



DISCUSSION PAPER

**Public consultation on draft wholesale pricing principles for broadband capacity services, and international submarine cable services**

*Issued on 3 July 2019*

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# 1 INTRODUCTION

1.1.1 On 18<sup>th</sup> February 2019, the Minister for Communications and Information Technology declared the following wholesale services under section 130 of the *National Information and Communications Technology Act 2009 (the Act)*:

- the international submarine cable transmission capacity service;<sup>1</sup>
- the international submarine cable gateway access service;<sup>2</sup>
- the international submarine cable duct access service;<sup>3</sup>
- the wholesale broadband capacity service;<sup>4</sup>
- the mobile terminating access service;<sup>5</sup> and
- the fixed terminating access service.<sup>6</sup>

1.1.2 The supply of a declared service is subject to the general pricing principles specified in section 134 of the Act and also to service-specific pricing principles that are determined by NICTA in respect of each individual declared service. Section 135 of the Act requires NICTA to determine service specific pricing principles for a declared service within six months of the Minister's declaration (that is, by the 18<sup>th</sup> August 2019 in the present case).

1.1.3 Service-specific pricing principles are important because:

- NICTA must have regard to them if it is required to arbitrate an access dispute (in relation to a service to which the pricing principles apply);<sup>7</sup>
- NICTA cannot accept a reference interconnection offer (*RIO*) if it is not consistent with any relevant service-specific pricing principles;<sup>8</sup>
- NICTA may deem the existence of an access dispute if NICTA considers that an interconnection or access agreement is materially inconsistent with the relevant service-specific pricing principles.<sup>9</sup>

1.1.4 NICTA has prepared draft service-specific pricing principles in respect of each of the first four of the above-mentioned wholesale services. In the case of the fixed and mobile terminating access services (dot points 5 and 6 above), the network operators primarily affected, Digicel and Kumul Telikom, are currently discussing the issues that arise for and between them for implementation, and they will report on any agreed approach that they wish NICTA to also agree and adopt. The service-specific pricing

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<sup>1</sup> Refer *Wholesale Service Declaration No.1 of 2019*.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Refer *Wholesale Service Declaration No.2 of 2019*.

<sup>5</sup> Refer *Wholesale Service Declaration No.3 of 2019*.

<sup>6</sup> Ibid.

<sup>7</sup> Refer paragraphs 135(6) and 149(1)(d) of the Act.

<sup>8</sup> Refer subparagraphs 142(5)(b)(iii–iv) of the Act.

<sup>9</sup> Refer paragraph 143(6)(a) of the Act.

principles for these services will be developed taking account of the outcomes of the negotiation, and then will be separately published in draft for public comment as required by Section 135(4) of the Act.

- 1.1.5 Pursuant to subsection 135(4) of the Act, copies of the draft pricing principles for the first four services listed above are attached to this consultation paper for public review and comment.
- 1.1.6 NICTA invites interested parties to consider and comment on these draft determinations. **Written submissions should be submitted via email to [consultationsubmission@nicta.gov.pg](mailto:consultationsubmission@nicta.gov.pg) and must be received by 5pm Thursday, 1<sup>st</sup> August 2019.**
- 1.1.7 Copies of all submission received will be published on NICTA's Public Register consistent with the requirements on NICTA under subsection 229(3) of the Act. Additional procedural information is set out in NICTA's *Guidelines on the submission of written comments to public consultations and public inquiries*, which are available on NICTA Public Register ([www.nicta.gov.pg](http://www.nicta.gov.pg)). Any respondent that wishes to claim confidentiality over information that it submits as part of this consultation should follow the procedures described therein.

## 2 OVERVIEW OF KEY ISSUES

### (1) General

- 2.1.1 For clarity, the draft determinations separate the proposed principles into price related and non-price related terms and conditions, consistent with section 135 of the Act.<sup>10</sup>
- 2.1.2 NICTA considers that the appropriate costing methodology for determining the efficient costs of supplying a declared service—should the need to do so ever arise—is a total service long run incremental cost standard, to which is added an equi-proportionate mark-up to reflect a reasonable contribution to common costs (i.e. TSLRIC+). In the case of the submarine cable services, NICTA considers that a fully allocated cost (FAC) standard—or a TSLRIC+/FAC hybrid—may also be appropriate in an environment in which there are no issues associated with substantial common and shared costs between different business units or between products and services.
- 2.1.3 In all cases, the proposed pricing principles are intended to provide some guidance as to how NICTA would apply a TSLRIC+ (or FAC) costing methodology to determine the efficient costs of supplying a particular declared service. For example, NICTA may adjust actual costs claimed by an access provider or assume an economic life of assets that is different to that adopted by an access provider. These principles are intentionally consistent across all declared services. These principles are also non-exhaustive and do not limit NICTA from taking actions that are necessary or convenient and generally accepted in costing exercises or arbitrations of this nature.
- 2.1.4 A proposed new principle in respect of the international submarine cable transmission capacity service gives NICTA's view of indicative prices for the supply of those declared services. These indicative prices reflect NICTA's views on the appropriate pricing of these particular declared services and are likely to guide NICTA when considering an access dispute or a RIO in the absence of a cost model.
- 2.1.5 The indicative prices are thus intended to provide guidance to:
- access providers and access seekers involved in negotiating the terms and conditions of access to these particular declared services; and
  - access providers considering submitting a RIO to NICTA for its consideration.
- 2.1.6 It is envisaged that the indicative prices for a declared service would only be used to provide guidance where they remain appropriate, and that they may not be required, for example, after NICTA has undertaken more detailed analysis and assessment of

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<sup>10</sup> Subsection 135(2) of the Act states that 'The service-specific pricing principles may contain price relate terms and conditions (whether relating to a price or the method of ascertaining a price) and non-price terms and conditions relating to access to the declared service'.

the efficient costs of supplying that declared using appropriate cost model(s) as part of an arbitration of a relevant access dispute pursuant to Division 6 of Part VI of the Act.

2.1.7 The indicative prices are non-binding on parties to access agreements or arbitrations. They are also non-binding on NICTA. Although NICTA would likely see the indicative prices as appropriate in a general sense, NICTA must consider the specific issues raised by the parties in particular arbitrations or RIOs on their individual merits. As such, there will remain potential for an arbitration determination or an approved RIO to depart from the indicative pricing, even though this would be abnormal and should not be anticipated as likely. In such an event, the service-specific pricing principles may be revised to update NICTA's view on the indicative pricing for the declared service in question (which might result in the removal of that particular indicative price guidance altogether).

2.1.8 NICTA has determined the indicative prices after taking account of:

- the current and recent pricing of the relevant declared service and, where available, information about costs, trends, and utilisation; and
- the general pricing principles and, where relevant, the proposed service-specific pricing principles.

2.1.9 The indicative prices are expressed as a price range. However, the lower bound of this price range is not intended to reflect a price floor and should not be interpreted as such. Rather, the price range reflects NICTA's view of the range within which the maximum price for the declared service is likely to fall (or, in the case of the submarine cable services, the range within which the maximum average effective price is likely to fall).

## (2) **Submarine cable services**

2.2.1 The proposed service-specific pricing principles are essentially the same as those which NICTA determined in respect of the previously declared submarine cable services.<sup>11</sup> This includes principles:

- describing (without limitation) the types of circumstances that may justify differentiation in the pricing of the international submarine cable transmission capacity service (e.g. different pricing for different transmission capacities or lease periods); and
- intended to ensure that the consequences of any fault conditions that restrict the available of transmission capacity—including but not limited to the long standing fault with a repeater on the APNG2 submarine cable—are borne proportionally by the access provider and access users (subject to the terms of any premium grade of service for which a user has paid a price premium).

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<sup>11</sup> Refer *Service-Specific Pricing Principles (Submarine Cable Access Services) Determination No.1/2013*.

2.2.2 A new principle has been proposed that sets out indicative pricing for the supply of international submarine cable transmission capacity services on the APNG-2 and PPC-1 cable systems. NICTA intends to specify indicative prices for the supply of international submarine cable transmission capacity service on the Kumul Cable System 1 (that is, only for *international* transmission capacity) and the Coral Sea Cable closer to the ready for service date for the latter system 0.

### **(3) National broadband capacity service**

2.3.1 The proposed service-specific pricing principles for the national broadband capacity service are broadly the same as those proposed for the international submarine cable transmission capacity service.

2.3.2 No indicative pricing is being proposed for this particular declared service at this time. However, NICTA may revise this position in the future in the light of access seekers' experiences gaining access to this declared service on reasonable terms and conditions.

## **3 INVITATION TO COMMENT**

3.1.1 NICTA invites any interested party to review and comment on any or all of the draft service-specific pricing principle determination provided in the annexes to this document.

**ANNEX A: DRAFT PRICING PRINCIPLES FOR THE  
INTERNATIONAL SUBMARINE CABLE SERVICES**



**SERVICE-SPECIFIC PRICING PRINCIPLES  
(SUBMARINE CABLE SERVICES)  
DETERMINATION 2019**

*National Information and Communications Technology Act 2009*

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The NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY makes this Determination under section 135 of the *National Information and Communications Technology Act 2009*.

Dated [DATE]

[Name]

[signature]

Member

*Charles Punaha*

[signature]

Member

National Information and Communications Technology Authority

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**PART I – PRELIMINARY**

**1 Name of Determination**

This Determination is the *Service-Specific Pricing Principles (Submarine Cable Services) Determination 2019*.

**2 Commencement**

This Determination commences on the day it is notified in the National Gazette (*commencement date*).

### 3 Interpretation

- (1) Subject to subsection (2), unless the context otherwise requires, terms used in this Determination have the same meaning as in the Act.
- (2) In this Determination, unless the context otherwise requires –
  - (a) “*Act*” means the *National Information and Communications Technology Act, 2009*;
  - (b) “*average effective price*” means the amount calculated on the basis of the revenue collected or proposed to be collected for services divided by the volume of those services expressed in megabits per second per month.
  - (c) “*physical colocation*” means a point of between the access seeker’s network and the access provider’s network that is located inside a cable landing station;
  - (d) “*submarine cable service*” means –
    - (i) an international submarine cable transmission capacity service;
    - (ii) an international submarine cable gateway access service; and/or
    - (iii) an international submarine cable duct access service.
  - (e) “*virtual colocation*” means a point of interconnection between the access seeker’s network and the access provider’s network that is located outside the cable landing station, and may be notionally part-way along a physical link. This location may be adjacent to the station or at a reasonably distant location, depending on the options available. In this case, the access seeker's equipment is connected to the cable landing station by a link between the virtual colocation point and the cable landing station.

### 4 Determination

The National Information and Communications Technology Authority determines, pursuant to section 135 of the Act, that the service-specific pricing principles specified in Part II are to apply to the following services declared by the Minister under section 130 of the Act –

- (a) the international submarine cable transmission capacity service;
- (b) the international submarine cable gateway access service;
- (c) the international submarine cable duct access service.

## **PART II – PRICING PRINCIPLES**

### *Division 1 – Submarine cable services*

#### **5 Price related terms and conditions for the submarine cable services**

- (1) A total service long run incremental cost (TSLRIC+) analysis or a fully allocated cost (FAC) analysis is an appropriate costing methodology to inform NICTA of the efficient costs of supplying a submarine cable service.
- (2) To determine the efficient costs of supplying a submarine cable service, NICTA may (without limitation) do any of the following –
  - (a) use one or more cost models that have been prepared by or for –
    - (i) NICTA;
    - (ii) an access provider; and/or
    - (iii) an access seeker,that have been made available to and accepted by NICTA for this purpose;
  - (b) adjust the actual costs claimed by an access provider or access seeker to reflect –
    - (i) productive efficiencies available in the operations of the access provider;
    - (ii) scale and scope efficiencies available to the access provider; and
    - (iii) other efficiencies available to the access provider,that should, in NICTA’s opinion, be shared with access seekers;
  - (c) determine the economic life of the assets employed in the supply of the service based on –
    - (i) the practice of the access provider in the use and replacement of similar assets in Papua New Guinea;
    - (ii) the economic lives accorded to similar assets by other regulatory authorities in other countries; and/or
    - (iii) the practices of other network operators in the use and replacement of similar assets in Papua New Guinea and other countries;
  - (d) determine a reasonable return on the access provider’s investment over the economic life of the assets employed in the supply of the service based on the actual risks and returns accepted by providers of debt and equity capital to –
    - (i) the access provider; and/or

- (ii) other network operators providing equivalent services in Papua New Guinea or in other countries that, in NICTA's opinion, are reasonably similar to Papua New Guinea;
- (e) determine the efficiencies that shall be taken into account having regard to –
  - (i) information provided by the access provider in relation to its own costs and potential efficiencies;
  - (ii) information provided by other operator licensees in relation to their costs and potential efficiencies in Papua New Guinea; and/or
  - (iii) benchmarked information from countries that, in NICTA's opinion, are reasonably similar to Papua New Guinea.

### ***Division 2 – International submarine cable transmission capacity service***

#### **6 Additional price related terms and conditions for the international submarine cable transmission capacity service**

- (1) The price of the international submarine cable transmission capacity service may be different in terms of the price per megabit per second for services of different transmission capacities provided that the extent of any such difference in price shall be no more than is reasonably warranted by the cost of providing service and/or accepted price differentials in accordance with common international practice.
- (2) The price of the international submarine cable transmission capacity service may be different in terms of the price per megabit per second where the period of contractual commitment by access seeker differs to the extent that a longer contractual commitment reduces the costs and risk to the access provider.
- (3) The indicative price per megabit per second per month for the supply of the international submarine cable transmission capacity service is specified in Schedule 1.

#### **7 Non-price terms and conditions for the international submarine cable transmission capacity service**

If the transmission capacity of the international submarine cable transmission capacity or related infrastructure is subject to a fault or other condition that reduces the capacity available for a period, the capacity constraint shall be borne proportionally by the access provider and all access seekers to the extent that preference may be given to those users that, before the service constraint in question occurs, have paid a premium for full or best available service continuity under such circumstances.

### ***Division 3 – International submarine cable gateway access service***

#### **8 Non-price terms and conditions for the international submarine cable gateway access service**

- (1) Subject to availability of suitable accommodation and supporting facilities, the choice between physical colocation and virtual colocation as part of the international submarine cable gateway access service shall be determined by the access seeker.
  - (2) An access provider shall ensure that all collocated equipment that is controlled by the access provider has adequate separation from other facilities to ensure safety of plant and personnel. An access provider may charge the access seeker to recover the cost of such separation.
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# SCHEDULE 1 – INDICATIVE PRICES

(Subsection 6(3))

The indicative average effective prices (in Kina) for the international submarine cable transmission capacity are –

| <b>Time period</b>         | <b>APNG-2 cable</b>                              | <b>Pipe Pacific Cable 1 (PPC-1)</b>          | <b>Kumul Cable System 1</b>                                 | <b>Coral Sea Cable</b>                                      |
|----------------------------|--|--|---|---|
| Commencement date – 2023 * | K910–1,011<br>[US\$270–300**] per Mbps per month | K170–270<br>[US\$50–80**] per Mbps per month | None specified at this stage (To be determined by Jan 2020) | None specified at this stage (To be determined by Jan 2020) |

\* These prices are subject to any progressive implementation arrangement or glidepath that may be proposed by an access provider and agreed by NICTA

\*\*If, without agreement by NICTA, an access provider charges or seeks to charge prices that exceed the upper limit of the indicative price range shown in this Schedule, NICTA may intervene to address the matter whether at the request of an access seeker or access provider, or on its own initiative.

**ANNEX B: DRAFT PRICING PRINCIPLES FOR THE  
WHOLESALE BROADBAND CAPACITY SERVICE**

**SERVICE-SPECIFIC PRICING PRINCIPLES  
(BROADBAND CAPACITY SERVICE)  
DETERMINATION 2019**

*National Information and Communications Technology Act 2009*

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The NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY makes this Determination under section 135 of the *National Information and Communications Technology Act 2009*.

Dated [DATE]

[Name]

[signature]

Member

*Charles Punaha*

[signature]

Member

National Information and Communications Technology Authority

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**PART I – PRELIMINARY**

**1 Name of Determination**

This Determination is the Service-Specific Pricing Principles (Broadband Capacity Service) Determination 2019.

**2 Commencement**

This Determination commences on the day it is notified in the National Gazette (*commencement date*).



### **3 Interpretation**

- (1) Subject to subsection 3(2), unless the context otherwise requires, terms used in this Determination have the same meaning as in the Act.
- (2) In this Determination, unless the context otherwise requires –
  - (a) “**Act**” means the National Information and Communications Technology Act, 2009;
  - (b) “***broadband capacity service***” means a network service supplied by optic fibre means for the carriage of broadband traffic on a network within Papua New Guinea and involves the provision of a Layer 2 bitstream service or a Layer 3 network service from a point of interconnection, or potential point of interconnection, to either a second point of interconnection or potential point of interconnection.

### **4 Determination**

The National Information and Communications Technology Authority determines, pursuant to section 135 of the Act, that the service-specific pricing principles specified in Part II are to apply to the broadband capacity service declared by the Minister under section 130 of the Act.

## **PART II – PRICING PRINCIPLES**

### **5 Price related terms and conditions for the broadband capacity service**

- (1) A total service long run incremental cost (TSLRIC+) analysis or a fully allocated cost (FAC) analysis is an appropriate costing methodology to inform NICTA of the efficient costs of supplying a broadband capacity service.
- (2) To determine the efficient costs of supplying a broadband capacity service, NICTA may (without limitation) do any of the following –
  - (a) use one or more cost models that have been prepared by or for –
    - (i) NICTA;
    - (ii) an access provider; and/or
    - (iii) an access seeker,that have been made available to and accepted by NICTA for this purpose;

- (b) adjust the actual costs claimed by an access provider or access seeker to reflect –
- (i) productive efficiencies available in the operations of the access provider;
  - (ii) scale and scope efficiencies available to the access provider; and
  - (iii) other efficiencies available to the access provider,
- that should, in NICTA’s opinion, be shared with access seekers;
- (c) determine the economic life of the assets employed in the supply of the service based on –
- (i) the practice of the access provider in the use and replacement of similar assets in Papua New Guinea;
  - (ii) the economic lives accorded to similar assets by other regulatory authorities in other countries; and/or
  - (iii) the practices of other network operators in the use and replacement of similar assets in Papua New Guinea and other countries;
- (d) determine a reasonable return on the access provider’s investment over the economic life of the assets employed in the supply of the service based on the actual risks and returns accepted by providers of debt and equity capital to –
- (i) the access provider; and/or
  - (ii) other network operators providing equivalent services in Papua New Guinea or in other countries that, in NICTA’s opinion, are reasonably similar to Papua New Guinea;
- (e) determine the efficiencies that shall be taken into account having regard to –
- (i) information provided by the access provider in relation to its own costs and potential efficiencies;
  - (ii) information provided by other operator licensees in relation to their costs and potential efficiencies in Papua New Guinea; and/or
  - (iii) benchmarked information from countries that, in NICTA’s opinion, are reasonably similar to Papua New Guinea.

- (3) The price of the broadband capacity service may be different in terms of the price per megabit per second for services of different transmission capacities provided that the extent of any such difference in price shall be no more than is reasonably warranted by the cost of providing service and/or accepted price differentials in accordance with common international practice.
- (4) The price of the broadband capacity service may be different in terms of the price per megabit per second where the period of contractual commitment by access seeker differs to the extent that a longer contractual commitment reduces the costs and risk to the access provider.

## **6 Non-price terms and conditions for the broadband capacity service**

If the transmission capacity of the broadband capacity or related infrastructure is subject to a fault or other condition that reduces the capacity available for a period, the capacity constraint shall be borne proportionally by the access provider and all access seekers to the extent that preference may be given to those users that, before the service constraint in question occurs, have paid a premium for full or best available service continuity under such circumstances.

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