

# 3 Chapter 3 Economic Regulation



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This report treats economic, technical and social regulation separately. There are no “bright lines” separating the three, and regulatory measures cannot always be neatly categorized according to this taxonomy. Nevertheless, the issues and the measures to address these issues differ sufficiently that it is useful to distinguish them for the purposes of this report.

The ultimate goal of economic regulation, as with other forms of government intervention in the economy, should be to improve Canadians’ quality of life by facilitating economic activity and increasing living standards. This goal should apply to economic policy and regulation in the telecommunications sector.

Chapter 2, Policy Objectives and Regulation, describes the Panel’s recommended core objectives for Canadian telecommunications policy and regulation. These core objectives are aimed at:

- promoting affordable access to advanced telecommunications services throughout Canada
- enhancing the efficiency of Canadian telecommunications markets and the productivity of the Canadian economy
- enhancing the social well-being of Canadians and inclusiveness of Canadian society.

These objectives are not radically different from the core objectives that Canadian regulators and policy makers have taken into account in the past, either explicitly or implicitly. However, the means proposed by the Panel to achieve these objectives differ from traditional regulatory approaches.

The telecommunications industry environment has changed dramatically over the past 25 years, and the pace of change is accelerating. Today, the industry has almost completed its transformation from a small group of regional monopolies operating as regulated “public utilities” and providing a limited set of basic telephone services. The industry now consists of a dynamically competitive group of companies operating in an open market environment. These companies now compete with many regional, national and global players to provide a wide range of telecommunications applications and content services using new technologies.

This transformation calls for a change in the means of achieving Canada’s national telecommunications policy objectives. The changes that the Panel considers necessary can be summarized as follows:

- The move toward economic deregulation of the industry should be accelerated to promote development of a more dynamic, innovative and customer-responsive environment.
- It should no longer be possible or desirable for regulators to “micro-manage” the industry to achieve a planned industry structure or to pre-determine most types of economic arrangements among industry players.

- Much of the detailed economic regulatory framework developed in the past is no longer required, since competitive market forces now are at the stage where they provide the means of achieving the core objectives of telecommunications policy.
- The telecommunications regulatory framework should rely more on the principles of “smart regulation”<sup>1</sup> and competition policy that apply to other sectors of the economy.
- The social goals of telecommunications regulation should be more clearly defined and separated from economic regulation of service providers. They should be directly addressed through competitively neutral regulatory measures that should generally apply to the whole industry.

The balance of this chapter starts with an examination of the rationale for economic regulation. This is followed by a discussion of what retail services should be regulated and what form this regulation should take. Particular emphasis is given to two important issues: control of anti-competitive conduct and the regulation of retail tariffs.

The chapter then turns to the issue of mandated wholesale access by competitors to incumbents’ facilities and networks, including the prices that should apply. The chapter concludes with a discussion on a related topic, namely, the rights and obligations of telecommunications service resellers.

Given the complexity of the telecommunications services sector and the need to adapt traditional competition law to its special circumstances, the Panel believes, during a transitional period of five years, there should be a body combining expertise in the economics of competition with a deep knowledge of the telecommunications industry.

For the reasons given in Chapter 4 below, the Panel believes a new Telecommunications Competition Tribunal (TCT) should be established. The TCT would be a type of “joint panel” of the CRTC and the Competition Bureau, relying on the expertise of both. It would generally have jurisdiction over issues that involve competition as it affects telecommunications services decisions on deregulation and on the control of anti-competitive conduct. The TCT should be subject to a “sunset” provision, the assumption being that after the transition period the TCT will no longer be needed.

This chapter focuses on the nature of economic regulation and which services are to be regulated. Chapter 4 provides a detailed discussion of the proposed structure of the TCT and its powers.

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<sup>1</sup> Many of the key principles of “smart regulation” have been studied and developed in Canada and elsewhere in recent years. Examples of key reports in this area include those by the Economic Council of Canada, *Reforming Regulation* (Ottawa: Supply and Services, 1981) and recently the External Advisory Committee on Smart Regulations, *Smart Regulation: A Regulatory Strategy for Canada* (Ottawa: September 2004). The Panel is of the view that the broad principles set out in the latter report are generally relevant to regulatory reform in the telecommunications sector.

## Factors Affecting the Scope of Economic Regulation

### The Growing Role of Competition

Over the past 25 years, competition has grown very rapidly in Canadian telecommunications markets. During that time, regulation has intensified, often in an attempt to promote competition in specific markets.<sup>2</sup> After the opening of the long distance and local markets to entry in the 1990s, complaints from new entrants of anti-competitive conduct by incumbent local exchange carriers (ILECs) — that is, the telephone companies — grew significantly. As well, technological advances and market opportunities widened the range of activities undertaken by ILECs. Reacting to this, the Canadian Radio-television and Telecommunications Commission (CRTC) has become increasingly engaged in the detailed supervision of their activities and conduct. However, as competition intensifies, economic regulation should make way for market forces to the maximum extent possible.

There are a number of reasons why competitive telecommunications markets can serve consumers and the general economy better than regulation or other government intervention. One key reason is that setting prices and conditions of service that benefit both service providers and customers requires large amounts of information, more than a single organization can easily gather, keep up-to-date and use. This is true whether the organization is government or private sector. In competitive markets, changes to prices and conditions of services are generally made by trial and error, taking into account what has worked in the market and what has not. Competitive market forces can process more information and do so more efficiently than any single service provider or regulator.

Another reason why competitive markets are superior to regulation and government intervention is that regulation imposes significant costs. These include the costs of the regulatory process itself, such as the costs of regulatory compliance by service providers and other participants, as well as costs in the form of unforeseen or unintended consequences.<sup>3</sup>

Competitive markets provide superior incentives to service providers. In a competitive market, service providers can prosper only to the extent that they meet the needs of customers. Provided that barriers to competitive entry have been removed, service providers must innovate and provide services and prices that meet their customers' needs, or customers will switch to competitive options.

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<sup>2</sup> For example, in the mid-1980s, the CRTC established a fixed price differential between prices charged by CNCP for private lines, and those charged by Bell Canada. See: *CNCP Telecommunications — Rates for the Provision of Interconnected Private Line Voice Services*, Telecom Decision CRTC 83-10, 26 July 1983. Ostensibly put in place to compensate for CNCP's lower value of service, in practice the differential served as a pricing umbrella for CNCP, stopping Bell from lowering its prices unless CNCP lowered its prices first, and so ensuring that CNCP could keep its prices at current levels.

<sup>3</sup> For example, preparing and filing economic studies in a level of detail and format specified by the regulator, to show that floor price constraints are met, will require additional time and resources.

In principle, regulation should supplement, not replace, market forces. The Panel considers that competition in Canadian telecommunications markets now has evolved to a point where regulation should be the exception rather than the rule. Such an approach would require a fundamental change in the current legislative framework, which provides that services will be regulated unless the regulator specifically forbears from regulation. The Panel also considers that the new regulatory framework should ensure that where regulation is required, its impact on market forces should be limited and the regulatory measures should be proportional to the problems they are intended to address.

Accordingly, the Panel believes the regulatory framework for Canada's telecommunications sector should rely on competition and market forces to the maximum degree feasible.

#### **Recommendation 3-1**

**The regulatory framework for Canada's telecommunications sector should rely on competition and market forces rather than on economic regulation, to the maximum extent feasible.**

The extent to which market forces can be relied upon varies by region. In regions with very low population density and fewer opportunities to realize economies of scale, telecommunications markets may well be what economists refer to as natural monopolies; that is, markets where costs are based on the scale of output and hence where a single firm can serve the market at a lower cost than several competitive firms. In such situations, regulation may need to continue for the foreseeable future.

Where economic regulation remains necessary, it is desirable, to the extent possible, to have it result in prices and performance levels similar to those that would occur in competitive markets. It will provide monopoly customers with some of the benefits that would have been obtained in a competitive market. It will also ease the transition for customers and service providers to deregulated markets by smoothing out price and performance changes.

#### **Fairness and Efficiency**

Regulation of an industry or a sector of the economy usually has a number of objectives. A major objective should be to maximize efficiency and productivity, in cases in which freely functioning markets are not expected to produce that result. But efficiency is not the only objective. Regulation is also devoted to pursuing a variety of social objectives. An example of a recurrent social objective is fairness in terms of the regulatory treatment of different customers or service providers. In telecommunications regulation, examples of key social objectives include universal access, privacy and availability of emergency services.

Pursuit of some of the social objectives can conflict with the objectives of efficiency and productivity. An example is universal access to telephone service. Rates for basic local residential service were kept significantly below the cost of such service for many years to encourage as many households as possible to subscribe.<sup>4</sup> Unfortunately, this led to major economic inefficiencies, and some customers were discouraged from purchasing services when prices greatly exceeded costs. This was the case with long distance services in Canada for many years.

In an attempt to protect the sources of the cross-subsidies used to finance below-cost local services, regulators and incumbent telephone companies impeded the development of competition for many years. In turn, this led to less cost reduction and may have led to the slower diffusion of innovation than might have occurred with competition.

The system of cross-subsidies proved to be increasingly inefficient and incompatible with competitive markets and was eventually replaced by the regulator with a system of targeted explicit subsidies. Today, explicit subsidies are mandated by the CRTC only for the provision of basic residential telephone service in high-cost serving areas.<sup>5</sup> This separation of social and economic goals has allowed the pursuit of the social objective of universal access at affordable prices, while minimizing the costs in terms of lost efficiencies.<sup>6</sup>

There have been other examples of regulatory measures that distorted economic efficiency to achieve social goals. These include freezing the price of pay telephone service for several decades (in the 1960s and 1970s and again in the 1980s and 1990s), discouraging experiments with local measured service (in the 1970s) and requiring uniform prices across a broad class of customers, even though costs of service vary greatly within the class (a continuing regulatory practice).<sup>7</sup>

A more recent example of a “fairness-based” regulatory approach that conflicts with the efficient functioning of markets can be found in the CRTC’s decision to add a new objective for economic regulation aimed at being “fair” to new competitors. In its decision on the review of its price caps regulatory regime in 2001, the CRTC introduced the objective<sup>8</sup>:

...to balance the interests of the three main stakeholders in telecommunications markets, i.e., customers, competitors and incumbent telephone companies; . . .

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<sup>4</sup> There were some efficiency reasons to keep the price of local access low. The ability to reach additional customers added value to other customers, even though they did not have to pay for it. However, the penetration rate of telephone service has been very high for decades, and the value of additional customers has long since become negligible.

<sup>5</sup> See *Changes to the contribution regime*, Telecom Decision CRTC 2000-745, 30 November 2000 for the initial CRTC decision addressing this regime.

<sup>6</sup> The implicit cross subsidy from urban to rural was also largely removed. As well, large business users have seen very significant reductions in price. However, the large contribution from small business customers is still in place.

<sup>7</sup> For example, all customers in Band B are charged the same, whether they live in a multi-unit dwelling or a single, detached house.

<sup>8</sup> *Regulatory framework for second price cap period*, Telecom Decision CRTC 2002-34, May 30, 2002 (Decision 2002-34), at paragraph 99.

Adding the new objective of balancing the interests of new competitors in designing price caps regulation suggests that prices should be set so that the interests of competitors to the ILECs should be promoted or protected, rather than setting prices at levels that would be produced by a competitive marketplace.

Other Commission initiatives have expanded the doctrine that the CRTC can intervene in markets in order to achieve “fairness” to competitors, even where it appears to be contrary to the principles of efficiency or the lowering of prices to consumers.<sup>9</sup> The Commission’s goal appears to have been to promote the financial viability of competitors to the ILECs, in order to ultimately provide consumers with the benefits of increased competition. Application of the doctrine has resulted in a new, high level of regulatory intervention aimed at shaping the structure of markets, rather than allowing market forces to determine the success or failure of different service providers. The relative degree of intervention by the CRTC on behalf of new entrants has been very substantial and has led to the imposition of extensive constraints by the CRTC on the activities of the major suppliers of many telecommunications services, the ILECs.<sup>10</sup>

The Panel considers that there should be a separation of the economic objectives from the social and “fairness” objectives of regulation. Designing different regulatory instruments targeted at achieving specific objectives limits the extent of unnecessary conflicts between the objectives and contributes to successful achievement of each.<sup>11</sup>

The guiding principles in designing a new telecommunications regulatory framework for Canada should be:

- to recognize that economic efficiency, social objectives and fairness are separate regulatory goals
- to be explicit about which goals are being pursued in any given regulatory intervention
- to make use of separate regulatory instruments to pursue each.

Application of these principles will add transparency to the trade-offs between the different objectives and the costs and benefits of pursuing them.

### Recommendation 3-2

**There should be a clear separation between economic and social regulation, with clear identification of the objectives of the regulation and the measures designed to achieve them efficiently, rather than using economic regulation to pursue social objectives.**

<sup>9</sup> A prime example is the Commission’s decision to shield competitors from reduction in ILEC prices that would have been required by the incumbents’ price cap regime and the creation of the deferral account with the surplus funds (Decision 2002-34).

<sup>10</sup> An example is the CRTC’s treatment of win-back restrictions, which is discussed below in the section on Control of Anti-competitive Conduct.

<sup>11</sup> The desirability of using different instruments to pursue different policy objectives has long been recognized. See, for example, Jan Tinbergen, *Economic Policy: Principles and Design* (Amsterdam: 1956).

Where market forces do not attain social objectives and so government intervention through regulation is required, such intervention should be done in as competitively neutral a manner as possible. In general, economic regulation should not be invoked to promote social objectives. Rather, these social objectives should be the subject of separate and specific obligations applying to all service providers, for example, the requirement for all service providers to provide emergency 9-1-1 service. This is discussed further in Chapter 6, Social Regulation.

### Reasons for Economic Regulation

Economic regulation should be invoked only if it improves efficiency and productivity. Specifically, economic regulation should be relied upon in those instances where competition and market forces alone are not expected to achieve as high a level of efficiency and productivity as can be achieved through regulation. There are three key reasons justifying intervention through economic regulation.

**Significant market power and high prices:** The first reason is related to the presence of significant market power (SMP).<sup>12</sup> In order to maximize its profits,<sup>13</sup> a service provider with SMP has an incentive to keep prices higher and produce lower quantities than those that would normally prevail in a competitive market. As a result, customers who would have purchased some extra units at competitive prices will not be able to do so. This is a waste from the point of view of society as a whole, and hence economic inefficiency. Such pricing also leads to an income redistribution from customers to the service provider since the price for the quantity of service that is produced and purchased is higher than it otherwise would be in a competitive market.

**Abuse of dominance:** A second reason that may justify regulatory intervention relates to the incentives of service providers with SMP to protect their position of market dominance. Such service providers may try to block entry by potential rivals, force existing competitors to exit, or discipline them so they do not try too hard to compete. This type of conduct may amount to an abuse of service providers' dominant position. An abuse of dominance by a provider with SMP that results in (or is likely to result in) a substantial lessening or prevention of competition constitutes anti-competitive conduct. Government intervention may be necessary to control such conduct.

**Network externalities:** A third reason for regulatory intervention relates to the existence of market externalities between customers.<sup>14</sup> The most common example in the telecommunications

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<sup>12</sup> Significant market power denotes a firm's ability to increase its prices significantly in a given market for a non-transitory period, without having its customers cut back significantly on their purchases, either because they are sensitive to prices or because they switch to an alternative supplier or to a substitute product. The expressions "market dominance" and "significant market power" are often used as synonyms. For further information, see the Competition Bureau's Enforcement Guidelines on the Abuse of Dominance Provisions, July 2001. Available online at: <http://strategis.ic.gc.ca/pics/ct/aod.pdf>

<sup>13</sup> These are sometimes referred to as supra-normal profits, which are profits that are larger than may be expected on average for an investment of comparable risk in a competitive financial market.

<sup>14</sup> A market externality is said to exist where one person's actions generate benefits or costs that accrue to others and not to the actor. The person who is acting may not have the motivation to take the best course of action from the point of view of society as a whole. An example of a negative externality is production that generates pollution, the cost of which is borne by society and not the producer. This will likely lead to a level of production that is too high in light of the true cost of production. An example of positive network externalities occurs when the addition of a node to a network confers benefits to existing users at other nodes of the network, benefits that are not captured by the provider or purchaser of the additional node. An example is the addition of a subscriber to a telephone network.

industry involves what are referred to as “network externalities”; that is, the more customers (or nodes) on a telecommunications network, the more valuable is the use of that network for any given customer, because more customers can be contacted.<sup>15</sup>

Significant network externalities can result from the interconnection of different networks. The value of a telecommunications network or service is dependent in part on the number of customers who can be reached. Interconnection of two networks increases the number of accessible users from both networks. This increases the value of both networks to their users.

However, interconnection is usually much more valuable to the operator of the smaller network. All other factors being equal, in the absence of interconnection, the larger network will attract the greater number of customers, thus reinforcing the market position of the larger network. It may be in the interests of its operator to refuse to negotiate interconnection and thus to significantly raise barriers to entry for new entrants.

Similarly, the incumbent may be the sole supplier of certain facilities or services that a new entrant needs to be able to provide service to customers, which cannot readily be duplicated for technical or economic reasons. Denial of access to these “essential” facilities and services may also erect very significant barriers to entry.

Regulation that mandates interconnection and access by competitors to essential facilities operated by incumbents may lower barriers to entry sufficiently to allow competitive forces to operate in the corresponding telecommunications services market.

### **Reasons Not to Regulate**

As discussed above, economic regulation in some circumstances can lead to improvement in the telecommunications sector and in the Canadian economy generally. However, regulation also has costs. These can be quite significant.

In a competitive market, service providers have incentives to reduce costs and prices and to innovate services in order to increase their profits or simply remain in business. Regulation of prices and levels of service constrain service providers’ flexibility. Regulators do not have all of the information required to mandate efficient prices and service conditions in competitive markets. Therefore, it is unlikely that prices set by regulators will maximize the benefits from new services or other innovations.

As well, inappropriate regulatory constraints may reduce incentives for cost reduction, investment and innovation from what they would be in an unregulated market. For example, the regulator may require positive outcomes such as sharing cost savings or increased profits with customers and competitors, either directly or indirectly.<sup>16</sup> This in turn lessens the rewards for taking risks and reduces the likelihood that risky innovation and investment will be undertaken.

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<sup>15</sup> The additional value of each customer generally decreases as more are added to the network. This also favours the operator of the larger network.

<sup>16</sup> Yet, increased costs or lower profits stay entirely with the service provider, as they would in a normal market.

Thus, regulation may reduce benefits from innovations and new services and also hinder cost reductions and other efficiency gains. These problems are all the more severe in an industry such as telecommunications that is marked by rapid technological change.

In addition to distortions in the marketplace, regulation in and of itself can be costly. Both the operating costs of the regulatory agency and the compliance costs of the service providers subject to regulation are recovered from the industry and ultimately in large part from customers. The weight of this burden varies with the intensity of regulation.

Finally, economic regulation, like any other set of behavioural constraints, leads to activity to circumvent those constraints. Such activity is a waste from the point of view of the economy and society generally.<sup>17</sup>

## Removing the Presumption of Regulation

It follows from the preceding discussion that any regulatory framework must balance two types of risk. On the one hand, there is a risk that regulation may be applied where it is not needed because competitive forces are sufficient to protect customers' interests. In such cases, regulation may induce distortions, higher prices and fewer choices.

On the other hand, there is a risk of deregulation where a service provider still has SMP. This may result in higher prices in either the short term (through direct exercise of market power) or in the long term (after disciplining competitors or driving them out of the market). A dominant supplier may also try to extend its dominance through anti-competitive conduct. While this may confer benefits on customers in the short term, it may lead to suppression of competition, higher prices and less innovation in the long term.

With the growth in competition and competitive alternatives in the Canadian telecommunications industry along with rapid technological change, the Panel believes any errors of the second sort will generally be self-correcting. New competition will emerge to challenge most remaining areas of SMP. Canada has reached the point, for the vast majority of retail telecommunications markets,<sup>18</sup> where the potential costs to the Canadian economy of continued regulation outweigh any real benefits.<sup>19</sup>

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<sup>17</sup> See Richard A. Posner, "Preface to the 30th Anniversary Edition," *Natural Monopoly and its Regulation* (1999), p. vii:

The effort to constrain, I argue, is more likely to produce distortions than to bring about a reasonable simulacrum of competitive pricing and output. This is primarily because of information and incentive problems of regulators and because of efforts by the regulated firms to neutralize regulation or to bend it to their advantage.

<sup>18</sup> The term "market" includes both the product or service being offered as well as the geographic area in which it is available. In the regulatory literature, "service" is often used as a synonym of "market."

<sup>19</sup> One leading U.S. jurist has gone so far as to state (Posner, *op. cit.*, p. v):

...public utility and common carrier regulation are more trouble than they are worth even in the diminishing number of industries that have pronounced natural-monopoly characteristics, that is, in which average costs decline over so large a range of outputs that a single firm would have a big cost advantage over multiple firms serving the same market.

Accordingly, the Panel believes the presumption in the current *Telecommunications Act* that telecommunications services provided by Canadian carriers must be regulated unless the Commission forbears should be replaced by a presumption of deregulation for all services. Thus, s. 25 of the Act should be repealed and replaced with a new provision that economic regulation should apply to a service provider in a telecommunications market only if there is a finding that the service provider has SMP in that market.

The Panel recognizes that a transitional period will be required. During the transition, services currently subject to economic regulation should remain regulated for a period of 12 to 18 months, during which all telecommunications markets should be examined to determine whether any service provider has SMP. If there is no SMP, the particular market should be deregulated. If there is SMP, economic regulation should continue.

#### **Recommendation 3-3**

**The *Telecommunications Act* should be amended by removing the current legislative presumption that telecommunications services must be regulated unless the CRTC makes a decision to forbear, and replacing it with a presumption of deregulation whereby**

- (a) economic regulation shall apply only if there is a finding that a service provider has significant market power, and**
- (b) retail telecommunications services shall be offered without the need for tariff filings or similar *ex ante* measures in markets where there is no significant market power.**

#### **Recommendation 3-4**

**The approach to forbearance established in section 34 of the *Telecommunications Act* should be replaced. New provisions should state that, upon application by any party, telecommunications markets subject to economic regulation should be reviewed. Where the review concludes that there is no longer any significant market power in a market, restrictions on price increases should be discontinued.**

#### **Recommendation 3-5**

**There should be a transition period of 12 to 18 months, during which time services that are currently subject to economic regulation shall continue to be subject to such regulation until there has been an opportunity to examine whether there is significant market power in markets for these services.**

In the Panel's view, definitions of relevant telecommunications markets, determinations of significant market power and decisions to deregulate should all be made by the TCT, as discussed at greater length in Chapter 4.

## What Should Be Regulated?

For clarity, a distinction must be made between retail and wholesale regulation. Services that are intended to be purchased by the final customer are referred to here as “retail services.” Access to facilities and services essential to a competitor are referred to here as “wholesale access.” To the degree that these are supplied as a result of an order by the regulator, they are referred to as “mandated wholesale access.” Wholesale access as well as interconnection services are collectively referred to as “wholesale services,” and their regulation is discussed below in the section on Regulated Wholesale Access and Interconnection Arrangements. But first the chapter deals with the various aspects of regulating retail services.

In considering whether there is SMP in a market for a retail service, the analysis must take into account any interconnection and wholesale access to essential facilities and services that has been negotiated between service providers or ordered by the regulator. This is consistent with the general principle of first looking to lowering barriers to entry as a solution to SMP at the retail level, as described in the following section. Economic regulation at the retail level should be invoked only where SMP persists, despite measures taken at the wholesale level.

### Basic Transmission Services

The Panel believes, for purposes of determining which retail services are subject to economic regulation, basic transmission services should be distinguished from discretionary services. A basic transmission service can be defined as a service that provides a transmission path between two points, along with any functionality required for the path to be used.<sup>20</sup> The path may be:

- circuit-switched, whereby a connection is established at the beginning of the communication session and is dedicated to that session until the connection is ended
- packet-switched, whereby the communication is divided into packets and routed via one or more paths, from origin to destination
- assigned permanently to a particular user, as in the case of a private line.

All other retail services should be categorized as discretionary.<sup>21</sup> The CRTC should review all currently regulated services and determine which are discretionary.

Under the new regulatory framework proposed here, there should be a legislative presumption of no economic regulation of basic transmission services. Economic regulation should be maintained or imposed only where there is a finding that the service provider has SMP in the market for a service. Existing economic regulation of basic transmission services should be reviewed and eliminated where there is no SMP.<sup>22</sup>

<sup>20</sup> Examples include local and long distance telephone service, as well as various data services.

<sup>21</sup> Examples include options and features such as call forward, voice mail, etc.

<sup>22</sup> The CRTC should continue entertaining applications for forbearance until the proposed regulatory regime is in place. The CRTC's ongoing forbearance decisions follow the approach established in *Review of Regulatory Framework*, Telecom Decision 94-19, September 16, 1994 (Decision 94-19). The CRTC has recently completed a proceeding on how this approach should apply to local exchange services at the retail level. A decision is pending as of this writing (*Forbearance from Regulation of Local Exchange Services*, Telecom Public Notice CRTC 2005-2).

In deciding whether or not to regulate, account should be taken of the CRTC's telecommunications sector experience to date, including its experience in establishing criteria for forbearance in the local exchange services market.<sup>23</sup>

### Recommendation 3-6

**Economic regulation of retail basic transmission services should be retained or instituted only if there is a finding that a service provider has significant market power in the market for such services.**

## Discretionary Retail Services

There appears to be little danger that service providers will use their dominance in markets for existing discretionary services to appreciably increase prices to customers. This assumption is supported by the CRTC's policies in the past. Indeed, between 1979 and 1998, the CRTC required ILECs to set prices well above costs to maximize "contribution" or profit from these specific services to help cross-subsidize rates for basic local services. From 1998 to 2002, under the CRTC's first price caps regime, the prices for optional local services were uncapped. It was only under the second price cap regime, starting in 2002, that the CRTC placed constraints on price increases for these services. However, even then, the limits were mostly symbolic, allowing for increases of \$1.00 per feature per year, amounting to annual increases of 10–20 percent.

If a service is discretionary, demand tends to be more sensitive to prices. This makes further price increases counterproductive, since they would decrease demand, revenues and profits and so mitigate market power. Therefore, there should be no constraints, other than market forces, on price increases for discretionary services. As far as anti-competitive conduct is concerned, the standard controls of anti-competitive conduct should apply.

### Recommendation 3-7

**Discretionary services should not be regulated to prevent price increases, but subject only to constraints on anti-competitive conduct.**

<sup>23</sup> The CRTC has established tests for the presence of SMP in its forbearance proceedings. Similar tests can be found in Canada's *Competition Act*, its related jurisprudence and the Competition Bureau's Enforcement Guidelines on the Abuse of Dominance Provisions, July 2001. The test for SMP generally proceeds in two stages. First, the relevant market is defined in terms of the set of products or services that are good substitutes for each other. A market has two dimensions: the product market and the geographic market. The boundaries of a market are determined to be the smallest group of products and the smallest geographic area in which a sole profit-maximizing seller (a "hypothetical monopolist") would be able to profitably maintain prices above competitive levels by a significant amount (usually 5 percent) for a non-transitory period of time (usually one year).

Once the universe of existing competitors is identified, an assessment is made of the extent to which those rivals can constrain any market power that the dominant firm(s) might otherwise possess. Market power is the ability to profitably set prices above competitive levels (or with respect to a material, non-transitory reduction in other factors of competition such as service, quality, variety, advertising and innovation) for a considerable period of time. It is often difficult to measure market power directly. As a result, a number of qualitative and quantitative indicators of market power can be used. These include, but are not necessarily limited to, the following:

- market share, including share stability and distribution
- barriers to entry, including any restrictive conduct allegedly engaged in by the dominant firm(s)
- other market characteristics, including the extent of technological change, the amount of excess capacity and whether customers or suppliers have any degree of countervailing power.

The CRTC has established tests for detecting the presence of SMP in its forbearance proceedings.

### Transition to Deregulated Markets

Under the proposed new framework, services that the CRTC has forborne from regulating should continue to be unregulated. Where the forbearance is conditional, with the CRTC having retained some regulatory conditions, these conditions should be reviewed and removed where no service provider has SMP. This is consistent with the presumption against regulation.

As noted in the preceding subsection, retail basic transmission services that currently are subject to economic regulation should remain regulated for a transition period, during which telecommunications markets should be reviewed to determine whether any service provider has SMP.

Consistent with the presumption against regulation, new basic transmission services should not be subject to economic regulation, unless there is a finding of SMP in the relevant market. However, any party could apply for a determination on whether a service provider has SMP in these new markets. If SMP is found, remedies to control anti-competitive conduct in markets for telecommunications services (as proposed in a later section of this chapter) should be considered first. If these remedies are not adequate to protect customer interests and control anti-competitive conduct, then economic regulation should apply, as described in the following section.

A similar process should apply in the case of re-regulation of basic transmission services that have been deregulated. After deregulation, any party should be able to apply for a finding that there is SMP in the relevant retail services market. If it is determined that there is SMP, there should be a further inquiry into whether the available remedies against anti-competitive conduct, as described in a later section, are sufficient protection. If not, economic regulation should be reinstated.<sup>24</sup>

If a retail service is found to be discretionary rather than essential and as a consequence economic regulation does not apply, there should be provisions to re-examine the classification of the service and, if necessary, reclassify it as a basic transmission service. Such a review could be initiated on an application by any party. If a service is reclassified as essential, the rules for economic regulation or re-regulation of a basic transmission service should apply.

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<sup>24</sup> The Panel expects resumption of economic regulation to be necessary only exceptionally. If a market has become competitive once before, in the sense that competition has eliminated SMP, then that market is likely a good candidate for competition in future. Supra-normal profits would be a strong incentive for renewed entry.

**Recommendation 3-8**

- (a) **Currently forbore retail services should continue to be unregulated. Any current conditions on forbearance should be reviewed and maintained only if significant market power is found.**
- (b) **New basic transmission services should be subject to a presumption of no economic regulation.**
- (c) **It should be open to any party to request a review of the existence of significant market power in any telecommunications market. If the review finds that a service provider has significant market power in the market, the next step should be to examine whether competition law, as adapted to telecommunications services, is sufficient to protect the interests of customers and prevent anti-competitive conduct. If it is not, then the service should be subject to economic regulation. If the review finds no significant market power, the service should be deregulated.**

**Recommendation 3-9**

**Provision should be made for reclassifying a retail service from a discretionary to a basic transmission service, and vice versa. The usual tests should be applied when a service is reclassified from discretionary to basic transmission in order to determine whether it shall be subject to economic regulation.**

Once a service is deregulated, there should not be any regulatory controls to prevent price increases. If there is no SMP, competitive forces should protect the interests of customers against excessively high prices. However, even after deregulation, controls on anti-competitive conduct should continue.

In the Panel's view, determination of the basic transmission or discretionary nature of a service draws particularly on knowledge of telecommunications technologies and markets and should be performed by the CRTC. The question of whether basic transmission service is subject to SMP and therefore should be subject to economic regulation should be determined by the TCT. The rationale for this proposal is discussed in Chapter 4. The TCT should also apply controls against anti-competitive conduct. Other aspects of economic regulation, including controls on price increases, if necessary, should continue to fall to the CRTC.

**Symmetric Regulation**

As discussed in Chapter 1, The Need for Change, the old distinctions among different types of service providers are disappearing. Cable companies are offering local and long distance telephone services over their cable networks as well as high-speed access to the Internet. Similarly, the ILECs are starting to provide television and other video programming over their

wireline networks. Network functionality is converging. Increasingly, the operator of any given network is able to offer voice, data and video services, both to fixed locations and on a mobile basis. Service providers are providing competitive bundles of services and applications, based on these multiservice platforms. In the new environment, it will no longer be possible to identify a single “incumbent” service provider.

As well, new entrants may expand their market share and grow to the point where they too have market power. It is not clear which service providers in the longer term will prove to be significant players in particular markets.

The purpose of economic regulation is to remedy market failure, no matter where it is found. It does not matter if the service provider is an ILEC. If a company has SMP and abuses it, economic efficiency and social welfare are reduced, and customers’ interests are injured. Good public policy suggests there should be regulatory intervention to prevent such harm. Conversely, service providers with no SMP should not be subject to economic regulation.<sup>25</sup>

Accordingly, the regulatory approaches described in this chapter should apply equally to all telecommunications service providers, not just to the ILECs.

#### **Recommendation 3-10**

**All forms of economic regulation should be applied symmetrically to all telecommunications service providers having significant market power in any telecommunications market.**

## What Form Should Regulation Take?

There are two broad approaches to the regulation of retail services. The first is direct regulation of prices and quality of service for services purchased by customers. This is also referred to as “retail regulation.” The second approach to regulation is indirect. It involves creating conditions to lower barriers to entry, where these barriers emerge from the unique nature or extremely high duplication costs of certain features of telecommunications networks (i.e. indirect regulation).<sup>26</sup>

The Panel believes, where a service provider has SMP in a retail market, the preferable approach to regulation in that market is to reduce SMP by applying competition law principles designed to lower barriers to entry, thereby relying on competition where possible. It is only when lowering the barriers to entry is not an effective means to prevent the harm done by an abuse of SMP that recourse is needed through direct regulation of retail services.

<sup>25</sup> They should continue to be subject to social and technical regulation.

<sup>26</sup> Great care must be exercised in designing measures to lower barriers to entry, so as not to provide inappropriate incentives to both incumbents and new entrants.

Direct economic regulation will continue to be necessary for markets where there is SMP and where control of anti-competitive conduct is not sufficient to curb abuses of that SMP. Such regulation includes restrictions on pricing as well as other terms and conditions of retail services.

As discussed below in a later section, regulation can also take the form of requiring service providers with SMP to interconnect with, and to make certain facilities and services available to, competitors at regulated wholesale prices on specified terms and conditions. Such measures encourage competition and may be sufficient to remove existing SMP. In such cases, it is generally preferable to focus on wholesale regulation and to deregulate the associated retail markets. In other cases, however, wholesale regulation is not sufficient and some form of direct economic regulation is necessary at the retail level.

The Panel notes that the European Union's Framework Directive, Access Directive and Universal Service Directive<sup>27</sup> attempt to resolve problems of lack of competition in telecommunications markets by regulating wholesale access and interconnection and by turning to retail regulation only when wholesale regulation is not sufficient. This approach is being implemented by member states of the European Union such as the United Kingdom. It is also the approach being followed in Australia and New Zealand.<sup>28</sup>

### Direct Regulation of Retail Services

Direct retail service regulation looks at prices and the accompanying level of service. In the telecommunications area, the two most common forms of direct retail service regulation are price cap regulation<sup>29</sup> and rate-base/rate-of-return regulation (RBROR).<sup>30</sup> It is generally accepted today that RBROR does not provide proper incentives for increased efficiency and productivity. Its principal virtue is fairness between customers, on one hand, and investors on the other, permitting the latter to earn a fair rate of return, but no more. However, as a form of cost-plus regulation, it provides incentives to increase the costs of producing regulated services, not to decrease them.

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<sup>27</sup> Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), available online at: [http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l\\_108/l\\_10820020424en00330050.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_108/l_10820020424en00330050.pdf); Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive), available online at: [http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l\\_108/l\\_10820020424en00070020.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_108/l_10820020424en00070020.pdf); Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive), available online at: [http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l\\_108/l\\_10820020424en00510077.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_108/l_10820020424en00510077.pdf)

<sup>28</sup> For further information, see New Zealand, Department of Communications, *Ministerial Inquiry into Telecommunications Final Report*, November 27, 2000; and Commonwealth of Australia, *The Performance of the Australian Telecommunications Regulatory Regime*, Senate Environment, Communications, Information Technology and the Arts Committee Report, August 10, 2005.

<sup>29</sup> Under price caps, the average price of all capped services is calculated as an index. At all times this index cannot exceed a target index based on prices at the start of the price cap period, adjusted upward annually for experienced inflation and adjusted downward annually according to a pre-set target reflecting expected productivity increases.

<sup>30</sup> Under RBROR, a regulated company's revenues and expenses are forecast one year out. If the resulting return on equity is below an allowable rate of return, which is the minimum that financial markets require before advancing new equity, the company is allowed to increase its prices to generate just enough revenues to close the gap. Similarly, if the forecast return is higher than the allowed rate of return, the company may have to decrease its prices.

As the CRTC has recognized, price cap regulation offers better incentives for efficiency and productivity gains. By allowing the regulated company to retain productivity gains in excess of a target level, price cap regulation provides incentives to increase productivity. As well, linking retail price changes to inflation and target productivity gains encourages allocative efficiency and protects end customers from excessive prices.

Price cap regulation has other advantages. It is easier to administer, eliminating the need for detailed oversight of a regulated company's operations and finances. It provides better incentives for innovation and reduced costs. It is flexible and can accommodate rate rebalancing, rate restructuring and subsidies as necessary. It can be applied in all situations where RBROR has been used to protect customers from excessive price increases. Finally, it requires less regulatory intervention in the operations of regulated companies and so minimizes regulation-induced distortions.<sup>31</sup>

Since price cap rules are relatively simple, *ex ante* ("prior") approval is not required for effective enforcement, particularly given the stronger *ex post* ("after the fact") remedies recommended in this report. Given the desirability of minimizing regulatory burden, enforcement of price cap constraints should be limited to *ex post* enforcement by means of an annual filing requirement or upon complaint by a customer or a competitor.

### Recommendation 3-11

**A price cap framework should be used when economic regulation of retail services is necessary, and enforced on an *ex post* basis by means of an annual filing or in response to a complaint by a customer or a competitor.**

### Price De-averaging

Originally, a principal objective of telecommunications regulation was fairness. This has long been a cornerstone of the public utility model of regulation, which formed the basis of telecommunications regulation in Canada throughout the 20th century and into the 21st. Section 27.(2) of the current *Telecommunications Act* prohibits "unjust discrimination" among customers or (as interpreted by the CRTC since 1977)<sup>32</sup> between a regulated service provider and a competitor.

One application of the prohibition against unjust discrimination has been the regulatory requirement for uniform pricing (or "price averaging," as it is known in telecommunications). The current regulatory framework still assumes that charging different prices to different customers for the same service is a form of unjust discrimination, unless there are demonstrable cost differences or similar justification. Even where there are such differences, the CRTC has

<sup>31</sup> In this context, it is questionable why NorthwesTel or the smaller independent ILECs should still be regulated under a RBROR regime.

<sup>32</sup> See *Challenge Communications Ltd. v. Bell Canada*, Telecom Decision CRTC 77-16, affirmed (sub nom. *Re Bell Canada and Challenge Communications Ltd.*), [1979] 1 F.C. 857, leave to appeal denied [1978] 2 S.C.R. v.

generally required ILECs to offer services under a general tariff, available to all customers. Accordingly, current CRTC regulation generally requires the same prices to be charged to all customers in a class, rather than allowing different prices for different customers.<sup>33</sup>

Charging different prices to different customers, or “differential pricing,”<sup>34</sup> is a normal business practice. In some cases, it could constitute anti-competitive conduct. If so, it should be dealt with as described in the next section. However, CRTC prohibitions on differential pricing extend beyond anti-competitive concerns and seem to be based on “fairness” principles. Unfortunately, in this case, fairness conflicts with normal business practice and indeed can lead to a significant loss of efficiency.

Differential pricing is especially important in industries with relatively large fixed and common costs. The widely accepted economic theory of Ramsey pricing<sup>35</sup> suggests that the best way of recovering such fixed costs is through different markups of price over incremental costs for various market segments. The more price-sensitive the customers in a given market segment, the lower the markup that should be charged to them. Thus pricing targeted to customers who are also targeted by competitors should not be prohibited *per se*. This type of targeted pricing takes place in most competitive markets. There is no good policy reason to prevent it, unless it constitutes anti-competitive conduct.

Differential pricing may be necessary if a firm is to maintain financial viability by covering its fixed costs, or to ensure the potential profitability of a new service. If some customers are very price sensitive, or place a lower value on the service in question, it may take very low prices to induce these customers to buy or to increase their purchases. If the incremental costs of providing the service are very low, it may be profitable to offer the service to these customers even at these very low prices, since there will still be some contribution toward the recovery of fixed costs.

Obliging a service provider with SMP to charge a uniform price to different groups of customers may be seen by some as a regulatory measure to protect particularly vulnerable customers. The reasoning is that a service provider would not want to risk losing those customers who have choices by increasing prices across-the-board; the result would be that those customers with few or no choices might be able to piggyback on those lower rates. However, concerns regarding the potential for price de-averaging to result in anti-competitive pricing in the lower-priced markets or excessive prices in higher-priced markets are best addressed by controls on anti-competitive conduct and price cap regulation in the relevant markets. Given the objective of promoting an efficient and productive economy, inefficient price-averaging requirements should not be imposed on the majority in the interests of protecting a few subscribers, particularly where other, more appropriate safeguards are available.

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<sup>33</sup> See, for example, Issues with respect to the provision of optical fibre, Telecom Decision CRTC 2005-63, 21 October, 2005 at paragraph 43 (requiring that dark fibre be offered pursuant to a General Tariff).

<sup>34</sup> The term “differential pricing” is used in the report synonymously with the term “price discrimination” as that term is used by economists.

<sup>35</sup> For an explanation of Ramsey pricing, see OECD, *Access Pricing in Telecommunications* (Paris: OECD, 2004), pp. 28–30. Available online at: <http://www.oecd.org/dataoecd/26/6/27767944.pdf>

The public utility model of price averaging is no longer suitable in today's increasingly dynamic and competitive telecommunications markets. Social or fairness concerns should be addressed on their own merits and dealt with through targeted regulatory initiatives, not broad uniform pricing requirements. There should be no prohibition on price differentiation and targeted pricing unless it is found to be anti-competitive conduct, using the criteria described in the next section.

#### **Recommendation 3-12**

**There should be no prohibition on price differentiation and targeted pricing unless they are part of a practice that is determined to be anti-competitive conduct.**

The Panel believes the broad prohibitions of ss. 27.(2) against unjust discrimination and undue or unreasonable preferences are much too general and rely too greatly on the regulator's discretion. Potential problems and abuses should be specifically identified and measures should be designed as narrowly as possible to target them adequately. As a separate matter, the requirement in ss. 27.(1) for rates to be just and reasonable is an attempt to balance the interests of customers as a body on the one hand with those of a service provider on the other hand. While appropriate in a monopoly environment, this provision has run its course and should be replaced by reliance on competitive market forces where possible and by explicit constraints on price increases otherwise. In the Panel's view, both ss. 27.(1) and 27.(2) should be removed and replaced by more specific measures to address carefully defined issues and problems.

#### **Recommendation 3-13**

**The current standards for price regulation as set out in section 27 of the *Telecommunications Act* are too general and allow for too much discretion. They should be replaced by more specific measures targeted at consumer protection and control of anti-competitive conduct.**

## Control of Anti-competitive Conduct

Service providers with SMP may try to preserve or extend their dominance through anti-competitive conduct. Such conduct has the effect of disciplining competitors or preventing their entry, with the likely result of substantially lessening or preventing competition.

Regulatory measures should be in place to sanction service providers who engage in this type of conduct. However, normal business conduct, characteristic of competitive markets, should be permitted. Care should be taken to ensure that control of anti-competitive conduct does not "chill" or unduly discourage normal competitive activity. Otherwise, regulation could become counterproductive.

Consistent with the deregulatory approach adopted by the Panel, the new regulatory framework should set out broad principles to prohibit anti-competitive conduct instead of detailed *ex ante* rules. In the event that conduct infringes upon these principles, *ex post* enforcement should be swift, and penalties should be severe enough to act as a meaningful disincentive to such conduct.

Over the years, the CRTC has developed a number of forms of retail market regulation aimed at preventing anti-competitive behaviour by ILECs. These regulatory restrictions have a number of features in common that are not usually found in competition law.

### ***Per se* Prohibitions**

First, the most onerous retail market restriction is the *per se* ban on certain acts; that is, the acts are prohibited whether or not they have anti-competitive intent or effect and whether or not they are likely to substantially prevent or lessen competition.

For example, the establishment of floor prices is intended to prohibit ILECs from pricing below costs. The regulatory goal is to prevent predatory pricing (also called “predation”). However, the CRTC’s prohibition against below-cost pricing for non-forborne services is absolute.

A major factor to be considered under competition law principles is the possibility of recoupment of short-run losses; that is, whether the predation is in fact profitable in the long run by reducing or eliminating competition in the market in question and then raising prices to monopoly levels, or by establishing a reputation for “toughness” and so “chilling” competition in other markets in which the firm operates.

At present, the CRTC does not require evidence that recoupment is likely to occur before it prohibits below-cost pricing and other conduct that it considers to be anti-competitive. As a result, such conduct is banned even where the conduct would be irrational if driven by anti-competitive intent or effect. As well, the CRTC does not examine the likely impact on competition and ultimately on customers of such practices. Benign and harmful conduct is banned together. This blanket prohibition may deprive customers of the benefits of price cuts that do not substantially lessen competition. Indeed, the result may be to dampen competition rather than encourage it. After all, intense price rivalry is an objective of competition policy.

Traditionally, under RBROR regulation, the risk of recoupment was very high — high enough that *per se* limitations on below-cost prices may have been justified. However, with the move away from RBROR to price cap regulation, this is no longer the case. Furthermore, consolidation in the industry has resulted in fewer but better-financed and more stable competitors in many markets, thereby increasing the costs of any predation strategy and reducing the likelihood of eventual recoupment.

The Panel concludes that continuing to enforce blanket prohibitions on below-cost pricing, without taking into account the circumstances of the case, is no longer necessary or appropriate.

Another example of a *per se* restriction is the “win-back” prohibition. Currently, the CRTC prohibits an ILEC from directly contacting customers who have moved to a competitor for their local exchange service for purposes of persuading the customer to switch their service back to the ILEC. The no-contact/win-back restriction runs for three months from the loss of a customer for business service and twelve months for residential customers.

One justification for the win-back restrictions is that customers should be given an opportunity to try a competitor’s service and judge the quality and reliability before being exposed to the incumbent’s win-back efforts. In effect, the rules created a temporary protection for the new entrant against targeted marketing efforts by the ILEC.

However, marketing to one’s competitor’s clients is a major objective of many campaigns in various sectors of the economy. Often, customers who have switched once can be induced to switch twice (and more). These customers tend to be more responsive to better offers. As a result, it is rational for the ILEC to target these customers. It is also beneficial, at least in the short run, for the customers. Indeed, making offers and counter-offers to the same customers is the very essence of competition.

Unless a win-back campaign can be shown to significantly lessen competition, with the ensuing detriment to consumers outweighing the benefits to them (a very unlikely occurrence, in the Panel’s view), win-back campaigns should not be restricted by the regulator.

### ***Ex Ante* Rules**

The CRTC’s restrictions are enforced on an *ex ante* basis, via prior approval of tariffs, rather than on an *ex post* basis. For example, an ILEC proposing a price decrease for a service must satisfy the CRTC that the new price is set above the floor price before it is allowed to implement the change. By contrast, *ex post* enforcement would allow a price change to be implemented and would impose penalties only if the change were subsequently found to be part of a practice of anti-competitive conduct.

The CRTC started developing these regulatory restrictions against below-cost pricing by ILECs in 1979,<sup>36</sup> well before passage of the current *Competition Act* and its provisions for civil offences in cases of abuse of dominance. Hence, the CRTC had little guidance from competition law and developed its own, often unique, measures. In addition, and as stated above, under RBROR, the risk of recouping losses from anti-competitive conduct was high.

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<sup>36</sup> See *Inquiry into Telecommunications Carriers’ Costing and Accounting Procedures: Phase II — Information Requirements for New Service Tariff Filings*, Telecom Decision CRTC 79-16.

In an environment of tight control of markets in which competition was just beginning and where the threat of anti-competitive conduct was high (because of ease of recoupment), it is to be expected that the CRTC would require *ex ante* controls in the form of prior tariff approvals and accompanying documentation. However, telecommunications markets have changed. Most are now competitive at varying levels of intensity. Therefore, the risk of inadvertently discouraging or sanctioning legitimate price and service competition has significantly increased. As well, as regulatory mechanisms have evolved away from RBROR and, as the scope of monopoly markets has shrunk, the chances of recoupment have decreased dramatically.

In such circumstances, the Panel believes it is no longer appropriate to require *ex ante* control of conduct that may prove to be anti-competitive. Rather, attention should turn to stopping behaviour that has been demonstrated to be anti-competitive, with sanctions that are severe enough to discourage future conduct of this sort.

It follows that the restrictions on anti-competitive conduct, developed by the CRTC in another era and under other incentives, need to be reviewed to determine whether they are still appropriate.

### Competition Law Approaches

In practice, it can be very difficult to distinguish healthy competitive rivalry from anti-competitive conduct. Accordingly, modern competition law has developed specific approaches to distinguish pro-competitive from anti-competitive conduct. In applying these approaches, competition law attempts to disallow conduct that is anti-competitive (referred to as Type I errors) and to allow bans on conduct that is pro-competitive (Type II errors). Many competition law commentators consider Type II errors to be more serious, as they can chill the very competitive conduct that is beneficial to society.<sup>37</sup> As well, prohibiting pro-competitive practices deprives customers of immediate benefits, which should not be dismissed lightly.

To address anti-competitive conduct in the telecommunications market, the provisions of the current *Competition Act* cannot be adopted word for word but can serve as a framework. Telecommunications is a network industry, with large sunk costs and significant economies of density and scope as well as positive externalities.<sup>38</sup> In such an industry, network effects are important, which naturally allow some players to have very large market shares in equilibrium. As well, the definition of the proper market for further analysis can be particularly difficult in telecommunications markets.<sup>39</sup>

<sup>37</sup> See Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* (Cambridge, MA: Harvard University Press, 2005), pp. 45ff.

<sup>38</sup> Sunk costs are expenditures that have been incurred and cannot be recovered if operations are discontinued. Economies of density occur if unit costs decline as volume of output increases at a given location. Economies of scope occur when the cost of producing two products together is less than the combined costs of producing the two products separately. See also note 12 above.

<sup>39</sup> In theory, every location can be viewed as a different market for the purposes of access and every route (or origin–destination pair) a different market for purposes of transport. In the market for local services, this can lead to millions of markets. It is not administratively feasible to examine all of these markets individually on an *ex ante* basis, for example in the context of a decision on forbearance. Here, some degree of aggregation of markets is necessary before analysis can proceed. But different markets can be examined individually on an *ex post* basis, focusing on those particular markets where there have been complaints of anti-competitive conduct.

The Panel considers that s. 79 of the current *Competition Act* provides an appropriate starting point for developing a framework for analysis of complaints of anti-competitive conduct in today's competitive telecommunications industry. In particular, for a finding of abuse of dominance, there must be findings of:

- market dominance, synonymous with SMP
- a practice of anti-competitive acts
- an effect of likely preventing or lessening competition substantially in a market.<sup>40</sup>

In considering the third condition, an important element to consider is whether the substantial lessening or prevention of competition is a result of superior competitive performance.<sup>41</sup>

To assist in interpreting the second condition above, the *Competition Act* gives a non-exhaustive list of anti-competitive acts in s. 78. In the Panel's view, the list of acts in section 78 is not well suited to telecommunications markets. Some of the acts are very unlikely to be found in telecommunications, for example, freight equalization. As well, some acts that could be problematic in telecommunications, such as refusing interconnection, are not listed in s. 78.

Accordingly, the Panel believes a somewhat modified set of rules and guidelines should be established to assist in distinguishing anti-competitive conduct from vigorous competitive rivalry. This task should draw on competition law principles as expressed in s. 79 of the *Competition Act* as well as on detailed knowledge of the telecommunications industry. This effort can be expected to be a significant one, given the complexities of the markets under examination.

The Panel believes work on this issue should begin as soon as possible, without waiting for amendments to the *Telecommunications Act*. A review of the current approach to regulation of anti-competitive conduct in telecommunications markets is needed in any case, whether or not the *Telecommunications Act* is amended.

A working group drawn from among staff members of the CRTC and the Competition Bureau, with the assistance of outside experts as necessary, should be established as soon as possible after the government's response to this report:

- to review both current CRTC practices and competition law principles and experience with regard to the control of anti-competitive conduct
- to design a new set of provisions and processes governing the control of anti-competitive conduct in telecommunications services, based on this review and on adapting competition law principles to telecommunications markets
- to develop a set of telecommunications-specific guidelines for market definition and market analysis, again to reflect the specific characteristics of telecommunications.

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<sup>40</sup> *Competition Act*, R.S.C. 1985, c. C-34, s. 79(1).

<sup>41</sup> *Ibid.*, s. 79(4). Note that the current wording of s. 79(4) appears to be in error, with the phrase "a result of superior competitive performance" attaching to the practice in question, rather than to the substantial lessening or prevention of competition.

**Recommendation 3-14**

**Control of anti-competitive conduct in telecommunications service markets should be guided by competition law principles, suitably modified to take into account the specific features of the telecommunications service industry.**

**Recommendation 3-15**

**A working group should be established and comprised of members drawn from both the CRTC and the Competition Bureau as well as independent experts. The working group should draw upon competition law principles and knowledge of the telecommunications industry, as soon as reasonably feasible, to develop specific guidelines for the application of competition policy to the industry, including**

- (a) specification of the types of practices that could constitute abuse of dominance, and**
- (b) guidelines for market definition and analysis of significant market power.**

## Role of Retail Tariffs

### Tariff Filings

Currently, ILECs must file tariffs with the CRTC for all telecommunications services that are not forborne. The tariffs must describe proposed prices and other terms and conditions governing how the services will be offered. The applicant must receive approval of the tariff before offering the new service or before changing the prices or conditions of an existing service.

Broadly speaking, there are two kinds of retail tariff: general tariffs, designed for mass markets (especially residential and small and medium-sized business customers); and customer-specific arrangements, designed for individual customers (often very large enterprises). Both kinds of tariff serve several functions. First, they are treated, for many purposes, as similar to a service contract, specifying the rights and obligations of the service provider and the customer. Second, they are publicly available and thus disseminate information on the service provider's prices and other terms and conditions. This information can be used by other customers in their dealings with the service provider. Third, the tariff approval process is a major vehicle by which the CRTC has traditionally set *ex ante* regulatory restrictions on a service provider's actions.

General tariffs also play a fourth role. As discussed above in the section on forms of regulation, since they are designed for a mass market, they offer the same prices and non-price terms to all customers who wish to avail themselves of a service. This in turn helps promote the traditional fairness objectives of no unjust discrimination and, particularly, uniform pricing. In line with its interpretation of ss. 27.(2) of the *Telecommunications Act*, the CRTC continues to prefer new services to be made available through general tariffs rather than through customer-specific arrangements. As discussed above, the Panel finds regulatory requirements for uniform pricing for its own sake, and absent anti-competitive conduct, is no longer necessary or appropriate.

The requirement for *ex ante* approval of tariffs imposes certain regulatory costs on service providers. First, the tariff approval process and the requirement for supporting documentation are administratively burdensome and costly to produce. Second, *ex ante* approval of tariffs can introduce lengthy delays from the time a service provider makes a decision to introduce a service to the time when it can offer it to customers. At times in the past, such delays have extended for months or occasionally even years. However, the CRTC recently has introduced streamlined processes that can in some cases reduce the time to approve a tariff to a matter of ten days or so.

Nonetheless, in a rapidly evolving market, a delay of ten days, combined with the greater amount of time required to assemble the information necessary to comply with CRTC filing requirements, can impede a service provider's ability to respond to customer requests or to marketplace developments. This is especially true in a competitive "bid" situation, where a counter-offer may have to be immediate to be of value. In these instances, any regulatory requirement to prepare tariff applications and to receive prior tariff approval can hinder competition and potentially deprive customers of lower prices.

A primary purpose of prior tariff approval by the CRTC today is *ex ante* screening to enforce:

- prohibitions against unjust discrimination (largely in the form of constraints on differential pricing)
- restrictions on promotional activity
- price floors designed to address anti-competitive behaviour
- price cap constraints.

In all cases, the Panel recommends replacing *ex ante* approval with *ex post* enforcement and eliminating restrictions. Consequently, under the regulatory framework proposed by the Panel, prior tariff approval will no longer serve a useful purpose.

With a move from *ex ante* to *ex post* regulation, the current tariff process clearly needs changes. There are two issues:

- Should the filing of tariffs still be required for services that are regulated?
- If so, should there be a tariff approval process and what form should it take?

With respect to the first issue, tariffs can be regarded as similar to mass market contracts, setting out each party's rights and obligations. To the degree that *ex post* regulation will be called upon to enforce these rights and obligations, it is useful to have them set out in a tariff on file with the regulator.

It is generally useful to have tariffs public and open to inspection by all parties. However, there are advantages to having tariffs for which certain key terms are kept confidential. For example, confidentiality will allow service providers greater flexibility to strike different deals with

different customers, as in normal competitive markets, reflecting the circumstances of each customer. Open or public contracts can be a medium for anti-competitive coordination of pricing, if there are several suppliers in the particular market, which is another reason that supports keeping tariff filings confidential. However, under the approach proposed by the Panel, prices will continue to be regulated only if the service provider who is filing the tariff has significant market power. Placing information in customers' hands regarding that supplier's pricing and other practices will help redress the imbalance of power and the relative lack of information that disadvantages the customer.<sup>42</sup>

### **Recommendation 3-16**

**Telecommunications service providers should continue to file tariffs for services that are subject to economic regulation. These tariffs should be open to public inspection.**

The Panel believes it should be the service provider's choice to use a general tariff intended for a mass market, or a series of customer-specific arrangements for different customers. This approach provides the service provider with the flexibility to accommodate changing market needs, implement price differentiation and otherwise respond to increasing uncertainty and rapid market changes.

### ***Ex Ante* versus *Ex Post* Tariff Approval**

The Panel believes there should be substantial economic deregulation of services provided in retail markets, generally subject only to the *ex post* safeguards discussed in this chapter and in Chapter 9, Policy-making and Regulatory Institutions. The move to a regulatory framework that focuses on *ex post* enforcement suggests that *ex ante* approval of tariffs is not necessary. However, there may be legitimate regulatory concerns related to social or technical implications of a change in conditions of offering a regulated service.

Therefore, the Panel considers that tariffs for regulated services should be subject to a "negative disallowance" process. Under this process, a tariff would automatically come into effect seven days after it is filed, unless within that time the tariff is disallowed or suspended for further investigation. Under the proposed approach, reasons should be provided for any suspension as well as an estimated date by which a final decision on the tariff can be expected.

### **Recommendation 3-17**

**Tariffs for regulated services should be subject to a negative disallowance process, in that they would automatically come into effect seven days after they are filed, unless they are suspended or disallowed by the CRTC, in which case the CRTC should provide**

- (a) the reasons for a suspension or a disallowance, and**
- (b) an indication of when a final decision on a suspension will be made.**

<sup>42</sup> Open tariffs also can serve as a source of information to competitors to help them detect anti-competitive conduct and, where appropriate, formulate a complaint in a timely manner.

## Bundles of Services

Telecommunications service providers offer bundles of services for a number of reasons, such as to add value to customers by integrating functions or to offer price discounts analogous to volume discounts. If all of the services in a bundle are deregulated, then it follows that the bundle offering also should be deregulated. Conversely, if all elements of the service bundle are subject to economic regulation, then the bundle also should be regulated. An issue arises, however, when the bundle offering combines services that are deregulated with elements that are still subject to economic regulation.

For bundles containing both regulated and deregulated services, there is no need for restrictions on price increases for the bundle, as long as the regulated service elements in the bundle are available on a stand-alone basis. If a customer thinks that the price of the bundle is too high, the customer has the option of purchasing the individual regulated elements at prices that are regulated. As for the unregulated elements of the bundle, competitive pressures protect the customer's interests.

There may be a concern that the service provider of a bundle containing both regulated and deregulated service elements may use the bundle to circumvent downward pricing limits or other constraints applicable to the individual regulated elements. To guard against these types of anti-competitive actions implemented via bundles, there should be a requirement to file tariffs for bundles that contain service elements subject to economic regulation. These tariffs should not need prior approval to come into effect and should not be subject to a negative disallowance process.<sup>43</sup> However, they should be subject to *ex post* challenge on the grounds that they constitute anti-competitive conduct. The appropriate tests for anti-competitive conduct should then apply.

## Discontinuing Retail Services

Today's telecommunications markets are increasingly dynamic, with new services replacing old ones and antiquated ones being phased out. In the rapidly changing technological environment, these changes are inevitable and regulation should not stand in the way. However, discontinuance of retail telecommunications services can cause serious inconvenience and disruption to the lives and businesses of customers if there are no ready substitutes.

Accordingly, the Panel proposes that under the new regulatory framework, a service provider should be allowed to discontinue a regulated retail service only with the permission of the regulator. The regulator would consider social impacts as well as the availability of other services to provide adequate substitutes before authorizing a service provider to discontinue a regulated service in any given market or location.

Because of the CRTC's specialized expertise in this area and because of the social impacts, the Panel recommends giving the power to approve discontinuation of a regulated service to the CRTC.

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<sup>43</sup> The negative disallowance process does not need to apply to the bundling of regulated and unregulated services. To the degree that the elements of the bundle are regulated, any social and technical concerns will have already been addressed through the regulatory process.

For deregulated services in markets where there is no SMP,<sup>44</sup> if any service provider discontinues provision of a service, customers may often be able to obtain a satisfactory substitute from another provider.<sup>45</sup> However, the customer will have to make appropriate arrangements, and this can take time. Accordingly, before discontinuing a deregulated retail service to any location, a service provider should be required to give sufficient notice to affected customers. The length of the notice period should depend on circumstances, such as the availability of a ready substitute and assistance in migrating to it.<sup>46</sup>

### Recommendation 3-18

**A telecommunications service provider should be allowed to discontinue a regulated service only if authorized by the CRTC. A telecommunications service provider of a deregulated service should be able to discontinue service without authorization, provided that reasonable notice is given to customers.**

## Regulated Wholesale Access and Interconnection Arrangements

The discussion now turns to the regulation of wholesale access and interconnection services (collectively referred to as “wholesale services”).

As discussed earlier, telecommunications markets are characterized by network effects. The greater the number of customers accessing a given network, in general, the more valuable is the network. In addition, certain telecommunications facilities or network elements cannot easily be duplicated, either technically, because of their special nature (e.g. telephone numbers) or economically, because of economies of scale (e.g. access networks in very low-population-density areas). These features of telecommunications networks can constitute significant barriers to entry into the corresponding markets.

A major role of economic regulation of telecommunications markets is to reduce these barriers to entry. Thus, interconnection allows a new entrant to enjoy the same network reach as an incumbent, without obliging a complete duplication of the incumbent’s network. Interconnection also maintains, or increases, the value of any given network to the customers accessing it. As well, access to incumbents’ essential facilities,<sup>47</sup> whether through voluntary commercial agreements or, in the last resort, through regulatory obligation, allows a new entrant to put in place essential components of its network, even where these would normally be in the nature of a natural monopoly.

<sup>44</sup> Discontinuance of service may also be restricted by a service provider’s obligation to serve. See Chapter 6, Social Regulation, for a discussion of this issue.

<sup>45</sup> If only one service provider remains in the market for an essential service, it will likely have SMP and so will be subject to economic regulation. Thus it will have to seek regulatory authorization before abandoning service.

<sup>46</sup> Current procedures for discontinuing services are set out in Telecom Circular CRTC 2005-7, 30 May 2005.

<sup>47</sup> “Essential facilities” are facilities and services that are needed by a competitor so it can build its own network and offer competing services, but that cannot technically or economically be duplicated. The concept is discussed further in this section, below.

A central objective of the telecommunications regulatory framework should be to maximize incentives for network efficiency, innovation and investment. A fundamental determinant of these incentives is the scope of “mandated wholesale access.”<sup>48</sup>

The Panel concludes that the scope of wholesale access currently required by the CRTC is too broad and that it undermines incentives for competitive entry, investment and innovation. The scope of such mandated wholesale access should be narrowed. However, to ensure that service providers have an opportunity to adapt to the new environment, there should be a transition period during which all existing mandated wholesale arrangements will remain in place. The remainder of this section gives the Panel’s reasons for these conclusions.

### Access and Interconnection

There are two general types of services that telecommunications service providers often afford one another. The first category, referred to collectively as “wholesale access” services, involves services, network functions or facilities that are used by a service provider in provisioning its network in order to supplement network facilities that it already owns or intends to build (or “self-supply”). This category includes retail services that are also used by end-users as well as services made available only between service providers. Examples include local and long distance private line facilities,<sup>49</sup> local loops and services that “transit” traffic from a carrier to one or more other carriers via an intermediary carrier. Wholesale access services can be made available under either mandated arrangements or voluntary commercial arrangements.

New service providers wishing to make maximum use of their own facilities prefer to lease from other providers only the specific elements needed to provision their networks. Where the incumbent does not make the desired network elements available on their own but only as part of a more comprehensive service, new entrants are forced to purchase more than they might like. At a new entrant’s request, the incumbent may separate out or “unbundle” just those network elements desired by the new entrant. This can occur through a commercial agreement or through a mandatory regulatory order. The resulting network elements and ancillary services typically are not available to nor indeed demanded by retail customers. That is why they are referred to in this report as “wholesale access.”

The second category of services that telecommunications service providers obtain from one another consists of interconnection services. Interconnection services permit communication between customers of different networks.<sup>50</sup> Interconnection arrangements are required even in those situations in which the service providers rely entirely on their own facilities in provisioning their networks. Interconnection services thus differ from services provided under mandated wholesale arrangements in that both incumbents and entrants require interconnection services.

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<sup>48</sup> As noted in an earlier section, “mandated wholesale access” refers to the extent to which ILECs or other service providers are required by regulation to make parts of their network available to their competitors at regulated rates.

<sup>49</sup> A private line is a telecommunications transmission facility between two or more points that is dedicated to the user.

<sup>50</sup> Interconnection has always been considered in terms of traditional telecommunications operations. However, what is happening in the Internet is also in many ways the same as interconnection. Internet access providers also must arrange for customers on their network to reach nodes on other providers’ networks. Providers usually enter into commercial or “peering” arrangements.

Both also control an interconnection “bottleneck” in the sense that if they do not permit interconnections, customers on their two networks will not be able to communicate with each other.

### Wholesale Access in Canada

For many services, the CRTC originally encouraged competition via resale.<sup>51</sup> Various rulings in the 1980s and early 1990s established a general policy requiring an incumbent who chose to offer a retail telecommunications service to permit resale of that service, whether by competitors or others.

The CRTC introduced facilities-based competition in the 1990s. It did so recognizing that the construction of network facilities by entrants was necessary for the full benefits of competitive entry to be realized. Under resale-based competition, competitive incentives for innovation and efficiency were largely confined to retail components of service provision such as billing systems, marketing, pricing and customer service as well as certain very limited network functions. The purpose of permitting facilities-based competition was to extend incentives for efficiency and innovation to the design, construction and operation of networks. The CRTC found<sup>52</sup>:

...efficient and effective competition will be best achieved through facilities-based competitive service providers; otherwise, competition will only develop at the retail level, with the ILECs retaining monopoly control of wholesale level distribution.

The CRTC also recognized, however, that entrants in some locations may be unable, for technical or economic reasons, to duplicate certain ILEC network elements or facilities, or “essential facilities” (defined in more detail below). Without access to these, entrants would be unable to provision their own networks and thus provide service to retail customers. Unbundling these facilities and making them available to entrants at regulated rates was considered to be a precondition for facilities-based competition. Accordingly, the CRTC required ILECs to do so. Unbundling not only facilitated entry but also allowed entrants to make maximum use of the facilities they controlled by allowing them to lease only those facilities from the ILEC that they actually required.<sup>53</sup>

The CRTC mandated the unbundling and pricing of certain other facilities on the same basis as essential facilities, even though they did not strictly meet the definition. These services were considered to be “critical” inputs for competitors. Although theoretically open to competitive provision, limited supply was anticipated, particularly in the early stages of competition.<sup>54</sup>

<sup>51</sup> *Enhanced Services*, Telecom Decision CRTC 84-18, 12 July 1984.

<sup>52</sup> *Local Competition*, Telecom Decision CRTC 97-8, 1 May 1997 (Decision 97-8), paragraph 73.

<sup>53</sup> Examples of facilities and related services that have been determined by the CRTC to be essential are unbundled local loops in rural, high-cost and less dense urban areas.

<sup>54</sup> See, for example, *Local Competition*, Telecom Decision 97-8, 1 May, 1997 (Decision 97-8), paragraphs 65, 85, 98 and 104; Order 2001-184, paragraph 28; *Competitor Digital Network Services*, Telecom Decision CRTC 2005-6 (Decision 2005-6), 3 February 2005, paragraphs 174, 197 and 200.

These were referred to as “near-essential” facilities and services.<sup>55</sup> The CRTC recognized the potential dangers of mandating wholesale access to more than essential facilities, noting that, if the scope of access was too broad, new entrants “...may not have sufficient incentives to invest in their own facilities, and would enter and remain in the market primarily as resellers.”<sup>56</sup>

However, the CRTC considered that requiring incumbents to make near-essential facilities available during the early stages of competition would make it easier for entrants to establish their networks and “acquire the critical mass of customers necessary to make entry and expansion of their own networks economic.”<sup>57</sup> Thus, mandating provision of near-essential facilities was intended to provide entrants with a “stepping-stone” toward greater reliance on their own facilities, thereby facilitating the construction of entrant networks. Access to near-essential facilities was initially required only for a five-year period commencing May 1997. However, in 2001, in response to concerns over the slow pace at which facilities-based local competition was developing, the Commission extended this requirement for an indefinite period of time.

As for regulated retail services, the CRTC has instituted quality of service regulation for a number of wholesale services provided by ILECs to competitors. This is intended to ensure that the quality of services provided to entrants as well as the provisioning timelines are comparable with those provided by ILECs to their own retail operations.

### **The Proper Scope of Mandated Wholesale Access**

As stated above, a fundamental objective of mandated wholesale access should be to maintain incentives for innovation, network efficiency and investment. In the Panel’s view, the most effective method for promoting these incentives is to ensure that competitive market forces apply to the broadest possible range of network and service components in as many locations as economically feasible.

To this end, new entrants should have both opportunities and incentives to build their own facilities. Since by definition retail market entry is not possible without competitor access to essential facilities, the regulatory framework should continue to require incumbents to make these available, on a mandatory basis if necessary.

However, the Panel concludes that, given the current state of competition in Canada, continuing to require that incumbents make non-essential facilities<sup>58</sup> available to competitors undermines the incentives for the latter to build alternative facilities. This in turn undermines competitive market incentives for all service providers to be efficient, to innovate and to invest, for several reasons.

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<sup>55</sup> Examples include local loops in the more dense urban bands, transiting of local traffic and certain lower speed local digital access facilities.

<sup>56</sup> Telecom Decision 97-8, paragraph 73.

<sup>57</sup> Order 2001-184.

<sup>58</sup> Non-essential facilities include those that the CRTC has found to be near-essential and others (e.g. operator services). This terminology is adopted here as a result of two regulatory decisions that impact these services. Specifically, access to certain services was ordered to facilitate long distance services before the category of essential and near-essential facilities was established in Decision 97-8 and was never included in the Decision 97-8 definitions.

First, when designing their networks, entrants can either build non-essential facilities or lease them from the incumbent. Mandated wholesale access at regulated prices reduces the cost and especially the risks associated with leasing relative to building. It thus increases the likelihood that leasing will be more attractive than building. Mandated wholesale access therefore tends to discourage entrants from supplying their own facilities, even where doing so would otherwise be economical. The potential negative impact is much more limited if mandated wholesale access is limited to essential facilities.

Second, regulated wholesale pricing reduces the revenues that entrants who build facilities can generate in the wholesale market when they lease those facilities to other providers. This arises because regulatory constraints on ILEC wholesale prices also effectively place upper limits on the price that other service providers can charge for facilities in the wholesale market. This in turn affects investment decisions of both incumbents and new entrants in cases where the viability of constructing network facilities is dependent on their ability to profitably supply facilities on a wholesale basis to other service providers.<sup>59</sup> The broader the scope of mandated access, the greater the negative impact on investment decisions.

Third, artificially low wholesale rates undermine the price levels and revenues that could otherwise be sustained in the retail market. The broader the scope of mandated access, the more significant the impact on retail prices. This compromises the ability of both entrants and incumbents to recover potential network investments.

The argument in support of mandating the availability of non-essential facilities is that it can actually facilitate, rather than hamper, construction of facilities by entrants by providing them with a “stepping-stone” until the day they can build their own facilities. The validity of this argument rests entirely on the assumption that the CRTC can set prices that are both:

- low enough to facilitate entrants’ ability to expand their networks and more quickly acquire the customer base that would justify construction of their own facilities
- high enough to provide entrants with sufficient incentives to build such facilities.

With perfect information, the CRTC might be able to achieve this balance. In practice, such information is not available and the prices it sets are arbitrary to some degree. Attempts to “fine-tune” or “manage” entry and investment incentives in this manner thus pose an unacceptable risk that entrants’ incentives will be compromised.

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<sup>59</sup> The wholesale market is not only an important source of revenue for facilities-based entrants, but also a means to reduce the risk of capital recovery. A carrier that serves both the wholesale and retail markets has two opportunities to contend for the business of any single end-user: once directly through the provision of retail services and once indirectly through the provision of wholesale services to other carriers that may serve the customer on a retail basis.

There is no evidence in Canada that the CRTC's "stepping-stone" strategy has provided an effective transition to greater reliance by entrants on their own facilities. There is, on the other hand, reason to believe these policies have distorted the behaviour and incentives of new entrants in Canadian telecommunications markets.<sup>60</sup>

When wholesale access to particular essential facilities is mandated after new entrants have already constructed comparable facilities, the value of these entrants' network investments is reduced. Even in areas where decisions with such retroactive effects have not occurred, a broad approach to mandated wholesale access raises the possibility that it may happen in the future. This increases the risk of network investments from the perspective of entrants.

Therefore, while the CRTC has identified facilities-based competition as an objective of its regulatory framework, it has adopted mandated wholesale access policies that, in the Panel's view, seriously undermine, if not foreclose, the achievement of that objective.

One argument advanced in favour of a very broad scope of mandated wholesale access is that such an approach would promote all forms of competition by making it easier for competitors to resell any portion of the ILEC's network that they want. However, in the Panel's view, a broader scope makes the distortion of entry and investment decisions more pervasive. For this reason, a broad scope of mandated wholesale access would not in fact promote all forms of competition. Rather, it would promote only one form of entry (i.e. resale), thus perpetuating disincentives for new entrants to build facilities and entrenching the ILECs' SMP over the network and its elements. This would extend the need for a broader scope of regulation than would otherwise be necessary.

Mandated wholesale access in effect is a requirement imposed on the incumbent to share network facilities and functions. The more extensive the scope of network elements that are shared, the greater the uniformity of the underlying networks used by both ILECs and entrants. Because ILECs are forced to share network innovations with competitors, these innovations do not advance the ILECs' competitive position. This in turn reduces ILECs' incentives to innovate in those areas. The broader the scope of mandated wholesale access, the broader the scope of network components for which incentives to innovate may potentially be reduced.

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<sup>60</sup> In this regard, TELUS noted that it had delayed network investment decisions outside of its ILEC operating territories for over two years while it waited for the CRTC's decision in the competitor digital network access (CDNA) proceeding and that it had adjusted its business plans to purchase wholesale facilities from Bell Canada in Ontario and Quebec to a greater extent than it otherwise would have (see Telus' discussion of unbundling as part of its response to question B.17, in its August 15, 2005 submission to the Telecommunications Policy Review Panel, p. 158, available online at: [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/TELUS-Submission.doc/\\$FILE/TELUS-Submission.doc](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/TELUS-Submission.doc/$FILE/TELUS-Submission.doc)). UTC Canada noted that its members compete with the ILECs' digital network access services and that the mandated wholesale rates established for the ILECs' CDNA service were up to 80 percent lower than the retail rates previously charged. UTC Canada indicated that this had a severely negative impact on its members' revenues (see UTC's August 15, 2005 submission to the Telecommunications Policy Review Panel, paragraph 75, p. 22, available online at: [http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/UTC\\_Canada\\_-\\_Submission.pdf/\\$FILE/UTC\\_Canada\\_-\\_Submission.pdf](http://www.telecomreview.ca/epic/internet/intprp-gecrt.nsf/vwapj/UTC_Canada_-_Submission.pdf/$FILE/UTC_Canada_-_Submission.pdf)). Quebecor Media Inc. (QMI) also indicated that its subsidiary, Vidéotron Telecom Ltd. (VTL), had constructed new fibre access and transport facilities expressly to provide service to wholesale customers and that the low CDNA rates subsequently established by the CRTC had a significant negative financial impact on VTL. *Part VII Application to Review and Vary Competitor Digital Network Services, Telecom Decision CRTC 2005-6, 3 February 2005*, filed with the CRTC by QMI on July 29, 2005.

The Panel recognizes that a broader scope of mandated wholesale access may reduce barriers to entry in the markets for services or applications. This may result in more innovation at the service and applications layers by allowing for more market participants and by creating pressure for timely introduction of new technologies. However, these benefits may be outweighed by the dramatic reduction in competition at the physical and network layers. Further, in the longer run, innovation at the service or application layers may depend on capabilities and innovation at the physical or network layers and continuation of SMP at those levels may impede innovation at higher layers as well.<sup>61</sup> A broad scope of mandated wholesale access may thus undermine long-run opportunities and incentives for innovation at all levels.

Consequently, the Panel considers that, for maximization of incentives for innovation, network efficiency and investment in networks, reform of the Canadian regulatory framework governing mandated wholesale access is needed.

#### **Recommendation 3-19**

**The regulatory framework should continue to require owners of essential wholesale facilities to make them available to competitors at regulated wholesale rates. Regulatory requirements to provide non-essential wholesale services or facilities should be phased out in order to provide increased incentives for innovation, investment and more widespread construction of competing network facilities.**

#### **Review of Essential Services**

To be considered “essential” under the current CRTC definition, a facility, function or service must meet three criteria:

- be monopoly-controlled
- be required by entrants as an input to provide services
- be economically or technically difficult for new entrants to duplicate.

Implementation of the Panel’s recommendation of limiting the scope of mandated wholesale access to essential facilities requires a clear and operational definition of essential facilities.

Under the CRTC’s current definition, determining whether a facility is required by entrants as an input or whether it can technically be duplicated is relatively straightforward. However, determining whether duplication is economically feasible is not straightforward for several reasons.

<sup>61</sup> For example, the introduction of fibre optic transport systems very significantly cut down the noise affecting transmission of signals, and allowed new protocols at the application layer, such as frame relay, that were not encumbered by the same amount of error checking and correction as earlier protocols, such as X.25.

First, it may be economically feasible for an entrant to build its own facilities and ancillary services in some areas but not in others. The analysis will require a definition of markets with common economic, geographic or demographic conditions. The market definition will likely differ depending on the facilities involved. The Panel is concerned that the CRTC's analyses to date may have relied upon markets that are too broadly defined.

Second, it is not clear what criteria should be used to identify situations in which duplication of a facility is not economically feasible. Facilities that have natural monopoly characteristics certainly meet this test.<sup>62</sup> However, it is not clear whether other facilities may also qualify.

Third, addressing the economic feasibility of the duplication of a facility by entrants also requires explicit consideration of a time horizon over which duplication may be expected to occur.

The Panel believes the foregoing issues require further study.

Effectively addressing these matters requires the involvement of both the CRTC and the Competition Bureau. The working group of CRTC and Competition Bureau members, proposed in Recommendation 3-15 above, should examine the definition of essential facilities and its application.

### **Recommendation 3-20**

#### **The *Telecommunications Act* should be amended**

- (a) to provide for the creation of a category of essential facilities, including ancillary services, that should be subject to a regime of mandated supply at regulated rates, and**
- (b) to establish a process whereby this category of services can be kept up-to-date.**

### **Recommendation 3-21**

**A working group of CRTC and Competition Bureau members should be established as soon as possible to develop recommendations to the CRTC on the definition of essential facilities and its application to today's telecommunications networks.**

The set of facilities and related services that meet the essential facilities definition will not be static. Technological and market developments over time may result in a shift of facilities from essential to non-essential status.<sup>63</sup> It is conceivable, although less likely, that shifts may also occur in the other direction. In addition, new essential facilities may emerge. Today, for example, it is recognized that many support structures (such as poles and ducts), antenna towers and certain rights-of-way are essential facilities. In some cases, a significant requirement

<sup>62</sup> A "natural monopoly" exists when the entire market demand can be served at the lowest aggregate cost by one supplier because of the nature of the economies of scale available, relative to total market size. Competition in such markets would likely be unsustainable in any case because of the economies available to the incumbent supplier.

<sup>63</sup> For example, ILEC local loops were declared essential in 1997 in some areas where cable companies are currently providing retail local telephone service using their own facilities, including facilities that are analogous to ILEC local loops.

for these facilities has emerged only with the evolution of technology. As this process continues, other facilities, such as light standards, may also become essential. These issues are dealt with in Chapter 5, Technical Regulation.

#### **Recommendation 3-22**

**A regular review of the essential facilities category should be conducted at least every three to five years.**

Consistent with the principles set out in Chapter 2, Policy Objectives and Regulation, mandated wholesale access should be subject to economic regulation since, by definition, the provider of these facilities and services has SMP. Over time, the service provider's SMP over certain components of mandated wholesale access may erode. In such cases, the review of essential facilities should result in a reclassification of those components to non-essential.

#### **Transitional Arrangements**

The Panel recognizes that, as a result of regulatory actions, many service providers have come to rely on the mandated wholesale access to non-essential services of the ILECs and, to a lesser extent, the cable industry. These service providers should be provided with a sufficient opportunity to adapt to the new environment recommended in this report.

Accordingly, there should be a transition period during which existing mandatory wholesale arrangements, including mandatory resale of retail services, should remain in place. The transition regime should apply to wholesale services provided by both ILECs and incumbent cable companies.<sup>64</sup> Parties should have the choice of negotiating alternative arrangements for provision of non-essential services during the transition period.

Following the transition period, only essential facilities and interconnection services (as discussed below) should remain subject to mandatory regulatory requirements.

#### **Recommendation 3-23**

**Existing mandatory wholesale arrangements, including mandatory resale of retail services, should remain in place during a transition period. The transition period should be three to five years for most non-essential services or facilities, with consideration given to a longer period for certain non-essential, co-location services because of their typically high, one-time costs. The transition arrangements should be developed by the working group of the CRTC and Competition Bureau.**

<sup>64</sup> The CRTC has mandated the provision of Third Party Internet Access by certain cable companies at cost-based tariffed rates in order that other Internet service providers (ISPs) may offer retail high-speed Internet services to end-users using the cable company access network. In CRTC Order 2000-211, the CRTC indicated that "high-speed access is not in the nature of an essential service provided by both telecommunications carriers and cable network operators."

**Recommendation 3-24**

**Following the transition period for phasing out mandatory wholesale arrangements, only essential facilities and interconnection services should remain subject to mandatory access requirements and regulated pricing.**

**Regulation of Non-essential Wholesale Services**

The Panel recommends restricting mandatory wholesale access requirements and regulated pricing to essential services, interconnection services and, during the transition period, existing non-essential arrangements. The availability and pricing of other wholesale arrangements should be left to market forces and commercial negotiations. The Panel considers that no valid purpose will be served by continued economic regulation of non-essential wholesale arrangements following the end of the transition period. However, as in the case of retail services, there remains the potential for anti-competitive conduct in the provision of non-essential wholesale services. The TCT should be empowered to deal with such complaints.

**Recommendation 3-25**

- (a) Tariff regulation should not apply to new, non-essential wholesale services, and should be removed from existing non-essential wholesale service arrangements, including the resale of regulated retail services, following a three-to-five-year transition period.**
- (b) The *Telecommunications Act* should be amended to require the filing of tariffs for wholesale services only for essential facilities and ancillary services and for interconnections services. Tariffs should be filed for existing non-essential facilities during the transition period to phase them out.**
- (c) The Governor-in-Council should issue a policy direction to the CRTC stating that regulating the availability and pricing of new, non-essential facilities and ancillary services is inconsistent with policy objectives set out in section 7 of the *Telecommunications Act*, particularly paragraphs (f) and (g).<sup>65</sup>**

In the Panel's view, the TCT should be responsible for dealing with allegations of anti-competitive conduct related to the provision of non-essential wholesale facilities, given its expertise in both competition and telecommunications matters. This matter is discussed further in Chapter 4.

<sup>65</sup> These objectives of s. 7 state:

- (f) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective;
- (g) to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services;

### Regulation of Interconnection Services

As noted above, the interconnection<sup>66</sup> of networks increases the number of users accessible from both networks and so increases the value of the network from the perspective of users of both interconnecting networks. In some cases, interconnection is also necessary to allow competitive entry and the introduction of competitive market forces. The interconnection of public networks can produce significant benefits for users and, more generally, greater efficiency of the whole economy.

The presence of the network externalities discussed above may result in an imbalance of bargaining power, particularly between incumbents and new entrants or between operators of large networks and operators of small networks. In cases in which interconnection is required for competitive entry, incumbents on balance may not stand to benefit from interconnection. As a result, two network operators may not always have an incentive to reach reasonable terms in a timely manner. Regulatory oversight may be required in these cases to ensure efficient interconnection and interoperability of networks on reasonable terms.

Where many interconnecting networks are potentially involved, the coordination and standardization that results from regulatory dispute resolution processes may also reduce the costs associated with negotiated arrangements, even in cases where all parties have an incentive to interconnect.

Consistent with the Panel's presumption in favour of reliance on market forces, regulatory intervention in new interconnection arrangements should occur only where there is a significant public interest in requiring the interconnection, and where market forces and commercial negotiations, of either a bilateral or multilateral nature, have not resulted or are unlikely to result in efficient interconnection and interoperability on reasonable terms and in a timely manner.

Where intervention is required, regulation should rely primarily on dispute resolution mechanisms to encourage the parties to come to an agreement. Only where such mechanisms are not likely to succeed should mandated interconnection tariffs be established.

Service providers have made significant investments and have configured their networks to conform to existing tariffed interconnection arrangements. Consequently, the CRTC should continue to regulate existing tariffed interconnection arrangements.

Currently, s. 29 of the *Telecommunications Act* specifies that Canadian carriers shall not, without the prior approval of the CRTC, give effect to any intercarrier agreement or arrangement. This should be revised to allow for commercial negotiation of such arrangements.

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<sup>66</sup> This report uses the term "interconnection" in the sense in which it is normally used in North America; that is, to include ancillary arrangements such as call termination and transit. This use of the term "interconnection" therefore encompasses arrangements that are considered "access" rather than "interconnection" arrangements in European and international parlance.

**Recommendation 3-26**

**Section 29 of the *Telecommunications Act* should be amended to give the CRTC clear authority to mandate interconnection arrangements and interoperability between all public networks when the CRTC is satisfied that**

- (a) there is a significant public interest in requiring the interconnection, and**
- (b) market forces and commercial negotiations are unlikely to result in efficient interconnection and interoperability on reasonable terms and in a timely manner.**

In the Panel's view, regulation of interconnection primarily involves sector-specific questions of telecommunications technology, service evolution, economics, industry practices and network architecture. These are areas of comparative CRTC expertise, and it should retain primary responsibility for telecommunications network interconnection arrangements. Interconnection may be ordered by the TCT or the Competition Tribunal as a partial or complete remedy to anti-competitive conduct. However, its implementation should be left to the CRTC.

**Recommendation 3-27**

**Primary responsibility for regulating interconnection, including resolution of interconnection disputes, should remain with the CRTC.**

**Pricing Issues**

There is general agreement in Canada that prices for mandated wholesale access and regulated interconnection services should be cost-based, although there has been debate about the methods, assumptions and data sources used in arriving at the relevant causal costs.<sup>67</sup> The highly contentious nature of these debates has resulted in very lengthy delays in finalizing regulated prices.

As is the case in regulating services, errors in establishing regulated cost-based prices carry significant risks, even if such regulation is restricted to essential facilities and interconnection services. Prices for essential facilities that are too high may not be competitively neutral and may result in artificially high retail prices. Prices that are too low may reduce the likelihood that new technologies can become viable alternatives, thus artificially perpetuating the monopoly supply of essential facilities.

<sup>67</sup> Ideally, Ramsey prices should be used for wholesale access and interconnection. However, these can become very complex, taking account, as they should, of demand relationships, technology and type of competition. In practice, the required information is not available. As well, the resulting prices may not be acceptable politically. As a result, the use of cost-based pricing is widespread throughout the world. For a discussion, see Ingo Vogelsang, "Price Regulation of Access to Telecommunications Networks," *Journal of Economic Literature* 41 (3) (2003): 833.

Establishing initial rates for essential facilities and interconnection services requires a well-developed costing capability. The difficulties in establishing reliable costing information and the consequences of error suggest that establishing prices based on cost estimates should be limited to new services. Once a cost-based price is established for an essential facility or interconnection service, the price should be kept up-to-date by application of a price cap mechanism that takes into account both inflation and productivity targets.

Given the importance of accurately determining initial prices under the Panel's proposal, a public review of the costing methodology used should be undertaken by the CRTC. The Panel notes that no comprehensive public review of the CRTC's Phase II incremental costing methodology has been conducted since it was first established in 1979. A review of costing systems and methodologies is long overdue.

#### **Recommendation 3-28**

**The CRTC should retain power to regulate the prices as well as other terms and conditions of wholesale access or interconnection where**

- (a) these have been mandated, or**
- (b) there is a dispute involving commercial access or interconnection.**

**Providers of mandated wholesale access or interconnection services should be obliged to file relevant tariffs with the CRTC.**

#### **Recommendation 3-29**

**The CRTC should undertake a public review of its incremental costing methodology as soon as possible.**

## The Role of Resale

### The Current Situation

The current regulatory framework governing facilities-based local competition<sup>68</sup> prevents local service resellers from becoming competitive local exchange carriers (CLECs) and so benefiting from the accompanying rights and obligations. This restriction is consistent with the CRTC's approach of promoting facilities-based competition. However, since a CLEC must be a Canadian carrier, foreign-owned resellers cannot become CLECs. This limits their participation in the local services market.

Resellers are not able to access the full set of rights available to CLECs:

- to obtain unbundled local loops, central office connecting links and co-location at mandated rates
- to obtain interconnection, exchange local exchange traffic on a bill and keep basis and share equally in the costs of interconnection
- to gain access to Canadian telephone number resources and the local number portability (LNP) database
- to receive subsidies when providing local exchange services to residential customers located in high-cost service areas (HCSA)
- to access buildings and in-building wiring.

Resellers can obtain access to some of these elements but generally must do so indirectly through a local exchange carrier (LEC).

Since 1997,<sup>69</sup> resellers operating in the long distance market have had mandated access to unbundled loops and connecting links for purposes of providing direct access lines (DALs) to their long distance service customers.<sup>70</sup> In 2000,<sup>71</sup> resellers who were also digital subscriber loop (DSL) service providers were granted the right to lease unbundled local loops, central office connecting links and co-location directly from the ILECs at mandated rates. This access has recently been extended for the provision of voice over Internet Protocol (VoIP) services, in addition to retail Internet access services.<sup>72</sup>

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<sup>68</sup> Established by the CRTC in Decision 97-8.

<sup>69</sup> Telecom Order CRTC 97-1818, 12 December, 1997.

<sup>70</sup> A DAL is, in effect, a private line facility running from the end customer premises to the entrant switch. A DAL was provided as an alternative means of accessing the long distance provider's service.

<sup>71</sup> Telecom Order CRTC 2000-983, 27 October, 2000.

<sup>72</sup> *Regulatory framework for voice communication services using Internet Protocol*, Telecom Decision CRTC 2005-28, 12 May 2005 (Decision 2005-28).

In addition to the rights available only to CLECs, there are also a number of obligations imposed:

- to provide 9-1-1 service and message relay service
- to implement number portability
- to provide equal access
- to provide subscriber listings to LECs
- to satisfy all regulatory requirements designed to protect consumer privacy
- to provide for reciprocal interconnection
- to interconnect with all LECs and with any long distance carriers and wireless service providers seeking interconnection
- to provide information on certain terms of service to customers.

Currently, the CRTC does not have direct authority over resellers under the *Telecommunications Act*, except in very limited circumstances, such as the context of contribution subsidy collection and the licensing of international telecommunications service providers. However, a number of these obligations are currently imposed on resellers providing local services indirectly through the underlying tariffs and agreements between the resellers and the LECs providing services to them.<sup>73</sup> The obligations currently imposed either directly or indirectly on local service resellers include the following:

- to pay contribution (direct)
- to provide 9-1-1 service and message relay service (indirect)
- to satisfy all regulatory requirements designed to protect consumer privacy (indirect)
- provide information on certain terms of service to customers (indirect).

Additional obligations regarding 9-1-1 service were imposed on resellers providing VoIP services.<sup>74</sup>

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<sup>73</sup> The Appendix to *Regulatory framework for voice communication services using Internet Protocol*, Telecom Public Notice CRTC 2004-2, 7 April 2004 sets out the regulatory framework and other attributes of local services competition and how they apply to ILECs/CLECs and local service resellers.

<sup>74</sup> *Emergency service obligations for local VoIP service providers*, Telecom Decision CRTC 2005-21, 4 April 2005.

## Competitive Local Exchange Carrier Rights and Obligations

Permitting local service resellers to avail themselves of all of the rights and obligations of CLECs may increase the scope of competition in the local services market. Resale remains a valid form of competitive entry which brings with it a number of benefits such as an increase in the number of competitors, improved supplier responsiveness, stimulation of product and service innovation, more rapid dissemination of the benefits of competition through the exploitation of arbitrage opportunities and more efficient capacity utilization.

As discussed in the preceding section on wholesale access, the Panel believes the regulatory framework should promote investment in competitive network facilities and avoid creating inefficient incentives for resale. However, barriers to efficient resale competition should be removed.

Extending the ability of local service resellers to compete in the local services market would expand the options for competitors to enter that market and remove artificial constraints on efficient entry decisions. This approach is also consistent with the greater emphasis that the Panel recommends placing on market forces.

Recently, the CRTC has extended the practice of indirect regulation to include local VoIP service providers. This extension of regulation was motivated by an important social objective to ensure that consumers of VoIP services had access to emergency services.<sup>75</sup>

The only significant one-sided CLEC obligation not already imposed on resellers is the requirement to provide equal access.<sup>76</sup> A principal goal of the new regulatory framework recommended in this report is competitive neutrality. In the Panel's view, there is considerable uncertainty about whether imposing new obligations on resellers without also providing access to substantially all of the benefits available to CLECs is competitively neutral.

### Recommendation 3-30

**Resellers in the local telecommunications services market who choose to undertake all the obligations of a competitive local exchange carrier should have all the regulatory rights and obligations applicable to competitive local exchange carriers.**

<sup>75</sup> In *Regulatory framework for voice communication services using Internet Protocol*, Telecom Decision 2005-28, the Commission imposed a number of obligations on VoIP service providers. Similarly, in *Follow-up to Emergency service obligations for local VoIP service providers, Decision 2005-21 — Customer notification requirements*, Telecom Decision CRTC 2005-61, 20 October 2005, which addressed the emergency service obligations for local VoIP service providers, the CRTC required all Canadian carriers to include in their contracts with these service providers the requirement that they abide by the directions set out in Decision 2005-61.

<sup>76</sup> The requirement to interconnect is an obligation not currently imposed on resellers but is currently imposed on the LEC providing the underlying services. In any case, the requirement to interconnect brings with it important benefits for resellers by providing access to potentially more favourable arrangements for the exchange of traffic.

### **Implementation**

Providing the CRTC with direct authority over resellers requires amendments to the *Telecommunications Act*. The issue of moving from indirect regulation of telecommunications service providers to direct regulation is addressed in Chapter 2, Policy Objectives and Regulation.

In advance of amendments to the *Telecommunications Act*, it may be possible to implement the above recommendation using the current indirect manner of regulating resellers.

This approach would permit resellers that choose to avail themselves of the rights and obligations associated with CLEC status to be indirectly regulated through the tariffs and agreements of LECs. The necessary interconnection arrangements between these resellers and other LECs could be handled directly through an “access tariff” included in the tariffs of all LECs. Reseller adherence to current standard-form interconnection arrangements between LECs and mobile service providers (MSPs), on the one hand, and LECs and long distance providers, on the other, could be imposed as a condition of access to interconnection with LECs.