



BERMUDA

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT  
MARKET POWER) GENERAL DETERMINATION 2013

BR 47 / 2013

The Regulatory Authority, in exercise of the power conferred by section 62 of the Regulatory Authority Act 2011 read with sections 23 and 74(b) of the Electronic Communications Act 2011, makes the following General Determination:

Citation

1 This General Determination may be cited as the Regulatory Authority (Market Definition and Significant Market Power) General Determination 2013.

Interpretation

2 In this General Determination unless the context otherwise requires all relevant terms shall have the meaning given in the Regulatory Authority Act 2011 and Electronic Communications Act 2011.

General purpose

3 This General Determination—

- (a) defines the relevant product and geographic markets that are subject to market review and ex ante regulation in Bermuda; and
- (b) designates the entities that are regarded as having significant market power on these markets.

Terms and conditions of the General Determination

4 The Schedule has effect.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT  
MARKET POWER) GENERAL DETERMINATION 2013

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SCHEDULE

(Paragraph 4)

BERMUDA REGULATORY AUTHORITY

MARKET REVIEW PROCESS – MARKET DEFINITION AND SIGNIFICANT MARKET POWER  
DETERMINATION

MATTER: MR01/13

- 1 This General Determination is made by the Regulatory Authority pursuant to Section 62(1) of the Regulatory Authority Act 2011, and in accordance with Section 74(b) of the Electronic Communications Act 2011, and; defines the Relevant Product and Geographic Markets that are subject to market review and ex ante regulation in Bermuda; and designates the Operators which, following the market review undertaken in accordance with Section 23(4) of the Electronic Communications Act 2011, are regarded as having Significant Market Power on the these markets.

1 **DEFINITIONS**

- 2 In this General Determination, unless the context otherwise requires:

“**Broadband**” or “**Broadband Services**” refers to the provisioning of the bundled package consisting of fixed broadband access and ISP services;

“**Broadband Access Services**” refers to the legacy service provided by a Class B provider such as BTC which linked an end-user to a provider of internet service provider (ISP) services. The link in question comprised local access, backhaul, and data stream aggregation, terminating at an ISP provider’s premises;

“**Digital Terrestrial Television (DTT)**” refers to the wireless broadcasting of television programmes that have been compressed and digitized for transmission in digital format;

“**Data Over Cable Service Interface Specification (DOCSIS)**” refers to an international telecommunications standard that permits the addition of high-speed data transfer to an existing cable television (TV) (CATV) system;

“**DOCSIS VoIP**” refers to a voice over internet protocol service offered by cable operators over their hybrid fibre coaxial cable (HFC) networks. It utilizes PacketCable IP-Based architecture enabled by DOCSIS standard. DOCSIS VoIP offers similar or better voice quality service to standard telephony. It is capable of providing e-911 services, where that service is available, and of staying live during power outages at the customer’s home or at the network node. DOCSIS VoIP is a close substitute for, and therefore lies in the same market as, standard telephony;

“**Digital Subscriber Line (DSL)**” refers to a family of technologies that provide Internet access by transmitting digital data over the wires of a local telephone network;

“**ECA**” means the Electronic Communications Act 2011;

“**Fibre to the x (FTTx)**” refers to a generic term for any broadband network architecture using optical fibre to replace all or part of the usual metal local loop used for last-mile telecommunications. The term is a generalization for several configurations of fibre deployment, ranging from fibre to the neighbourhood (FTTN) to

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

fibre to the desk (FTTD). Voice service delivered over FTTx is in the same market as standard telephony service;

**"Internet Protocol TV (IPTV)"** refers to the provision of multimedia services such as television/video/audio/text/graphics/data delivered over IP based networks managed to provide the required level of quality of service and experience, security, interactivity and reliability. Thus IPTV is a carefully managed service delivered using an operator's proprietary end-to-end platform and possessing quality of service (QoS) standards that guarantee picture quality that is as good as, or better than, traditional TV;

**"ISP Services"** refers to the provisioning of access to local and international Internet networks along with the provisioning of Internet services such as web hosting and email accounts;

**"Leased Lines"** refers to services and products that provide fixed, permanent point-to-point symmetric termination services between two points within Bermuda. A leased line is permanent, in that capacity is available between the two fixed points. However, capacity could be reserved or shared through the associated network depending on the nature of the leased line. Leased lines can be used for providing voice services, other analogue services, and/or data services either directly to end users (e.g. private networks for large companies) or to other telecommunications services providers who would then use the leased lines in question as an input for the provision of services to their own customers. Leased lines may be categorized as follows:

- (a) High-speed leased lines—1 Mb/s or faster
- (b) Low-speed leased lines—less than 1 Mb/s

**"Mobile Virtual Network Operator (MVNO)"** refers to a wireless communications services provider that does not own the radio spectrum or wireless network infrastructure over which the MVNO provides services to its customers;

**"Notice"** means the Notice identifying markets susceptible to *ex ante* regulation drawn up by the Authority in accordance with Section 22(1) of the ECA;

**"Operator"** means Communications Provider as defined under Section 2 of the ECA;

**"Public Switched Telephone Network (PSTN)"** refers to the network of the world's public circuit-switched telephone networks;

**"RAA"** means the Regulatory Authority Act 2011;

**"Small but significant non-transitory increase in price test (SSNIP test)"** is a test that is often applied in the determination of market boundaries. The test asks whether a hypothetical monopolist over a narrow market could profitably maintain a small but significant (usually considered to be a price rise that lies between 5 and 10%) non-transitory increase in price above competitive levels. If it could not, then the market is too narrowly defined;

**"SMP"** means significant market power as defined under Section 2 of the ECA;

**"Voice over Internet Protocol (VoIP)"** refers to the communication protocols, technologies, methodologies, and transmission techniques involved in the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks,

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

such as the Internet. Six main types of VoIP are recognized by the Body of European Regulators for Electronic Communications (BEREC);

**“VoIP Type 6”** refers to a voice over IP service involving both incoming and outgoing access to the PSTN and for which a telephone number is assigned that is part of a national or international telephone numbering plan. VoIP Type 6 is a close substitute for, and therefore lies in the same market as, standard telephony. This service falls into the following two categories:

- (a) VoIP provided as part of a combined offering that includes the provision of a broadband access line and voice services by a single company, generally referred to as voice over broadband (VoB). This is a service that is supplied and managed by the broadband access provider. Examples are VoWiMAX, DOCSIS VoIP and FTTx VoIP, which have been discussed above; and
- (b) Voice over the Internet (Vol) which, in most respects, is identical to standard telephony. The end-user has a standard telephone number, call quality is typically at least as good, if not better than, standard telephony, and e-911 service can be provided (but, unlike standard telephony, the service can be ported to any location with a computer and broadband access, in which case the e-911 location service does not work). Vol, however, differs from standard telephony: the end-user obtains broadband access from one provider, for example, in the form of naked DSL, and Vol from another; and Vol does not work in the event of a broadband or power outage. Further, the Vol service provider generally does not have a commercial relationship with the network operator and so the Vol is generally provided without use of QoS standards and service level agreements. Despite this, Vol call quality can be higher than standard telephony. Moreover, Vol typically comes with free calling features or with features that are unavailable on standard service. Finally, Vol numbers are portable in the sense that the user can effectively act as if they have a local phone number from wherever they have Internet access (though e911 service fails when the user is not at their registered location);

**“Voice over Worldwide Interoperability for Microwave Access (VoWiMAX)”** refers to the provision of voice over WiMAX. WiMAX standards now support quality of service technologies that allow the provision of voice services comparable to those that can be obtained through standard telephony and DOCSIS VoIP. VoWiMAX is a close substitute for, and therefore lies in the same market as, standard telephony; and

**“Worldwide Interoperability for Microwave Access (WiMAX)”** refers to a wireless local loop (WLL) communications standard designed to provide high-speed wireless connections.

## 2 INTERPRETATION

- 3 For the purpose of interpreting this General Determination:

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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- (a) unless the context otherwise requires, words or expressions shall have the meaning assigned to them herein, the ECA, RAA and Interpretation Act 1951;
  - (b) where there is any conflict between the provisions of this General Determination and the ECA or RAA, the provisions of the ECA or RAA, as the case may be, shall prevail;
  - (c) terms defined herein and in the ECA and RAA have been capitalised;
  - (d) headings and titles used herein are for reference only and shall not affect the interpretation or construction of this General Determination;
  - (e) references to any law or statutory instrument include any modification, re-enactment or legislative provisions substituted for the same;
  - (f) a document referred to herein shall be incorporated into and form part of this General Determination and a reference to a document is to a document as modified from time to time;
  - (g) expressions cognate with those used herein shall be construed accordingly;
  - (h) use of the word “include” or “including” is to be construed as being without limitation; and
  - (i) words importing the singular shall include the plural and vice versa, and words importing the whole shall be treated as including a reference to any part unless explicitly limited.
- 4 This General Determination shall be construed by reference to the Consultation Document and Final Decision issued in the Public Consultation entitled “Market Review Process (Part A) – Market Definition and Market Review Process (Part B) – Significant Market Power,” Matter MR01/13. Where there is any conflict between the Consultation Document and the Final Decision, the provisions of the Final Decision shall prevail. Where there is any conflict between the Final Decision and this General Determination, the provisions of this General Determination shall prevail.

### 3 LEGISLATIVE BACKGROUND AND PURPOSE

- 5 Section 59(2) of the RAA requires that, in any case in which Sectoral Legislation directs the Authority to conduct a market review prior to imposing or maintaining *Ex Ante* Remedies on a Sectoral Participant, the Authority shall identify those relevant markets in which *Ex Ante* Remedies may be appropriate.
- 6 Pursuant to Section 22(1) of the ECA, the Authority has identified a list of markets in the Notice which it considers appear to be susceptible to the imposition of *Ex Ante* remedies.
- 7 Section 59(2) of the RAA also provides that the Authority shall conduct a market review of each relevant market identified in order to determine whether any Sectoral Provider has Significant Market Power (SMP).

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

- 8 Section 23(4) of the ECA requires that the Authority conduct a Public Consultation in order to undertake a review of those markets listed in the Notice that it considers are susceptible to *ex ante* regulation in order to determine, amongst others:
- (a) whether these relevant markets are, or continue to be, correctly defined based on an economic assessment of supply and demand; and
  - (b) whether a Communications Provider, on the basis of the applicable facts and circumstances, individually or with others holds SMP in one or more such markets.
- 9 Section 74(b) of the ECA requires that the Authority:
- (a) undertake the Public Consultation as provided for under Section 23(4) of the ECA in order to review those markets that it considers are susceptible to *ex ante* regulation no later than 30 days after the date of commencement of Part 12 of the ECA; and
  - (b) on that basis, make one or more General Determinations designating any Operator with SMP, whether individually or with others, in a relevant market(s) no later than 90 days after initiating the Public Consultation.
- Section 74(b) further provides that the Authority shall undertake the above referred to tasks notwithstanding the process as set out in Section 72 of the RAA.
- 10 In accordance with Section 70(1) of the RAA, the Authority published a set of Consultation Documents on its webpage on 8 February 2013 entitled; Market Review Process (Parts A & B). These consultation documents set out proposed definitions for the Relevant Product Markets that the Authority considers should be subject to *Ex Ante* review and regulation in Bermuda, and identified the Communications Provider(s) that it proposed to designate with SMP on each market defined therein. This Public Consultation was closed on 15 March 2013. In accordance with Section 72(4) of the RAA, the Regulatory Authority published a Final Order and Decision in the Public Consultation on 29 April 2013, setting out its conclusions regarding the issues raised during the Public Consultation process.
- 11 Pursuant to Section 62(1) of the RAA and Section 74(b) of the ECA, and in compliance with the market review guidelines developed as suggested by Section 23(1) of the ECA, the Authority hereby determines that:
- (a) the Relevant Product Markets listed in Table 1 below shall be subject to market review and *Ex Ante* regulation in Bermuda;
  - (b) the geographic scope of the Relevant Product Markets is set out in Table 2 below, and
  - (c) the Operators identified in Table 3 below are designated with SMP on the Relevant Product Markets as also set out therein and listed adjacent to each Operator's name.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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4 MAIN PROVISIONS

4.1 Determination on the Relevant Product Markets

12 Pursuant to Section 62(1) of the RAA and Section 74(b) of the ECA, and in compliance with the market review guidelines developed as suggested Section 23(1) of the ECA, the Authority hereby determines that the Relevant Product Markets set out in Table 1 below shall be subject to market review and *Ex Ante* regulation in Bermuda:

Table 1: Relevant Product Markets

Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
Retail fixed narrowband access lines and local calls	A national market (excluding Southside) for the supply of Retail fixed narrowband access lines and local calls to residential customers.	<ul style="list-style-type: none"> <li>• Traditional PSTN services</li> <li>• DOCSIS VoIP delivered over HFC</li> <li>• VoWiMAX</li> <li>• FTTx VoIP</li> <li>• VoIP Type 6</li> </ul>
	A market for the supply of Retail fixed narrowband access lines and local calls to business customers in the City of Hamilton and contiguous suburbs.	
	A market for the supply of Retail fixed narrowband access lines and local calls to business customers outside of Southside and the City of Hamilton and contiguous suburbs.	
Retail Broadband	A national market (excluding Southside) for the supply of Retail fixed Broadband Access Services and ISP Services to residential customers.	<ul style="list-style-type: none"> <li>• DSL</li> <li>• DOCSIS over HFC</li> <li>• Fixed WiMAX and,</li> <li>• FTTx</li> </ul>

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
	A market for the supply of Retail fixed Broadband Access Services and ISP Services to business customers in the City of Hamilton and contiguous suburbs.	
	A market for the supply of Retail fixed Broadband Access Services and ISP Services to business customers outside of Southside and the City of Hamilton and contiguous suburbs.	
Retail mobile services	A national market for the supply of Retail mobile services, including voice and data.	<ul style="list-style-type: none"> <li>• The relevant market contains both voice and data services</li> <li>• Prepaid and post-paid services are part of the same market</li> </ul>
Retail Leased Lines	A market for the Retail supply of low-speed Retail Leased Lines in the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• PSTN (excluding DSL)</li> <li>• DOCSIS over HFC</li> <li>• Fixed WiMAX; and</li> <li>• FTTx</li> </ul>



REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
	A market for the Retail supply of low-speed Retail Leased Lines outside of the City of Hamilton and contiguous suburbs (excluding Southside).	
	A market for the Retail supply of high-speed Retail Leased Lines in the City of Hamilton and contiguous suburbs.	
	A market for the Retail supply of high-speed Retail Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs (excluding Southside).	
Retail Subscription Television Services	A national market for the supply of Retail Subscription Television Services.	<ul style="list-style-type: none"> <li>• Digital Satellite</li> <li>• Digital Terrestrial Television (DTT)</li> <li>• Digital cable TV</li> <li>• IPTV</li> </ul>
Wholesale call origination on fixed networks	<p>A Wholesale market for the origination of calls on fixed networks in the City of Hamilton and contiguous suburbs.</p> <p>A Wholesale market for the origination of calls on fixed networks in areas outside of Southside and the City of Hamilton and contiguous suburbs.</p>	<ul style="list-style-type: none"> <li>• Traditional PSTN services</li> <li>• DOCSIS VoIP delivered over HFC</li> <li>• VoWiMAX</li> <li>• FTTx VoIP; and</li> <li>• VoIP Type 6</li> </ul>
Wholesale call termination on fixed networks	Markets for the supply of call termination on each individual fixed network.	<ul style="list-style-type: none"> <li>• Traditional PSTN services</li> <li>• DOCSIS VoIP</li> </ul>

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
		delivered over HFC <ul style="list-style-type: none"> <li>• VoWiMAX</li> <li>• FTTx VoIP</li> <li>• VoIP Type 6</li> </ul>
Wholesale fixed narrowband access and local calls	A Wholesale market for the supply of fixed narrowband access and local calls in the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• Traditional PSTN services</li> <li>• DOCSIS VoIP delivered over HFC</li> </ul>
	A Wholesale market for the supply of fixed narrowband access and local calls in areas outside of Southside and the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• VoWiMAX</li> <li>• FTTx VoIP</li> <li>• VoIP Type 6</li> </ul>
Wholesale Broadband Access Services	A Wholesale market for the supply of fixed Broadband Access Services in the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• DSL</li> <li>• DOCSIS over HFC</li> </ul>
	A Wholesale market for the supply of fixed broadband access in areas outside of Southside and the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• Fixed WiMAX</li> <li>• FTTx</li> </ul>
Wholesale MVNO access on mobile networks	A national market for the supply of Wholesale access and local call origination on mobile networks.	<ul style="list-style-type: none"> <li>• The relevant market contains both voice and data services</li> <li>• Prepaid and post-paid services are part of the same market</li> </ul>

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
Origination of international calls on mobile networks	A national market for the supply of Wholesale origination of international calls on mobile networks.	N/A
Call termination on individual mobile networks	Markets for the supply of call termination on each individual mobile network.	N/A
Wholesale provision of terminating segments of Leased Lines	A market for the Wholesale supply of low speed Leased Lines in the City of Hamilton and contiguous suburbs.	<ul style="list-style-type: none"> <li>• PSTN (excluding DSL)</li> <li>• DOCSIS over HFC</li> <li>• Fixed WiMAX</li> <li>• FTTx</li> </ul>
	A market for the Wholesale supply of low speed Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs.	
	A market for the Wholesale supply of high speed Leased Lines in the City of Hamilton and contiguous suburbs.	
	A market for the Wholesale supply of high speed Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs.	
Supply of access to infrastructure facilities	A market for the Wholesale supply of access to facilities used to construct fixed local access networks.	N/A
	A market for the supply of access to facilities used to construct wireless radio access networks.	
Wholesale Subscription Television Services	A Wholesale market for the transmission facilities used to deliver Subscription Television	<ul style="list-style-type: none"> <li>• Digital Satellite</li> <li>• Digital Terrestrial</li> </ul>

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

Service	Definition of markets	Technological delivery systems and services defined as being included in the relevant market
to deliver broadcast content to end users	Services to end users in addition to the Subscription Television Services themselves.	Television (DTT) <ul style="list-style-type: none"><li>• Digital cable TV</li><li>• IPTV</li></ul>

**4.2 Determination on the Relevant Geographic Markets**

13 Pursuant to Section 62(1) of the RAA and Section 74(b) of the ECA, and in compliance with the market review guidelines developed as suggested by Section 23(1) of the ECA, the Authority hereby determines that the Relevant Product Markets identified in Table 1 shall have the geographic scope as set out in Table 2 below. The Authority further determines that the geographic market of the City of Hamilton and its contiguous suburbs is best defined as existing within the following boundaries:

The City of Hamilton, as defined in the City of Hamilton Plan 2001; together with,  
Those areas on the outskirts of the City of Hamilton that are shown on Zoning MAP 35 of the Bermuda Plan 2008 and are zoned either "Commercial" or "Tourism."<sup>1</sup>

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<sup>1</sup> The Zoning MAP was approved by the legislature in June 2010 as part of the official Planning Statement for Bermuda.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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**Table 2: Relevant Geographic Markets:**

<b>Service</b>	<b>Geographic markets</b>
Retail access lines and local calls	Residential customers: National Business customers: Two separate geographic markets that are (1) City of Hamilton and contiguous suburbs; (2) the rest of Bermuda (excluding Southside)
Wholesale fixed narrowband access lines and local calls Wholesale call origination on fixed networks	Two separate geographic markets being (1) City of Hamilton and contiguous suburbs; and (2) the rest of Bermuda (excluding Southside)
Wholesale call termination on individual fixed networks	The geographic footprint of the network providing the termination service
Retail Broadband Services	Residential customers: National Business customers: Two separate geographic markets being that are (1) City of Hamilton and contiguous suburbs; (2) the rest of Bermuda (excluding Southside)
Wholesale Broadband Access Services	Two separate geographic markets being (1) City of Hamilton and contiguous suburbs; (2) the rest of Bermuda (excluding Southside)
Retail Mobile	National
Wholesale MVNO access	National
Wholesale origination of international calls on mobile networks	National
Domestic Leased Lines	Two separate geographic markets that are (1) City of Hamilton and contiguous suburbs; (2) the rest of Bermuda (excluding Southside)
Wholesale terminating segments of Leased Lines	Two separate geographic markets being (1) City of Hamilton and contiguous suburbs; (2) the rest of Bermuda (excluding Southside)
Infrastructure services	Separate geographic markets for (1) Southside; and (2) the rest of Bermuda.
Retail Subscription Television Services	National
Wholesale Subscription Television	National

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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Services to deliver broadcast content to end users	
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**4.3 Determination on the designation of Operators with SMP**

- 14 Pursuant to Section 62(1) of the RAA and Section 74(b) of the ECA, and in compliance with the market review guidelines developed as suggested by Section 23(1) of the ECA, the Authority hereby determines that the following Operators shall be designated with SMP on the Relevant Product and Geographic Markets as defined in Tables 1 and 2 above:

**Table 3: Operators designated with SMP<sup>2</sup>**

Service	Definition of markets	Operators determined to possess SMP
Retail fixed narrowband access lines and local calls	A national market for the supply of Retail fixed narrowband access lines and local calls to residential customers (excluding Southside)	BTC
	A market for the supply of Retail fixed narrowband access lines and local calls to business customers in the City of Hamilton and contiguous suburbs	None
	A market for the supply of Retail fixed narrowband access lines and local calls to business customers outside of the City of Hamilton and contiguous suburbs and Southside	BTC
Retail Broadband Services	A national market for the supply of Retail fixed Broadband Access Services and ISP Services to residential customers (excluding Southside)	BTC and BCV

<sup>2</sup> On 26 April 2103, KeyTech Limited issued a press release announcing that Logic Communication Ltd. and North Rock Communications Ltd. agreed to amalgamate their businesses. The Authority does not have sufficient information, nor has it had adequate time, to consider the implications of this amalgamation on the SMP analysis relating to these two licensees. Therefore, as discussed below, notwithstanding anything contained in this Final Decision to the contrary, the Regulatory Authority is issuing an interim and emergency determination that until such time as the Authority can consider the impact of that amalgamation on relevant parts of the analysis set forth in this Final Decision, Logic and North Rock shall be deemed to possess SMP in all of the markets in which they operate.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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Service	Definition of markets	Operators determined to possess SMP
	A market for the supply of Retail fixed Broadband Access Services and ISP Services to business customers in the City of Hamilton and contiguous suburbs	None
	A market for the supply of Retail fixed Broadband Access Services and ISP Services to business customers outside of Southside and the City of Hamilton and contiguous suburbs	BTC
Retail mobile services	A national market for the supply of Retail mobile services, including voice and data.	BDC and Digicel
Retail Leased Lines	A market for the Retail supply of low-speed Retail Leased Lines in the City of Hamilton and contiguous suburbs	BTC
	A market for the Retail supply of low-speed Retail Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs	BTC
	A market for the Retail supply of high-speed Retail Leased Lines in the City of Hamilton and contiguous suburbs	None
	A market for the Retail supply of high-speed Retail Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs	BTC
Retail Subscription Television Services	A national market for the supply of Retail Subscription Television Services (excluding Southside)	BCV
Wholesale call origination on fixed networks	A Wholesale market for the origination of calls on fixed networks in the City of Hamilton and contiguous suburbs	BTC

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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<b>Service</b>	<b>Definition of markets</b>	<b>Operators determined to possess SMP</b>
	A Wholesale market for the origination of calls on fixed networks outside of Southside and the City of Hamilton and contiguous suburbs	BTC
Wholesale call termination on fixed networks	Markets for the supply of call termination on each individual fixed network	No designated SMP operator(s) as long as existing bill and keep arrangements stay in place.
Wholesale fixed narrowband access and local calls	A Wholesale market for the supply of fixed narrowband access and local calls in the City of Hamilton and contiguous suburbs	BTC
	A Wholesale market for the supply of fixed narrowband access and local calls outside of Southside and the City of Hamilton and contiguous suburbs	BTC
Wholesale Broadband Access Services	A Wholesale market for the supply of fixed broadband access in the City of Hamilton and contiguous suburbs	BTC
	A Wholesale market for the supply of fixed Broadband Access Services outside of Southside and the City of Hamilton and contiguous suburbs	BTC and BCV
Wholesale MVNO access on mobile networks	A national market for the supply of Wholesale access and local call origination on mobile networks	BDC and Digicel
Origination of international calls on mobile networks	A national market for the supply of Wholesale origination of international calls on mobile networks	BDC and Digicel
Call termination on individual mobile networks	Markets for the supply of call termination on each individual mobile network	No designated SMP operator(s) as long as existing bill and keep arrangements stay in place.



**REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013**

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<b>Service</b>	<b>Definition of markets</b>	<b>Operators determined to possess SMP</b>
Wholesale provision of terminating segments of Leased Lines	A market for the Wholesale supply of low speed Leased Lines in the City of Hamilton and contiguous suburbs	BTC
	A market for the Wholesale supply of low speed Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs	BTC
	A market for the Wholesale supply of high speed Leased Lines in the City of Hamilton and contiguous suburbs	None
	A market for the Wholesale supply of high speed Leased Lines outside of Southside and the City of Hamilton and contiguous suburbs	BTC
Supply of access to infrastructure facilities	A market for the Wholesale supply of access to facilities used to construct fixed local access networks	BLDC, BELCO, BCV, NRC, and BTC
	A market for the supply of access to facilities used to construct wireless radio access networks.	None
Wholesale Subscription Television Services to deliver broadcast content to end users	A Wholesale market for the transmission facilities used to deliver Subscription Television Services to end users in addition to the Subscription Television Services themselves.	BCV

- 15 On 26 April 2103, KeyTech Limited issued a press release announcing that Logic Communication Ltd. and North Rock Communications Ltd. agreed to amalgamate their businesses. The announcement came at a time when the Market Review documents and this General Determination had already been finalized. As a consequence, it was not possible to take into account the competitive implications of the amalgamation, without unduly delaying the market review process, to the detriment of regulatory reform and other ICOL holders. Notwithstanding anything contained in the remainder of this General Determination to the contrary, Logic and North Rock shall be deemed to possess SMP on all of the Relevant Product and Geographic Markets in which they operate until such time as the Authority can complete a market assessment of the competitive impact of that amalgamation. This measure has been adopted an interim and emergency determination pursuant to Section 66 of the Regulatory Authority Act 2011.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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**4.4 Assorted general determinations not necessarily contained in Tables 1, 2, and 3, above**

**(a) General determination concerning access and local calling**

16 The Authority determines that access and local calling are in the same market for both fixed and mobile services.

17 The Authority determines that BTC holds SMP in:

(i) the Retail access and local call markets; and,

(ii) the Wholesale access and local call markets;

18 The Authority determines that each fixed network operators holds SMP for termination of calls on its network.

**(b) General determinations concerning access and international calling:**

19 The Authority determines that:

(i) while some bundling of international calling services with Retail fixed narrowband access and local calling will probably occur upon issuance of the ICOLs, it is highly probable that a significant amount of international calling services will continue to be provided in its current, unbundled format by firms such as TBI;

(ii) international calls are not part of the market that contains Retail fixed narrowband access and local calling; and,

(iii) BTC holds SMP in the Wholesale markets for the origination of international calls.

**(c) General determinations concerning the means of delivering fixed access and local calling:**

20 The Authority determines that, in addition to traditional PSTN services, the market for narrowband fixed access and calling also includes:

(i) DOCSIS VoIP;

(ii) VoWiMAX;

(iii) FTTx VoIP; and

(iv) VoIP Type 6.

21 The Authority also determines that:

(i) VoIP types 1-5 are not part of the fixed narrowband access and local calling market and neither are fixed services that are delivered over a mobile network (e.g., the Yak service); and

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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- (ii) mobile services are not part of the fixed access and local calling market.

**(d) General determinations concerning Retail customer markets:**

22 The Authority determines that:

- (i) there are separate markets for residential and business customers for Retail fixed line services, namely Retail access and local calls and Retail Broadband Services; and
- (ii) there are no customer market delineations for Leased Lines, mobile services; or Subscription Television Services.

**(e) General determinations concerning the Broadband Services and Broadband Access Services:**

23 The Authority determines that

- (i) dial-up Internet access is not part of the Broadband Access Services market;
- (ii) once the ICOL is available, standalone supply of broadband access will essentially disappear, and instead, companies currently providing broadband access will begin to supply Internet access and services as well (specifically, broadband access will be bundled with Internet access and, most likely, with Internet service to mass market customers);
- (iii) fixed wireless and fixed Broadband Access Services and Broadband Services belong in the same markets;
- (iv) Broadband Access Services and Broadband Services over cable networks is a close substitute for, and therefore lies in the same markets as, Broadband Access Services and Broadband Services via DSL;
- (v) Broadband Access Services and Broadband Services over FTTx are in the same markets as Broadband Access Services and Broadband Services using DSL;
- (vi) mobile broadband is properly viewed as being a complementary product to fixed broadband at the present time, and so is not part of the fixed Broadband Access Services and Broadband Services markets;
- (vii) the market structure of residential Broadband Service, being two duopolists that have shared ownership and a small competitive fringe with significant entry barriers, is not conducive to vigorous competition and is likely to give rise to tacit coordination between the two largest firms;
- (viii) BTC and BCV hold collective SMP in the Retail residential Broadband Service market. The RA finds that no operator has SMP for business

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

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Broadband Services within the City of Hamilton and its contiguous suburbs. Outside of this area, where the economics of network deployment differ, the RA finds that BTC holds SMP in the business Broadband Service market; and,

- (ix) BTC and BCV hold collective SMP for Wholesale Broadband Access Services outside of Southside and the City of Hamilton and contiguous suburbs.

**(f) General determinations concerning the market for mobile services:**

24 The Authority determines that:

- (i) mobile access and local calls are in a single bundled Retail market;
- (ii) fixed services are not part of the mobile services market;
- (iii) there are not distinct geographic markets within Bermuda for mobile services;
- (iv) prepaid and post-paid services are in the same market;
- (v) the market for mobile services is one that contains both voice and data services;
- (vi) there is a national market for the supply of Wholesale origination of international calls on mobile networks;
- (vii) origination of mobile international calls does not include fixed origination;
- (viii) there are separate markets for the termination of calls on each mobile network;
- (ix) for Wholesale MVNO access the relevant market is a national market for the supply of Wholesale access and local call origination on mobile networks;
- (x) owing to the existence of high and non-transitory barriers to entry, the market for Retail mobile services in Bermuda enables the existing two mobile operators to engage in tacit coordination;
- (xi) Digicel and BDC jointly hold SMP in the mobile voice and data markets; and,
- (xii) BDC and Digicel jointly hold SMP in the Wholesale access and local call origination market for mobile networks;

**(g) General determinations concerning the Leased Line market:**

25 The Authority determines that:

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

- (i) all Leased Line services and products, belong in the market for terminating segments, and so are considered belonging in the Leased Line market, irrespective of the technology used to deliver the product;
- (ii) there are two separate bandwidth markets for Leased Line services, one which includes speeds less than 1 Mbps and another which includes speeds of 1Mbps or more;
- (iii) ADSL services are not part of the Leased Line market;
- (iv) there are separate Wholesale markets for low-speed (less than 1 Mbps) and high-speed (speeds of 1Mbps or more) terminating segment of Leased Lines;
- (v) the relevant market for Wholesale Leased Lines consists solely of Leased Lines which provide connection to an end customer;
- (vi) Wholesale Leased Lines used by, for example, mobile networks and ISPs for backhaul, are not part of the relevant market;
- (vii) BTC holds SMP for the supply of low-speed Retail Leased Lines both outside and within the City of Hamilton and contiguous suburbs;
- (viii) no company, either jointly or by itself, possesses SMP for the supply of high-speed Retail Leased Lines within, the City of Hamilton and contiguous suburbs;
- (ix) BTC does have SMP for the supply of high-speed Retail Leased Lines outside the City of Hamilton and contiguous suburbs;
- (x) BTC holds SMP in the Wholesale market for low-speed Leased Lines in all areas of Bermuda;
- (xi) in the City of Hamilton and contiguous suburbs no network holds SMP for high-speed Leased Lines; and,
- (xii) BTC holds SMP for high-speed Leased Lines in the rest of Bermuda (excluding Southside).

**(h) General determinations concerning the infrastructure access market:**

26 The Authority determines that:

- (i) the relevant fixed infrastructure market is one for the supply of fixed access network facilities that includes ducts, towers, and poles and, in the case of Southside, the copper and fibre optic network installed there and owned by BLDC;
- (ii) There is a market for the Wholesale supply of access to facilities used to construct fixed local access networks;
- (iii) dark fibre should not be included in the fixed infrastructure market;

## REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT MARKET POWER) GENERAL DETERMINATION 2013

---

- (iv) the relevant wireless infrastructure market is for the supply of wireless network facilities that includes tower and mast access;
- (v) There is a market for the supply of access to facilities used to construct wireless radio access networks;
- (vi) owners of duct and poles have SMP due to the difficult in replicating these facilities; and,
- (vii) BLDC has SMP over the copper and fibre optic network installed in the Southside development it owns.

**(i) General determinations concerning the Subscription Television Services market:**

27 The Authority determines that:

- (i) free-to-air broadcasting in Bermuda is in a different market from Subscription Television Services;
- (ii) mobile TV and over-the-top (OTT-TV) or Web-TV are also in separate markets from that of Subscription Television Services;
- (iii) with the exception of Mobile TV and over-the-top (OTT-TV) or Web-TV, there is a single pay-TV service market in Bermuda irrespective of the means by which these services are delivered (e.g. HFC, WLL via WiMax, xDSL or VDSL, DTT, and FTTx);
- (iv) Subscription Television Services are in a single geographic market with no customer differentiation;
- (v) the Retail market for Subscription Television Services is undifferentiated on the basis of channels;
- (vi) there is a relevant Wholesale subscription TV market for the transmission facilities used to deliver Subscription Television Services to end users in addition to the Subscription Television Services themselves. The determinations made for Retail Subscription Television Services, listed in the preceding bullet points, are applicable to the Wholesale market as well;
- (vii) BCV holds SMP in the Retail Subscription Television Services market;
- (viii) BCV holds SMP in the Wholesale Subscription Television Services to deliver broadcast content to end users market.

**5 EFFECTIVE DATE**

28 This General Determination will become effective on the date on which it is published in the Gazette.

REGULATORY AUTHORITY (MARKET DEFINITION AND SIGNIFICANT  
MARKET POWER) GENERAL DETERMINATION 2013

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Made this 29th day of April 2013

Chairman, Regulatory Authority