profit society

Site contains eight leased quarter sections

Seven disciplines - ten ranges

Membership of about 1000

Chief Firearms Officer (CFO) sets the safety standards

Range Safety Officers (RSO) implement and uphold those standards at the local level

Seven Shooting Disciplines

Rifle
Shotgun
Archery
Pistol
Youth
Silhouette
Black Powder

Two of the Rocky Rod and Gun Club Objectives

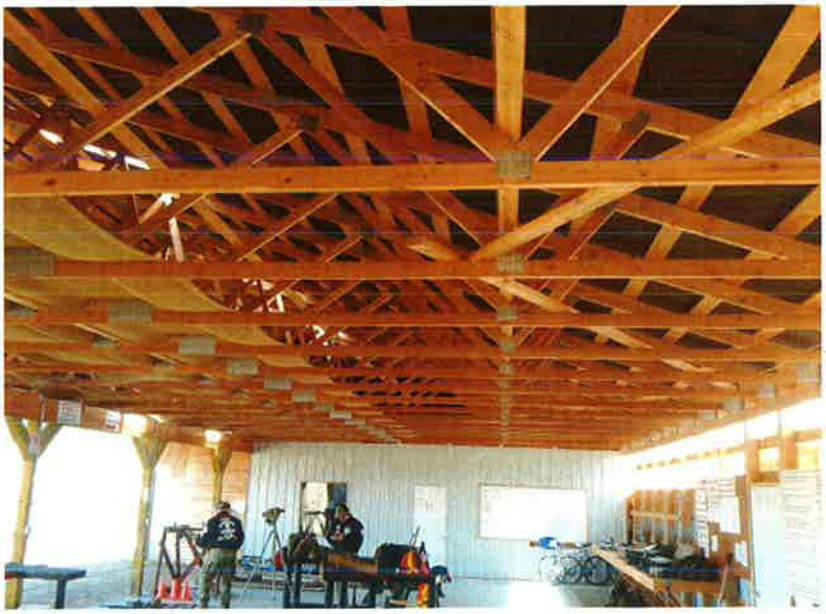
- to promote and disseminate a knowledge of and proper practices of firearm use and proficiency in the shooting sports and allied activities among the population in our region
- to promote and encourage the education of safe and responsible firearms use to the youth in our region

Rocky Rod and Gun Club

Approximate Membership Numbers

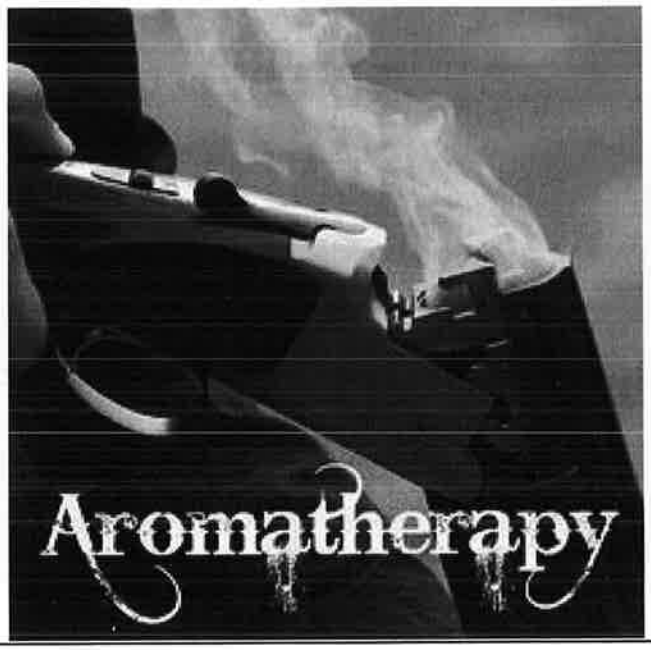
Primary Members	700
Family Members	340

Members come from as far away as Edmonton and Calgary. Some are hunters that use the range to sight in their rifles, and many only shoot paper or steel targets for fun or competition.




600m
400m
500m
400m
500m
300m
300m
200m
200m
100m
100m
Rocky Rod and Gun Club in Rocky Mountain House Alberta Canada

And then there are the Trap and Skeet Shooters



Rocky Rod and Gun Club

We ask your support in granting tax free status for the Rocky Rod and Gun Club.

Should Council wish to have a tour of our facility, it can be arranged.


SE25 039-08-W5M
SW30
NE24 039-08-W5M

AGENDA ITEM

PROJECT: Meeting with AAMDC Board Members		
PRESENTATION DATE: August 11, 2015		
DEPARTMENT: Municipal	**WRITTEN BY: Rudy Huisman**	**REVIEWED BY: Rudy Huisman**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME: Well Governed & Leading Organization	**PRIORITY AREA:** Advocate in the best interests of our community and region	**STRATEGIES:** Foster and enhance relationships with local MLA and MPs to promote Clearwater County goals and objectives
RECOMMENDATION: That Council receives the agenda for discussion with the AAMD&C board members on August 11, 2015 as described in this item.		
ATTACHMENT(S):		

BACKGROUND:

1. Council wishes to discuss the following matters with the AAMDC board members on Tuesday August 11, 2015:
   - Updates to the AUMA lobby regarding the resolution on the pooling of linear assessment and a sharing of any knowledge regarding the Provincial Government position on this important matter;
   - What the AAMDC lobby strategies are in relation to the linear pooling being proposed and what challenges if any exist; and,
   - The status of the MGA review and the timing of presentation to the Legislature.

2. Should time allow, Council wishes to have the board tour two projects in the Village of Caroline. First is the Caroline Community HUB Complex, which is a joint initiative undertaken in 2013/14 with the Village. Second is the Caroline commercial/ industrial development project recently undertaken by Clearwater County and just getting underway.

G5

Clearwater County
Councilor and Board Member Remuneration Statement

For the Year of ....2015.....

Name of Councilor / Board Member ....Jim Duncan.....

Payment Periods

January	**February**	**May**	***June***
March	**April**	**July**	**August**
September	**October**	**November**	**December**

Supervision Rate – $550.00 Monthly
Reeve Supervision Rate - $850.00 Monthly

Date	Type of Meeting Attended	First 4 Hours $156.00	Next 4 Hours $124.00	Next 4 Hours $124.00	Regular Council Meeting $283.00	Lunch $16.00	Mileage @ $0.55 / km
June 1	FCSS Affordable Housing	X					40
June 3	SDAB Hearing	X					40
June 3	Weed Workshop, Rec Board	X	X				69
June 4	Bighorn Backcountry	X					40
June 4	FCM Conference	X					224
June 5	FCM Conference	X	X				0
June 6	FCM Conference	X	X				0
June 7	FCM Conference	X	X				224
June 9	Regular Council				X		40
June 9	Pow Wow Committee	X					65
June 10	FCSS Meeting/Retreat	X	X				40
June 11	Rec Facility Tour	X	X				40
June 12	Internet Education Session	X	X				40
June 13	Eckville Parade	X					144
June 15	A+P	X	X				40

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Remuneration Calculation

19	Meetings @ $156.00=	2964.00	1510	Kms @ $0.55=	830.50
9	Meetings @ $124.00=	1116.00	0	Lunch @ $16.00=	0
2	Meetings @ $283.00=	566.00			
	Supervision=	550.00			
	TOTAL=	5196.00		**TOTAL=**	830.50

Signature {Councilor / Board Member} .....

G5

Date	Type of Meeting Attended	First 4 Hours $156.00	Next 4 Hours $124.00	Next 4 Hours $124.00	Regular Council Meeting $283.00	Lunch $16.00	Mileage @ $0.55/ km
June 16	Open House - Rocky	X					40
June 17	NSWA AGM Wabamun	X	X				192
June 18	Open House - Caroline	X					112
June 23	Council				X		40
June 24	Rec Board Stakeholders meeting	X					40
June 26	Road to 2017 Committee	X					40

G5

Clearwater County
Councilor and Board Member Remuneration Statement

For the Year of ....2015.....

Name of Councilor / Board Member EARL GRAHAM

Payment Periods

January	**February**	**May**	**June**
March	**April**	**July**	**August**
September	**October**	**November**	**December**

Supervision Rate – $550.00 Monthly
Reeve Supervision Rate - $850.00 Monthly

Date	Type of Meeting Attended	First 4 Hours $156.00	Next 4 Hours $124.00	Next 4 Hours $124.00	Regular Council Meeting $283.00	Lunch $16.00	Mileage @ $0.55 / km
July 13/15	Red Deer Caller/Sec	✓	✓				190
July 14/15	Council				✓		92
July 17/15	SAOG/BOD	✓	✓				90
July 28/15	Council				✓		92
July 9/15	MPC	✓	✓				92
July 10/15	ICC	✓	✓				92

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Remuneration Calculation

4	Meetings @ $156.00=	624.00	648	Kms @ $0.55=	356.40
4	Meetings @ $124.00=	496.00	-	Lunch @ $16.00=	Ø
2	Meetings @ $283.00=	566.00			
	Supervision=	550.00			
	TOTAL=	2236.00		**TOTAL=**	356.40

Signature {Councilor / Board Member}