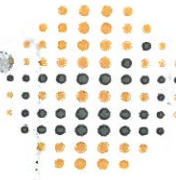


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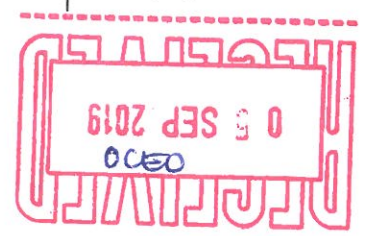
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OFFICE OF MANAGING DIRECTOR

www.pngdataco.com

4 September 2019

Submitted via Email: consultationsubmission@nicta.gov.pg



BY: Charles Punaha
Chief Executive Officer
National ICT Authority (NICTA)
PO Box 8444
BOROKO
National Capital District

Dear Mr. Punaha,

Noted in CEO 06/09/19

SUBJECT: PUBLIC CONSULTATION ON DRAFT WHOLESALE PRICING PRINCIPLES FOR BROADBAND CAPACITY SERVICES, AND INTERNATIONAL SUBMARINE CABLE SERVICES

*DETAILED DRAFT
For your attention*

*CEO
06/09/19*

We thank you for the opportunity to be able to provide the submission to the public consultation on the draft wholesale pricing principles for Broadband Capacity Services and International Submarine cable services.

As a wholesale only service provider and the manager and the operator of the National Transmission Network ("NTN") which comprises of International and Domestic transmission in Papua New Guinea, the draft Specific Pricing Principles will have a direct impact and influence on the following wholesale services that we offer:

- 1) The international submarine cable transmission capacity service;
- 2) The international submarine cable gateway access service;
- 3) The international submarine cable duct access service; and,
- 4) The wholesale broadband capacity service.

PNG DataCo Limited ("DataCo") is of the view that the setting of the specific pricing principles is premature at this stage in the development of the ICT sector as well as the development of the National Transmission Network Program and will distort the growth of the market and further development of critical wholesale ICT infrastructure for the country. Hence find **attached** is DataCo's response accordingly.

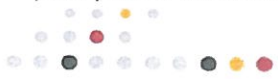
We would be happy to discuss our views and position with you and your Management and any other matters arising from the submission that requires further clarification.

Sincerely,

PAUL KOMBOI
Managing Director

Encl: *DataCo Submission on the Public Consultation on Wholesale Pricing Principles.*

yes, you'll be covered



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PNG DATACO LIMITED
RESPONSE TO

DISCUSSION PAPER ON

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

A handwritten signature in blue ink, appearing to be 'JF', is located in the bottom right corner of the page.

SUMMARY OF DATACO COMMENTS

DataCo understands that the following wholesale services which are provided through DataCo managed assets are now declared services.

1. the international submarine cable transmission capacity service;
2. the international submarine cable gateway access service;
3. the international submarine cable duct access service; and,
4. the wholesale broadband capacity service.

While DataCo is of the opinion that the pricing principles set out in the consultation document and the draft Specific Pricing principles covers the principles, DataCo is concerned that NICTA has gone a step further by determining 'Indicative Pricing' which cannot be accepted at this stage for the following reasons.

1. DataCo has just taken on the Management of the PPC-1 and APNG 2 in August 2018

The services for which indicative pricing has been proposed are delivered on PPC-1 and APNG-2 which are assets that are now managed by PNG DataCo since August 2018. Prior to that TPNG was the operator and manager of this assets.

It has only been 12 months now since DataCo took on the assets and since then, DataCo had reduced the price of the assets twice already from K1250 per Mbps per month to K1000 per Mbps per month then to K800 per Mbps per Month. DataCo has planned to further reduce the Wholesale internet rates further.

Apart from the Right to Use costs under the Business Transfer arrangements, the business transfers include transfer of costs for:

O&M for the cables,
O&M for the systems,
Colocation in Sydney,
Cross connect costs
Fibre lease costs in Sydney between PoPs
Peering costs; and
IP transit costs.

Even with this high costs which is shared amongst the low usage, DataCo has managed to achieve cost price reductions for the good of the market and users.

DataCo is focussed on achieving Government objectives on affordability and Access and therefore feels that the timing between taking on the management of the wholesale assets and the declaration is too short for DataCo to intervene through price ceilings at this stage.

2. The NTN is still in construction

The National Transmission Network (NTN) is still under construction and there also exists a lot of improvement in infrastructure to ensure resiliency and improved reliability. While DataCo is on track to deliver the NTN, the heavy handed regulatory intervention by NICTA like introducing price caps creates a lot of uncertainties as well as disincentives for those investing in wholesale infrastructure like PNG DataCo.

3. The prices of declared services dropping with time and increase in demand

Even without the wholesale declaration and indicative pricing by NICTA, PNG DataCo has already since taking on the wholesale assets from Telikom has already started to reduce pricing of Internet. DataCo has plans to achieve further price reductions but can only do this with completion and commercialisation of the parts of the NTN and achieving increased usage (Demand) on the network.

The wholesale pricing is volume driven. If the usage volume increases then the costs are shared amongst a bigger volume base resulting in lower unit costs does achieving lower prices.

However, DataCo is a wholesale service provider who depends on the volumes that are acquired by the retails service providers who drive the volumes at the retail level. The retails services providers need to grow the demand and acquire more wholesale capacity for the market to see further reductions of prices.

Legal and Other observations and commentary

A further extension to the observations and commentaries made above is that whilst there is a generalist approach taken by NICTA to further regulate and move to indicative pricing, the timing is premature (considering there has only been a recent declaration). In DataCo's respectful view, the proposal is premature considering the heavy capital investments which are being made into ensuring the backhaul network is efficient enough to guarantee seamless service provision on those assets/network with minimal glitches and generate volume domestically to meet the critical mass and make such investment feasible and viable

Part of the objectives of the NICTA Act and in particular section 3(b) provides that the regulatory measures imposed should be proportionate and drafted to achieve results that are no more burdensome than necessary to achieve their stated regulatory objectives; are based on sound economic principles and that they are implemented within reasonable timeframes that recognize the need for ICT licensees to respond to dynamically changing market forces among other matters. By proposing indicative pricing at this stage would cripple the return on investment but importantly the ability to repay loans obtained to fund these investments made by the PNG Government through DataCo and could potentially stifle the current positive play of market forces which have had the effect so far in driving prices down in the last 12 months.

Whether the indicative pricing accords with the general pricing principles spelt out in Section 134 of the NICTA is an economist argument. For legal purposes though, any sort of pricing which is being considered by NICTA should generally following section 134 (general pricing principles) and section 135 (for service specific pricing principles).

The "general pricing principles" under section 134 merely require that the price of access to a declared service should among other things:

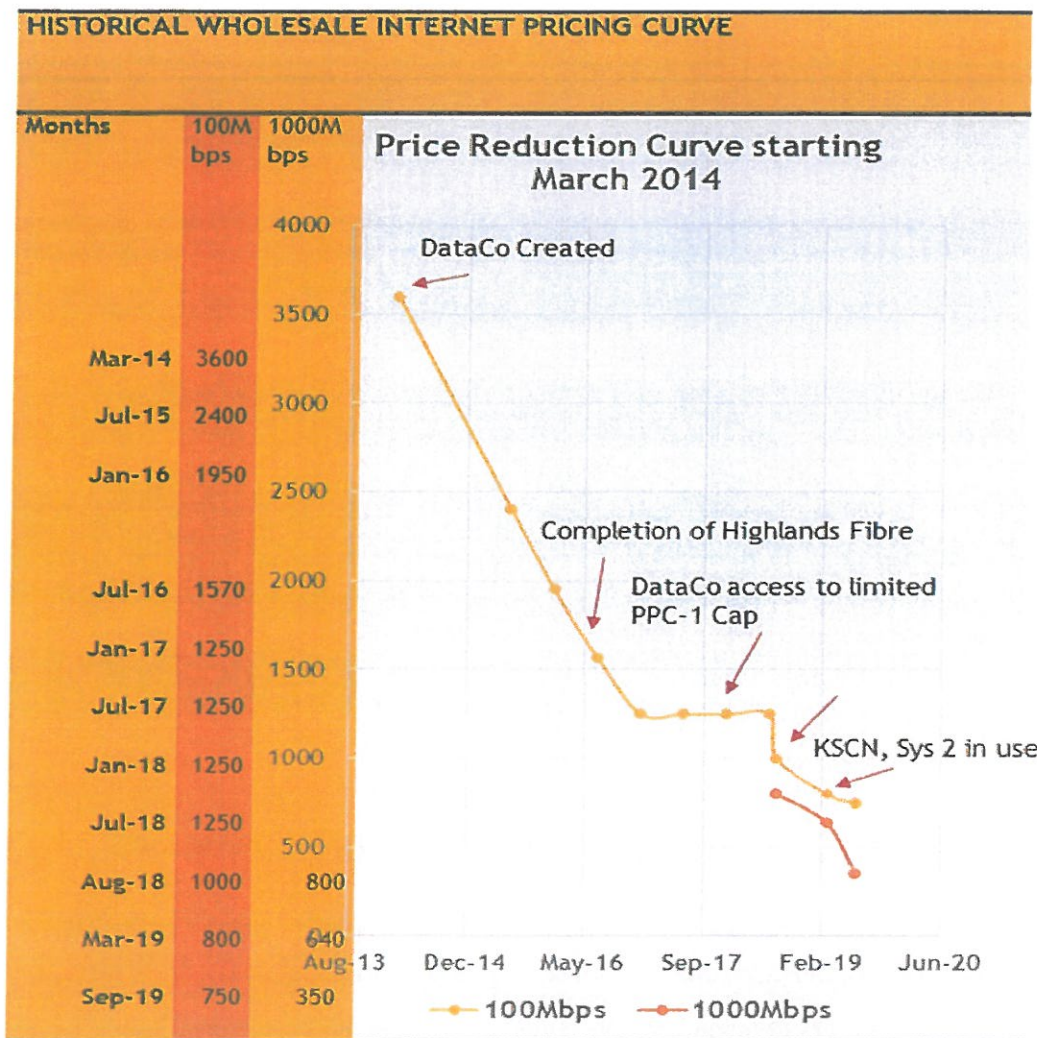
- a) promote the achievement of the objectives set out in Section 124 (which among other things includes the legitimate commercial interests of the access provider in supplying the ICT services, including the ability of the access provider to exploit economies of scale and scope; and the incentives for investment in the facilities by which ICT services may be supplied, including the risks involved in making the investment);
- b) that the price of access to declared service should –



- (i) be set so as to generate expected revenue from that declared service that is sufficient to meet the efficient costs of providing access to that declared service; and
 - (ii) include a reasonable return on investment, over the economic life of the assets employed, commensurate with the regulatory and commercial risks involved, this principle is known as the "cost recovery principle"; and
- c) a declared service that is a resale service should be set by –
 - (i) RMAC, where this results in pricing that is consistent with the cost recovery principle; or
 - (ii) cost-based pricing, if RMAC would result in pricing that is insufficient to meet the cost recovery principle; and
- d) a declared service that is not a resale service should be subject to cost-based pricing; and
- e) a declared service, where the access provider is required to extend or enhance to the capability of a facility in order to supply the declared service, should –
 - (i) be set so as to generate expected revenue in respect of that extension or enhancement that is sufficient to meet the reasonably anticipated costs of that extension or enhancement in the circumstances; and
 - (ii) include a reasonable return on investment, commensurate with the regulatory and commercial risks involved.

DataCo prefer that NICTA consider these observations and commentaries with care and that further consultative exercise and workshop needs to be conducted with DataCo to understand the risks to DataCo and industry, complexities of the proposal being made and how best these areas may be resolved to the benefit of all stakeholders.





Recommendation

1. It is in DataCo's view that setting Specific Pricing Principles including setting of indicative prices at this stage is premature as the market is still evolving and any intervention at this stage would distort the market forces and the evolution of the market.
2. DataCo recommends for NICTA to restrain from setting specific pricing principles including setting indicative pricing and allow for PNG DataCo to continue to build out the wholesale infrastructure through the National Transmission Network Program as this is a critical infrastructure that will transform the industry and the country.
3. NICTA to allow the forces of supply and demand to inter- play at the market of submarine cable transmission and related services given the significant reduction in wholesale prices already seeing in the market since the inception of DataCo in 2014. It is projected that the prices will further decrease overtime when the Kumul Submarine

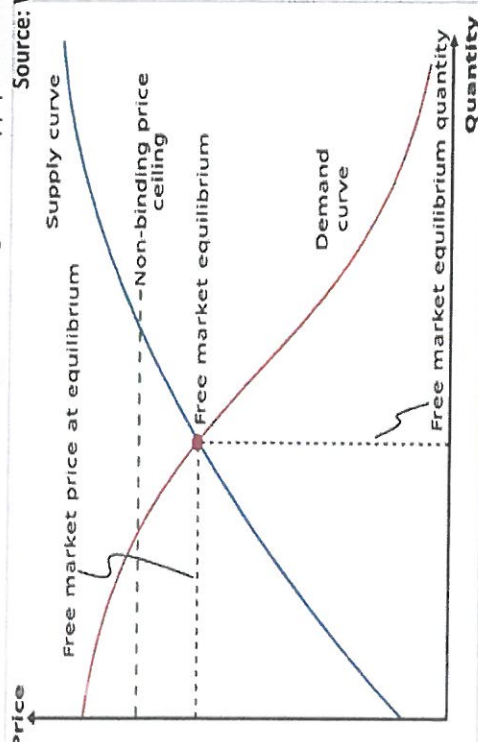


Cable Network Project (KSCN) and Coral Sea Cable System (CS2) are completed and brought into use.



PNG DATACO RESPONSE TO DISCUSSION PAPER

| Ref. | NICTA STAFF POSITION | DATACO COMMENTS |
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| 2.1.2 | <p>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 equiproportionate 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.</p> | <p>PNG DataCo Limited (“DataCo”) is NOT in agreement with the costing methodology on cost based pricing principles as specified in the NICTA Act 2009. Hence DataCo is also in the view that the Total Service Long run incremental cost standard (TSLRIC) plus equiproportionate mark up to reflect the a reasonable contribution to common costs (i.e. TSLRIC +) be used in determining the efficient costs of supply declared services in the case of APNG 2, PPC1, Kumul Domestic Submarine Cable Network Project (“KSCN”), Coral Sea Submarine Cable (“CS2”) must not be used to distort the market whereby prices have been decreasing. Furthermore DataCo notes NICTA’s consideration on fully allocated cost (FAC) standard TSLRIC+FAC hybrid in such an environment must not be used where the cable the National Transmission Network (NTN) is still under construction Therefore’ DataCo opposes all forms of pricing principles and methodologies as recommended by NICTA as the forces of demand and supply are to interplay to determine the equilibrium price which is the best approach going forward.</p> |
| 2.1.3 | <p>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.</p> | <p>DataCo takes note of the proposal of pricing principles on the application of TSLRIC+ (or FAC) including the adjustments of these prices. In addition, these principles are also non- exhaustible and do not limit NICTA and DataCo including other operators with Significant Market Power (“SMP”). DataCo recommends that the pricing principles to encourage economic efficiency in these critical investments by taking the following interdependent elements that must not be isolated:</p> <ul style="list-style-type: none"> • dynamic efficiency- DataCo and related operators to have appropriate incentives to invest, innovate, improve the range and quality of services, increase productivity and lower cost through time; • productive efficiency- DataCo and related operators to produce services at least cost and production activities are distributed between firms such that industry- wide costs are minimised; and • Allocative efficiency- DataCo and related operators to employ resources for the provision of transmission services that will provide |

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| | <p>maximum benefit to the society. An important condition for allocative efficiency is that the prices for at least reflect the value society places on the next best alternatives use of the resources to produce the service. For example Submarine Cable in comparison to satellite and radio link services.</p> | |
| <p>2.1.4</p> | <p>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.</p> | <p>DataCo strongly recommend that the indicative prices for the supply of declared services to be excluded from this Pricing Principles as price cap will be detrimental to the market when considering an access dispute. DataCo strongly maintained that NICTA sticks to the detail cost modelling being done going forward by following the TSLRIC + or FAC Principles as specified in the NICTA Act. Without due diligence the indicative price will distort the market will not reflect a true indication of a price ceiling or vice versa. Hence DataCo opposes the introduction of indicative prices and the pricing principles including methodologies</p> |
| <p>Graph No.1 : Showing the non-binding price ceiling vs the Supply and Demand Curve Source: Wikipedia</p>  <p>Non-binding price ceiling</p> | | |

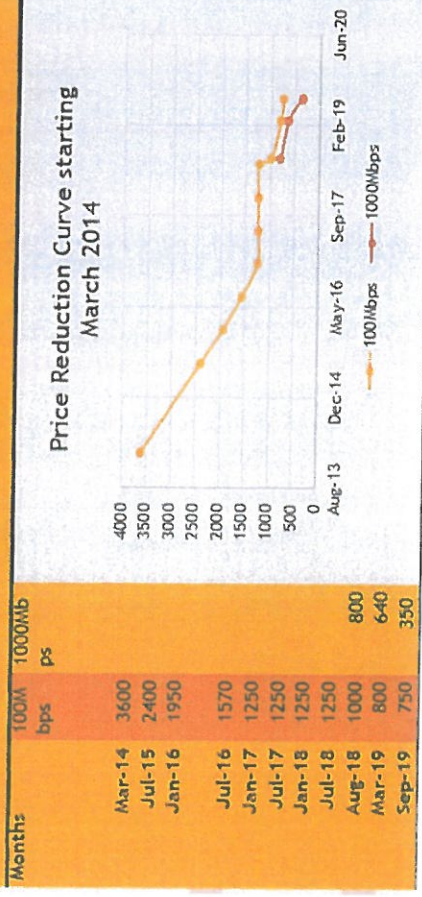
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| | | <p>Theoretically as per Graph No. 1 above, the price ceiling has to be above the equilibrium price to be non-binding. In addition, DataCo argues that the price ceiling be realistic and non-binding and must be above the equilibrium price. A detail study on the supply and demand including equilibrium prices on the access providers and access seekers of transmission services is required to derive or ascertain the equilibrium price. The outcome of this study will place NICTA in a position to come up with the indicative pricing rationale for the determination of non-binding vs binding price ceilings going forward. At this stage DataCo assumes that in information on the indicative prices are premature and are forced on the market. Hence DataCo opposes the "Indicative Prices" and the "Pricing Principles" until such a time a detail study is done to ascertain the same.</p> <p>Given that Submarine Cable projects fall under the critical infrastructure category, and in the event that indicative price ceilings are used as reference without proper due diligence on the microeconomics and the dynamics of the price paths, may cause business failures and distort the market for the international submarine cable services. Note that retail operators and all customers are enjoying greater benefits of price reductions with high speed internet services. Therefore indicative prices must not be part of regulation for these declared services unless there is a dispute or customer complaint.</p> |
| 2.1.5 | <p>The indicative prices are thus intended to provide guidance to:</p> <ul style="list-style-type: none"> • 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. | <p>DataCo understands NICTA's position to pre-empt the indicative prices by providing guidance to access providers and seekers involved in negotiating the terms and condition of access to these particular declared services is not the best and holistic approach thus furthermore NICTA should NOT provide the indicative price range. All RIO Submissions should be based on the market forces of demand and supply going forward and must be approached holistically. It is DataCo's position that NICTA has to assist the SMP operator as mandatory for Regulatory Accounting Framework. Hence the Regulatory Accounting Frame work will provide Guidance to access providers and seekers as opposed to indicative prices Therefore DataCo fully opposes the indicative prices and specific pricing principles going forward.</p> |



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| 2.1.6 | <p>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 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.</p> | <p>It is strongly recommended that DataCo believes that indicative prices may not be appropriate and required in the wholesale pricing principles for Broadband capacity services and international submarine cable services. It will further distort the market. Kindly refer to 2.1.4 above regarding the same. Once a detailed analysis is done, then the indicative prices becomes irrelevant. Hence indicative prices should be removed. Hence DataCo opposes indicative prices regarding the same.</p> |
| 2.1.7 | <p>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).</p> | <p>As per NICTA's explanation on the process that NICTA must consider the specific issues raised by the parties in particular arbitrations or RIOs on their individual merits. It is highly recommended that the indicative price guidance be removed completely. It must be removed on the basis that the forces of demand and supply will interplay and the market will correct itself given the dynamics of the market. The interplay of market forces to meet present condition is relevant whilst indicative prices may not be otherwise and may send the incorrect price assumptions to the market if the indicative prices are used for benchmarking.</p> |
| 2.1.8 | <p>NICTA has determined the indicative prices after taking account of:</p> <ul style="list-style-type: none"> • 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. | <p>Therefore it is recommended the indicative prices be removed and all forms of pricing principles be removed. It will further distort the market</p> <p>DataCo notes the key information of pricing were taken into account for the proposed service – specific pricing principles. Note that DataCo was NOT preview to exercise and cannot verify and ascertain whether the information are <u>current</u> and <u>recent</u> as claimed by NICTA.</p> <p>Since the inception of DataCo in 2014 has drastically reduce the price for wholesale internet pricing in PNG including other related markets. The price reductions will further decrease in September 2019 from K640/1000 Mbps to K350/1000Mbps. Refer to Graph No.2 below regarding the Historical Wholesale Pricing Curve for detail information.</p> |



Graph No.2 : Historical Internet Pricing Curve
HISTORICAL WHOLESALE INTERNET PRICING CURVE



As a way forward it is recommended that NICTA has to share information on the calculation of indicative prices to DataCo and other operators in the market as the indicative prices may be outdated and may not be relevant to the market.

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).

Data noted the indicative prices are expressed as a price range below:

| Time Period | APNG Cable | 2 | Pipe Pacific Cable 1 | KSCN System 1 | Coral Cable | Sea Cable |
|-------------------------|---|---|---|--|--|--|
| Commencement Date 2023* | K910- K1,100 (US\$270- US\$300**) per Mbps per month. | | K170- K270 (US\$50- US\$80**) per Mbps per month. | None specified at this stage to be determined in Jan 2020. | None specified at this stage to be determined in Jan 2020. | None specified at this stage to be determined in Jan 2020. |

*These prices are subject to any progressive implementation arrangement or glide part 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 precise that exceed the upper limit of the indicative price range shown in this schedule, NICTA may intervene to address this matter whether at the request of the access seeker or access provider, on its own initiative.

DataCo did NOT concur to the rationale of having indicative prices and must be removed as per the discussions above. In addition DataCo recommends that there is only one price access to achieve economies of scale and scope. In accordance to NICTA Act (2019) the Section 134 on the General Pricing Principles that

(a) the declared service should-

- (i) to be set as to generate expected revenue from the declared services that is sufficient to meet the efficient costs of the declared service; and,*
 - (ii) include reasonable return on investment, over the economic life of the assets employed, commensurate with the regulatory and commercial risks involved, this principle is known as the "cost recovery principle"; and,*
- (b) declared service that is resale should be set by-*

In Summary, the Commission recommends that a TSLRIC approach should be adopted when determining an appropriate access prices for the transmission capacity services.

Based on the above and in accordance to the NICTA Act (2009), indicative prices should not be used as a pricing path for price determination. TSLRIC+ hybrid cost approach is the best approach for NICTA's consideration. The following items must be taken into account going forward to develop a robust model that will have trike down effect to the economy.

- (i) The price must make a reasonable return on investments ("ROI") on capital expenditure projects. Kumul Submarine Cable Network ("KSCN") Project at a total capex cost of US\$269 million, Coral Sea Submarine Cable at a total capex cost of USD 100 million and the upgrade of PPC 1 is at the capital cost of PGK 2.3 million. All these costs have to be factored in the pricing principles to recoup at a reasonable

| | | |
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| | | <p>ROI. These are all new capex projects and are not sunk costs.</p> <p>(ii) The cost recovery for goods sold and the operation costs for the these projects need to be factored as well;</p> <p>(iii) The compensation for Commercial Risks and uncertain risks to be taken into consideration. PNG is situated in the Pacific Ring of Fire whereby earthquakes are frequent that resulted in the Cable Breaks and the same are classified as a high risks to the business. On average the minimum cost of cable restoration is approximately US\$5 million.</p> <p>(iv) The price must be robust to finance future submarine cable investments and redundancy links such as the “Pukpuk Ring” (i.e. for domestic and international connectivity). Hence the principle must encourage future capex investments as a way forward.</p> <p>Given the above DataCo is against indicative prices including any related prices in in this developing industry which is determined by the invisible hand of demand and supply whilst the market is still evolving. Let the market forces determine the prices when the market is fully developed in a fully pledged National Transmission Network (NTN) in PNG DataCo do not want to subscribe to prices imposed by the regulator at this stage. Let the market determine its own pricing with less market interference.</p> |
| 2.2.1 | <p>The proposed service-specific pricing principles are essentially the same as those which NICTA determined in respect of the previously declared submarine cable services.¹¹ This includes principles:</p> <ul style="list-style-type: none"> • describing (without limitation) the types of circumstances that may justify differentiation in the pricing of the international submarine | <p>DataCo is already applying volume and term discounts in its pricing based on what the market requires and therefore is of the view that the NICTA should allow the market to evolve and develop without regulatory intervention at this stage.</p> |

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| | <p>cable transmission capacity service (e.g. different pricing for different transmission capacities or lease periods); and</p> <ul style="list-style-type: none"> 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). | |
| 2.2.2 | <p>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 PPC1 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</p> | <p>DataCo affirms the above comments and recommendation listed above in 2.1.3 to 2.1.7 and 2.1.9 be taken into consideration as our response to the same.</p> |
| 2.3.1 | <p>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.</p> | <p>DataCo notes the same and affirms its position to recommend the Total Service Long run incremental cost standard (TSLRIC) plus equiproportionate mark up to reflect the a reasonable contribution to common costs (i.e. TSLRIC +) be used in determining the efficient costs of supply declared services in this market structure.</p> |
| 2.3.2 | <p>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.</p> | <p>DataCo notes the same.</p> |