Wholesale Broadband Access and Regulatory Appeals in the Canadian Telecommunications Industry: An Institutional Analysis

by

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A thesis submitted in conformity with the requirements for the degree of Master of Information
Faculty of Information
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Abstract

This thesis focuses on Canada’s federal regulatory appeal procedure, the “Petition to the Governor in Council” (GiC), and questions how it integrates with other institutional actors in the country’s telecommunications policymaking apparatus. The research applies the Institutional Analysis and Development framework methodology to a recent GiC appeal decision in favour of mandated wholesale broadband access to fibre-to-the-premises facilities. This appeal decision, the thesis suggests, helps to illustrate how Canada’s telecommunications regulator, the CRTC, has maintained its ability to shape the specifics of policy outcomes. Despite GiC jurisdiction over the direction to telecommunications regulation, as well as obstructions to CRTC policy development that can transpire as a byproduct of GiC appeal decisions, the findings show that the CRTC has nevertheless defended its status as the lead actor in the regime. The thesis also points to areas where the GiC procedure would benefit from improved transparency and strengthened conduits for regional representation.
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1. INTRODUCTION

Can analyzing a policy appeal platform reveal anything about the current state of the larger regulatory regime in which it functions? The following thesis addresses this question through performing an institutional analysis of the Canadian telecommunications policymaking regime. The research focuses primarily on the “Petition to the Governor in Council,” a statutorily sanctioned governmental appeal procedure through which written requests can be filed for Cabinet to overturn policy decisions made by the country’s federal regulatory agencies. With an intent to investigate how this powerful, though relatively seldom exercised procedural mechanism integrates with other institutional facets within Canada’s federal regulatory framework, as well as the decision outcomes that arise as a result, the thesis uses the Institutional Analysis and Development (IAD) framework methodology to analyze the institutional arrangement established for producing the policy developments and the appeal amendments that define Canada’s wholesale access regulatory program for wireline broadband provision.

The Governor in Council’s recent appeal ruling (P.C. 2016-0332), which upheld wholesale mandated access to fibre-to-the-premises (FTTP) broadband facilities, is the central petition case examined in this research and guides the scope of the analysis. As FTTP networks are poised to redefine Canada’s residential broadband markets over the coming years, this appeal ruling is especially important because it has opted to safeguard, rather than to strike down, federal policies that promote consumer choice and offer improved strategies for competition.

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1 Throughout this thesis, I use the terms “Petition to the Governor in Council,” and the “GiC” appeal “procedure” or “mechanism” interchangeably. Both in the research to follow and elsewhere, the procedure in question is sometimes also referred to as an “appeal to Cabinet” or an “Order-in-Council” application (Department of Canadian Heritage, 2015).

2 Fibre-to-the-premises, or “FTTP,” infrastructure is, for the purposes of this thesis, recognized as synonymous with fibre-to-the-home (FTTH). This type of network infrastructure can be distinguished from fibre-to-the-node (FTTN), fibre-to-the-curb/cabinet/closet (FTTC), and fibre-to-the-building/basement/business (FTTB), in that FTTP/FTTH relies exclusively on fibre optic cabling throughout the entire local exchange network, with the demarcation point being the modem in the end-customer premises (Government of Canada [GOC], 2015; Cisco, 2013). The other types of network configurations, including FTTN, FTTC, and FTTB, convert the final connection to a downgraded wiring technology, usually some variety of copper (DSL) infrastructure, before reaching the retail customer premises (whether that be a home or business).
Because these upheld policies apply to wireline technologies including FTTP infrastructure, they thus ensure that mandated wholesale wireline access continues to be offered over communications networks of the foreseeable future.

The country’s telecommunications regulator, the Canadian Radio-television and Telecommunications Commission (CRTC or “the Commission”) is the independent agency dedicated to ensuring that Canadians—as citizens, creators, and consumers—have access to a world-class communications system that encourages innovation and enriches their lives (CRTC, 2013b, 2014). For the CRTC, part of striving for a communications system of such caliber has included, among other initiatives, implementing a wholesale access regulatory program for wireline broadband provision. This body of policies mandates competitor Internet service providers (ISPs), hereafter referred to as “competitors,” regulated access to portions of incumbent operators’ wireline networks, which allows them to compete in providing the transmission of data over fixed-access wires that extend to customers’ homes and businesses. The wholesale access policies examined in the research therefore harbor the potential to improve competitive retail access and the variety in choice of service provider for consumers.

Most regulations created by Canada’s bureaucratic agencies, including the CRTC program for wholesale broadband access policies, are ultimately subject to the authority of a

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3 All CRTC regulatory policies, orders, notices of consultation, and decisions that are cited in this proposal can be found on the CRTC website: [http://www.crtc.gc.ca/eng/dno.htm](http://www.crtc.gc.ca/eng/dno.htm)

4 Wholesale access regulatory policies established by the CRTC are broadly referred to in consolidated form as the “wholesale services framework,” the “wholesale access regime” (CRTC, 2015b), or—as it is most commonly referred to in this thesis—the “wholesale access program.” By using the latter terminology to characterize this body of CRTC regulations, my intention is twofold: first, to proactively incorporate the vocabulary of the “Ostrom Workshop” community, which explicitly instructs the policy analyst employing an IAD approach to target “a specific policy issue or program…” (Polski & Ostrom, 1999, p. 7); and second, to help offer a convenient distinction between the “wholesale services framework,” which is a set of regulations, and the “IAD framework,” which is a methodology for policy analysis.
federal Cabinet appeal procedure known as the Petition to the Governor in Council (GiC). This procedure affords a person ("complainant"), whether that person is acting on his own behalf or advocating on behalf of a group or corporate entity, the right to implore the federal Cabinet to alter or revoke an existing regulatory policy or policies with which that complainant disagrees. Petitions are required in writing and must be sent to the Office of the Clerk of the Privy Council and the agency responsible for the policy under appeal (Privy Council Office, 2016b). The federal Cabinet minister whose portfolio, underpinned by statutory jurisdiction, directs Governor in Council appeal authority over a specific agency or type of regulation, is then tasked with deciding the petition outcome on behalf of Cabinet. Before an outcome is reached, in some cases, the presiding minister may directly consult the associated agency, parties who may be immediately affected by a decision outcome, or provincial ministers. A decision on the appeal petition is typically required by the minister within a specified time period, the duration of which varies depending on presiding statutory legislation.

One of the main purposes of the GiC appeal procedure is to act as an accountability check on administrative agency power. Agency employees are appointed to their positions in the bureaucracy, but with no direct obligation to voter accountability. Cabinet ministers, on the other hand, are subject to the rigors of Constitutional convention—they are only eligible to occupy

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5 Canada’s wireline broadband regulation is federally preempted and within the jurisdiction of the CRTC (Telecommunications Act, 1993; Industry Canada, 2011). However, the Minister of Innovation, Science and Economic Development* ("ISED"), presently the Hon. Navdeep Bains, oversees the portfolio containing the “Petition to the Governor in Council” appeal procedure under the purview of telecommunications regulation (Telecommunications Act, 1993, §.12(1)). As such, this thesis does provide consideration for ISED, but not beyond its authority in administering the GiC appeal procedure.

* Note: Before November 2015, Innovation, Science and Economic Development Canada was referred to as Industry Canada (Industry Canada, 2015). The Minister of Industry was the title of the department head before the name change to ISED.

6 The Minister of Canadian Heritage must, for instance, issue an appeal decision on a GiC petition filed to vary or rescind a CRTC broadcasting decision within ninety days after the date of the CRTC decision, pursuant to section 28(1) of the Broadcasting Act (1991). Other legislative statutes specify different directions on the appeal decision time period. Discussed in detail below, the Telecommunications Act of 1993 stipulates that a GiC appeal petition filed to vary or rescind a CRTC telecommunications decision must be decided by the Minister of Industry within one year after the date of the CRTC decision (1993, §.12(1)). Permitting more flexibility than perhaps any other statute in its rules on a GiC petition decision timeframe, the Canadian Transportation Act of 1996 allows for the outcome of a GiC appeal petition filed to vary or rescind a Canadian Transportation Agency policy to be decided “at any time, in the discretion of the Governor in Council” (1996, §.40).
their ministerial positions with the customary prerequisite of first gaining an elected seat in the lower house of Parliament, the House of Commons (Privy Council Office, 2016c). In other words, ministers are chosen by the Prime Minister (and officially appointed by the Governor General); out of deference to the unwritten rules of the Canadian Constitution, however, ministers are typically selected from the pool of party members elected to the House of Commons. After gaining a Cabinet appointment, ministers—including those vested with deciding GiC appeal petitions—are held accountable to, and must maintain the confidence of a majority of the members of Parliament (MPs) in the House of Commons (Malcolmson & Myers, 2005). MPs are, in turn, directly accountable to the electorate through each of their individual constituencies.7 To this end, the institutional arrangement in which the GiC appeal procedure is embedded protects the Westminster system principle of parliamentary accountability known as “responsible government” (Malcolmson & Myers, 2005). It ensures that the GiC appeal procedure commands executive oversight and override authority extending to all necessary reaches of Canada’s federal bureaucracy, but with measures that preserve a direct line of accountability to Canadian voters.

Invoking the GiC procedural mechanism within the ambit of telecommunications policymaking allows for complainants to appeal policy outcomes produced by the CRTC (Telecommunications Act, 1993, §12(I)). Legally grounded by the Telecommunications Act of 1993, the appeal procedure has, historically, most often produced verdicts that result in the GiC declining to adopt the recommendations of a telecommunications policy appeal petition (Hall, 1990; Industry Canada, 2015; Privy Council Office, 2016b). Alternatively, though, petition cases have also produced findings wherein the GiC varies or rescinds a decision on its own initiative or through a third-party appeal; in other instances, a GiC decision outcome may refer the policy

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7 See Appendix 3: Canadian Telecommunications Policymaking Regime: Elected or Appointed Institutions? (p. 106).
under review back to the Commission for reconsideration (Privy Council Office, 2016b; 
*Telecommunications Act, 1993, §.12(1), §.69.4(1)).

1.1. Motivation and Problem Statement

Despite the discretionary powers granted to the GiC over CRTC regulatory decisions—and the authoritative role its petition outcomes can, by statute, assume in telecommunications policymaking—Canada’s federal policy appeal procedure has not been the subject of extensive academic scrutiny. Discussed in the literature review to follow, past regulatory law and administrative policy studies examining the telecommunications policy regime in Canada, or assessing it comparatively with other regimes, have tended to pose an institutional focus principally on the CRTC, Industry Canada, or some combination of these two organizational bodies. In instances where the GiC appeal procedure is addressed in the reviewed works, it is usually done so in a capacity that offers little more than a cursory description of the procedure and its function in the regulatory framework. By contrast, an institutional analysis that situates the GiC as its primary subject—which is the strategy employed in this thesis—can provide novel insight and a nuanced analytical approach to the regulatory regime at hand.

A research focus that prioritizes the GiC can also help to expose some of the broader, problematic implications that emerge when a complainant submits an appeal petition through this procedural avenue. The thesis puts forward and, throughout the research, confronts the following problem statement: As an externality, or byproduct, of casting an appeal decision, the GiC procedure can obstruct the development or real-world application of the CRTC wholesale access program when either: *A*) sending a policy back to be reconsidered by the Commission; or *B*) requiring the Commission to reconcile an appeal ruling that varies or rescinds one provision of a policy under review, but also collaterally obfuscates another, uncontested provision within that

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8 See Appendix 1: Petition to the Governor in Council Information Flow, Telecommunications Cases (p. 105).
same policy. The thesis approaches this “policy obstruction externality” that can inhibit CRTC regulatory output as a zero-sum byproduct. The nature of this zero-sum byproduct is such that incumbent operators—by nature of their occupying the role of facility and equipment proprietor—necessarily benefit, and competitors necessarily suffer.⁹

CRTC policy obstructions caused as an indirect byproduct of a GiC appeal decision present problems for competitors who rely on CRTC wholesale regulations in order to provide resold broadband services to their retail customers. When obstructions that affect the CRTC wholesale access program are elicited as a repercussion of a GiC appeal petition outcome, competitors are hit hardest. Indeed, as a result of a policy obstruction that inhibits the progress of CRTC wholesale access policymaking, a competitor’s ability to improve the variety in choice of service provider for consumers in retail markets may be fundamentally threatened going forward. Without the protection of mandated wholesale access regulations, a competitor’s presence in the market—which can help to stimulate more competitive pricing, transmission speeds, and service quality standards for consumers—would also face a considerable threat.

A) An incumbent operator who files a petition gains from a GiC appeal decision that sends wholesale policies under review back to be reconsidered by the Commission—even if the policies are not altered in the complainant’s favour after being reviewed. This type of policy obstruction externality was the result of a 2009 appeal petition (P.C. 2009-2007) that disputed

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⁹ The stakeholder group “incumbent operators” (or “incumbent carriers”) refers to both incumbent local exchange carriers (ILECs) and incumbent cable companies (cablecos). “ILECs” include the following stakeholder parties: Bell Aliant Regional Communications Limited Partnership (Bell Aliant) and Bell Canada (collectively, the Bell companies); MTS Inc. (MTS) and Allstream Inc. (collectively, MTS Allstream); Saskatchewan Telecommunications (SaskTel); and TELUS Communications Company (TCC). “Cablecos” include the following stakeholder parties: Bragg Communications Incorporated, operating as Eastlink (Eastlink); Cogeco Cable Inc. (Cogeco); Videotron G.P., an affiliate of Quebecor Media Inc. (Videotron); Rogers Communications Canada Inc. (RCCI);* and Shaw Cablesystems G.P. (Shaw). Another stakeholder grouping, “competitors,” includes the following parties: the British Columbia Broadband Association (BCBA); the Canadian Network Operators Consortium Inc. (CNOC); Distributel Communications Partnership (Distributel); Fibermetics Corporation (Fibermetics); Primus Telecommunications Canada Inc. (Primus); and TekSavvy Solutions Inc. (TekSavvy). These stakeholder groups and many of the individual stakeholder parties, or participants, who comprise them will be discussed in the community attributes section of the results chapter.

* Rogers Communications Canada Inc. is formerly known as Rogers Communications Partnership (RCP). RCP ceased to exist as of 1 January 2016. All of its business activities, including its assets and liabilities, are now held by RCCI (CRTC, 2016b).
wholesale broadband obligations and speed-matching requirements over legacy and fibre-to-the-node (FTTN) platforms (Bell Aliant Regional Communications & Bell Canada, 2009; Telus Communications Company [TCC], 2009). Though the Commission did not alter the policies under review upon reconsideration (CRTC, 2010), the co-complainants who filed the case—in incumbent operators Bell Canada, Bell Aliant, and Telus, all of whom are in possession of the resources to construct lengthy, comprehensive appeal petitions and supplemental reports—benefitted from the ensuing obstruction on CRTC wholesale policy developments as the Commission concentrated efforts on reconsidering past wholesale access regulations (Privy Council, 2009), rather than advancing new ones. A CRTC policy obstruction caused as an externality of a GiC appeal decision implicates an incumbent operator in an advantageous manner, as that operator’s highly concentrated level of market control is endangered by CRTC regulatory developments that mandate competitor access. By the same measure, that is to say, when regulatory development gives way to policy stasis caused by the Commission having to reconsider past wholesale decisions, an incumbent operator’s market share can therefore remain preserved, even if temporarily.

B) Policy obstructions that impede the CRTC wholesale access program may also conceivably arise through another type of externality scenario illuminated by the most recent appeal petition (P.C. 2016-0332) filed with the GiC by Bell Canada in October 2015 (Bell Canada, 2015b). Though Cabinet would ultimately decline to adopt the recommendations offered in Bell’s petition (Privy Council, 2016), the P.C. 2016-0332 case does provide a compelling point of entry into how an appeal ruling that varies or rescinds one provision of a policy under

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10 “Legacy platforms” refer to twisted pair copper (asymmetrical) digital subscriber line (ADSL or DSL) wiring; and “cable” or DOCSIS (data over cable service interface specification) network technologies (CRTC, 2008b). “FTTN,” or fibre-to-the-node, is a telecommunications architecture in which fibre cables to run to a neighborhood node (sometimes referred to as a “cabinet”) covering a service radius of more than 300 meters approximately. At this point, the fibre cabling is terminated, and existing DSL or DOCSIS infrastructure is used to reach the remaining distance to customer homes and businesses (CRTC, 2009b; Cisco, 2013).
review, could collaterally obfuscate another, uncontested provision within that same policy. Applied to the particular features of the P.C. 2016-0332 appeal case, the externality of such an outcome would burden the Commission with the need for a substantial reworking, if not a complete overhaul, of “disaggregated broadband service,” a significant new component of the CRTC wholesale access program. This wholesale policy provision is remodeling the regulatory protocol for how and where competitors interconnect with incumbent operator (fibre and legacy) networks, with the intention of better calibrating their capacity for competitive penetration in retail markets across Canada (CRTC, 2015b). Before proceeding to research questions, the remainder of this section describes how the appeal outcome of Bell’s 2015 GiC petition could have jeopardized disaggregated broadband service, a seemingly unrelated CRTC wholesale policy provision.

   Recommending that Cabinet use its authority to instruct the Commission to adopt a course of regulatory forbearance, Bell’s appeal proposed a policy amendment that targeted all nascent FTTP facilities and equipment (Bell Canada, 2015b). Exempting FTTP facilities from wholesale service obligations, the petition argued, would have a positive impact on private investment and job creation, reduce the digital divide, and revitalize the digital economy (Bell Canada, 2015b). Regardless of the disputable accuracy of these claims, a decision result in favour of the petition would have effectively rescinded the wholesale mandates that competitors are currently expecting to have granted as the next generation of networks used for wireline broadband provision—FTTP, that is—continues to be deployed (CRTC, 2014c, 2015b). An outcome that were to instruct forbearance from wholesale access regulation would have directly produced a negative impact on competitors who are attempting to lease access to FTTP network infrastructure owned by incumbent operators like Bell Canada.

   In past orders, decisions, and regulatory policies, the CRTC has mandated (CRTC, 1997a, 2006, 2007a-e, 2008b, 2009b), and provided reconfirmation on (CRTC, 2008a, 2010), wholesale access to legacy infrastructures and FTTN equipment.
But a ruling in favour of Bell’s petition would have rendered the GiC’s appeal decision as severely disruptive to another, associated dimension of the policy under review—a provision of the larger regulatory policy that was not the immediate, contested focus of the appeal petition. Core to recent developments involving CRTC wholesale access regulation was a decision to pivot from an aggregated to a disaggregated broadband service (DBS) model for competitor interconnectivity (CRTC, 2015b). Aggregated wholesale service, on the one hand, entitles competitors to lease a type of interconnection configuration in which a network access component, interface component, and transport component are bundled into a single package (Government of Canada [GOC], 2015). Conveniently, this resale package provides competitors with high-speed paths to end-customers’ premises throughout an incumbent operator’s entire serviceable territory, but only from a single interface per province (CRTC, 2013a; GOC, 2015).

The DBS model, on the other hand, limits the portion leased from incumbent operators to just the access and interface components (otherwise known as “the last mile” of the network), which requires competitors to invest in or lease transport facilities from each local region to bring data traffic onto their own upstream networks (GOC, 2015). This disaggregated arrangement may prove to be comparatively more arduous for competitors than its aggregated variant (CRTC, 2016b; Dobby, 2015b). But gaining the flexibility to interface within each local region where a competitor wishes to offer service—rather than the single interface per province that the aggregated model rigidly permitted—affords competitors the ability to interconnect closer in proximity to their retail end-customers and thereby better differentiate their service.

12 In telecommunications regulatory and industry parlance, “DBS” is also referred to as “disaggregated wholesale high-speed access (HSA) services.” Similarly, aggregated wholesale service is also commonly referred to as “aggregated wholesale HSA services” (GOC, 2015).

13 The “last mile” (or “last kilometer”) refers to the final portion of a broadband network that physically delivers connectivity between an ILEC central office or cableco head-end to retail end-customer premises (Cisco, 2013; Huber, 1997; Speta, 2000). The last mile is often the most challenging tier of the network infrastructure to upgrade to new and faster technologies (van Gorp & Middleton, 2010; Walden, 2009; Wu, 2003).
offerings (CRTC, 2014b, 2016b, para. 24; Cisco, 2013; Middleton & van Gorp, 2009; van Schewick, 2010).

However, in the event that Bell’s deregulatory position on wholesale FTTP access were adopted outright by the GiC through its own decision-making interpretation, the policy implication could have collaterally involved the need for a substantial reworking, if not a complete overhaul, of the current CRTC plans to implement DBS. The proposal for DBS implementation was included as a component of the same CRTC regulatory policy (“Telecom Regulatory Policy [TRP] 2015-326”) that opted to mandate wholesale FTTP access (CRTC, 2015b). The stipulation in TRP 2015-326 specifies that DBS implementation will include the requirement for such services “to be provided over any underlying technology, including FTTP access facilities” (CRTC, 2015b, para. 262). The current DBS plans, in other words, are predicated on the same mandated wholesale FTTP access policies that the recent GiC appeal petition sought to reverse. It follows that a GiC appeal decision electing to deny mandated wholesale FTTP access would have consequently obfuscated the current DBS arrangement that incorporates FTTP facilities. Such a decision also would have indirectly created a policy obstruction on the DBS implementation process with regard to those legacy platform and FTTN configurations not directly targeted in Bell’s petition. Phrased differently, a DBS configuration for legacy broadband architecture may have suffered policymaking setbacks simply because its proposed model is part of the same CRTC regulatory policy in which FTTP wholesale mandated access—the target provision of Bell’s petition—is housed.

Given the range of possible repercussions this recent appeal petition could have triggered for wireline competitors and broadband consumers alike, a focus on the GiC appeal mechanism and its role in relation to the CRTC is a particularly relevant and timely research undertaking. A ruling that were to trigger inhibitive repercussions for mandated wholesale access would not be
completely uncharacteristic of the GiC either; discussed earlier in this section, arguments used in a past petition that was also critical of wholesale broadband policies have, to some extent, been received and acted upon favourably for the complainants (Bell Aliant Regional Communications & Bell Canada, 2009; CRTC, 2008b, 2009b; Privy Council, 2009; TCC, 2009). Therefore, the undeniable feasibility of a GiC decision that sets in motion a deregulatory wholesale access agenda, such as the one advocated by Bell’s recent petition—or a decision that, through association, can indirectly obstruct uncontested provisions within the CRTC wholesale access program—stands as an emphatic reminder of the authoritative presence with which this procedural mechanism can operate, and the potential scale of its decision outcomes. It also emphasizes the necessity to more comprehensively investigate the GiC procedure through the lens of an institutional analysis.

1.2. Research Questions

Performing an analysis of Canada’s telecommunications regulatory regime in a manner that systematically incorporates the GiC appeal procedure can assist in exposing new, salient avenues through which existing arguments can be assessed. The thesis expands on two such arguments in the literature review chapter, but briefly considers both arguments here to help contextualize the research questions before they are expounded later in this section.

1.2.1. Primary Research Questions

During the period of 1976-1996, deregulatory ideas and policies that led to the virtual downfall of other government agencies, namely the National Energy Board and the Canadian Transportation Commission, have instead been combated and often neutralized by the CRTC (Schultz, 1999), suggesting that amid much industry turmoil, the telecommunications regulator had still been able to successfully defend its agency mandate. However, following the time
period addressed in this argument (1976-1996), significant developments have transpired and ought to be factored into any attempt at a contemporary institutional analysis of telecommunications regulation in Canada. In the years following 1996, for example, high-speed broadband provision became the communicative standard in the country (Benkler, 2010; CRTC, 1997a, 2009a)—first under copper DSL (digital subscriber line) and coaxial DOCSIS (data over cable service interface specification, or “cable”) infrastructure standards, and increasingly in more recent years, through incorporation of hybrid and fully-fibre optic technologies (CRTC, 2015a). Likewise, at a policy level orders issued by the CRTC Policy Direction—which derives its authority from approval by the GiC—have subsequently taken effect and have unavoidably influenced the Commission’s regulatory output (Department of Justice, Canada [DoJC], 2006).  

Given these infrastructural and policy developments that have unfolded over the last two decades, this thesis considers whether the CRTC has continued to successfully defend its agency mandate and its primacy as an institutional actor. The thesis also considers the barriers to policy implementation that can emerge as an externality when a CRTC regulation is subjected to a GiC appeal petition, and how these barriers factor into the CRTC’s ability to assert itself as the lead actor in the telecommunications regulatory regime.

With new communications technologies developed and deployed in the market, coupled with an increase in consumer demand for online access (CRTC, 2015a), the CRTC has confronted the challenge of how to administer broadband technologies through, among other means, implementing a wholesale access regulatory program. While the wireline policies that sit within this program stand to benefit competitors, such policies directly threaten many of the

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14 The Policy Direction (P.C. 2006-1534) requires for the CRTC to, among other instructions, “rely on market forces to the maximum extent feasible as the means of achieving [its] telecommunications policy objectives” (DoJC, 2006, §.1(a)(i)). The CRTC is also directed to use measures “...that interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives” (DoJC, 2006, §.1(a)(ii)).
deregulatory values and priorities of incumbent operators and other industry stakeholders.\textsuperscript{15} In order to better understand the proliferation of wholesale access policy conflicts between stakeholder parties for and against wholesale access regulation, this thesis pursues a focused analysis that prioritizes one of the institutional arenas in which such conflicts are exhibited—that is, the Petition to the Governor in Council (GiC) appeal procedure.

Furthermore, as has been discussed earlier in this chapter, CRTC wholesale regulatory mandates for FTTP access facilities have been the subject of a recent appeal petition deliberated and ruled on by the GiC (Bell Canada, 2015b; CRTC, 2015b; Privy Council, 2016). In upholding TRP 2015-326 upon appeal, the results of the GiC ruling now enable the Canadian regulator’s objective to expand its policy framework for mandated wholesale services, so as to include next-generation FTTP access facilities, to continue onward. To this end, Canada’s federal Cabinet appeal procedure and its association with incipient mandated FTTP access provisions that are now a part of the CRTC wholesale regulatory program, is a particularly relevant research focus, and leads to the primary line of research questions addressed in the thesis.

- If viewed as an institutional actor, can an IAD analysis of the GiC appeal mechanism, its regulatory procedures, and its appeal decision that upheld mandated wholesale FTTP access, help to showcase how the CRTC has protected its roles and responsibilities as an independent regulatory agency?
- If so, what are the ways in which the institutional analysis can demonstrate that the CRTC has continued to maintain its status and power as the lead actor in the telecommunications regulatory regime?

\textsuperscript{15} Not every ILEC and cableco has began to deploy FTTP broadband services. Consequently, many of the incumbent operators are not yet in the position to offer disaggregated wholesale FTTP provision. Relevant operators are discussed in the results chapter under the biophysical characteristics section.
1.2.2. Secondary Research Questions

Another example of how the GiC appeal procedure may considerably implicate existing arguments in the discourse stems from inter-regime examination with the United States. Indeed, any comparative analysis of the Canadian and American telecommunications policymaking regimes that does not include consideration for Canada’s federal policy appeal procedure is committing a significant omission. Procedural parallels between the two countries’ regimes can, in fact, be identified due to the existence of the GiC appeal mechanism and the manner in which it processes petition cases.

The GiC appeal mechanism is an institutional component of the Canadian telecommunications policymaking regime that functions through use of procedural protocols strikingly similar to those administered by the American telecommunications regulator, the Federal Communications Commission (FCC). The written submission procedure used to incorporate the input of outside commenters into the GiC decision-making process, for instance, bears likeness to the written, third-party comment platform relied on in FCC “notice and comment” rulemaking practices (FCC, 2011, 2015; Telecommunications Act, 1993, §12(4); Walden, 2009). Similarly, FCC “ex-parte meeting” forums operate in a manner that closely resembles the provincial ministerial consultations offered to Canada’s Minister of Industry before formulating an appeal decision (for CRTC telecommunications policy cases) on behalf of the GiC (FCC, 2011, 2015; Telecommunications Act, 1993, §13; Walden, 2009). These administrative similarities suggest institutional protocols exist that may bring into question prevailing views on the Canadian and American regimes’ respective procedural workings and policy trajectories, which have been characterized as largely contrastive when under past comparison (Cherry, 2012b, 2015).
Apart from showcasing administrative similarities when compared to the GiC, FCC procedural protocols have also been the topic of criticism, particularly regarding the disputable efficacy of platforms offered for outside party participation and supplementary meeting forums that lack transparency and throttle public access. Indeed, rather than employ a quasi-judicial, tribunal style of procedure that requires an active, oral defense of one’s argument—which is a procedural format incorporated into the larger CRTC decision-making process, for example (Intven, 2012)—FCC rulemaking practices instead rely exclusively on written comment submissions issued by outside parties (FCC, 2015, §. 6). This written notice and comment process, critics have stressed (Abbott, 2016; Walden, 2009), creates difficulty for the FCC and its respondents to commence meaningful dialogue over policy creation, as it provides “wide latitude for manipulation of information filed by parties in a proceeding” (Cherry, 2015, p. 468). What is more, the private forum proceedings that accompany the FCC notice and comment process have also been labelled as an administrative procedure that tends to inhibit public access and advocacy (Cherry, 2015). As its name implies, the ex-parte forum procedure limits meetings to a single party attendee, meaning there is no opportunity provided for any additional interested outside party to be physically present during a meeting (FCC, 2011).

This criticism directed towards FCC procedures may bring to light a problematic nexus for the GiC. The administrative similarities between the FCC and GiC begin to suggest that criticism directed towards FCC procedural mechanics could also apply to Canada’s federal policy appeal mechanism. It stands to reason, then, that if the American FCC could benefit from procedural improvements, then Canada’s GiC could do so as well. This opportunity for procedural analysis and potential reform leads to the secondary line of research questions addressed in the thesis.
• Applying the IAD framework, can an institutional analysis of the Canadian federal policy appeal mechanism point to areas where the GiC requires improved transparency and better conduits for public participation?

• What are those procedural areas? How can they be improved?

1.3. Thesis Outline

The remainder of this thesis will be organized in the following manner:

Chapter 2: Literature Review—This chapter engages in a review of relevant literature, first surveying the discourse behind wholesale access regulation in Canada, which was the focus of the recent appeal petition brought before the GiC. The review then shifts to a broader vantage of works that analyze regulatory institutions within the Canadian telecommunications policymaking regime, and considers why the GiC appeal procedure does not receive a comparable amount of scholarly attention to other organizational actors within the regime. Then turning to a cross-regime comparison with the United States, the review goes on to suggest that better integrating the GiC appeal procedure into a holistic analysis of the Canadian policy regime could significantly implicate how the country’s regulatory trajectory is viewed in relation to that of its American counterpart.

Chapter 3: Methodology—The thesis then proceeds with a third chapter on methodology. It begins by addressing data collection practices with a discussion that considers: document analysis as a qualitative research method, the significance of the data generated, and the advantages and disadvantages that were encountered during data collection. The IAD methodology workflow is then unpacked in detail. The steps are divided into results and discussion tables. Important considerations and questions to be asked at each framework step are included in the tables. Next, the chapter provides an overview of other research cases that have
benefitted from employing an IAD approach. It finalizes by justifying the appropriacy of the IAD framework as the methodology of choice for the thesis, and reviews the advantages and limitations encountered.

Chapter 4: Results—The fourth thesis chapter applies the IAD framework to the wholesale aspect of Canada’s telecommunications policymaking regime. More specifically, the results data are drawn from the recent CRTC wholesale policy developments that have extended mandated access to FTTP facilities and equipment. The results also gather from the federal appeal process through which these burgeoning wholesale policy developments have had to endure. That is to say, the scope of the results chapter focuses on the policy arena encompassing both the procedural mechanics used in the GiC appeal mechanism, and the GiC petition case that sought to appeal the TRP 2015-326 CRTC regulatory policy.

Chapter 5: Discussion—The discussion chapter engages in an analysis that integrates data collected from each of the results sections. The discussion assimilates and explains data by applying it to the IAD analysis integration methodology questions. These questions are approached through each of the stakeholder roles involved in the GiC procedure action arena for the P.C. 2016-0332 appeal case: the administrative participant role, which is occupied by the Minister of Industry and provincial ministers; the commenter participant role, in which industry and consumer advocacy are the two most dominant priorities upheld in the submitted written comments; and the complainant role, which is held by Bell Canada and demonstrates how GiC appeal petitions can lead to CRTC policy obstructions that necessarily benefit incumbent operators and disadvantage competitors. Here, the thesis begins to submit that mobilizing the GiC as an institutional actor—one with procedural implications and regulatory output worth examining—can actually help to showcase how the CRTC has protected its roles and responsibilities as an independent regulatory agency.
Chapter 6: Conclusions—The final thesis chapter formulates conclusions based on discussions initiated in the previous chapter. The conclusions have been posited based on evaluating the data by framing it through a broad reconsideration of the arguments that were used to contextualize the research questions and were then expanded upon in the literature review. Next, the chapter considers final impressions and issues conclusions drawn from the primary and secondary research questions, themselves. At this point, the thesis also begins to intimate that performing an institutional analysis of Canada’s federal policy appeal mechanism can uncover areas in which lawmakers might engage to improve upon the existing procedural mechanics used. A final argument recommends that a focus on the provincial ministerial consultation platform as an area for potential reform would work to improve decision-making transparency, to shed light on the degree to which written comment submissions are factored into appeal outcomes, and to strengthen conduits for regional representation in what is an otherwise heavily centralized policymaking arena. The chapter and thesis conclude with insights into how this thesis has contributed to the telecommunications law and policy field.
2. LITERATURE REVIEW

A number of different policy instruments and institutional facets of Canada’s telecommunications regulatory regime have been treated with sustained scholarly attention. Of topics relating to policy matters, discussions over broadband service provision have largely coalesced around the polarizing concern for whether Canada’s wireline market is sufficiently competitive laissez-faire, or whether artificially supported measures are necessary to bolster competition. As the CRTC has adopted a stance that tends to lean towards artificially supported measures, particularly through its wholesale access program (CRTC, 2008a-b, 2009b, 2010, 2015a-b), policy research institutes and individual academics have responded with positions on either side of the debate, with arguments both critical (Aron & Crandall, 2008; Baskoy, 2008; Eisenach, 2015; Masse & Beaudry, 2014, 2015; Rabeau, 2012; Renda, 2015; Singer, 2015a-b; Singer, Caves, & Koyfman, 2015) and supportive (Benkler, 2010; Longford, Moll, & Shade, 2008; Middleton & van Gorp, 2009; Rajabiun & Middleton, 2013; van Gorp & Middleton, 2010) of wholesale intervention.

2.1. Background on Wholesale Access Regulation in Canada

Pursuing an anti-regulation outlook for assessing industry competitiveness, Masse and Beaudry (2015) warn that interventions aiming to increase the number of players in the market through subsidies and mandated access, which is indicative of the long-standing strategy applied by the CRTC (2015a), are not likely to have the intended effect and might instead jeopardize future investment and innovation. This oppositional stance on regulatory involvement is often underscored by the so-called “dynamic” vision of competition (Baskoy, 2008; Eisenach, 2015; Renda, 2015). Unlike its “static” alternative, which is described as the view that government-backed competitive measures are of limited relevance in a rapidly changing industry like
telecommunications (Masse & Beaudry, 2014), the dynamic vision instead emphasizes merit in the supposedly transformative role played by the rapid evolution of markets and the potential impact of new, disruptive technologies (Masse & Beaudry, 2015), such as mobile broadband and satellite services (Rabeau, 2012; Singer, 2015a-b).

Incumbent operator industry stakeholders, namely Bell Canada, Bell Aliant, and Telus, have made use of the dynamic competition, anti-regulation argument in past GiC appeal petitions (Bell Aliant Regional Communications & Bell Canada, 2009; Bell Canada, 2015b; TCC, 2009). Based largely on this argument, the 2009 joint-petition filed by the Bell companies and Telus was somewhat successful in convincing the GiC to overturn policies developed by the CRTC to improve wholesale access to legacy and fibre-to-the-node (FTTN) infrastructures (CRTC, 2008b, 2009b). Though the GiC did not opt to vary the policies under appeal, the ruling did send them back to the Commission for reconsideration (Privy Council, 2009), thus seriously delaying their eventual implementation (CRTC, 2010). The petition submissions from the 2009 appeal case were all accompanied by supplemental reports issued to further advocate dependence on market forces from outside the immediate wireline sector as being the most compelling driver for competition (Aron & Crandall, 2008; Sidak, 2009; Winnik & Sieradzki, 2009). Attachments advocating similar positions were filed along with Bell’s most recent appeal petition brought before the GiC (Eisenach, 2015; Renda, 2015; Singer, 2015a-b; Singer, et al., 2015).

Others are notably less convinced that Canada’s wireline broadband market is sufficiently competitive in relying solely on market forces, even if those forces exist outside of the legacy wireline sector. In an international broadband report, Benkler (2010) points out that despite its early leadership between roughly 1996 and 2002, Canada’s ISP market has since lagged peer Organization for Economic Co-operation and Development (OECD) nations in broadband penetration, speed, and price. Relative industry consolidation and sluggish uptake in both cable
and DSL providers deploying wireless and FTTP broadband infrastructures are identified as major factors in this trend (Benkler, 2010). In other studies that tend to corroborate these findings (Longford, et al., 2008; Middleton & van Gorp, 2009), potential remedies to improve competitiveness have included refining regulatory oversight and the implementation of a progressive policy strategy called the “ladder of investment” (LOI) to help guide competitor ISPs into a transition from tariffed network leasing (service-based competition) to investing in and maintaining their own infrastructures (facilities-based competition) (Cave, 2006).

However, despite its theoretical attraction (Cave, 2006; Middleton & van Gorp, 2009), CRTC wholesale access regulations that have embraced the LOI approach have not since made a compelling conversion into instilling significant competition in Canada’s broadband market (CRTC, 2008a, 2008b, 2010; Masse & Beaudry, 2015; van Gorp & Middleton, 2010). Recognizing this discrepancy, Rajabiun and Middleton (2013) investigate the role that lower levels of government can lead to help stimulate decentralized solutions for confronting access and service quality problems. Their analysis recommends provincial policies that include public sector procurement power to open up access to essential facilities, as well as channeled public investment into Internet backbone infrastructure (Rajabiun & Middleton, 2013). Ultimately, however, the authors emphasize that an improved essential facilities regime at the national level—one that sustains attention on the quality of Internet connectivity rather than just a focus on the question of access—may be the most efficient path to enhancing market discipline and incentives for the adoption of next generation broadband technologies (2013).

2.2. Institutional Analysis and the Canadian Telecommunications Policy Regime

Studies that have analyzed the regulatory institutions included in Canada’s telecommunications policymaking apparatus have tended to bypass or limit scrutiny on the GiC
appeal mechanism (Ryan, 2012; Schultz, 1999; Shepherd, Taylor, & Middleton, 2014). This attention deficit likely stems from several contributing factors, all of which suggest that the appeal mechanism may be viewed as a lower or non-priority for telecommunications policy researchers. Factors that may contribute to this deficit, or literature gap, include the following: the existence and authority of the Canadian Federal Court of Appeal (Lowe & Quesnel, 2009); the relatively high percentage of policy appeal petitions that the GiC has declined to adopt (Hall, 1990; Industry Canada, 2015); the opacity involved in the GiC decision-making process (Evans, 1993); or potentially because the appeal procedure is also used to decide regulatory cases from outside the ambit of telecommunications policymaking (Department of Canadian Heritage [DoCH], 2015); and, even more broadly, in cases that apply to government agencies apart from the CRTC (Doern, Hill, Prince, & Schultz, 1999). Alternatively, still, the close jurisdictional ties between Industry Canada and the GiC may also contribute to a decision not to focus on the latter institution (Telecommunications Act, 1993, §.12(1)).

Regardless of the rationale behind its scholarly neglect heretofore, an institutional analysis of the Canadian telecommunications regulatory regime that better integrates assessment of the GiC appeal mechanism may stand to significantly implicate established arguments in the discourse. Two different arguments are reviewed below.

Schultz (1999) identifies a paradox inherent in Canada’s telecommunications regulator. The CRTC has maintained its status, Schultz affirms, even though it has encountered far more “organizational turbulence” as a result of technological, economic, and political forces than were experienced by its sister agencies, the National Energy Board and the Canadian Transportation Commission (1999, p. 29). Schultz argues that during the period of 1976-1996, the CRTC

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16 When processing a GiC petition, the authority to formulate a verdict for the appeal case is completely incumbent upon Canada’s federal Minister of Industry, who simultaneously is the head of Industry Canada (Telecommunications Act, 1993, §.12(1)).
successfully maintained its primacy vis-à-vis other government actors, both political and bureaucratic (1999). The study’s thesis is supported by examples that include major CRTC-governmental conflicts (none of which include the GiC) in the broadcasting sector, in the telecommunications sector, and emergent legislation applicable to both sectors that has left the CRTC’s status as the predominant actor largely intact (Schultz, 1999).

Focusing instead on a comparative approach between federal regimes, Cherry (2015) poses an analysis of telecommunications policy developments between Canada and the United States, and argues the two nations are characterized by strictly divergent policymaking trajectories. Within the parameters of this study, these regulatory paths are examined exclusively in relation to the CRTC and the US regulator, the FCC. CRTC administrative proceedings, Cherry applauds, uphold a scope of public participation broadly defined to include a robust array of groups representing consumer interests (2012a, 2015). Shepherd et al. (2014) present a similar view of the CRTC in a study that compares academic policy participation within the context of Canadian institutions; in their case, they conclude that the CRTC is much more amenable to public and academic advocacy than is Industry Canada.

By contrast, Cherry stresses that FCC rulemaking practices under the American regime rely on administrative procedures that aggravate the disparity of resources between open market, anti-regulation industry stakeholders and those advocating on behalf of consumer or citizen interests (2012a, 2015). Unlike CRTC decision hearings, the procedures and forums at the FCC, Cherry concludes, bear ramifications in the US that have prolonged policy acceptance of the so-called “monopoly theory argument,” the factually erroneous strategy used to justify the idea that incumbent operators’ historical legal duties were based on the monopoly conditions that existed
at the time, and thus are, supposedly, not applicable in a competitive environment (2015). As other critics have similarly noted (Abbott, 2016; Walden, 2009), Cherry’s institutional comparison suggests the FCC would gain from administrative reform, particularly in the areas of procedural transparency and consumer protection.

17 The CRTC, by contrast, squarely addressed the monopoly theory argument in a 2011 public hearing, clearly defining its expectations regarding incumbent carriers’ obligations to serve (Cherry, 2012b, 2015; CRTC, 2011).
3. METHODOLOGY

The following chapter looks at the methodology involved in generating data for this thesis, as well as the methodology used in guiding its analysis and discussion. The thesis used document analysis as a qualitative research method for data collection. The chapter first describes this method and considers the advantages and disadvantages that were encountered during data collection. Once data was generated, the IAD framework methodology was used for analysis and discussion. The chapter next unpacks this IAD framework and details the workflow of the methodology. As the tables below illustrate, the five steps that comprise the framework are organized into separate results and discussion sections. Questions and considerations that were addressed in each step are listed and explained in the tables. (Corresponding results and discussion thesis chapters will later apply the workflow steps as they are structured in the tables.) The methodology chapter also looks at other research cases that have put the IAD approach to use. It concludes with a review of the advantages and limitations in applying the IAD framework to the research.

3.1. Data Collection

For data collection, a document analysis approach was adopted. A systematic procedure for reviewing or evaluating printed and electronic documents, document analysis as a qualitative research method entails finding, selecting, appraising, and synthesizing data contained in documents (Bowen, 2009). This process yields data that is typically then organized into major themes, categories, and case examples that emerge as the research is conducted (Corbin & Strauss, 2008; Glaser & Strauss, 1967). Generally, document analysis can be a fitting approach for research in policy and institutional studies (Bowen, 2009; McGinnis, 2011; Polski & Ostrom, 1999).
3.2. Data Collection: Advantages and Disadvantages

In conducting research for this thesis, the advantages of document analysis were apparent. Because the research focus relied heavily on institutional, statutory, and policy documentation created and maintained by the Government of Canada (and to a lesser extent, the federal government of the United States), the primary advantages that are commonly associated with a document analysis approach—namely efficiency, cost-effectiveness, stability, and availability (Merriam, 1988)—were all realized in this case. Furthermore, as Department of Justice, Industry Canada (GiC appeal procedural information and appeal cases), US FCC, and CRTC regulatory policy and decision outcomes are archived in detail and available online from as far back as the early 1990’s, the broad range and exactness of coverage that often benefit a document analysis approach (Yin, 1994), were also recognized as major advantages in the execution of this thesis.

The data collection method used in the execution of this thesis did also present certain limitations. For one, using document analysis as a sole research method renders a limitation in precluding the potential for research triangulation (Patton, 1990). However, because this thesis relied predominantly on government produced legal and policy documentation, much of which has been used in past Canadian policy studies, this limitation can be viewed as tolerable. What is more, past IAD case studies provide evidence that relying solely on document analysis is a tenable method for reliable research (Jillson & Wilson, 1994; Ostrom, 1987, 1994). Another limitation was related to biased selectivity in document analysis. For example, available organizational documentation tended to be aligned with corporate or bureaucratic policies, procedures, and agendas (Yin, 1994). While biased selectivity undoubtedly presented some challenges with data collection, by other measures the research benefitted from documents that reflect organizational biases.
In GiC appeal petition cases, for example, comment respondents represented a multitude of different organizational viewpoints, though usually not in balanced proportion (Industry Canada, 2015). These biases evident in the written response documents (see table 3) occupied an important component in the research. Written responses submitted by commenter participants were particularly revealing, and clearly demonstrated bias for, or against Bell Canada’s policy position in the P.C. 2016-0332 appeal case. Biases exhibited in these documents helped to characterize the community of participants involved in the action arena, and to draw out broader trends relating to stakeholder motivations, interests, and values.

3.3. Institutional Analysis and Development (IAD) Framework Methodology

The Institutional Analysis and Development (IAD) framework can best be described as “a systematic method for organizing policy analysis activities that is compatible with a wide variety of more specialized analytic techniques used in the physical and social sciences” (Polski & Ostrom, 1999, pp. 5-6). Elinor Ostrom and her colleagues at the Workshop in Political Theory and Policy Analysis at Indiana University originally developed the framework in the 1980’s. Before her assembly of a fully systematized IAD workflow, Ostrom’s husband and partner, Vincent Ostrom, made substantial conceptual insights that would later have an influence on the framework’s apparatus, including the conception of multiple levels of social interaction (i.e. constitutional, collective, and operational), and the importance of boundary rules for local collective action (Cole, 2014). The IAD framework thus encapsulates the collective efforts of the “Ostrom Workshop” community to understand the ways in which institutions operate and change over time (McGinnis, 2011).

When applied, the IAD framework is designed to help policy analysts comprehend complex social situations and break them down into manageable sets of practical activities.
(Ostrom, 2011). This process can be executed through a forward- or a backward-flowing workflow. The IAD approach adopted in this thesis involves using the framework as a diagnostic tool and working backwards through the flow diagram (see Figure 1).

*Figure 1: IAD framework flowchart*

This backward-flowing approach to applying the IAD methodology has been formulated to allow policy analysts to re-affirm or revise policy objectives, evaluate policy outcomes, understand the information and incentive structure of a policy, or develop reform initiatives (Polski & Ostrom, 1999). The analysis can be based “on empirical observation of past and present events, hypothetical forecasts and simulations, or a combination of both” (Polski & Ostrom, 1999, p. 9).

Polski and Ostrom (1999) arrange the IAD framework into nine broad steps that structure the analytic process, with each step including multiple sub-steps and questions to be answered by the policy analyst. Below, however, the thesis modifies and condenses the instructions and questions to be addressed by the framework into a five step approach. The content of each step is extracted predominantly from Polski and Ostrom (1999) and McGinnis (2011), with
supplemental insights offered from Kiser and Ostrom (2000), Ostrom (2010; 2011), and Ostrom, Schroeder and Wynne (1993). The remainder of this section details the workflow process included in each of the five modified framework steps. For this thesis project, the steps have been organized into results and discussion chapters, laid out in the following order:

4. RESULTS
   4.1 Program Parameters and Objectives
   4.2 Biophysical Characteristics
   4.3 Community Attributes
   4.4 Rules-in-Use

5. DISCUSSION
   5.1 Analysis Integration

Accordingly, the tables included in this section (Table 1: Results Methodology and Table 2: Discussion Methodology) outline the IAD framework structure as it is addressed in the results and discussion chapters.

Table 1: Results Methodology

| PROGRAM PARAMETERS AND OBJECTIVES | Isolate a specific policy issue or program, and specify its objectives (Polski & Ostrom, 1999).
| Questions to be asked at this point include:
  | What is happening in the policy arena?
  | How do observed outcomes compare to policy objectives?
  | Which outcomes are satisfactory? Which are not?
  | Which outcomes are most important?
| Targeting a particular class of outcome, then identify relevant patterns of interaction (e.g. market structure, information flows, and the structure of political participation). Additional questions to consider are:
  | When are these outcomes occurring?
  | Where are they occurring?
  | Who is involved? |
• Biophysical characteristics consist of human and material resources and capabilities related to providing and producing goods and services (Ostrom, 2011; Polski & Ostrom, 1999).
  o These characteristics often influence policy action situations and constrain institutional arrangements in significant ways (Ostrom, 2011). They include production inputs like capital, labour, and technology, as well as sources of finance, storage, and distribution channels (McGinnis, 2011; Polski & Ostrom, 1999).
• The kinds of questions asked to determine the physical and material conditions associated with a particular policy activity include:
  o Focusing on the good or service produced in the policy situation, what is the economic nature of the activity?
  o How is the good or service produced?
  o How is the good or service provided?
  o What human and material resources are required to produce and provide this good or service?
  o What is the scale and scope of production and provision of the activity?
• The economic nature of a good or service can be determined by defining two characteristics:
  o Excludability: How costly it is for A to exclude B from access to that resource (McGinnis, 2011); or, the extent to which access to consumption can be controlled. High excludability implies that consumers will have difficulty consuming the good or service without contributing to its cost; low excludability implies that consumers may be able to “free-ride,” consuming the good or service without contributing to the cost of production or provision (Olson, 1965; Polski & Ostrom, 1999).
  o Subtractability: Whether A’s consumption of a unit of a given resource lowers B’s potential enjoyment (McGinnis, 2011); or, the extent to which one person’s consumption reduces the supply available to others; high subtractability implies individual consumption, while low subtractability implies that more than one person will consume the good or service at the same time (Polski & Ostrom, 1999). Consumption of goods and services, the IAD framework recognizes, is more or less subtractable or excludable depending upon the physical characteristics of a good
or service, production technology available, scale and scope of availability, as well as storage and distribution availability (Polski & Ostrom, 1999).  

**Figure 2: The economic nature of goods and services: Excludability and Subtractability**

<table>
<thead>
<tr>
<th>Difficulty of excluding potential beneficiaries</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Toll goods</td>
<td>Private goods</td>
</tr>
<tr>
<td>High</td>
<td>Public goods</td>
<td>Common-pool resources</td>
</tr>
</tbody>
</table>

Source: Ostrom (2010)

- Figure 2 shows four broad categories of goods and services: private, toll, common pool, and public. Each category has a different associated level of excludability and subtractability.
- Differentiate production from provision activities:
  - **Production activities:** the physical process of constructing a public good or service (McGinnis, 2011); or those activities that involve transforming an input into an output (Polski & Ostrom, 1999).
  - **Provision activities:** a selection of the bundle of public goods or services for a collective consumption unit (McGinnis, 2011); or activities associated with financing and distribution (Polski & Ostrom, 1999).

Analyzing the economic nature of a policy activity and distinguishing between production and provision activities, Polski and Ostrom point out, helps to uncover which resources, capabilities, and coordination mechanisms are required to effectively implement a policy (1999).

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18 Polski and Ostrom make specific note of goods and services that have a public character, such as various forms of physical infrastructure (i.e. metered energy, water, telecom, sanitation, and arterial roads). These infrastructures are often classified as toll goods—they can be used by many people at once, but they also require production processes, and distribution and control systems to make it possible to physically control consumption access so that consumers contribute to the cost of production and provision (Polski & Ostrom, 1999; Ostrom, Schroeder, & Wynne, 1993).

19 High “difficulty of excluding potential beneficiaries” is the equivalent to “low excludability.” Similarly, low “difficulty of excluding potential beneficiaries” is the equivalent to “high excludability.”
COMMUNITY ATTRIBUTES

- Community attributes is a term used to include all relevant aspects of the social and cultural context within which an action situation is located (McGinnis, 2011).
- Community attributes can influence a policy action situation, namely through:
  - The demographic features of the community
  - Generally accepted norms about policy activities
  - The degree of common understanding potential participants share about activities in the policy arena
  - The extent to which potential participants’ values, beliefs, and preferences about policy-oriented strategies and outcomes are homogeneous (Polski & Ostrom, 1999).
- Pertinent questions to consider in order to determine the community attributes relevant to a policy action situation include:
  - What knowledge and information do participants have about the relationship among policy-oriented strategies, actions, and outcomes?
  - What are participants’ values and preferences with regard to strategies for achieving outcomes, as well as outcomes themselves?
  - What are participants’ beliefs about the relationship among policy-oriented strategies, actions, and outcomes?
  - What are participants’ beliefs about other participants’ strategy preferences and outcomes?
When analyzing rules-in-use, IAD concentrates on the operating rules that are commonly used by most participants and on the sources of these rules, rather than rules that can be articulated but are not widely observed (Polski & Ostrom, 1999).

Taking a representative sample of the population engaged in the policy activity in question, the IAD analysis focuses on what those rules are, the source of each of the rules, who observes them and why, and who does not observe them and why (Ostrom, 2010; Polski & Ostrom, 1999). The seven types of rules to consider are:

- **Position rules**: specify the set of positions or roles that participants assume in an action situation, and the number of participants who hold each position
- **Boundary rules**: exit and entry rules; they specify which participants enter or leave positions and how they do so
- **Authority rules**: specify the actions that participants in given positions may take
- **Aggregation rules**: determine how decisions are made in an action situation. “Aggregation rules specify the transformation function from actions to intermediate or final outcomes” (McGinnis, 2011, p. 174).
- **Scope rules**: specify the jurisdiction of outcomes that can be affected and whether these outcomes are or are not final
- **Information rules**: affect the amount and type of information available to participants in an action arena
- **Payoff rules**: determine how costs and benefits are meted-out in the action arena
Table 2: Discussion Methodology

| ANALYSIS INTEGRATION | The action arena is the core component of policy analysis and design when applying the IAD framework. It is a conceptual space in which individual actors inform themselves, consider alternative courses of action, make decisions, take action, and experience the consequences of actions (Polski & Ostrom, 1999).
| | Assessing who is present in the action arena, the roles they play, and the actions they take are all affected by factors in the physical world, the community, and rules-in-use (see Figure 4 in the Appendix section). An IAD policy analysis is integrated by explaining behaviour in terms of the following situational elements (Ostrom, 2011):
| | o What are the positions or roles that actors play in the situation in question?
| | o Who are the participants?
| | o What actions can participants take, and how are actions linked to outcomes?
| | o What is the level of control that each participant has over action in this situation?
| | o What outcomes are possible in this situation?
| | o What information about the action situation is available to participants?
| | o What costs and benefits do participants incur when they take action in this situation? |
3.4. The IAD Framework in Past Studies

When applied, the IAD framework has been used in a wide range of studies, across a variety of disciplines. Perhaps most relevant to the underlying intentions for this thesis (insofar as to perform an institutional analysis), the IAD framework has been used to analyze how institutions are organized for the provision and production of: education, micro-credit facilities, healthcare, and farming (Polski & Ostrom, 1999). More immediately relevant to the particular research interests of the thesis, policy analysts have adopted an IAD approach for economic development works, which includes issues such as infrastructure (Gerrard & Polski, 1998; Ostrom et al., 1993), fiscal policy and privatization (Walker, 1994), and resource management (McGinnis, 2011). Also encouraging in the execution of this thesis, IAD analyses have been conducted relating to constitutional dynamics in US federal system (Jillson & Wilson, 1994), as well as the Canadian federal system (Sproule-Jones, 1993).

3.5. The IAD Framework Methodology: Advantages and Limitations

Appropriacy in selecting the IAD framework for the present research stemmed primarily from the fact that the debate over wholesale broadband access policy in Canada, which was discussed in chapter two of this thesis, is a well-established policy situation. This suitable fit between the IAD framework methodology and the specific policy situation in question—that is, the Canadian wholesale wireline access regulatory program—was viewed as an advantage. The IAD framework, Polski and Ostrom explain, is put to use by isolating “a specific policy issue or program” and working backwards through the flow diagram to re-affirm or revise policy objectives, evaluate policy outcomes, understand the information and incentive structure of a policy, or develop reform initiatives (1999, p. 7). These concerns were all immediately relevant
when considered in light of Canadian wholesale wireline access regulation, and were vital in the confronting and answering of research questions central to this thesis.

Another advantage encountered was that an IAD analysis allows policy analysts the flexibility to work in the other direction, specifying a political economic activity and then working forward rather than backward through the framework (Ostrom, 2011). This approach is best suited for policy tasks that involve developing new policy initiatives, or comparing alternative policy designs (McGinnis, 2011; Polski & Ostrom, 1999). This was valuable in tasks that involved GiC procedural analysis, including the comparative assessment between CRTC, GiC, and FCC procedures used to premise the secondary research questions in the research. Further, the backward workflow was a valuable avenue for assessing the recent GiC appeal petition case (Bell Canada, 2015b; Privy Council, 2016). Polski and Ostrom stress that components of an IAD framework step can be analyzed in an idiosyncratic order, in a way that makes most sense for each individual component in a particular policy analysis project (1999). For this thesis project, having the latitude to analyze different levels of components—for instance, CRTC wholesale broadband access regulations on one level, GiC appeal decisions on another, and the procedural mechanics used in processing such decisions on a third—in a manner that is best suited for each individual level discretely, was a highly valuable framework parameter for approaching the data.

There were also several limitations encountered when applying the IAD methodology in the research. One such limitation involved having to reconcile discrepancies in the discourse regarding how to interpret and apply different conceptual facets of the framework. Perhaps the most fundamental discrepancy in this regard was related to defining the relationship between “action situation” and “action arena.” The action situation, McGinnis (2011) explains, was originally enclosed within an action arena, which also included the set of actors as a separate
component. However, McGinnis goes on to clarify, since the capabilities of actions can be attributed to the effect of the position rules (defined within the IAD framework’s rules-in-use), “E. Ostrom (2010) recommends abandoning this distinction between action situation and arena” (2011, p. 172).

Curiously, however, despite these directions by Ostrom (2010) and the McGinnis (2011) reiteration on which it is based, works by Ostrom (2011) and others who have subsequently implemented the IAD framework (Ostrom, Cox, & Schlager, 2014; Weible, Sabatier, Jenkins-Smith, Nohrstedt, Henry, & deLeon, 2011; Whaley & Weatherhead, 2014), appear not to uphold abandoning the distinction between action situation and arena. Rather, they continue to recognize the two action components as separate. (Figure 1 in this thesis illustrates how these components continue to be recognized as separate.) In applying the IAD framework methodology in this research, I have elected to view and apply the action situation and arena as separate components, as the majority of the IAD framework resources published by the Ostrom Workshop community—whether published before, or after Ostrom (2010)—have followed this approach.

Another limitation was met in the scarcity of resources available that offer the IAD framework in the form of steps for the policy analyst to execute. Indeed, it is only Polski and Ostrom (1999) that expound a step-by-step workflow for IAD. Therefore, the five step IAD framework methodology used in this thesis leans solely on the workflow directions of a single academic work. Having access to a multitude of academic resources for the step-based workflow methodology—the counterfactual, in other words—would mitigate the possibility of misinterpreting the language used in Polski and Ostrom (1999), or of inadvertently transplanting existing biases into the IAD methodology used herein.
4. RESULTS

The following chapter reports on the results arrived at by applying the IAD framework methodology to certain dimensions of Canada’s telecommunications policymaking regime. These results, more particularly, will be drawn from an analytical scope that focuses on the policy arena encompassing: a) the procedural mechanics and protocol used in the GiC appeal mechanism; and b) the GiC petition case (P.C. 2016-0332) that sought to appeal TRP 2015-326, a significant policy decision from the CRTC in which access to FTTP facilities and equipment was mandated for wholesale use. The chapter unfolds with sections organized by the first four steps that comprise the IAD framework. It will therefore be laid out in the following order:

- 4.1 Program Parameters and Objectives
- 4.2 Biophysical Characteristics
- 4.3 Community Attributes
- 4.4 Rules-in-Use

Important questions from each IAD step are addressed in the same sequence they were expressed in the methodology chapter.

4.1. Program Parameters and Objectives

The Canadian telecommunications industry is supported by a policy program that regulates the services telecommunications operators provide to each other. Since the late 1990’s, these policies have required incumbent operators, including both ILECs and cablecos, to make available parts of their respective networks to competitors (CRTC, 1997a, 2008a, 2008b, 2009b, 2010, 2015b). These network component leasing arrangements are called “wholesale services,” and are used by competitors to provide resold services, such as local telephony, television, and broadband access (wireline and wireless), to their retail end-customers. Broadly referred to in consolidated form as the “wholesale services framework,” the “wholesale access regime,” or, as
it is most often referred to in this research, the “wholesale access program,” these regulatory measures are viewed by the CRTC as necessary because incumbent operators have had considerable advantages over competitors (2015b). Consequently, without wholesale regulation fewer competitive broadband service options would be available to Canadian consumers (CRTC, 2015a; Middleton & van Gorp, 2009).

4.1.1. What is happening in the policy arena?
Over roughly the last decade, the CRTC has steadily shifted its regulatory focus away from legacy voice services and towards improving competition for broadband services, including wholesale wireline access (CRTC, 2008a). Though its general approach towards wholesale wireline service regulation has been “to promote facilities-based competition wherever possible” (CRTC, 2015b, para. 25), the CRTC has also opted to allow competitors access to a type of wholesale service that did not require significant material investment in facilities (CRTC, 2010).

To ascertain whether a competitor should be authorized to access facilities owned by another operator on a wholesale basis, the CRTC established “the essentiality test.” In order to meet the requirements of the test and to be considered by the Commission to be essential, a facility, function, or service has to satisfy all of the following conditions:

(i) The facility is required as an input by competitors to provide telecommunications services in a relevant downstream market (CRTC, 2008a, para. 36);

(ii) The facility is controlled by a firm, or group of firms exercising joint dominance, that possesses upstream market power such that withdrawing mandated access to the facility would likely result in a substantial lessening or prevention of competition in the relevant downstream market (CRTC, 2008a, para. 36);

(iii) It is not practical or feasible for competitors to duplicate the functionality of the facility (CRTC, 2008a, para. 36).
In the past, if the requirements of the test were met, mandated wholesale access to essential facilities (and the functions or services provided by such facilities) was offered using the existing interconnection model, known as aggregated wholesale high-speed access (HSA).\(^{20}\) Aggregated HSA enables competitors to lease a package of the interface equipment and access facilities they require to connect to retail customer locations, and transport facilities, which consists of the ILEC or cableco network component that transmits end-customer traffic between an ILEC central office (CO) or cableco head-end and a competitor point of interconnection (CRTC, 2008a, 2010; Cisco, 2013). Put differently, the aggregated HSA service package has allowed for competitors to engage in service-based competition via an interconnection arrangement mandated by the CRTC. This type of arrangement allows competitors to connect to an incumbent operator’s interface equipment and its access and transport facilities—without requiring the competitor to invest substantially in the existing network infrastructure (CRTC, 2010).

In December 2013, the CRTC initiated a “Notice of Consultation” proceeding to review issues related to wholesale wireline access services and their associated regulatory policies (CRTC, 2013a). Central to this review was a debate over whether FTTP network infrastructure should be subject to the same sort of mandated wholesale access policies that had already been applied to legacy platforms (CRTC, 2008a-b, 2010) and to FTTN network configurations (CRTC, 2009b, 2010). Additionally, during the CRTC hearings the question arose as to whether the aggregated approach to mandated wholesale access would continue to be the most appropriate means to foster competition in Canada’s wireline broadband markets (CRTC, 2014c). Discussion over a proposed disaggregated broadband service (DBS) model surfaced during the proceedings, which offered a potential alternative to aggregated HSA service (CRTC, 2013a, 2014c). DBS would continue to provide competitors with high-speed paths to end-

\(^{20}\) Before wholesale HSA service was termed as such, it was referred to in earlier proceedings as aggregated asymmetrical digital subscriber line (ADSL) access service (CRTC, 2008a, 2008b, 2009b).
customers’ premises served by an ILEC CO or a cableco head-end (CRTC, 2014c; Cisco, 2013). Like aggregated HSA, these paths would still include an access component and an interface component in the last mile catchments of an incumbent operator’s serviceable territory. However, in order to provide service to their own end-customers under the DBS model, competitors would have to either invest in transport facilities to each CO or head-end where they have end-customers, or lease these facilities from another operator (CRTC, 2014c).

While this disaggregated arrangement would concentrate more of a burden on competitors to generate investment capital or secure third-party transport leasing contracts (CRTC, 2014c, Dobby, 2015b), it also would present to them new competitive opportunities. Through the implementation of a DBS arrangement, competitors will be provided improved flexibility to interface within each local region where a given competitor wishes to offer service—rather than the single interface per province that the aggregated model authorized. The CRTC review hearings found that because DBS would permit competitors to interconnect in or near incumbent facilities located physically closer to their retail end-customers, this type of wholesale arrangement would allow competitors to better differentiate their service offerings in comparison to previous aggregated HSA wholesale bundles (CRTC, 2014b, 2016b, para. 24). Better service differentiation, the hearings repeatedly stressed, fosters improved market competition (CRTC, 2014c; Rajabiun & Middleton, 2015).

The review proceedings prompted the CRTC to adjust its mandating criteria for wholesale services. In July 2015, the Commission determined in TRP 2015-326 that wholesale HSA services would continue to be mandated, but not in aggregated form; instead, the provision of aggregated services would be phased out in conjunction with the implementation of mandated DBS (CRTC, 2015b). The Commission emphasized that DBS would apply to legacy platforms (i.e. DSL, DOCSIS 3.0), as well as FTTN, and next-generation DOCSIS 3.1 and FTTP fibre-
access network infrastructure (CRTC, 2015b). The hardware configuration and tariff pricing details would be determined in subsequent Commission proceedings.

Efforts by the Commission to implement wholesale services have not gone without opposition, however. Among other legal and procedural channels available to apply resistance—both within, and outside of the CRTC’s agency purview (see outcome 1 and outcome 3 below)—opponents to wholesale regulation have induced inhibitive repercussions for mandated wholesale access policies through invocation of the GiC petition procedure. The “reconsideration” outcome generated by a 2009 GiC petition filed by the Bell companies and Telus (P.C. 2009-2007), persuaded the GiC to reexamine existing wholesale broadband obligations and speed-matching requirements over legacy and FTTN platforms (Bell Aliant Regional Communications & Bell Canada, 2009; Privy Council, 2009; TCC, 2009). Though the GiC did not opt to vary the policies under appeal (CRTC, 2008b, 2009b), the ruling did send them back to the Commission for reconsideration. This reconsideration instruction ultimately had a negligible effect in altering the content of the policies (CRTC, 2010). Likewise, Bell Canada’s 2015 GiC appeal petition opposed wholesale services by seeking to retract newly enacted wholesale mandates related to FTTP facilities (Bell Canada, 2015b). In its decision outcome the GiC ruled against Bell’s petition, instead opting to uphold the CRTC policy in what was considered by Minister Bains of ISED to be “the right balance between the private sector having incentives to invest and consumers having a competitive choice” (GOC, 2016, para. 3).

4.1.2. How do observed outcomes compare to policy objectives?

The Commission’s recent commitment in TRP 2015-326 to pivot from aggregated HSA service to DBS, and to incorporate FTTP mandated access into the DBS arrangement, was made in accordance with the CRTC “objectives of the wholesale service regime.” The objectives, as iterated in the TRP 2015-326 policy documentation, are (CRTC, 2015b, para. 14):
• To enhance 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;

• To incent efficient network investment to further the development of facilities-based competition;

• To consider network efficiency, competitive neutrality, and technological neutrality with establishing wholesale regulations, and;

• To recognize differences in regional markets

These wholesale service objectives are largely derived from, and in accord with, the Governor-in-Council “CRTC Policy Direction” (P.C. 2006-1534) (DoJC, 2006). Approved by the GiC in 2006, the Policy Direction broadly requires for the CRTC to, among other instructions, “rely on market forces to the maximum extent feasible as the means of achieving [its] telecommunications policy objectives” (DoJC, 2006, §.1(a)(i)). The CRTC is also instructed by the Policy Direction to use measures “...that interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives” (DoJC, 2006, §.1(a)(ii)). The CRTC Policy Direction and other sets of objectives that underpin the CRTC wholesale access program for wireline broadband provision are in place to shape policy outcomes as they are decided by the Commission’s quasi-judicial tribunal, internal deliberations, and review hearings (CRTC, 2014a).

For stakeholders who oppose the implementation of CRTC wholesale access regulations, several procedural channels have been pursued to appeal such policies. Outcomes can be divided into four categories characterized by how a CRTC policy is received once approved by the Commission (appealed/not appealed), and, if appealed, by which avenue a third-party appeal is
filed (CRTC “review and vary” application/ GiC appeal petition/outside legal proceeding through the Federal Court of Appeals or another judicial body):\textsuperscript{21}

- **Outcome 1)** policies that are approved, and are afterwards the subject of an internal CRTC “review and vary” application;\textsuperscript{22}
- **Outcome 2)** policies that are approved, and are afterwards the subject of a GiC appeal petition (*Telecommunications Act*, 1993, §.8, §.12);
- **Outcome 3)** policies that are approved, and are afterwards the subject of an outside legal proceeding through the Federal Court of Appeals (*Federal Courts Act*, 1985, §.28(1)(c); *Telecommunications Act*, 1993, §.64(1));
- **Outcome 4)** policies that are approved, and are *not* the subject of opposition through either Outcome 1, Outcome 2, or Outcome 3.

4.1.3. **Which outcomes are satisfactory? Which are not? Which outcomes are most important?**

Given the research focus and priorities for this thesis, outcome 1, outcome 3, and outcome 4 are considered satisfactory. In problematizing the category of outcome wherein CRTC wholesale wireline access policies are appealed through the GiC procedure, the thesis therefore considers outcome 2 to be unsatisfactory. By the same measure, outcome 2 is also

\textsuperscript{21} For outcomes 1-3, see *Appendix 2: Canadian Appeals Procedural Channels* (p. 105).

\textsuperscript{22} The CRTC offers a review and vary procedure as an avenue for processing policy appeals internally (CRTC, 1998; *Telecommunications Act*, 1993, §.62). Under section 62 of the *Telecommunications Act*, the Commission may, on application or on its own motion, review and rescind or vary any decision made by it or rehear a matter before rendering a decision. When applying this authority through assessment of a review and vary application, the Commission uses the following criteria:

The applicant must demonstrate, on *a prima facie* basis, the existence of substantial doubt as to the correctness of the original decision through one or more of the following:

a) An error in law or fact;

b) A fundamental change in circumstances or facts since the decision;

c) A failure to consider a basic principle which has been raised in the original proceeding;

d) A new principle which has arisen as a result of the decision

Except under exceptional circumstances, applications made pursuant to section 62 of the *Telecommunications Act* should be filed within six months of the Commission’s original decision (CRTC, 1997a).
considered most important—which, again, pertains to those CRTC wholesale wireline access policies that are instated and then afterwards the subject of a GiC appeal petition.

4.1.4. When and where are these outcomes occurring?

Since the *Telecommunications Act* of 1993 was introduced more than twenty years ago, the CRTC has issued more than 13,000 telecommunications-related policies (Bell Canada, 2015b; CRTC, 2015a). During that same timeframe, the GiC procedure has been invoked to appeal CRTC telecommunications-related policies on thirty-two separate occasions (Privy Council Office, 2016b). GiC petitions are officially filed when sent to and received by the Clerk of the Privy Council and Secretary to the Cabinet in Ottawa, Ontario, Canada (Privy Council Office, 2016b). Of those thirty-two telecommunications-related petition cases filed with the GiC, six of them pertain to appealing wholesale access policies regardless of the infrastructural platform or medium to which they directly apply. Ending with the most recent GiC appeal regarding wholesale regulation of fibre access facilities, these wholesale access petition cases and their finalized appeal decision descriptions and dates are outlined below (Privy Council Office, 2016b).

- **P.C. 1994-2036**: (Dec. 13, 1994)- [Commission Reconsideration]- Order the CRTC to reconsider its intention to authorize increases in local rates, that were to be effective the first of January for the years 1995, 1996, and 1997 and to vary Telecom Decision CRTC 1994-19.23


23 Some Privy Council appeal petition orders in council have a different PC number and registration number (Privy Council Office, 2016b). In the case of P.C. 1994-2036, the Privy Council registration number is: (Statutory Instrument) SI/1994-0143.
• **P.C. 2007-0532**: (April 4, 2007)- [Order to Vary]- Order varying Telecom Decision CRTC 2006-15 (Forbearance from the regulation of retail local exchange services) which will allow the CRTC to apply streamlined criteria for forbearance from retail price regulation in local telephone markets and to end restrictions on winbacks and other promotions.\(^{24}\)

• **P.C. 2009-2006**: (Dec. 12, 2009)- [Decline to Vary]- Order declining to vary or rescind Telecom Decision CRTC 2008-118 and Telecom Regulatory Policy CRTC 2009-34, or refer them back to the Commission for reconsideration.

• **P.C. 2009-2007**: (Dec. 10, 2009)- [Commission Reconsideration]- Order referring back to the CRTC Telecom Decision CRTC 2008-117 and Telecom Order CRTC 2009-111, requiring the CRTC to conduct broader hearings to examine the implications on investment in advanced telecommunications networks, competition, consumer choice, and innovation.

• **P.C. 2016-0332**: (May 10, 2016)- [Decline to Vary]- Order declining to vary the CRTC Telecom Regulatory Policy CRTC 2015-326, a review of wholesale wireline services and associated policies.

### 4.2. Biophysical Characteristics

To understand the physical and material, or “biophysical,” characteristics necessary for a good or service produced in a particular policy situation, the IAD framework requires the good or service in question to be approached as an economic activity. Disaggregated wholesale services that apply to FTTP broadband access provision, once deployed and implemented as an economic activity, will consist of producing and providing the facilities, equipment, and infrastructure needed for competitors to connect their upstream fibre networks to those downstream fibre networks (i.e. the portion of network infrastructure that connects to retail end-customers) owned by incumbent operator at tariffed rates (CRTC, 2013a, 2014b-c, 2015b,

\(^{24}\) The Privy Council registration number for P.C. 2007-0532 is: (Regulation) SOR/2007-0071.
2016a). By leasing access to a point of interconnection (POI) with incumbent operators’
downstream, or last mile, fibre network infrastructure, competitors could then market and resell
their own fibre access broadband services to retail end-customers. The Commission’s
preliminary DBS wholesale interconnectivity model set forth in TRP 2015-326 (CRTC, 2015b),
and expanded upon in the months that followed during proceedings with Bell Canada, Cogeco,
Rogers, and Vidéotron (2016a), permits this competitor-incumbent operator interconnection
arrangement to take place at virtually each fibre-capable ILEC CO or cableco head-end where a
competitor intends to offer retail fibre access services.

4.2.1. What is the economic nature of the activity?

The economic nature of a good or service can be determined through illustration of two
features: its “excludability,” or the extent to which access to consumption can be controlled; and
its “subtractability,” or the extent to which one party’s consumption reduces the supply available
to others.

Excludability—Setting aside the influence of any sort of policy presence that enforces
regulatory standards for mandated wholesale access, competitor interconnectivity to FTTP
facilities, as an economic activity, is inherently of high excludability. Like past interconnection
transactions pertaining to legacy platforms, the high level of excludability for FTTP facility
interconnection stems from the fact that Canada’s wireline broadband market has historically
been dominated by a small number of incumbent operators who own and operate the vast
majority of existing physical infrastructure throughout the country (Benkler, 2010; Cherry, 2015;
CRTC, 2015b, Middleton & van Gorp, 2009). Bell’s 2015 GiC petition repeatedly drew attention
to the fact that these incumbent operators are the very parties who have invested in upgrading
existing last mile infrastructure to FTTP access components (Bell Canada, 2015b). These
infrastructure upgrades are currently being implemented in various local markets in Ontario and
Quebec (CRTC, 2014b). Consequently, because of the highly concentrated level of facilities ownership, the only means through which competitors can provide fully fibre-based broadband services for end-customer consumption is invariably through interconnection with a CO or head-end owned and controlled by an incumbent operator. Therefore, competitors are obligated to lease access to facilities over which incumbent operators possess full—and thus highly excludable—control of potential downstream consumption.

Subtractability—In relation to competitor FTTP facility interconnections at a CO or head-end, subtractability varies depending on the physical limitations of the facility in question (space), as well as the technical configuration of equipment for the proposed interconnection arrangement (hardware). The extent to which one competitor’s consumption will reduce the supply available to others, in other words, is contingent on whether a competitor co-location arrangement is spatially permitted, for one, and technically feasible and sustainable, for another. “Co-location” refers to the provision of incumbent operator physical rack space and downstream network interface connectivity for an edge device that a competitor uses to manage its own network or to permit additional competitors to co-locate virtually and exchange traffic (known as “virtual co-location”)25 (Cisco, 2013; GOC, 2015).

Subtractability is high and thus becomes a concern when FTTP co-location physical rack space and power is scarce—or, in the case of cableco head-ends, is completely unavailable (CRTC, 2016a-b). The level of subtractability is also higher under a scenario in which co-location is permitted by an ILEC and is spatially available, but through use of a network hardware configuration that creates a data traffic bottleneck or issues related to security concerns, capacity management, and procurement of network “survivability” failsafe redundancies (Cisco, 2013; Sandvig, 2015). Permitting co-location over a hardware

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25 Phrased differently, “virtual co-location” occurs when a (physically) co-located competitor transport facility connection is used by another (virtually) co-located competitor (CRTC, 2016b).
configuration that does not have the capability to segregate traffic could create logistical issues for multiple competitors who interconnect on a single CO port and later have to reconcile capacity management issues (CRTC, 2016a). In more extreme scenarios, a co-location arrangement based on poorly configured or insufficient interconnection hardware could potentially overwhelm an incumbent operator’s support model and put at risk all competitors sharing the interconnection port (CRTC, 2016b). This problematic sort of hardware configuration would mean, for example, that a distributed denial of service (DDoS) attack inflicted on one competitor could easily implicate others sharing that same port (Cogeco Cable, 2015).26

In the past, the Commission’s “primary purpose rule” set constraints on the amount of telephony voice traffic that could be exchanged between co-located competitor service providers (CRTC, 1997b). This rule has again been invoked in discussions concerning proposals for disaggregated wholesale FTTP service provision (CRTC, 2016a). As a potential preventative measure to limit third parties “from using co-location to turn COs into competitor hubs” (CRTC, 2016b, para. 94), the primary purpose rule has been reintroduced into contemporary policy discussions as a regulatory tool that may assist in mitigating future network issues associated with subtractability.

4.2.2. How will disaggregated wholesale FTTP service be produced?

Facilitated under either an ILEC or cableco interconnection configuration, disaggregated wholesale FTTP service, once implemented, will be based on a combination of incumbent operator and competitor equipment to transform upstream competitor network input, through to

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26 A distributed denial of service (DDoS) attack is an attempt to make an online service unavailable to its intended, legitimate users by overwhelming it with traffic from multiple sources; this attack temporarily interrupts or suspends the service’s functionality (Understand Denial-of-Service, 2011). This interruption is caused by the attacker(s) targeting the online service server or Local Area Network (LAN) with an overwhelming amount of external communication requests, ultimately leading to server or network overload (Understand Denial-of-Service, 2011).
incumbent operator hosting hardware and infrastructure, into retail end-customer output. The incumbent operators have all expressed a preference for disaggregated wholesale FTTP service to rely on a Layer 3 configuration solution, which is a network layer of services that is Internet Protocol (IP)-based.27

Bell Canada, which is the only ILEC Canadian incumbent operator that has currently issued a proposal for disaggregated wholesale FTTP (CRTC, 2016a), has characterized the proposed DBS over FTTP as a “turnkey solution” that enables traffic flow from the fibre management system (FMS) in the CO all the way to the optical network terminal (ONT) at the end-customer premises (Bell Canada, 2015a, p. 7). Installation of a DBS fan out switch in Bell COs offering DBS for FTTP, which would be a requirement to accommodate sufficient upstream ports to serve multiple competitor operators, would facilitate point to point protocol over ethernet (PPPoE) traffic transmission “on a best effort basis” (Bell Canada, 2015a, p. 4). Under Bell’s proposed hardware configuration, Bell would own and manage every element of the service—the interconnecting competitor would not own or install the fibre drop infrastructure entering each individual retail end-customer premises, nor would it own or provide the ONT residential gateway, which is the demarcation point for Bell’s proposed DBS over FTTP wholesale service (Bell Canada, 2015a). Apart from owning or leasing the transport component and managing its upstream network (CRTC 2015b, 2016a), the competitor would contribute to production by connecting its equipment to Bell’s FMS located in the CO’s co-location space, as well as the modem for fidelity at the end-customer premises (Bell Canada, 2015a).

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27 Layer 3 (network layer) services are typically Internet Protocol (IP)-based services, which provide access between end-users and service providers through use of IP protocols for data exchange (GOC, 2015). By contrast, Layer 2 (data-link layer) services are typically Ethernet-based. Layer 2 HSA services provide access between end-users and service providers that use Ethernet protocols for data exchange (GOC, 2015). Layer 2 data transmission is arguably a more efficient data transport layer as data transmissions: are not burdened by as much overhead protocol, are of greater compatibility with networking advances like larger Ethernet “jumbo frames,” and are more flexibility with regard to computer network equipment choices and better ability to overlay network protocols and functions (CRTC, 2016b).
Disaggregated wholesale FTTP service proposals offered by cablecos, namely by Rogers, Cogeco, and Vidéotron (CRTC, 2016a), have outlined that production input would require the competitor to install its interconnection equipment to the fibre outside splice closure (FOSC), otherwise known as the “pedestal” or “external meet-me point,” located outside a head-end. The FOSC, in turn, connects to the POI router inside the head-end facility (Cogeco Cable, 2015; Québecor Média, 2015; Rogers Communications Canada, 2015). This configuration is similar to active legacy TPIA (third-party internet access) arrangements that cablecos have offered for existing aggregated HSA service (CRTC, 2016a; GOC, 2015). A pivot to disaggregated wholesale FTTP service production would also, however, necessitate various additional material input requirements for the cablecos.

Cogeco and Vidéotron, for instance, each would need to upgrade their local cable modem termination systems (CMTS), which is the device that processes data exchange over DOCSIS protocols (CRTC, 2016b), to facilitate interconnection with the local POI router in each head-end (Cogeco Cable, 2015; Québecor Média, 2015). Cogeco, in whole, and Rogers, in part, would use radio frequency over glass (RFoG) technology to provide wholesale FTTP service. For Cogeco, this configuration would allow the operator to continue relying on the existing CMTS platforms (after firmware upgrades are performed), head-end equipment, set-top boxes, conditional access technology, and cable modems (Cogeco Cable, 2015). Rogers, on the other hand, would demand different hardware requirement configurations for each type of FTTP platform the company would provide. For connections using RFoG technology, the interconnecting competitor would be responsible for providing the end-customer cable modem for the residence gateway, in addition to the competitor providing interconnection equipment at the Rogers head-end. As for connections that would use passive optical network (PON) technology for FTTP, Rogers would

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28 Third-party internet access (TPIA) is common industry parlance for cablecos’ aggregated wholesale HSA service (GOC, 2015).
own and maintain the ONT at each end-customer location, with the competitor continuing to
supply the cable modem or router for end-customer fidelity (Rogers Communications Canada,
2015).

4.2.3. How will disaggregated wholesale FTTP service be provided?

Provision activities are generally associated with providing financing and distribution.
Provision activities for disaggregated wholesale FTTP service will pertain predominantly to the
transaction of tariff rates paid by competitors for both POI access to incumbent operator
interconnection equipment at a given CO or head-end, and the existing fibre access network
extending to the end-customer premises. As per TRP 2015-326, the tariff process would begin
after the configurations for disaggregated wholesale HSA services received approved by the
Commission. This process would include an expectation to identify appropriate configurations
and implementation plans for incumbent operators’ respective DBS “at a later date, depending on
demand considerations” (CRTC, 2015b, para. 159-160). Along with a future DBS tariff scheme
expected at a later juncture, incumbent operator were expected by the Commission to continue to
file tariffs regarding “the introduction of or modifications to the provision of aggregated
wholesale HSA service until such services have been phased out within their respective serving
territories” (CRTC, 2015b, para. 155).

Initiated concurrently with the TRP 2015-326 approval, subsequent follow-up
proceedings with the Commission required all of the participating incumbent operators to submit
preliminary pricing proposals between September and December 2015. Submitted proposals all
broadly agreed on the following cost consideration areas: an upfront fee to first enable DBS at a
given CO or head-end, an upfront fee associated with the installation of the wholesale service at
the end-customer premises, a recurring monthly access fee per end-customer (charged to the
competitor wholesale customer), and a recurring monthly usage fee per CO or head-end (Bell
Canada, 2015a; CRTC, 2016a-b; Cogeco Cable, 2015; Québecor Média, 2015; Rogers Communications Canada, 2015). Under configuration models that would rely on an incumbent-provided ONT or other equipment, the tariff prices charged to a competitor would be adjusted accordingly.

4.3. Community Attributes

The policy action situation encompassing the GiC appeal petition which sought to reverse the CRTC policy mandating wholesale FTTP access is associated with a community of individual stakeholder parties, referred to hereafter as “participants,” that fit into one of three different roles, or “positions”: administrators, complainants, and commenters. The rules that define each participant position are addressed subsequently in the rules-in-use section below. This section mainly focuses on commenter participants, those stakeholder participants who are not directly involved in the action situation as complainant (Bell Canada) or administrator (the Minister of Industry, ISED staff, provincial ministers). Commenter participants involved in the P.C. 2016-0332 appeal case include: corporations (public, private, subsidiary, crown, not-for-profit) from the telecommunications, information technology, construction, engineering, and manufacturing industries; advocacy groups representing business, investment, or consumer interests; government actors (CRTC, ISED, municipalities); academics; and private citizens.

4.3.1. What knowledge and information do participants have about the relationship among policy-oriented strategies, actions, and outcomes?

Participants involved in the action situation could extract comprehensive information regarding the regulatory argument over mandated wholesale FTTP access from two main sources. Detailed information on the CRTC decision to extend wholesale regulation to FTTP facilities (TRP 2015-326) and on Bell’s subsequent petition which sought to vary the CRTC’s
wholesale decision so that regulation would not extend to FTTP (P.C. 2016-0332), was readily accessible through the Government of Canada CRTC and Industry Canada (now Innovation, Science and Economic Development Canada) websites, respectively. Through CRTC online resources, policy releases fully detail the Notice of Consultation 2013-551 review and follow-up proceedings (CRTC, 2013a, 2014b), as well as the TRP 2015-326 CRTC decision, itself (CRTC, 2015b).

In order for its appeal petition to formally be recognized, Bell Canada was required to file with the Privy Council Office (PCO), which is “the hub of non-partisan, public service support to the Prime Minister and Cabinet and its decision-making structures [including the GiC procedure]” (Privy Council Office, 2016d, para. 1).\(^{29}\) When Bell Canada filed its petition with both the CRTC and the Clerk of the Privy Council and Secretary to the Cabinet (Privy Council Office, 2016b), a notice of receipt of the petition was published in Part I of the Canada Gazette by the Minister of Industry on November 21, 2015, which indicated “where the petition or [written comment] submissions made in response to it may be inspected and copies of them obtained” (Privy Council, 2016, para. 5). Furthermore, pursuant to section 12(3) of the Telecommunications Act, the Commission was obligated to send a copy of Bell’s petition “to each person who made any oral representation to the Commission” in relation to TRP 2015-325.

Bell Canada’s petition offered a detailed justification of its position against wholesale mandated FTTP access as it had been established in CRTC TRP 2015-326. Bell maintained in its appeal petition that its plans “to invest billions into fibre-to-the-home as part of [the corporation’s] commitment to building Canada’s 21st century infrastructure” would be

\(^{29}\) Note: A number of civil servants who worked for the PCO have gone on to serve in executive or director roles at Bell Canada Enterprises (BCE) or at its subsidiary, Bell Canada. Paul Tellier, for example, served as Clerk of the Privy Council and Secretary to the Cabinet from 1985-1992 before becoming a director of BCE and Bell Canada from 1996-2010 (Privy Council Office, 2016a). Tellier’s Deputy Secretary of the Cabinet, Michael Sabia, joined BCE in 1999. Sabia served as CEO of BCE and Bell Canada from 2002-2008 (Caisse de dépôt et placement du Québec, 2016). These career trajectories suggest that executives and directors who served at Bell Canada possessed an intimate, tacit knowledge of the GiC procedure.
undermined if Cabinet did not vary the CRTC’s decision so that wholesale regulation would not extend to FTTP or to next-generation DOCSIS 3.1 cable networks (Bell Canada, 2015b, p. 16). To help justify its appeal position, Bell’s petition emphasized that without access to FTTP, Canadian consumers—particularly those in smaller and rural areas—would not enjoy the benefits of new video entertainment services and social media applications, next-generation distance learning, telehealth, and other crucial online tools needed to participate fully in the digital economy (2015b). The petition also focused on the impact that the CRTC wholesale fibre access decision, if upheld, would supposedly elicit on job creation and economic growth. Bell was sure to highlight the “well-understood relationship” between investment in FTTP and the job market: “Building fibre-to-the-home networks requires engineers to design the network, construction crews to complete the civil work on roads and towers, and skilled technicians to install the network. It also requires goods and services from a range of suppliers” (Bell Canada, 2015b, p. 27).

4.3.2. What are participants’ values and preferences with regard to strategies for achieving outcomes? What are participants’ beliefs about the relationship among policy-oriented strategies, actions, and outcomes?

The policy action situation that contains the recent GiC appeal petition and resulting decision that upheld wholesale mandated access to fully-fibre broadband facilities included a procedural forum for public participation through the submission of written comments. Below, table 3 organizes and analyzes the individual written comments submitted to the GiC in response to the P.C. 2016-0332 appeal petition. The written submissions generate data from commenter participants that comprise the wider interested community. Each of the commenter participants have interests—business, advocacy-based, governmental, or personal—in the outcome of the appeal case. From these individual comment submissions, community attributes are gathered by
examining commenter participant categories, values, and interests. Furthermore, data on policy-oriented strategies, actions, and outcomes have been inferred through assessment of comment submissions, each of which explicitly declare the respective participant’s position in support of, or opposition to, the appeal petition. The table results are expanded upon and further analyzed in the discussion chapter.

Table 3: P.C. 2016-0332 Commenter Participant Written Submissions Analysis

<table>
<thead>
<tr>
<th>Participant name</th>
<th>Participant category</th>
<th>Participant interests</th>
<th>Position on P.C. 2016-0332 appeal petition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aecon</td>
<td>Corporation (Public)</td>
<td>Industry (Construction)</td>
<td>✓</td>
</tr>
<tr>
<td>Aecon Utility Engineering</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Engineering Services)</td>
<td>✓</td>
</tr>
<tr>
<td>AGI Traffic Technology Inc.</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Construction, Infrastructure)</td>
<td>✓</td>
</tr>
<tr>
<td>Alliance Corporation</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Alpha Technologies Ltd.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom, Manufacturing)</td>
<td>✓</td>
</tr>
<tr>
<td>ARRIS Group Inc.</td>
<td>Corporation (Public)</td>
<td>Industry (Telecom, Manufacturing)</td>
<td>✓</td>
</tr>
<tr>
<td>Bell Pensioners' Group</td>
<td>Advocacy Group</td>
<td>Advocacy (Business, Investment)</td>
<td>✓</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Corporation (Public)</td>
<td>Industry (Computer Software)</td>
<td>✓</td>
</tr>
<tr>
<td>Board of Trade of Metropolitan Montreal</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
</tr>
<tr>
<td>Canadian Chamber of Commerce</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
</tr>
<tr>
<td>Canadian Federation of Independent Business</td>
<td>Advocacy Group</td>
<td>Advocacy (Business, Consumer)</td>
<td>✗</td>
</tr>
<tr>
<td>Canadian Network Installations Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Canadian Network Operators Consortium Inc.</td>
<td>Advocacy Group</td>
<td>Advocacy (Business, Consumer)</td>
<td>✗</td>
</tr>
<tr>
<td>Canadian Wireless Telecommunications Association</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
</tr>
<tr>
<td>Participant name</td>
<td>Participant category</td>
<td>Participant interests</td>
<td>Position on P.C. 2016-0332 appeal petition</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Cartel Communication Systems Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Charles Lidstone</td>
<td>Private Citizen</td>
<td>Private Citizen (Engineer)</td>
<td>✗</td>
</tr>
<tr>
<td>Cisco Systems Inc.</td>
<td>Corporation (Public)</td>
<td>Industry (Computer Networking)</td>
<td>✓</td>
</tr>
<tr>
<td>City of Calgary</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✗</td>
</tr>
<tr>
<td>Clear Power Solutions Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom, Energy)</td>
<td>✓</td>
</tr>
<tr>
<td>Cogeco Cable Inc.</td>
<td>Corporation (Public)</td>
<td>Industry (Telecom)</td>
<td>✗</td>
</tr>
<tr>
<td>Comm SiteWorks Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Construction, Infrastructure)</td>
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</tr>
<tr>
<td>Consumer Choice Coalition</td>
<td>Advocacy Group</td>
<td>Advocacy (Consumer)</td>
<td>✗</td>
</tr>
<tr>
<td>Corning Incorporated</td>
<td>Corporation (Public)</td>
<td>Industry (Glass, Ceramics, Concrete)</td>
<td>✓</td>
</tr>
<tr>
<td>Cybera Inc.</td>
<td>Corporation (Not-for-profit)</td>
<td>Industry (Telecom)</td>
<td>✗</td>
</tr>
<tr>
<td>Data Wiring Solutions Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Dr. Reza Rajabiun and Dr. Catherine Middleton</td>
<td>Private Citizens</td>
<td>Private Citizens (Academic)</td>
<td>✗</td>
</tr>
<tr>
<td>Eastlink</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Electron Metal</td>
<td>Corporation (Private)</td>
<td>Industry (Mechanical and Industrial Engineering)</td>
<td>✓</td>
</tr>
<tr>
<td>EMC</td>
<td>Corporation (Public)</td>
<td>Industry (Cloud Computing, Data Storage)</td>
<td>✓</td>
</tr>
<tr>
<td>Emerson Network Power</td>
<td>Corporation (Public)</td>
<td>Industry (Electrical and Electronic Manufacturing)</td>
<td>✓</td>
</tr>
<tr>
<td>Ericsson Canada</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Information Technology and Services)</td>
<td>✓</td>
</tr>
<tr>
<td>Erivan Gecom Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
<td>✓</td>
</tr>
<tr>
<td>Participant name</td>
<td>Participant category</td>
<td>Participant interests</td>
<td>Position on P.C. 2016-0332 appeal petition (✓ support/ ✗ oppose)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
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<td>Evertz Technologies Limited</td>
<td>Corporation (Public)</td>
<td>Industry (Broadcast Media)</td>
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</tr>
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<td>Federation of Chambers of Commerce of Quebec</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
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<tr>
<td>G-TEK</td>
<td>Corporation (Private)</td>
<td>Industry (Construction, Infrastructure)</td>
<td>✓</td>
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<td>GENBAND Canada ULC</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
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<td>Hewlett Packard Enterprise</td>
<td>Corporation (Public)</td>
<td>Industry (Information Technology and Services)</td>
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<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
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<td>IneoQuest Technologies</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
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<td>Infrastructel Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
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<tr>
<td>Internet Society Canada Chapter</td>
<td>Advocacy Group</td>
<td>Advocacy (Consumer)</td>
<td>✗</td>
</tr>
<tr>
<td>J.W. Contracting</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
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</tr>
<tr>
<td>Jim Willis</td>
<td>Private Citizen</td>
<td>Private Citizen (Small Business Owner)</td>
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</tr>
<tr>
<td>Mayor of Barrie</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Cowansville</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Dorval</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Gatineau</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Granby</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Niagara Falls</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of North Battleford</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Participant name</td>
<td>Participant category</td>
<td>Participant interests</td>
<td>Position on P.C. 2016-0332 appeal petition</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------------</td>
<td>-------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Mayor of Ottawa</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Peterborough</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
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<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
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<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Terrace</td>
<td>Government</td>
<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Toronto</td>
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<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Westlock</td>
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<td>Municipal Government</td>
<td>✓</td>
</tr>
<tr>
<td>Mayor of Yorkton</td>
<td>Government</td>
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<tr>
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<td>Advocacy (Consumer)</td>
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<tr>
<td>President and CEO of Canadian Council of Chief Executives</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
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<td>Primes Telecommunications Canada Inc.</td>
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<td>Industry (Telecom)</td>
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<tr>
<td>QualNet Wireless Services Inc.</td>
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<td>Industry (Telecom)</td>
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</tr>
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<td>Quebec Employers Council</td>
<td>Advocacy Group</td>
<td>Advocacy (Business)</td>
<td>✓</td>
</tr>
<tr>
<td>Quebecor Media Inc.</td>
<td>Corporation (Public)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>QX LTD</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Telecom, Infrastructure)</td>
<td>✓</td>
</tr>
<tr>
<td>Participant name</td>
<td>Participant category</td>
<td>Participant interests</td>
<td>Position on P.C. 2016-0332 appeal petition</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>----------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Samsung Electronics Canada</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Consumer Electronics)</td>
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</tr>
<tr>
<td>Saskatchewan Telecommunications</td>
<td>Corporation (Crown)</td>
<td>Industry (Telecom)</td>
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</tr>
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<td>Skyward Towers Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
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<td>Sony Mobile Communications</td>
<td>Corporation (Subsidiary)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
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<td>Sorichetti Construction</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
<td>✓</td>
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<tr>
<td>TCI Group</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
<td>✓</td>
</tr>
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<td>TekSavvy Solutions Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✗</td>
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<tr>
<td>Telesat</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>TELUS Communications Company</td>
<td>Corporation (Public)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>The Arctic Group</td>
<td>Corporation (Private)</td>
<td>Industry (Construction, Infrastructure)</td>
<td>✓</td>
</tr>
<tr>
<td>Trigenex</td>
<td>Corporation (Private)</td>
<td>Industry (Civil Engineering, Consultancy)</td>
<td>✓</td>
</tr>
<tr>
<td>Trilinks Communications Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Trylon TSF Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Infrastructure, Construction)</td>
<td>✓</td>
</tr>
<tr>
<td>Turris Contractors Atlantic</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✓</td>
</tr>
<tr>
<td>Union des municipalités du Québec</td>
<td>Advocacy Group</td>
<td>Advocacy (Municipalities)</td>
<td>✓</td>
</tr>
<tr>
<td>Vaxination informatique</td>
<td>Advocacy Group</td>
<td>Advocacy (Consumer)</td>
<td>✗</td>
</tr>
<tr>
<td>VistaCare Communications</td>
<td>Corporation (Private)</td>
<td>Industry (Construction)</td>
<td>✓</td>
</tr>
<tr>
<td>VMedia Inc.</td>
<td>Corporation (Private)</td>
<td>Industry (Telecom)</td>
<td>✗</td>
</tr>
</tbody>
</table>
4.4. Rules-in-use

Participants involved in the GiC appeal procedure, which is the policy action situation in question, use operating rules drawn from the *Telecommunications Act* of 1993 under the “Powers of Governor in Council, Commission and Ministers” sections (§.8-15), the “Minister’s Powers” section (§.69.3), and under the “Powers of the Governor in Council, Others” section (§.69.4). In their capacity to guide the procedural mechanics of the GiC appeal mechanism, these statutory operating rules are considered below through organization based on the seven types of IAD rules. Position rules are addressed in table 4. Boundary, scope, and authority rules are addressed in table 5. Aggregation, information, and payoff rules are subsequently addressed through the analysis integration performed in the discussion chapter.
### Table 4: Position Rules

<table>
<thead>
<tr>
<th>Participant position (role)</th>
<th>GiC position characteristics</th>
<th>Position rules applied in P.C. 2016-0332 appeal petition proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complainants</td>
<td>“Complainants” are participants in the action situation who file an appeal application with the Governor-in-Council (GiC). Complainant participants may also opt to file supplemental research reports written by industry or academic experts. These attachments are included to support the appeal petition argument.</td>
<td>Bell Canada was the complainant participant who filed the P.C. 2016-0332 GiC appeal petition (Bell Canada, 2015b). Five supplemental research reports, all in favour of the appeal, were written by contracted economists and filed by Bell as attachments to the petition (Eisenach, 2015; Renda, 2015; Singer, 2015a-b; Singer et al., 2015).</td>
</tr>
<tr>
<td>Participant position (role)</td>
<td>GiC position characteristics</td>
<td>Position rules applied in P.C. 2016-0332 appeal petition proceedings</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Commenters                  | • “Commenters” are participants who choose to submit written comments to the GiC in response to an appeal application.  
• Commenter participants typically submit written comments in support of, or opposition to the active petition in question (*Telecommunications Act*, 1993, §.12(4)). | • After the petition was filed in October 2015, written comments were submitted by additional outside commenter participants. For the P.C. 2016-0332 GiC appeal petition, eighty-eight different commenter participants submitted written comments in response to Bell’s petition (Industry Canada, 2015). |
<table>
<thead>
<tr>
<th>Participant position (role)</th>
<th>GiC position characteristics</th>
<th>Position rules applied in P.C. 2016-0332 appeal petition proceedings</th>
</tr>
</thead>
</table>
| Administrators              | • “Administrators” are federal government participants who are vested with administering the GiC appeal procedure, treating a petition case with due process, and ultimately ruling on the outcome of an appeal petition.  
• Science and Economic Development Canada (ISED), formerly the Minister of Industry, oversees the Cabinet portfolio containing the “Petition to the Governor-in-Council” appeal procedure under the purview of telecommunications policy cases (*Telecommunications Act*, 1993, §.12(I)).  
• Ministers designated by the government of each province are also included under the role of administrator participants. Their participation involves offering consultation to the Minister of ISED before an appeal ruling is finalized (*Telecommunications Act*, 1993, §.13). | • As of November 4, 2015, the Minister of ISED is the Hon. Navdeep Bains. Given that P.C. 2016-0332 was decided on May 10, 2016, Minister Bains presided over ISED when the appeal decision was reached.  
• While mention of explicit ministerial involvement is not included, the P.C. 2016-0332 ruling documentation does explain that “the Minister of Industry has provided the provinces with an opportunity for consultation” (Privy Council, 2016, para. 6).  
• The composition of ISED while the P.C. 2016-0332 appeal was processed also includes, but is not limited to: ISED deputy, associate deputy ministers; senior assistant, assistant deputy ministers of Spectrum, Information Technologies and Telecommunications; Legal Services; Canadian Competition Bureau (Industry Canada, 2015). |
### Table 5: Boundary, Scope, and Authority Rules

<table>
<thead>
<tr>
<th>Participant position</th>
<th>GiC participant boundary, scope, and authority rules</th>
<th>Boundary, scope, and authority rules applied in P.C. 2016-0332 appeal petition proceedings</th>
</tr>
</thead>
</table>
| Complainants         | • Participants enter the complainant role by filing a formal appeal petition with the GiC within ninety days of a decision by the CRTC (*Telecommunications Act*, 1993, §.12(I)).  
  o The CRTC holds federal jurisdiction over telecommunications-related concerns in Canada. Therefore, a CRTC policy that is varied or rescinded through the GiC appeal procedure implicates telecommunications regulation in all of the Canadian provinces and territories.  
  o Formal appeal petitions are officially filed with the GiC when sent by a complainant participant to the Clerk of the Privy Council and Secretary to the Cabinet at 80 Wellington Street in Ottawa, Ontario, Canada (Privy Council Office, 2016).  
  • GiC petitions are officially filed by a complainant when sent to, and received by the Clerk of the Privy Council and Secretary to the Cabinet in Ottawa, Ontario, Canada (Privy Council Office, 2016b).  
  • Complainant participants possess the authority to file attachment reports authored by third-parties to supplement | • Bell Canada entered the complainant participation role by filing its appeal petition role by filing its appeal petition with the Commission and the Clerk of the Privy Council and Secretary to the Cabinet, Janice Charette, on October 20, 2015 (Bell Canada, 2015b).  
  • Bell’s petition targeted TRP 2015-326, which was instated by the CRTC on July 22, 2015 (CRTC, 2015b).  
  • Bell Canada submitted five attachments to supplement its 2015 GiC appeal petition (Industry Canada, 2015):  
    o Attachment 1: “Economic Impact of FTTH Deployment in Toronto” (Singer, 2015a).  
    o Attachment 2: “The Economic Impact of the CRTC’s Decision to Unbundle Fibre-to-the-Premises Networks” (Singer,
<table>
<thead>
<tr>
<th>Participant position</th>
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<td>• Along with filing a petition with the GiC, complainant participants are required to send a copy of the petition to the Commission (<em>Telecommunications Act</em>, 1993, §.12(2)).</td>
<td>o Attachment 3: “The Empirical Link Between Fibre-to-the-Premises Deployment and Employment: A Case Study in Canada” (Singer et al., 2015).</td>
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<td></td>
<td>• After filing an appeal petition and any supplemental attachments, and after sending a copy of the petition to the CRTC, complainant participants effectively exit the role.</td>
<td>o Attachment 4: “Broadband Market Performance in Canada: Implications for Policy” (Eisenach, 2015).</td>
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<td>o Attachment 5: “Regulating Broadband: Lessons from the European Union, and Implications for Canada” (Renda, 2015).</td>
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<tr>
<td>Participant position</td>
<td><strong>GiC participant boundary, scope, and authority rules</strong></td>
<td><strong>Boundary, scope, and authority rules applied in P.C. 2016-0332 appeal petition proceedings</strong></td>
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</table>
| **Commenters**       | • Participants enter the commenter role once filing with the GiC a written comment submission in response to an active appeal petition  
                       • Commenter participants may submit a written response to an appeal petition. The comment submission period begins once the new petition is published in the *Canada Gazette (Telecommunications Act, 1993, §.12(4)).*  
                       • For GiC appeal petitions pertaining to CRTC telecommunications-related cases filed before 2008, Industry Canada archive records indicate that the associated notices published in the *Canada Gazette* did not include a specific timeframe during which public comments would be accepted. During and after 2008, however, notices began to specify a comment period:  
                         o Sixty day commenting periods were allotted for two petitions, but in most cases, a thirty day window has come to be the convention for accepting written comments (Industry Canada, 2015).  
                         o Participants can enter the commenter role at any point during this thirty day timeframe.  
                       • Once a written comment is submitted to the GiC, the participant effectively exits the commenter role. | • For the P.C. 2016-0332 GiC appeal petition, commenter participants submitted written responses that supported or opposed Bell Canada’s petition seeking to rescind CRTC TRP 2015-326, which mandated wholesale access to FTTP facilities.  
                       • Generally, written responses briefly justified the commenter participant’s position on the appeal by explaining how the GiC decision would implicate its stakeholder interests (Industry Canada, 2015).  
                       • Table 3 under the Community Attributes section expands on the individual comment participant positions regarding the P.C. 2016-0332 appeal petition. The table unpacks and identifies the comment participants’ organizational categories and stakeholder interests. |
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<tr>
<th>Participant position</th>
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<th><em>Boundary, scope, and authority rules applied in P.C. 2016-0332 appeal petition proceedings</em></th>
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<tbody>
<tr>
<td><strong>Administrators</strong></td>
<td>• As a participant, the Minister of Industry is vested with administering the GiC appeal procedure, representing the Governor-in-Council (Cabinet). The GiC may <em>A</em> on its own motion, by order, vary or rescind a CRTC decision or refer it back to the Commission for reconsideration of all or a portion of it (<em>Telecommunications Act, 1993</em>, §.12(1)).  &lt;br&gt;  ○ The GiC may make regulations (<em>Telecommunications Act, 1993</em>, §.69.4(1)):  &lt;br&gt;  ▪ respecting requirements for technical specifications and markings in relation to telecommunications apparatus or any class of telecommunications apparatus;  &lt;br&gt;  ▪ prescribing the form of registration or markings, or any class of registration or markings;  &lt;br&gt;  ▪ prescribing the eligibility and qualifications of persons who may be appointed as inspectors, and the duties of inspectors;  &lt;br&gt;  ▪ for giving effect to international agreements, conventions, or treaties respecting telecommunications apparatus to which Canada is a party.  &lt;br&gt;  • On behalf of the GiC, the Minister of Industry may also <em>B</em> vary, rescind, or refer back a CRTC decision based on a petition in writing presented to the GiC</td>
<td>• For P.C. 2016-0332, Minister Bains (and pertinent ISED staff) entered the administrator participant role when Bell Canada filed its appeal petition with the Clerk of the Privy Council and Secretary to the Cabinet on October 20, 2015 (Bell Canada, 2015b).  &lt;br&gt;  • Before the P.C. 2016-0332 appeal ruling, the Minister of Industry provided the provinces</td>
</tr>
<tr>
<td>Participant position</td>
<td>GiC participant boundary, scope, and authority rules</td>
<td>Boundary, scope, and authority rules applied in P.C. 2016-0332 appeal petition proceedings</td>
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<td>within ninety days after the CRTC decision (<em>Telecommunications Act</em>, 1993, §.12(I))</td>
<td>with an opportunity for consultation (Privy Council, 2016), thus permitting the provincial ministers to enter, and then exit, the administrator participant role.</td>
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<td>• For either of the above scenarios (<em>A</em> or <em>B</em>), once a petition is filed with GiC, the Minister of Industry enters the administrator participant role.</td>
<td>o Explicit evidence of participation by provincial ministers in the P.C. 2016-0332 appeal ruling only includes the following excerpt: “Whereas the Minister of Industry has provided the provinces with an opportunity for consultation;” (Privy Council, 2016, p. 2).</td>
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<tr>
<td>• Ministers from the government of each province enter the administrator participant role when offered an opportunity for consultation (<em>Telecommunications Act</em>, 1993, §.13). After providing consultation, provincial ministers exit the role.</td>
<td>• On May 5, 2016, the GiC issued the P.C. 2016-0332 ruling denied Bell’s appeal petition, citing that “Telecom Regulatory Policy CRTC 2015-326 is consistent with Canada’s telecommunications policy objectives set out in section 7 of the Act” (Privy Council, 2016, p. 2).</td>
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<td>• The Minister of Industry, on behalf of the GiC, may, by order, issue to the Commission directions of general application on broad policy matters with respect to the Canadian telecommunications policy objectives (<em>Telecommunications Act</em>, 1993, §.8).</td>
<td>• The Minister of Industry may, where the Minister is satisfied that to do so will further the Canadian telecommunications policy objectives, by order made after consultation with the Commission, establish standards in respect of the technical aspects of telecommunications</td>
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<td>• The Minister of Industry, on behalf of the GiC, may require the CRTC to make a report on any matter with in the Commission’s jurisdiction over telecommunications regulation (<em>Telecommunications Act</em>, 1993, §.14).</td>
<td>• The Minister of Industry may, where the Minister is satisfied that to do so will further the Canadian telecommunications policy objectives, by order made after consultation with the Commission, establish standards in respect of the technical aspects of telecommunications</td>
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<td>and require the Commission to give effect to them <em>(Telecommunications Act, 1993, §.15).</em></td>
<td>• The Minister of Industry (the Hon. Navdeep Bains and any involved support staff) effectively exited the administrator participant role once the decision was cast.</td>
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<td>• The Minister of Industry may authorize any person to exercise any of the powers that are granted to the Minister under section 69.3, or by the regulations made under section 69.3, subject to any conditions that the Minister may fix <em>(Telecommunications Act, 1993, §.69.3(2)).</em></td>
<td></td>
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<tr>
<td></td>
<td>• After an appeal decision is issued on behalf of the GiC, the Minister of Industry (and any ancillary ISED staff involved as delegates) exit the administrator participant role.</td>
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5. DISCUSSION

The following chapter distills and explains data from the results by applying it to the IAD analysis integration methodology questions. These questions are considered through each of the stakeholder roles involved in the GiC procedure action arena for the P.C. 2016-0332 appeal case: the administrative participant role, which is occupied by the Minister of Industry and provincial ministers who provide consultation; the commenter participant role, in which industry and consumer advocacy are the two most dominant priorities expressed in the submitted written comments; and the complainant role, which is filled by Bell Canada and reveals how GiC appeal petitions can lead to CRTC policy obstructions that produce a zero-sum byproduct—incumbent operators necessarily benefit and competitors necessarily suffer.

5.1. Analysis Integration

In order to integrate an IAD policy analysis, behaviour must be explained in terms of situational elements (Polski & Ostrom, 1999). Below, relevant situational elements associated with the GiC appeal procedure are structured in the form of IAD methodology questions. Each question is addressed by applying data from the results section to the GiC appeal procedure as an action arena. Actors that participate within the arena fall into three different role categories: administrative, commenter, and complainant. The IAD questions considered are as follows:

- What actions can participants take, and how are actions linked to outcomes?
- What is the level of control that each participant has over action in this situation?
- What outcomes are possible in this situation?
- What information (information rules) about the action situation is available to participants?
- What costs and benefits (payoff rules) do participants incur when they take action in this situation?
5.1.1. Administrative Participant Role: The Minster of Industry and Provincial Consultations

The administrative participant role, occupied first and foremost by the Minister of Industry, is the dominant actor role in the GiC appeal action arena. The Minister of Industry holds “considerable power” as both the head of Innovation, Science and Economic Development (ISED, formerly Industry Canada) (Shepherd et al., 2014), and as the highest de facto authority in deciding GiC outcomes related to appeals filed against CRTC telecommunications policies (Telecommunications Act, 1993). In this respect, the actions of the Minister of Industry have a direct link to appeal outcomes—on behalf of the GiC, the Minister may, on the Minister’s own motion, by order, vary or rescind a CRTC decision or refer it back to the Commission for reconsideration of all or a portion of it (Telecommunications Act, 1993, §.12(1)). What is more, the Minister of Industry may vary, rescind, or refer back a CRTC decision based on a petition in writing presented to the GiC within ninety days after the CRTC decision (Telecommunications Act, 1993, §.12(1)). Derived from statute, this authority over the GiC appeal procedure affords the Minister of Industry with a very high level of control over action in this policy arena.

Various provincial ministers can also occupy the administrative participant role, though their ability to take action is limited, as is their level of control over action in the GiC appeal arena. Section 13 of the Telecommunications Act stipulates that the Minister of Industry is obligated to provide an opportunity for a minister designated by the government of each province to consult with the Minister before an appeal decision is formed (Telecommunications Act, 1993, §.13). This provincial consultation platform might, perhaps, exist as an opportunity for additional perspectives to contribute diversified viewpoints that, say, represent constituent opinions from across the country when assessing the petition and interpreting comment response submissions. Indeed, this consultation platform might offer an invaluable opportunity for decentralized input—one that could help to offset the highly concentrated federal preemption under which
telecommunications regulation is administered in Canada (Walden, 2009). However, the information rules associated with this facet of the action situation are very limited, and desperately lack transparency. Minimal data is offered by Cabinet in explicitly revealing the nature of how a provincial consultation is tendered to the Minister. Finalized GiC appeal decisions, including the P.C. 2009-2007 and P.C. 2016-0332 wholesale wireline access appeal cases, merely note that the Minister of Industry “has provided the provinces with an opportunity for consultation” (Industry Canada, 2015; Privy Council, 2009, 2016), but do not go so far as to disclose which provincial ministers actually contributed, or the substance of their contribution.

5.1.2. Commenter Participant Role: Industry and Consumer Advocacy

Compared to the authoritative role held by the Minister of Industry in the appeal decision-making process, the remaining participant roles in the GiC appeal action arena are relatively restricted with regard to the potential actions in which they are permitted to engage. Parties interested in the outcome of an active GiC appeal petition can take action through the role of commenter participant. The Telecommunications Act mandates the GiC appeal procedure only with the ability to use an indirect platform of written comment submissions (1993, §.12(4)). Therefore, a commenter participant assumes a position in the action arena by filing a written submission, which is generally in support of, or opposition to an ongoing appeal case. Comments submitted during the P.C. 2016-0332 appeal petition were plentiful. In fact, more response submissions were received during the comment period offered in this GiC appeal case than during any other past petition (Industry Canada, 2015).

Table 3 in the results chapter records comment participant positions on the P.C. 2016-0332 appeal petition. The table also illustrates the corporate or organizational category and stakeholder interest characteristics held by commenters. Fifty-five commenter participants represented public, private, not-for-profit, and subsidiary corporations. These corporate
participants conduct their business interests primarily in the telecom, information technology, manufacturing, and construction industry sectors. Fourteen commenter participants were advocacy groups representing mainly business and consumer interests. The remaining nineteen participants commented on behalf of municipal governments or on behalf of themselves as private citizens or academics (Industry Canada, 2015). Of the eighty-eight commenter participants who filed response submissions, seventy-three responses were in support of Bell Canada’s appeal petition, while fifteen expressed opposition. Supportive commenter participants represented corporate industry and business advocacy interests, as well as fifteen of the sixteen municipal government respondents.

The City of Calgary was the lone municipal government commenter participant (including consideration for comments by municipal mayors) in opposition to the appeal case. This stance against Bell Canada’s petition can be attributed to the fact that Calgary is a telecommunications operator in its own right, licensing its approximately 400 kilometers of fibre infrastructure, much of it “dark” (unused) fibre, to civic partners and to other not-for-profit entities in all quadrants of the city (City of Calgary, 2016). As its comment submission to the P.C. 2016-0332 appeal case notes, by installing surplus fibre capacity in the process of building out its fibre network for providing municipal services, Calgary “can complement the services provided by carriers and indirectly enhance competition in the telecommunications marketplace” (City of Calgary, 2015, p. 2). In this capacity, Calgary is a competitor in the same wholesale wireline broadband service market as the petition complainant, Bell Canada.

However, while Bell is responsible only for economic profits and its shareholders, the City of Calgary is responsible for social and environmental concerns, in addition to its financial bottom line. With these factors to bear, Calgary’s opposition to Bell’s appeal petition is based on the argument that provisions within the original CRTC TRP 2015-326 that benefit competitors
will work to compensate for the significant advantages that incumbent operators harbor from what Calgary calls “Legacy Rights.” Legacy Rights pertain to: existing rights of access to Alignments—or defined segments of space located in a municipal ROW (rights-of-way) that is designated to an ISP to install facilities or infrastructure—in Calgary’s existing ROWs; existing ownership of telephone poles located on the surface of ROWs; and existing rights of access (through long-standing agreements) to support structures such as utility poles—all of which, in Calgary and other municipalities, are unavailable to competitors for installation of fibre facilities (City of Calgary, 2015). “The incumbents’ Legacy Rights,” Calgary’s comment submission emphasizes, “exist simply by virtue of their incumbent status” (2015, p. 14). Enshrining privileges for incumbent operators, these Legacy Rights are in direct conflict with the rights afforded by the newly enacted mandated DBS model to the very competitors with whom the City of Calgary may seek to provide wholesale transport services.

Most other opponents to the appeal petition were the consumer advocacy groups and individual citizens and academics within the commenter participant role. The disconnect between the comment responses, which were overwhelmingly in favour of the Bell petition, and the GiC’s appeal decision, which denied the appeal, may suggest that the GiC decision was founded on the Minister of Industry holding a resoundingly high level of confidence in the CRTC wholesale broadband access agenda and the associated regulatory framework. This sort of resolved confidence could help to explain why the GiC was ultimately unconvinced by the Bell appeal petition when casting its decision, despite the concentrated comment participant support the petition received.

5.1.3. Complainant Participant Role: Bell Canada

Complainant participants are characterized as such by taking action through filing an appeal petition with the GiC. Complainants have control over when their appeal is filed, so long
as it is received by the GiC within ninety days of a decision by the CRTC (Telecommunications Act, 1993, §.12(1)). Complainants also have full control over content included in the appeal petition. The incumbent operator complainants who filed the P.C. 2009-2007 and the P.C. 2016-0332 (Bell Canada, Bell Aliant, and Telus; and Bell Canada, respectively) included multiple supplemental document attachments to help provide credibility to their appeal petition.

Supplemental documents filed during these last two GiC appeal petitions pertaining to wholesale access regulation consisted exclusively of research reports written by industry or academic experts (Aron, & Crandall, 2008; Eisenach, 2015; Renda, 2015; Sidak, 2009; Singer, 2015a-b; Singer et al., 2015; Winnik & Sieradzki, 2009). Once an appeal petition is filed with the GiC, complainant participants have no direct control in any other actions in the appeal action situation. Indirectly, however, the complainant participant could induce interested parties to file written response submissions in support of the petition. If they do choose to participate, such actors would then assume the role of commenter participant.

Though the complainant participant role is relatively straightforward in execution, it does command a significant level of authority in the linking of actions to outcomes. Through the simple act of filing an appeal petition, the complainant participant has initiated a procedural process that can not only alter or strike down the policy under appeal, but moreover, can induce externalities that effectively obstruct the otherwise uncontested developmental progress of the CRTC wholesale access program. These obstructions act as a zero-sum byproduct from which incumbent operators necessarily gain an advantage, and competitors suffer a setback.

In the case of a “reconsideration” decision outcome, such as the one generated by the 2009 GiC petition filed by the Bell companies and Telus (P.C. 2009-2007), the appeal petition persuaded the GiC to have the Commission reexamine existing CRTC wholesale broadband obligations and speed-matching requirements over legacy and FTTN platforms (Bell Aliant
Regional Communications & Bell Canada, 2009; Privy Council, 2009; TCC, 2009). Once being referred back to the CRTC for reconsideration,\textsuperscript{30} Telecom Notice of Consultation 2009-261 and, later, TRP 2010-632 reaffirmed the Commission’s original position established in Telecom Decision 2008-117 and Telecom Order 2009-111 (CRTC, 2008b, 2009b). Specifically, in the four areas (a-d) that the GiC instructed the Commission to reexamine, the CRTC maintained its position:

(a) The Commission considers that, at present, retail Internet service competition results primarily from services provisioned using wireline facilities. Other retail Internet services, such as those offered using wireless and satellite facilities, are not generally substitutes for wireline facilities at this time. (CRTC, 2010, para. 5);

(b) Regarding the equity of the speed-matching requirement between ILECs and cable carriers, the Commission notes that cable carriers are also subject to a speed-matching requirement for their existing wholesale high-speed access services that allow competitors to provide retail Internet services. (CRTC, 2010, para. 11);

(c) The Commission is not persuaded that the ILECs and cable carriers should provide new wholesale access services [...] In the Commission’s view, there is no convincing evidence to indicate that there would be a substantial lessening of competition in the absence of these services. (CRTC, 2010, para. 13);

(d) The Commission finds no utility in defining what facilities should be identified as ‘next generation.’ The Commission will apply its existing essential services regulatory framework to any application requesting that ILECs and cable carriers make these facilities available for competitor use. (CRTC, 2010, para. 15).

\textsuperscript{30} The GiC ruled for the CRTC to specifically consider whether: (a) the speed matching requirements unduly diminish the incentives to invest in new network infrastructure; (b) in the absence of speed matching requirements there would be sufficient competition to protect the interests of users; (c) the respective wholesale obligations imposed on incumbent telephone and cable companies are equitable or represent a competitive disadvantage; and (d) the impact of these wholesale requirements unduly impairs the ability of incumbent telephone companies to offer new converged services (P.C. 2009-2007).
The GiC did not opt to vary the policies under appeal in any direct capacity. However, the decision to send the policies back to the Commission for reconsideration did present indirect implications for the CRTC wholesale access program. Instead of focusing efforts to progress the wholesale access program through development of new policy, the Commission was obligated to commit its resources to a reconsideration of existing wholesale policies, thus postponing the wholesale access agenda by more than a year through obstructing the development of any new policies that might otherwise have unfolded during that time.

Bell Canada’s 2015 appeal case (P.C. 2016-0332) illustrates another scenario through which policy obstruction externalities induced by a GiC decision outcome could plausibly obfuscate associated—though uncontested (ostensibly, at least)\(^\text{31}\)—regulatory provisions that sit within the CRTC wholesale access program. Had the GiC ruled in favour of Bell’s petition and used its authority to rescind CRTC TRP 2015-326, such an outcome would burden the Commission by requiring it to substantially rework, if not completely overhaul, its DBS model for competitor interconnectivity. A GiC appeal decision electing to deny mandated wholesale FTTP access would have, as an immediate implication, overturned the current DBS arrangement that incorporates FTTP facilities. Different concerns arise, however, when assessing the indirect, protracted implications of the appeal decision.

TRP 2015-326 directs DBS to include being implemented over legacy platform and FTTN configurations. The Commission’s analysis and determinations section of the policy documentation explains how this direction includes legacy and FTTN network infrastructure:

> 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

\(^{31}\) Though DBS was not the immediate policy provision focus of its 2015 petition—indeed, “DBS” is not once mentioned in the petition—Bell Canada did, however, directly appeal DBS in a separate internal CRTC “review and vary” application contesting TRP 2015-326 (“Outcome 1” as described in this thesis (see p. 42), in other words) (Bell Canada, 2015c; CRTC, 2016a).
FTTN), HFC cable, and FTTP access facilities (CRTC, 2015b, para. 115, emphasis added).

Had the GiC elected to rescind mandated wholesale FTTP access in its P.C. 2016-0332 appeal decision, the DBS implementation policy provision—which is an emerging component of the larger CRTC wholesale access agenda—would be obstructed as a byproduct of the appeal outcome. Because DBS implementation includes legacy platform and FTTN configurations (in addition to FTTP network infrastructure), a GiC appeal decision that were to rescind the regulatory policy mandating all wholesale access to FTTP facilities and equipment would collaterally obfuscate the uncontested policy provision applying to legacy platform and FTTN DBS. As a result, the Commission would be required to reconsider, redraft, and approve a separate policy for DBS implementation precluding any FTTP facilities or equipment.

Whether based on a resource-consuming reconsideration instruction issued for the Commission to exercise, or a rescinded policy that collaterally obfuscates uncontested provisions from within the CRTC wholesale access program, obstructive externalities stemming from GiC appeal decisions emphasize the tacit power that complainants can wield—simply through the act of submitting a GiC appeal petition.

6. Conclusions

This chapter articulates conclusions drawn from the research. Based on discussions initiated in the preceding chapter, these conclusions have been reached after evaluating data framed through a broad reconsideration of the arguments by Schultz (1999) and Cherry (2015) that were used to contextualize the research questions and were expanded upon in the literature review. During this undertaking, the chapter will also return to, and address the thesis primary and secondary research questions, themselves, under the final impressions heading. Next, a recommendation is issued for procedural areas where future research could target and further
develop reform initiatives. Focused on the provincial ministerial consultation platform, the recommendation intimates that procedural reform of this nature could work to improve decision-making transparency, to shed light on the degree to which written comment submissions are factored into appeal outcomes, and to strengthen conduits for regional representation in what is an otherwise heavily centralized policymaking arena. The chapter and thesis conclude with insights into how this thesis has contributed to different areas associated with the telecommunications law and policy field.

6.1. Final Impressions

To better understand the proliferation of wholesale access policy conflicts between stakeholder parties for and against wholesale access regulation, this research sought to investigate how the Petition to the Governor-in-Council appeal procedure could be analyzed to help gauge the CRTC’s ability to maintain its institutional mandate. Often overlooked in past studies, the GiC appeal mechanism has thus also provided a point of entry into assessing the current state of Canada’s wholesale access regulatory program for wireline broadband provision. Framed through the policy context of nascent wholesale FTTP access regulation, the research has led to the formation of several conclusions. These conclusions are organized under headings that correspond to the primary and secondary research questions originally posed in the introductory chapter.

6.1.1. Primary Research Conclusions

Research on the GiC appeal procedure and case details examined in this thesis, most particularly regarding P.C. 2016-0332, but, to a lesser extent, relating to P.C. 2009-2007 as well, have yielded two areas in which primary research conclusions begin to coalesce. First, past GiC petition cases that appealed CRTC wholesale access policies have, on the one hand, demonstrated the obstructive effect inflicted upon the Commission’s wholesale access agenda as
a byproduct of appeal outcomes. When submitted by complainants like Bell Canada, policy externalities that are generated through the GiC appeal procedure demonstrate the tacit advantage incumbent operators can plausibly harness, even if appeal findings are not decided in their immediate favour.

By virtue of their privileged position as facilities and infrastructure owners with decades—or in the case of Bell, more than a century (Bell Canada, 2015b)\(^\text{32}\)—of brand power, long-standing municipal ROW agreements, tacit knowledge,\(^\text{33}\) and customer bases on which to rely and capitalize, incumbent operators tend naturally to benefit from regulatory stasis in the wholesale access arena. This much is certainly true of policy propositions that could mandate wholesale access but are delayed or fail to receive approval at the CRTC, and of policies that meet approval but then incur cumbersome obstructions as an externality of a tangentially associated GiC appeal petition. (This is to say nothing of the other procedural avenues through which CRTC regulatory policies may be challenged.) Whether caused by policy obstruction externalities of a GiC appeal decision or by other factors, benefits to incumbent operators that are predicated on policy inaction compound when regulatory stasis persists while, at the same time, infrastructure technologies and platforms progress onward. Indeed, when regulatory policies are not adequately updated to reflect evolving infrastructure technologies and consumer expectations, those service providers who already possess significant market control—incumbent operators, that is to say—are the stakeholders who stand to gain.

As the Canadian telecommunications landscape is shifting from reliance on twisted copper and coaxial to fully-fibre wireline networks, consumers will increasingly express the desire, if not the obligation, to upgrade their service subscriptions for faster data transmission

\(^{32}\) The corporate entity that now is Bell Canada (a subsidiary of BCE) was founded in 1880 as “The Bell Telephone Company of Canada, Ltd.” (Bell Canada, 2015b; Cherry, 2015).

\(^{33}\) See note on p. 52 regarding Bell Canada executive directors who also served in senior roles at the PCO. These executives would be intimately aware of the procedural realities and the potential policy implications a GiC appeal petition can provoke.
capabilities. This shift is occurring with or without the presence of regulatory oversight, and regardless of whether or not the CRTC has to endure obstructions caused by the externalities brought on through a GiC appeal decision. The results arrived at in this thesis regarding assessment of the economic nature of an activity—specifically, with respect to subtractability and excludability—offer insight into why the act, itself, of casting a GiC appeal petition can be strategically beneficial to an incumbent operator-petition complainant who conducts business in the wholesale wireline broadband service market.

Subtractability and excludability for proposed disaggregated wholesale FTTP service (DBS) were both assessed to be relatively high (particularly in relation to, say, retail broadband service provision, which would be of high excludability but of very low subtractability, and would thus be characterized as a toll service in figure 2). These findings suggest that, as an economic activity, disaggregated wholesale FTTP service provision is characterized as a private service. The implications of an economic activity defined as a private service, rather than a toll, are revealing when considered in relation to obstructive externalities prompted by a GiC appeal petition outcome: Unlike retail customers, wholesale customers—competitors, in other words—are able to enter into the broadband service market, including the emerging market for FTTP service provision, manifestly because of the mandated access policies established by the CRTC wholesale access program. It is therefore not adverse to the interests of incumbent operators—who are in competition with competitor ISPs precisely because of CRTC regulations—to invoke an appeal procedure that can easily impede the policymaking productivity of the very regulator that mandates wholesale access to their otherwise privately owned networks, and the very regulatory program that threatens the market revenues they would otherwise exclusively reap. CRTC policymaking obstructions, such as a reconsideration instruction or regulatory obfuscation following a decision to vary or rescind policy provisions, can arise simply through the act of a
complainant filing a GiC appeal petition. As Canada’s retail broadband markets are undergoing an infrastructural pivot to FTTP, that simple act of filing a petition could conceivably result in incumbent operators maintaining their concentrated stake in the retail broadband service market as it shifts to nascent FTTP service provision.

The second area in which primary research conclusions come together is in the relationship between the decision outcomes in P.C. 2009-2007 and those in P.C. 2016-0332. A comparison of these two most recent GiC appeal cases illuminates a telling trajectory regarding the evolving dynamic between the CRTC and the Minister of Industry (on behalf of Cabinet). When compared to the P.C. 2009-2007 GiC case, in which the CRTC policies under review were sent the back to the Commission for reconsideration, the GiC’s rejection of Bell’s 2015 petition in the P.C. 2016-0332 outcome suggests Cabinet is now comparatively more accepting of the CRTC wholesale access agenda. In a statement release issued by the Government of Canada, the Honorable Navdeep Bains, Minister of Industry (Innovation, Science and Economic Development (ISED)), supported this conclusion with his comments following the release of the appeal decision: “We [the Government of Canada] are committed to increasing higher-speed broadband coverage and supporting competition, choice and availability of services for Canadian consumers and business users. Wholesale broadband is a proven regulatory tool for enabling retail competition in the Internet service market” (GOC, 2016).

Rather than a reconsideration decision that requires the CRTC to ultimately deny a potential policy variance, as was true of the P.C. 2009-2007 outcome for the appeal of policies mandating legacy and FTTN wholesale services (CRTC, 2010), the GiC instead squarely embraced the initiative in the P.C. 2016-0332 outcome by rejecting Bell’s petition. In casting this decision, the GiC assumed responsibility and confidence in the Commission’s wholesale access program by upholding the CRTC policy that both mandates wholesale FTTP access and, with
DBS, spearheads an innovative approach to retail market competition. This outcome demonstrates that Cabinet has, over time, come to adopt and defend the CRTC’s position on wholesale access mandates. Cabinet’s shift in policy position offers resounding support to the notion that the CRTC has continued to defend its institutional role as an independent regulatory agency. Similarly, the disconnect between, on the one hand, opinions conveyed in the P.C. 2016-0332 written responses, which overwhelmingly favoured the Bell petition, and Cabinet’s decision to deny the appeal, on the other, is also significant. This rejection of the appeal petition—despite a commenter community preference generally in support of the contrary policy position—provides additional evidence that the GiC appeal procedure can help to showcase government support in one of the Commission’s most comprehensive and ambitious telecommunications regulatory initiatives. For this reason, the GiC appeal procedure and its most recent appeal ruling upholding mandated access to FTTP, stand as a compelling testament to the continued ability of the CRTC to protect its status and power as the lead actor in Canada’s telecommunications regulatory regime.

6.1.2. Secondary Research Conclusions

The research results pointed to one area in particular where the GiC appeal mechanism could benefit from procedural reform. The provincial ministerial consultation platform affords an opportunity for provincial ministers to offer consultation to the federal Minister of Industry before an appeal decision is finalized. However, finalized appeal decisions—as they are currently released to the public—merely note that the Minister of Industry “has provided an opportunity for provincial consultation.” These decision releases, in other words, do not go so far as to disclose which ministers actually contributed, or the substance of their contribution. This is where procedural revision could easily take effect. The recommendations for procedural revision are stated below:
For GiC petitions that appeal CRTC regulations, decision outcomes, as they are made publicly available online (Privy Council, 2016), should be released along with:

- Attendance information with names of participating provincial ministers, provincial affiliation, and a description listing of the provincial cabinet position occupied.
- The full meeting transcript of the provincial ministerial consultation, or consultations.

A provision should be established in the provincial ministerial consultation protocol stipulating that consultations with the Minister of Industry cannot take place before the written comment submission period has closed.

These recommendations offer non-intrusive, and thus easily executable, reform propositions that would improve the transparency and accountability of a platform that already exists for provincial ministers to consult the Minister of Industry on an appeal petition.

Protected under section 13 of the *Telecommunications Act* (1993, §.13), this consultation platform offers an invaluable opportunity for decentralized input that could easily mitigate the highly concentrated federal preemption under which telecommunications regulation is administered in Canada (Walden, 2009). The recommendations that have been proposed here help to ensure that the opportunity currently offered for consultation will actually be seized, as it assures accountability through the public release of attendance information and a transcription of consultation proceedings. A provision stipulating that consultations with the Minister of Industry cannot take place before the written comment submission period has closed would inject further transparency and insure that the input of written responses by commenter participants would be better acknowledged in the consultation.
6.2. Research Contributions

The research involved in producing this thesis makes contributions to several areas of scholarship: (a) application of the IAD framework methodology; (b) the field of Canadian regulatory law and administrative policy; (c) telecommunications policy discussions that concern wholesale mandated access; and (d) the role of the CRTC in the Canadian telecommunications regulatory regime at large. In this final section, a brief description of each of these areas of study is provided in turn.

6.2.1. Application of the IAD Framework Methodology

This research has applied a modified framework of the IAD methodology in relation to how it has been typically conceptualized. This modification contributes to the “Ostrom Workshop” community and to policy analysts who employ the IAD approach, namely by demonstrating how the methodology may be tightened and rendered more efficient when applied in future studies. Polski and Ostrom (1999) present a nine step approach for applying the IAD framework to a policy program. This thesis modified and condensed the instructions and questions to be addressed by the framework into a five step approach. If policy analysts intend to apply the IAD framework steps thoroughly and in order, rather than in a more general, non-sequential capacity, this five step approach bypasses questions that land overlapping, if not repetitive, responses. This research also presented the rules-in-use findings in a tabular format that divides the different rules into one table that organizes position rules, and another table that organizes and integrates boundary, scope, and authority rules. This tabular approach allows for the policy analyst to maintain the step-based IAD framework while, at the same time, minimizing repetitive analysis that would otherwise commit to a drawn-out, sentence-based structure.
6.2.2. Canadian Regulatory Law and Administrative Policy

This thesis contributes analysis of the Governor-in-Council (GiC) appeal procedure by situating it as the primary institutional focus in the research. This strategy has provided novel insight and a nuanced analytical approach to researching the Canadian telecommunications regulatory regime, as past regulatory law and administrative policy studies have tended to prioritize the CRTC or Industry Canada. This tendency to mostly neglect Canada’s federal policy appeal procedure has persisted despite the discretionary powers granted to the GiC over CRTC regulatory decisions—and the authoritative role its petition outcomes can, by statute, assume in telecommunications policymaking. Given the paucity of existing scholarship, the research has sought to reconcile the knowledge gap in understanding exposed by the GiC procedure through bridging the institutional relationships between the CRTC, the GiC, and the Minister of Industry.

Contributions made in this research are, furthermore, evident when considering Canada’s telecommunications regime through the context of comparing its regulatory institutions’ procedural mechanics holistically with those used in the American telecommunications regime. When factoring Canada’s GiC appeal procedure into an inter-regime comparison, procedural parallels are easily illuminated. Past studies and prevailing views on the Canadian and American regimes’ respective procedural workings and policy trajectories have been characterized as largely contrastive when under comparison (Cherry, 2012b, 2015; Walden, 2009). However, the administrative similarities that can be connected between the GiC appeal procedure and the American telecommunications regulator, the FCC, present a new, revealing outlook for future regulatory law and administrative policy research to pursue.

The administrative similarities between the FCC and GiC also suggest that criticism directed towards FCC procedural mechanics could perhaps apply to Canada’s federal policy appeal mechanism as well. Exploring the potential for procedural improvements at the GiC, this
research has called attention to the provincial ministerial consultation platform used in the GiC appeal procedure, and highlighted it as an area for reform. If implemented by lawmakers, the recommendations set forth in this thesis would work to improve decision-making transparency, ensure that written comment submissions are factored into appeal outcomes, and offset the high level of federal preemption with which telecommunications regulations are administered in Canada.

6.2.3. The Wholesale Mandated Access Debate in Telecommunications Policymaking

This thesis approached the recent GiC appeal ruling (P.C. 2016-0332), which upheld CRTC wholesale mandated access to FTTP broadband facilities, as the central petition case examined in the research. Deliberating over the CRTC wholesale wireline access program while upholding a priority to analyze the GiC appeal procedure, as was done so in this research, has contributed to exposing two broad, problematic implications that can emerge when a complainant submits a GiC appeal petition. Policy obstruction externalities that result as a byproduct of a GiC appeal decision can impede the developmental progress of CRTC regulatory output—including, most especially, regulations that would fit within the wholesale access program. Potential obstructions have been identified when the GiC either decides to send a policy back to be reconsidered by the Commission; or when the Commission is required to reconcile an appeal ruling that varies or rescinds one provision of a policy under review, but also collaterally obfuscates another, uncontested provision within that same policy. By examining the P.C. 2016-0332 appeal case and the impact a “vary or rescind” outcome could have on DBS implementation, the research has stressed that externalities of this nature can impede CRTC regulatory output as a zero-sum byproduct from which incumbent operators stand to benefit, and competitors to suffer.
Moreover, analysis of the economic nature of DBS has provided additional points of analysis that may contribute to the debate over wholesale mandated access in Canadian telecommunications policymaking, and perhaps elsewhere as well. Through assessment of excludability and subtractability, the research has shown DBS to be defined as a private service (high excludability and high subtractability)—rather than a toll service (high excludability but low subtractability), the category of economic services to which both retail and wholesale markets for wireline broadband provision may commonly, though mistakenly, be attributed.

Recognizing DBS to be a private service adds potential weight and credibility to policy positions that regulators, legislators, and critics could marshal when defending wholesale access regulation for wireline broadband provision. Subtractability, or the extent to which one party’s consumption reduces the supply available to others, will be a challenge for competitors who must physically co-locate at COs or near head-ends—and for the incumbent operators who own such facilities. Wholesale regulation, particularly in the context of considering the logistical hardware realities of DBS, would not just benefit competitors; regulations reminiscent of the Commission’s original “primary purpose rule” (CRTC, 1997b) would also benefit contemporary incumbent operators who require broadband policies established to set standards on network interface practices, such as limits on virtual co-location, at the facilities they own and control. As the DBS implementation process moves forward from proposition to deployment, these insights provide contributions to the wholesale access regulatory debate in a manner that could benefit proponents and sway open-market sceptics.

6.2.4. The Role of the CRTC in Canada’s Telecommunications Policymaking Regime

Finally, this thesis has contributed to the discourse that questions the role of the CRTC in relation to the rest of Canada’s telecommunications policymaking regime. While past scholarship
has asserted the CRTC’s ability to combat and neutralize deregulatory trends, and to defend its institutional mandate from the period of 1976 to 1996 (Doern et al., 1999; Schultz, 1999), infrastructural and policy developments that have transpired over the last two decades have required the question to be returned to again. The research presented herein has contributed to confronting this question. Since the advent of commercially available broadband services, wholesale wireline access regulation demonstrates success by the CRTC in defending its institutional mandate. The GiC appeal procedure and its most recent appeal ruling upholding mandated access to FTTP stand as persuasive indications of the continued ability of the CRTC to protect its status and power as the lead actor in Canada’s telecommunications regulatory regime.
Bibliography


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Appendices

Appendix 1: Petition to the Governor in Council Information Flow, Telecommunications Cases

Appendix 2: Canadian Appeals Procedural Channels
Appendix 3: Canadian Telecommunications Policymaking Regime: Elected or Appointed Institutions?

The diagram illustrates the relationships between the elected and appointed institutions involved in the policymaking process. Here is a brief overview of the key points:

1. **Elected Institutions**
   - **House of Commons**: MP's elected by the electorate.
   - **Cabinet**: Ministers are appointed by the Prime Minister from House of Commons MPs.

2. **Appointed Institutions**
   - **CRTC**: The Canadian Radio-television and Telecommunications Commission, which has regulatory powers.
   - **Federal Court of Appeal**: An appeals court.
   - **Supreme Court of Canada**: The highest court of Canada.

3. **Key Processes**
   - **Petition to the Governor in Council**: The Minister receives the petition and decides the outcome.
   - **Votes for**: The House of Commons votes on policies.
   - **Policies regulate**: The CRTC regulates the telecommunications sector.

The diagram shows the flow of decision-making and regulatory processes between these institutions, highlighting the elected and appointed roles in the policymaking regime.