
GENERAL NOTICE

NOTICE 427 OF 2009



INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA (ICASA)

PUBLICATION OF APPLICATION FOR INDIVIDUAL ELECTRONIC COMMUNICATIONS NETWORK SERVICE (I-ECNS) AND INDIVIDUAL ELECTRONIC COMMUNICATIONS SERVICE (I-ECS) LICENCES BY A PUBLIC ENTITY IN TERMS OF SECTION 9(1)(d) OF THE ELECTRONIC COMMUNICATIONS ACT.

The Independent Communications Authority of South Africa ("the Authority") hereby invites interested persons to submit written responses to applications for I-ECNS and I-ECS licenses by Broadband Infraco (Pty) Ltd in terms of Section 9 (1) (d) of the Electronic Communications Act, No 36 of 2005.

The Authority may decide to hold public hearings on the application, and if so, such hearings will be held on the 29th of June 2009. Persons or organisations who wish to make any written responses must also indicate whether they would like an opportunity to make oral representations at the hearings.

All written responses submitted to the Authority pursuant to this application shall be made available for inspection by interested persons at the ICASA library during weekdays from 8:30 am to 16:30 pm and copies of such responses can be obtained upon payment of the prescribed fee.

The Authority invites any interested parties to submit written responses to the attached application on or before 19 June 2009 at 16h00 by fax or email at:

Fax: (011) 566 3068 or (011) 566 3224

Email: lmolapisi@icasa.org.za and copy lmorobane@icasa.org.za

Or

Addressed for the attention of the Chairperson and hand delivered to the General Manager, Licensing and Compliance at Block D, Pinmill Farm, 164 Katherine Street, Sandton.

**PARIS MASHILE
CHAIRPERSON
ICASA**

Broadband
Infraco



ANNEXURE A

APPLICATION FOR AN INDIVIDUAL ECNS AND AN INDIVIDUAL ECS LICENCE
(in response to the ITA published in Government Gazette No 32026 on 13 March 2009)

PARTICULARS OF THE APPLICANT	
FULL NAME OF APPLICANT	Broadband Infraco (Proprietary) Limited
DESIGNATED CONTACT PERSON	Name: Mr Klaas Motlhabane Designation: General counsel, legal and regulatory department
APPLICANT'S STREET ADDRESS AND PRINCIPAL PLACE OF BUSINESS	Sunninghill Place 9 Simba Road Sunninghill, 2157
APPLICANT'S POSTAL ADDRESS	Postnet Suite 321 Private Bag X26 Sunninghill, 2157
APPLICANT'S PHONE NUMBERS	(011) 800 4833 (011) 800 4017 (011) 800 3295
APPLICANT'S FAX NUMBER	(011) 800 4998
DESIGNATED CONTACT PERSON'S EMAIL ADDRESS	klaas.motlhabane@infraco.co.za
APPLICANT'S	Broadband Infraco was incorporated in South Africa and has its principal place of

BROADBAND INFRACO: ANNEXURE A1 (I-ECNS LICENCE APPLICATION)

14 April 2009

REGISTRATION AND PRINCIPAL PLACE OF BUSINESS	business in South Africa.
ENSURING THAT ECNS ARE PROVIDED BY PERSONS OR GROUPS OF PERSONS FROM A DIVERSE RANGE OF COMMUNITIES IN SOUTH AFRICA	<p>Broadband Infraco's primary focus will be on the wholesale, large corporate and enterprise markets. It will not be an access provider in the retail market.</p> <p>Rather, Broadband Infraco will provide wholesale long distance access services to third party electronic communications services ("ECS") and electronic communications network services ("ECNS") providers in South Africa, who will bundle the same services with their other metro, access, voice and data value added service solutions and on-sell in the broader market.</p> <p>In addition, Broadband Infraco will specifically provide wholesale backhaul connectivity to former under-served area licensees ("USALs"). The USALs are typically owned and operated by persons from a diverse range of communities, including a variety of community based small medium and micro enterprises ("SMMEs") and historically disadvantaged individuals ("HDIs").</p> <p>By making backhaul services available to the USALs, Broadband Infraco hopes to facilitate the provision of ECNS and ECS by a diverse range of persons, groups and communities throughout the country. .</p>
PROMOTING THE EMPOWERMENT OF HISTORICALLY DISADVANTAGED PERSONS, INCLUDING WOMEN, YOUTH AND PEOPLE WITH DISABILITIES	<p>By providing support to the USALs, Broadband Infraco will help to empower HDIs both within the communities in which the USALs operate, and within the management, ownership and control structures of the USALs themselves, which are HDI-owned and controlled.</p> <p>In addition, Broadband Infraco hopes to promote the empowerment of HDIs within its own organisational structures by complying with the BEE Scorecard elements of the Codes of Good Practice.</p>
OTHER (SPECIFY)	<p>Broadband Infraco is a state owned enterprise ("SOE") that is wholly owned by the state. It's shareholders are as follows:</p> <ul style="list-style-type: none"> • Department of Public Enterprises: 74%; • Industrial Development Corporation of South Africa Limited: 26%.

BROADBAND INFRACO: ANNEXURE A1 (I-ECNS LICENCE APPLICATION)

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APPLICANT'S JURISTIC STATUS	Broadband Infraco is a limited liability company that is incorporated in terms of the Companies Act of 1973.
COMPANY REGISTRATION NUMBER	1989/001763/07
APPENDIX 2.1	<p>The following founding documents of Broadband Infraco are attached in APPENDIX 2.1:</p> <ul style="list-style-type: none">• certificate of incorporation;• memorandum of association; and• articles of association.
APPENDIX 2.2	<p>The applicant is a juristic person incorporated under the company laws of South Africa. A written undertaking that the applicant will comply with section 5(8)(b) of the ECA is therefore not necessary.</p>
APPENDIX 2.3	<p>A resolution authorising the signatory to the applications</p> <ul style="list-style-type: none">• to sign the applications on behalf of Broadband Infraco; and• to represent Broadband infraco at ICASA's hearings in respect of the applications, <p>is attached in APPENDIX 2.3.</p>

Broadband
Infraco



ANNEXURE B – PROPOSED TERMS AND CONDITIONS

1. INTRODUCTION

As indicated in the ITA, Broadband Infraco is a wholly state owned SOE. Its mandate is detailed in section 4 of the Broadband Infraco Act 33 of 2007 (the "**Infraco Act**"), which states that the main object of Infraco is to expand the availability and affordability of access to electronic communications (including to under-developed and under-serviced areas) through the provision of electronic communication network services ("**ECNS**") and electronic communication services ("**ECS**") to these areas.

2. INFORMATION REQUESTED IN THE ITA

In **ANNEXURE B** of the ITA, ICASA has asked Broadband Infraco to provide a market impact analysis on how it intends to position its role in the market, taking into consideration the provisions of section 4 of the Infraco Act. The ITA calls for the market analysis to include the following information:

2.1. Affordable access

The market analysis must indicate:

- 2.1.1. how Broadband Infraco intends to promote affordable access to ECNS and ECS in South Africa, taking into account existing industry prices; and
- 2.1.2. the basis for Broadband Infraco's proposed prices and how such prices would relate to the cost of providing ECS and ECNS; and

2.2. Universal access

The market analysis must indicate:

- 2.2.1. how Broadband Infraco intend to roll out ECNS and ECS so as to ensure access to such services;
- 2.2.2. how Broadband Infraco's rollout plan will contribute to the provision of access to ECNS and ECS, including in under-developed and under-served areas; and
- 2.2.3. specific timeframes in the rollout plan.

3. AFFORDABLE ACCESS

- 3.1. Informed by its statutory mandate, Broadband Infraco's vision is to provide affordable access to long distance electronic communications network infrastructure and broadband electronic communications connectivity services in South Africa. To this end, Broadband Infraco aims to rapidly enhance electronic communications market efficiency by increasing the available capacity and lowering the costs of those network infrastructure that currently impede private sector development and innovation in electronic communications services and content offerings.
- 3.2. Broadband Infraco's business will be primarily focused on two key elements, namely:
 - 3.2.1. owning and operating a **national long distance fibre optic network**, that is capable of providing high capacity electronic communication services between the major national metropolitan centres, and that will be expanded to extend connectivity to identified under-served areas; and
 - 3.2.2. participating in an **international connectivity** initiative, comprising a submarine cable which will be deployed between South Africa and the United Kingdom along the west coast of Africa.
- 3.3. Broadband Infraco's strategic goals are:
 - 3.3.1. to develop a long-distance electronic communications network infrastructure (inclusive of the national long distance and international component), and by so doing to increase access to broadband connectivity services in the South African wholesale market;

BROADBAND INFRACO: ANNEXURE B (PROPOSED SPECIFIC TERMS AND CONDITIONS)

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3.3.2. to provide access to ECNS and ECS at significantly lower but financially sustainable prices; and

3.3.3. to provide the enabling mechanisms for the Department of Science and Technology projects of national importance [such as MeerKAT and SKA] from an electronic communications perspective,

within a framework of good corporate governance and international best practice.

3.4. Broadband Infraco intends to provide long distance connectivity services to other ECNS and ECS providers, large corporate, enterprise and government customers.

3.5. The Broadband Infraco's pricing strategy will deliver wholesale electronic communications services on a cost plus basis to the market, with sufficient profit margin for Broadband Infraco to be financially sustainable and self-funding for network expansion purposes in the future. This will result in services being provided to the market at a significant discount compared to the prevailing rates on offer for the equivalent capacity in the market today.

3.6. Further information as to how Broadband Infraco intends to meet the imperative of providing affordable access, is contained in **ANNEXURE B1** (*market impact assessment on providing affordable access to wholesale long distance ECNS and ECS*).

4. UNIVERSAL ACCESS

4.1. It is proposed that Broadband Infraco's community service obligations ("CSOs") should be aligned to its business plan, namely to position itself as a wholesale provider of ECS and ECNS in South Africa.

4.2. It is suggested that Broadband Infraco's CSO rollout targets should be detailed in an implementation plan to be negotiated between ICASA and Broadband Infraco, and annexed to Broadband Infraco's ECNS licence at a later date.

4.3. In addition, the CSOs should be aligned to Broadband Infraco's own business plan. More details as to how Broadband Infraco plans to expand its network to under-served areas, are contained in **ANNEXURE B2** (*existing network roll-out, planned network expansion and universal access provisioning strategy*).

**BROADBAND
Infraco**



**ANNEXURE B1: MARKET IMPACT ASSESSMENT ON
 PROVIDING AFFORDABLE ACCESS TO
 WHOLESALE LONG DISTANCE ECNS
 AND ECS**

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

1. INTRODUCTION

Broadband Infraco's mandate is to rapidly normalise telecoms market efficiency by improving access to and lowering the cost of those components of national and international connectivity infrastructure that impede private sector development and innovation in electronic communications services and content offerings.

Broadband Infraco's vision is to leverage the substantial existing investments in its national fibre optic cable network footprint to reduce the cost and accelerate the availability of long distance national and international connectivity to a broader wholesale customer base.

The scope of this **Annexure B1** is as follows:

- Market analysis overview
- Broadband Infraco's role in the telecommunications value chain together with its business model; and
- The value proposition.

2. MARKET OVERVIEW

Although the cost of broadband in South Africa has started to come down, mainly as result of an aggressive drive from the mobile operators to roll out 3G/HSPA services, broadband prices are still prohibitive for the broader middle class and mass markets, especially if measured as a percentage of Gross National Income per Capita.

Globally, there continues to be a strong correlation between the socio-economic growth seen in countries with high levels of ICT capability, and access to affordable broadband services. As shown by many examples internationally, the pent-up demand for broadband is significant and is poised to result in massive uptake in South Africa once broadband infrastructure and services become more widely available and affordable.

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

Similarly, the amount of bandwidth available per local user is currently significantly constrained, which forces the adoption of business models that limit the amount of data that end-users can afford. Once bandwidth can be distributed more freely, the amount of data used by individual users will also increase dramatically, driven by demand for rich content and internet based services from across the globe.

The International Telecommunications Union (ITU) has published its most recent global ICT performance report for 2008.

2.1 Broadband Prices

Fixed broadband Internet prices display quite singular patterns compared to fixed and mobile cellular telephony prices. The difference between developed and developing economies is bigger than in all other cases.

In particular, the high Internet broadband price of Sub-Saharan countries is striking (average price per person of \$322 per month, compared to \$15 in the USA using (PPP – purchasing power parity – comparison techniques). It practically implies the unavailability of that service in the region. Moreover, the price difference between Sub-Saharan countries and other regions shows that the region is lagging significantly behind. Some of Oceania's islands (Papua New Guinea, Samoa, Tonga and Vanuatu) are in the same situation.

Seven out of ten economies with the least expensive fixed broadband Internet prices are high-income economies. The fact that Maldives and India are in the top 10, as well as the fact that both are also among the top 10 economies with least expensive mobile broadband prices, shows their good performance concerning mobile and Internet pricing.

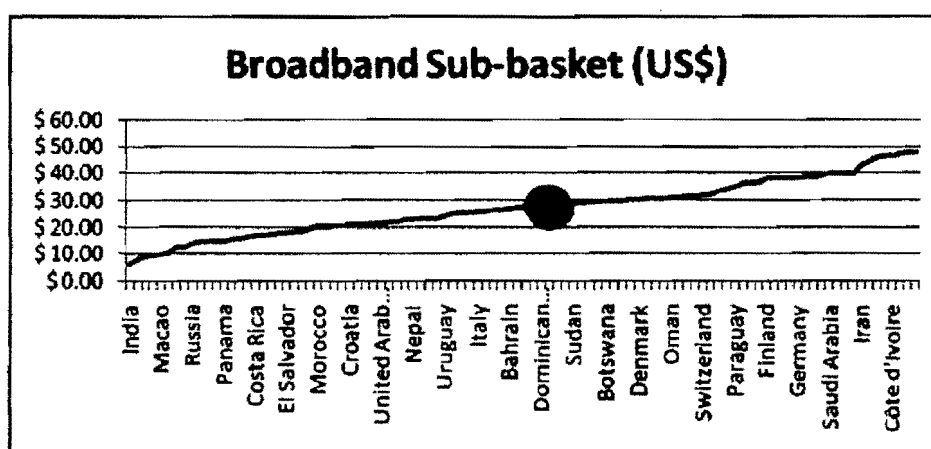
The United States and Canada also have relatively cheap broadband prices. The Northern American average broadband Internet price (\$15.70 per connection per month) is the lowest among all regions. Eastern Asia (\$ 26.60 per connection per month) is the second least expensive region, with Macao (China) and Taiwan (China), amid the top ten economies with least expensive broadband prices. Finally, consistent with the regional averages, out of the bottom 20 countries (i.e. with most

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

expensive broadband prices), 14 are from the Sub-Saharan region and three are islands from Oceania.

According to the ITU report, South Africa currently ranks 48th in terms of the actual cost of broadband (approx \$26.00 per connection per month in South Africa), which is less expensive than the UK and Denmark (approximately \$30); and more expensive than the US (approximately \$15.00 per connection per month).

The graph below shows how broadband connectivity ranges from \$7.00 (per connection per month) (India) to approx \$50.00 (per connection per month) in the Dominican Republic.



2.2 Broadband Prices as Percentage of Gross National Income

When considering the cost of broadband as a percentage of GNI (Gross National Income), South Africa's rank drops from 48th to 62nd (at 5.5% of GNI), or approximately 10 times more expensive than European and the US as its main trading partners, where the cost of broadband is at 0.4 to 0.8% of GNI.

By reducing the cost of long distance connectivity, as a major cost driver for broadband connectivity, Broadband Infraco will help enable South Africa to improve the cost of broadband (also as a percentage of GNI) significantly, thus also lowering the impact of price as a barrier to entry for widespread Internet adoption.

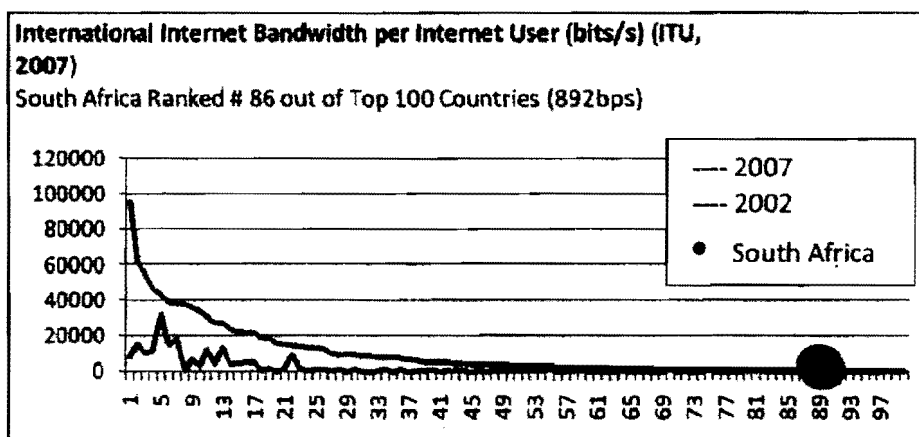
BROADBAND INFRACO - LICENCE APPLICATION

ANNEXURE B1 – MARKET IMPACT ASSESSMENT

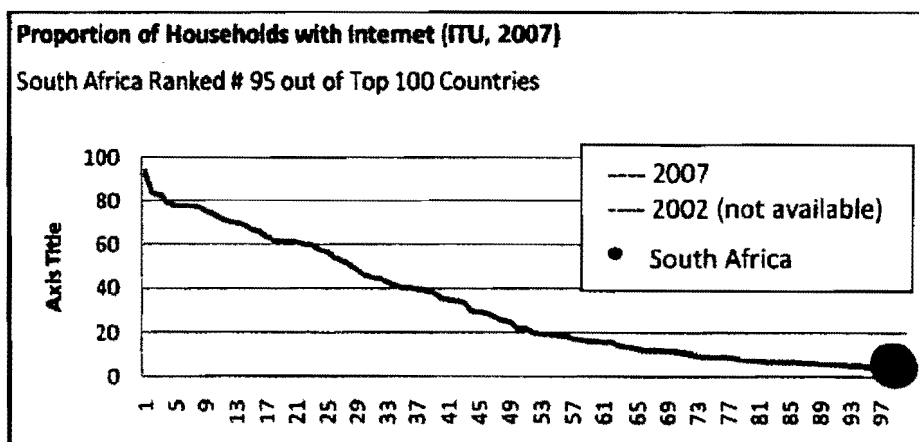
2.3 Quality of Broadband

The difference in actual bandwidth and the quality of broadband is important when comparing prices, as most European broadband offerings provide up to 8 M/bits ADSL II connections, versus the basic ADSL and 3G offerings in South Africa that cannot readily be compared to the performance delivered by the developed economy networks.

South Africa was ranked 86th out of 154 countries measured. For practical purposes, only the Top 100 countries are shown in the graph below. South African Internet users, on average, experienced 892 bps (i.e. 0.9 kbps) bandwidth connections.



The graph below illustrates Internet penetration the Top 100 countries, ranked from highest to lowest.



BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

Considering that South African internet penetration resulted in approximately 4.8 households per 100 having access to the Internet, it is abundantly clear that the need for higher levels of national and international bandwidth will be needed to compliment further development and investment into metro and regional connectivity.

- The UK has 67 households per 100 connected to the Internet at an average of 55,281 bps (55kbps), which indicates a compounded difference factor of $(67/4.8)$ users \times $(55,281/892)$ bps = 786 the ratio for South Africa.
- Luxemburg, Sweden, France, UK and Denmark currently tops the list for Internet penetration (approx 75% combined with bandwidth per user (approx 98,000bps), which is a compound factor of $(75/4.8)$ users \times $(98,000/892)$ bps = 1,559 times the ratio for South Africa.
- Compared through the compound measure, South Africa is in the same category as Libya, Poland, Saudi Arabia, Iran, Yemen, Burkina Faso, Sudan, Benin, Vietnam and Lao.

By using the compound measure, it is clear that countries with the highest bandwidth per user, combined with Internet penetration, will be able to leverage ICT to accelerate economic development faster than countries with low bandwidth and penetration. The compound measure also illustrates that the gap between the developed world and developing economies is growing at an increasing rate.

2.4 South African Market Liberalisation

As a result of the recent licence conversion process to the new ECNS/ECS license regime, numerous organisations have obtained the ability to self provide network infrastructure, as is evident by several initiatives being undertaken both at metro and national fibre optic network deployments for addressing different needs in the market.

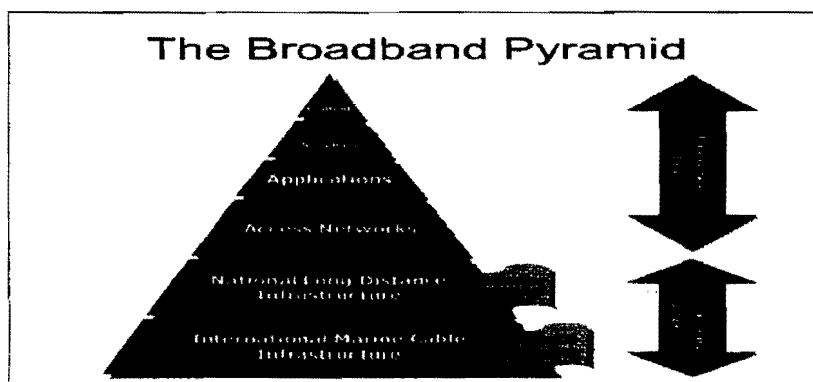
Many of these organisations (service providers) have existing customer bases that are sufficient to provide them with critical mass; whereas several other new service providers will be able to bundle new services to end-users in order to leverage

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

extensive retail distribution capabilities. These service providers are also able to select any last mile access technology, provided they get access to sufficient amounts of spectrum in the case of players preferring to make use of wireless/mobile services. By being able to use the most appropriate technologies for serving different market requirements, service providers will be able to improve the provisioning and quality of broadband services. This process will further be assisted by reducing the cost of long distance national and international wholesale data services.

3. VALUE CHAIN AND FOCUSSED BUSINESS MODEL

Extensive market analysis has shown that the current and future capabilities of Broadband Infraco will not be optimally leveraged by entering the access layer or retail distribution environment, which as a result of recent regulatory developments, is widely seen as being sufficiently empowered to ensure a high level of competition.



In line with its mandate, Broadband Infraco has therefore adopted a strategy that will focus its operation as a Wholesale Long Distance Data Service Provider to serve other ECNS/ECS licensed providers, as well as large corporate, enterprise and government organisations with a requirement for high capacity long distance connectivity. The Broadband Infraco intervention will essentially be targeted at two elements of the telecommunications value chain:

- **Broadband Infraco already provides National Long Distance** on its fibre network, that can be used for providing wholesale high capacity managed data services between the major national metropolitan centres, that can also

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

be selectively extended to provide wholesale connectivity to service providers in identified rural areas, and;

- **Broadband Infraco is participating in International Long Distance Services**, which comprises a submarine cable to be deployed between South Africa and the United Kingdom, along the west coast of Africa, focused on offering wholesale high capacity managed data services between major international metropolitan centres.

The combination of the above two business focus areas is envisaged to alleviate any possible remaining structural bottlenecks that currently exist in the telecommunications services supply chain in South Africa.

4. VALUE PROPOSITION

Whereas many ECNS licensed participants in the market will exercise the option to self-provide, or to continue to use the services of the incumbent long distance fixed line operator, Broadband Infraco will provide its target market customers with an additional choice for their long distance wholesale network service needs. Customers will therefore be able to put together an optimum portfolio of long distance connectivity supply, based on a combination of the options mentioned above.

By having the ability to make these choices, customers will be able to reduce the cost of long distance and international connectivity as one of the key cost drivers to providing data services and internet access to end users, including corporate, SME and residential users, fixed, wireless and mobile operators.

Customers of Broadband Infraco will also be able to benefit from the following:

- Optimising their business models by being able to leverage capital and operational expenditure preferences, depending on cost of capital and availability of funds;
- Eliminating time delays associated with expanding footprint or capacities, revenue losses, constraints on quality and SLA capabilities, by being able to optimise the supply side of long distance connectivity;

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

- Extending their geographic reach without being dependent on a single operator or to self-provide by leveraging the economies of scale that Broadband Infraco can create across a broader geographic footprint, both nationally and internationally;
- Obtaining access to opportunities created by regional connectivity to other operators in neighbouring countries, also on a wholesale basis; and
- Focusing on their key competences, namely the provisioning of last mile access and providing products and services to end users, as well as to leverage their retail distribution capabilities.

Ultimately, Broadband Infraco will benefit the market by providing high capacity, carrier class services, across a wide footprint of national destinations, at the best possible price.

5. EXPECTED IMPACT OF BROADBAND INFRACO MARKET ENTRY

The proposed entry of Broadband Infraco into the long distance data services market as a full ECNS/ECS licensed operator, will have three primary positive impacts on the broader market for data services:

- **Ability to offer customers with choice:** In addition to being able to provide quality wholesale services at lower prices, Broadband Infraco will also stimulate competition in the long distance data services market; beyond the level of competition that will be created by the self-provisioning initiatives of several of the current ECNS service providers;
- **Ability to maintain transparency:** By remaining focused on reducing the cost of long distance connectivity, Broadband Infraco will maintain full transparency on the cost of long distance data services, thereby creating an environment that will create transparency into the long distance costs to ECNS operators for

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

providing backhaul to access layer services, to ensure that the benefits of additional capacities and lower prices are passed on to end users; and

- **Ability to unlock socio-economic growth:** By enabling the availability of high capacity, quality broadband services to the ICT market, Broadband Infraco will create an environment within which South Africa will be able to foster new business opportunities; while also improving its ICT performance and competitiveness at a global level.

Broadband Infraco's pricing is not intended to crowd-out additional private-sector investment from operators seeking to offer their own innovative services.

However:

- Lower rates of return may deter investment in long-distance infrastructure, depending on the alternative cost to self providing;
- Private sector investments are more likely to be targeted at the metro, access and higher return services and content end of the market; and
- The Broadband Infraco business model should also seek to encourage and stimulate investment into the metro and access layers.

Broadband Infraco will also consider its pricing strategies in view of the broader economic environment and evolution of industry forces affecting the level of investment into metro access networks.

BROADBAND INFRACO - LICENCE APPLICATION**ANNEXURE B1 – MARKET IMPACT ASSESSMENT**

6. SUMMARY AND CONCLUSION

Once successfully licensed as ECNS/ECS operator, Broadband Infraco will be able to leverage its existing fibre network footprint to provide affordable and quality access to long distance wholesale data services to its target customer base in a fair and transparent manner.

By providing additional options, this will enable the Broadband Infraco's target customer base to utilise as well as to pass on the benefits of higher bandwidth capacities and more affordable long distance services to their customers.

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**ANNEXURE B2: EXISTING NETWORK ROLL-OUT,
 PLANNED NETWORK EXPANSION AND
 UNIVERSAL ACCESS PROVISIONING
 STRATEGY**

BROADBAND INFRACO: LICENCE APPLICATION**ANNEXURE B2 – NETWORK ROLL-OUT AND USAL PROVISIONING STRATEGY**

1. INTRODUCTION AND STRUCTURE OF ANNEXURE B2

Broadband Infraco's Universal Access Provisioning Plans (at the wholesale level) are an integral part of its overall national long distance Network Roll-out Plan. Both elements will therefore be combined in this Annexure B2 to Broadband Infraco's application for Individual Electronic Communications Network Services (I-ECNS) and Electronic Communications Services (I-ECS) licences.

Annexure B2 covers the following relevant aspects associated with network infrastructure and service provisioning:

- Implementation of Broadband Infraco's mandate from a network infrastructure perspective;
- International best practice and trends; and
- Implications for network infrastructure development.

2. BROADBAND INFRACO'S STATUTORY MANDATE

Broadband Infraco's enabling legislation (Broadband Infraco Act No.33 of 2007) stipulates Broadband Infraco's mandate as being the expansion of the availability and affordability of electronic communications, including but not limited to underdeveloped and under serviced areas. This is to be implemented in accordance with the Electronic Communications Act No. 36 of 2005, and to be commensurate with international best practice and pricing, through the provision of electronic communications network services ("ECNS") and electronic communications services ("ECS").

3. BROADBAND INFRACO'S IMPLEMENTATION OF ITS MANDATE

Based on the above mandate, which is to unlock inefficiencies in the national and international long haul electronic communications services market, Broadband Infraco will focus on leveraging its current assets by enabling more market participants to gain access to long distance managed connectivity services; whilst adding layers of value added services to its basic product portfolio in the future.

BROADBAND INFRACO: LICENCE APPLICATION**ANNEXURE B2 – NETWORK ROLL-OUT AND USAL PROVISIONING STRATEGY**

3.1 International Best Practice

In keeping with its mandate to apply international best practice in its network development and operations, Broadband Infraco has observed the following wholesale market trends and will demonstrate how international best practice has influenced its network planning, design and engineering.

The global wholesale market is at an inflection point.

- Demand for wholesale services is growing fast;
- Competition in the access and retail layer is multiplying;
- Products are evolving beyond simple connectivity offerings;
- More partnerships are being forged in the supply chain (with regards to system integration); and
- Geographic availability of wholesale services is increasing (due to demand for multinational capability from service providers, driven by large global customers).

Large global players have typically responded to these changes by addressing the challenges at four different layers in the wholesale infrastructure model:

Network Layer

- One multipurpose all Internet Protocol (IP) network;
- Next Generation Network (NGN) architectures, providing integration between transport, control, and services/applications; and
- Deeper deployment of fibre, taking fibre to the last mile or even to the access layer.

Services Layer

- Paying attention to building managed services capability; and
- Understanding the degree of flexibility required by access layer.

BROADBAND INFRACO: LICENCE APPLICATION**ANNEXURE B2 – NETWORK ROLL-OUT AND USAL PROVISIONING STRATEGY**

Systems Layer

- Driving cost savings through systems integration to reduce complexity; and
- Deployment of Operational and Business Support System (OSS/BSS) layers in conjunction with NGN Network deployments.

Channel Layer

- Building specific business units capable of delivering multinational solutions to large global customers demanding to deal with “one provider”.

Based on the design of international business models and global industry trends, it is clear that wholesale communications providers should:

- Focus on speed to market capability;
- Embrace customer responsiveness;
- Maintain focus on core business;
- Achieve competitive advantage through the cost structure; and
- Be clear on how far they want to migrate into managed services layers.

3.2 Implications for Broadband Infraco

One of the key implications of the above for Broadband Infraco is that it will have to expand its current network capabilities to include network equipment capable of switching and managing IP traffic, as well as to adapt a wholesale model that includes providing managed and value added services to a select number of players.

However, given the complexity of delivering managed and value added services to licensed ECNS and ECS operators, and partners as well as other customers, Broadband Infraco will adopt a business model and product portfolio that is simple, efficient and relevant to the needs of the target market. At the same time the model will be adaptive to future changes in the needs of customers, including future technologies.

Moreover, Broadband Infraco will play a fundamental role in supporting the emerging new ECNS and ECS operator landscape, since few players will be in a position to build their own

BROADBAND INFRACO: LICENCE APPLICATION**ANNEXURE B2 – NETWORK ROLL-OUT AND USAL PROVISIONING STRATEGY**

long haul backbone infrastructure. In parallel, by having a number of ECNS licensees investing in the access layer, this will stimulate and effectively create new demand for broadband services.

This will most likely also result in step change in long and short distance data traffic volumes while ultimately benefiting the end user through significantly lower prices; provided that the cost savings enjoyed by Broadband Infraco's customers, who are the service providers to end-users, are passed on and sufficiently shared with end-users.

To achieve this, Broadband Infraco's network will have to be of the highest standards (that is, carrier grade), underpinned by having a reliable and highly scalable fibre optic cable network infrastructure. Reliability, accessibility, redundancy and affordability will be the hallmarks of Broadband Infraco's value proposition, network and operations.

4. SUMMARY AND CONCLUSION

Broadband Infraco's enabling legislation stipulates Broadband Infraco's mandate as being the expansion of the availability and affordability of electronic communications, including but not limited to underdeveloped and under serviced areas.

Based on the above mandate, and in keeping with international best practices, Broadband Infraco will focus on leveraging its current assets by enabling more market participants to gain access to long distance managed connectivity services; whilst adding value added services to its basic product portfolio in the future.