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OFFICE OF THE DIRECTOR

4th September 2014

Charles S. Punaha
Chief Executive Officer
National Information and Communications Technology Authority (NICTA)
P.O. Box 8444,
BOROKO

Dear Mr. Punaha,

RE: PUBLIC CONSULTATION ON RETAIL PRICING OF ENTRY-LEVEL BROADBAND SERVICE

The National Research Institute (NRI) has been advocating for competition and sound economic regulation in key infrastructure industries including the ICT. In continuing this endeavour, and in response to your letter dated 28th August, 2014 regarding the above, we provide our views on the issues highlighted in the consultation paper and related ICT matters, necessary to support successful implementation of the National Broadband Policy.

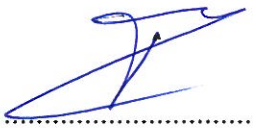
Using the recent experience of the introduction of competition in PNG's mobile market as a guide, our views are summarised as follows:

- Regulatory and policy reform to build ICT backbone infrastructure and harness the potentials of submarine cables is critical. Emphasis should therefore be placed on accessibility and availability of broadband and internet services, which largely depend on ICT backbone and international network assets. The more critical, though, is the access to capacities on international submarine cables and satellite-based services.
- Constraints to access capacities on cost-effective fibre-optic submarine cables have implications for robust competition among ISPs. As a result, consumer demand for the internet service can be adversely constrained. However, initiating and reinforcing Universal Access and Service Policy could ensure provision of broadband infrastructure that can, in turn, help broadband service providers reduce their costs, and hence the costs of retail broadband services for end-users nationwide.
- While price regulation (either at wholesale or retail level) ensures that a vertically integrated operator and dominant market player does not leverage its competitive advantages, the possibility of claims that such intervention is costly

and unnecessary, as it could be the cause of distortion to their service innovation and quality, cannot be ruled out.

A detailed submission is attached. However, should you require any clarification, please contact Mr. Ronald Sofe, Senior Research Officer on telephone 3260300 or fax 3260213 or email: rsofe@nri.org.pg

Yours Sincerely,



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Dr. Thomas Webster
Director

National Research Institute (NRI)

Submission

To

National Information and Communications Technology Authority (NICTA)

On

Retail Pricing of Entry-Level Broadband Services

September 2014

NRI Submission on Retail Pricing of Entry-Level Broadband Services

1. Introduction

1.1. The National Research Institute (NRI) is pleased to provide comments in response to issues highlighted in NICTA's consultation paper on Retail Pricing of the Entry-level Broadband Services. Through this submission, NRI continues its endeavour in advocating for public policies that effectively promote competition and sound economic regulation in key infrastructure sectors including the Information and Communications Technology (ICT) sector. We believe that the delivery of essential services through a competitive and well regulated market is critical to achieve economic efficiency and enhance consumer welfare as well as business development.

1.2. It is acknowledged that this public and stakeholders' consultation gives effect to the recent Government-endorsed National Broadband Policy. The aim is to facilitate increased affordability and wider availability of broadband services throughout the country which should, in turn, foster business innovation, enhance competitiveness, and increase productivity.

1.3. This submission is based on our understanding of the PNG ICT market and relevant information available in the public domain. Whilst it endeavours to focus on issues within the scope of the consultation paper, it also dwells, to some extent, on regulatory economics of broadband and related competition concepts to generate supporting analysis.

2. Affordability issue of broadband

2.1. With the ever-increasing pace of globalization and technological advancement, accessing quality internet services via broadband has become a priority for the 21st Century. PNG's endeavour in the adoption and usage of broadband services has been markedly enhanced through its recent phenomenal ICT development, riding on the back of recently introduced competition. The experience arising from the benefits of effective competition in the mobile market in the country should be a key lesson and a guiding benchmark in the broadband case.

2.2. The cost associated with accessing internet or broadband service is a growing concern among users. According to the assessment highlighted in the consultation paper,

the cost of entry-level mobile broadband and fixed broadband services falls at most 80% and 150% respectively of average monthly income, whereas the international benchmark rests at a mere 5% mark. This reflects the high cost (price) of accessing internet services in the country, relative to per capita income. In fact, the price is in excess of what a competitive market could offer. Given that broadband affordability is largely determined by price, the case for PNG in broadband journey is surely a long way to go.

2.3. The number of Internet Service Providers (ISPs); that is 7 in total as indicated in the Consultation Paper (page 6), is reasonable in nurturing a competitive broadband market. But this is not the case as the unaffordability data reveals. It appears that some of these ISPs are constrained by the lack of sufficient access to pre-requisite wholesale services and international gateway access capacity. History has shown that ISPs' capacity and access to wholesale services, particularly the cost-effective fibre optic submarine cable, has often been tampered with in discriminatory schemes, all to the advantage of incumbent's downstream internet service enterprise. Consequently, effective competition among the ISPs appears to be lacking which negatively impact on the expansion of broadband usage.

2.4. The high price of retail broadband services and contracted competition effectively gives rise to insufficient leverage upon which the broadband users (residential and corporate) could bank on to establish countervailing buying power. However, recent acquisitions among the ISPs and the entry of Vodafone through a partnership deal with B Mobile are likely to exert some degree of competition at the retail level.

2.5. As it is with other ICT services, reliable accessibility and availability of internet broadband services largely depend on ICT backbone and international network assets. Central to this is the wholesale access to capacities on international submarine cables and satellite-based services. The latter has been employed by the licensed ISPs to access international network to provide services where demanded, but that has often come at considerable costs. Succumbing to excessive transaction costs for resorting to substitutes, effectively translates into high retail prices of internet services. Among other fallouts, (business and residential) consumer demand for the internet service is adversely constrained, which further complicates the affordability incentives. Hopefully, the

determination from the recent NICTA Public Inquiry into the wholesale access to and capacity on submarine cable, following the Minister's declaration, will address this.

3. Initiatives to reduce cost and enhance provision of broadband services

3.1. The grim statistics and prospect of broadband affordability in the country, as highlighted earlier here, and also in the Consultation Paper, give rise to the critical question of how effective the Government needs be, in order to achieve its National Broadband Policy objective of affordability. As indicated in the previous section, the current market condition barely allows competitive market forces to conveniently bring down price which can enhance affordability of broadband services. It is obvious, therefore, that there is deficiency that handicaps opportunities of a well-functioning internet broadband market. This preferably warrants price regulation but this can be risky as highlighted in subsequent discussions.

3.2. Indeed, competition alone will not be fully instrumental in achieving the Government's National Broadband Policy objectives. Given the ruggedness and remoteness of many places in PNG, where provisions of critical services including ICT (broadband) are largely unviable, what would be the viable alternative? NRI supports the idea that Universal Access and Service Policy (UAS)[1] would be a fitting vehicle. And as indicated in the National Broadband Policy and Consultation Paper, greater attention will need to be given to extending the provision of broadband infrastructure to support internet penetration to uneconomical areas around the country. Initiating and reinforcing such arrangements can help broadband service providers reduce their costs, and hence, the costs of retail broadband services for end-users that could, eventually aid the transition to the next generation of broadband services market.

3.3. There have been some positive developments on harnessing the potentials of submarine cables through building a cross-country, cost-effective backbone network of fibre optic cables running alongside the PNG LNG project pipelines to eventually link up to the high-speed international submarine cable in Madang. We understand there is a plan by the

[1] For PNG case, the Universal Access and Service (UAS) regime was established under Section 88 of the National Information and Communications Technology Act 2009, as part of the Government's vision in improving accessibility of ICT services, particularly in the rural communities.

Government for Telikom to sell off the trunk services and the international gateway to PNG Dataco to hold under a monopoly arrangement under price controls; Telikom would continue to compete in the domestic retail market with other service providers in the ICT services.

3.4. Even then, the market for the wholesale capacity on and access to the international fibre-optic submarine cables, as it is now, is exclusively under the control of Telikom (PNG) Ltd. The licensing was authorized by the owners of the APNG-2 (Ela Beach cable) and the PPC-1 (Madang cable) which consequently grant full wholesale access to the capacities therein. This 100% possession of market share demonstrates Telikom's substantial market power in the wholesale market. The exclusive right over the international submarine cables' capacities and access, which are key wholesale input for the downstream retail ISPs, has been a cause of public concern. As and when this issue is addressed, retail price regulation on entry-level broadband product[2] as proposed in the Consultation Paper, will help promote broadband accessibility and affordability.

4. Potential issues relating to regulating broadband services

4.1. The continuing lack of competition may compel NICTA to intervene in the retail pricing of the broadband market through applications of its regulatory instruments, pursuant to relevant provisions in the NICTA ACT (2009). For example, the broadband service providers might be required to submit their retail prices to NICTA for its approval or variation, depending on evidence of market dominance. Relatedly, NICTA may endeavour to approve ISP's retail price of entry-level broadband product amid concerns of a vertically integrated operator that is dominating the wholesale broadband market and possess capability to impose margin squeeze[3] on its retail competitors. Retail price regulation in this instance, would ensure that the vertically integrated service provider does not leverage its market power.

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[2] It might be a basic broadband lower capacity service that a dominant service provider is obliged to offer at a specific price, or it could be a standardised product that all broadband service providers are obliged to offer as a minimum

[3] Vertically integrated firm in total control of essential wholesale input supply to its retail competitors at a price greatly in excess of its costs

4.2. Some caution, however, is that any form of price intervention can have an adverse impact on the broadband market in the long-run. This is due mainly to the immaturity of PNG's broadband market at this stage and the uncertainty for demands of certain broadband products and applications. There is danger that price regulation could distort price signals and dissuade potential investment in broadband infrastructure, which is essential for the long-term growth of the broadband market.

4.3. One of the feasible strategies to promote effective competition at price levels of retail broadband services is to address issues associated with market dominance in the wholesale broadband access regime. As discussed earlier, the monopolistic behaviour with regard to access to submarine cable capacity gives rise to problems along the supply chain. Hence, fixing the problems in the wholesale market with necessary regulation is justified. This supports our view earlier that Telikom will be able to compete with other ISPs on a level playing field if it sells off the trunk services and the international gateway to a separate corporate entity to hold under a monopoly arrangement that would be subject to price controls. While it would take some time to establish a vibrant regulatory mechanism for the wholesale market, the positive impact of retail competition could trickle down immensely to businesses and end-users wishing to use broadband.

4.4. Further, a critical issue worth considering is the likelihood of dominant market players attempting to use their advantage in either wholesale or retail markets to push for partial or total elimination of retail regulation on entry level broadband services. The dominant market players might claim that price regulatory intervention is costly and unnecessary as it could be the cause of distortion to their service innovation and quality. This observation renders a compelling case to undertake appropriate competition analysis by NICTA – perhaps in collaboration with ICCC – to determine whether there is evidence of substantial market power, not just in the wholesale and retail markets but also among operators of fixed, mobile handset based, and computer based broadband services.

5. Concluding remarks

5.1. The recent experience of introduced competition in PNG's mobile market is a key lesson to draw on and guide the efforts to addressing high costs and unaffordability issues of broadband services.

5.2. Availability, accessibility and reliability, and of broadband and internet services largely depend on the ICT backbone and international network assets. Central to this is the access to capacities on international submarine cables and satellite-based services. Regulatory and policy reform to build the ICT backbone infrastructure and harness the potentials of submarine cables is, therefore, critical.

5.3. Constraints to access capacities on cost-effective fibre-optic submarine cables have severe implications on nurturing effective competition among ISPs. As a result, consumer demand for the internet service is adversely constrained, which further complicate the affordability incentives.

5.4. Initiating and reinforcing Universal Access and Service Policy to ensure provision of broadband infrastructure to support internet penetration nationwide, particularly to uneconomical areas, can help broadband service providers reduce their costs, and hence, the costs of retail broadband services for end-users.

5.5. While price regulation (either at wholesale or retail level) ensures that a vertically integrated operator and dominant market player does not leverage its competitive advantages, the possibility of claims that such intervention is costly and unnecessary as it could be the cause of distortion to their service innovation and quality cannot be ruled out.