



**NATIONAL INFORMATION AND COMMUNICATIONS
TECHNOLOGY AUTHORITY**

RECOMMENDATION REPORT

A report to the Minister recommending the declaration of certain wholesale services under
Division 3, Part VI of the NICTA Act 2009

Issued by NICTA, Port Moresby on 13 November 2025

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Executive Summary

Background

1. Section 130 of the National Information and Communications Technology Act 2009 (the “Act”) gives power to the Minister, upon the recommendation of the National Information and Communications Technology Authority (“NICTA”), to declare a wholesale service.
2. On 18 February 2019, following NICTA’s recommendation, the Minister declared certain wholesale services (“Wholesale Service Declaration No. [1] Of 2019”). These declared services included: (i) international submarine cable transmission capacity service, (ii) international submarine cable gateway access services, and (iii) international submarine cable duct access service.
3. On the same day, the Minister also declared the wholesale broadband capacity service (“Wholesale Service Declaration No. [2] Of 2019”). At the time of these two declarations, the sole provider of these declared services was PNG DataCo Limited (“DataCo”).
4. Subsequently, NICTA adopted service-specific pricing principles (“SSPPs”) for these declared services. These SSPPs came into effect on 1 January 2020, and established pricing principles and non-price terms and conditions for the supply of the declared services.
5. Both declarations expired on 27 March 2024, on the fifth anniversary of their commencement dates. In consequence, the associated SSPPs ceased to be in force in accordance with Section 135 (5) of the Act.
6. To remedy this situation, pursuant to Section 127(2)(a) of the Act, NICTA undertook a Public Inquiry under Section 230 of the Act into a potential declaration of certain wholesale services (the “Public Inquiry”). After completing that public inquiry, NICTA concluded that the following wholesale services should be recommended for declaration:
 - (a) Wholesale International dedicated submarine cable capacity service;
 - (b) International submarine cable facilities access service;
 - (c) Wholesale long-haul dedicated capacity service;
 - (d) Wholesale local dedicated capacity service; and
 - (e) Wholesale Internet access service.

Objective of the declarations

7. To further the achievement of the competition and efficiency objectives of Part VI of the Act as set out in Section 124 (the “Competition and Efficiency Objectives”).

Recommendation

8. NICTA’s recommendation to the Minister is to adopt the three declarations presented in Annex A through C of this report. The justification for this recommendation follows.

Justification

9. Firstly, the expired declarations prevented DataCo, the sole access provider, from pricing and supplying the declared services under conditions that may have slowed down progress towards achieving the Competition and Efficiency Objectives in Part VI of the Act. The expired declarations required DataCo to price these services in accordance with the general pricing principles under Section 134 of the Act. These principles required DataCo to set cost-based prices for the declared services. Moreover, NICTA's SSPPs for these declared services specified the methodology to be used by DataCo to determine cost-based prices for these services, and for one service in particular, it specified the maximum average price DataCo was permitted to charge. Moreover, the expired declarations imposed non-discriminatory obligations on the supply of these services to prevent conduct that could lessen competition on ICT markets. These restrictions have ceased to be in force. DataCo is now unconstrained to supply these services as a monopolist. NICTA considers this a set back towards advancing the Competition and Efficiency Objectives in the Act. The proposed declarations intend to remedy this situation and renew progress towards the achievement of the objectives.
10. Secondly, the new declarations constitute an improvement over the expired ones. The new declarations include services that were not previously declared such as wholesale Internet access. Moreover, the definition and delineation of the boundaries of each service has been improved. For example, the so-called broadband capacity service, which was a declared service in one of the expired declarations, has been renamed and divided in two separate services: long-haul dedicated capacity, and local dedicated capacity service. The service definitions were also greatly improved to reflect more accurately the differences on how these services are used by access seekers.
11. Thirdly, the new declarations are necessary to further the competition objective in Part VI, Section 124 of the Act. It is NICTA's view that the facilities used by the access provider to supply the wholesale services cannot be feasibly substituted as a matter of commercial reality, via another facility in order to supply the wholesale services. This creates a situation where the supply of the wholesale services is monopolized. Because these wholesale services are essential inputs in the supply of retail (mobile and fixed) Internet services, the monopolized supply of the wholesale services raises the cost of an essential input, and in consequence, the price of the retail services, holding all else equal.
12. In NICTA's view, the declarations are necessary to bring those costs down and move retail prices closer to the competitive level. Moreover, absent the proposed declarations, the monopolist access provider, which competes with access seekers in retail markets, would have the ability to price the wholesale services at a level high enough to make it unfeasible for access seekers to compete with the access provider in the market for the supply of retail fixed Internet service. This would erase the progress made to further the competition objective in Part VI of the Act.
13. Fourthly, to the extent that the proposed declarations would cause an increase in the supply of the wholesale services, it would also increase the utilization of the access provider's facilities used for the supply of those services. This implies an increase in the efficiency of the access provider, which advances the efficiency objective in Part VI of the Act.
14. Fifthly, each of the three proposed declarations meet all the declaration criteria under Section 128 of the Act.
15. NICTA is satisfied that the proposed declarations meet the Declaration Criteria under Section 128 (a) and (b) by furthering the achievement of the competition objective of Part VI of the Act:

“promote effective competition in markets for ICT services in Papua New Guinea, to be known as the ‘competition objective’ ”.¹

And specifically, that,

“(i) access or increase access to the wholesale service (as a consequence of declaration) is necessary for the promotion of effective competition in at least one market other than the market for the wholesale service; and

(ii) the wholesale service is supplied in whole or in part via a facility that cannot feasibly be substituted, as a matter of commercial reality, via another facility in order to supply that wholesale service;”²

16. NICTA is also satisfied that the proposed declarations meet the Declaration Criteria under Sections 128 (a) and (c) by furthering the efficiency objective under Part VI of the Act:

“promoting the economically efficient use of, and the economically efficient investment in, the facilities by which ICT services may be supplied, to be known as the ‘efficiency objective’ ”.³

And,

“(2) In determining the extent to which a particular thing is likely to further the achievement of the efficiency objective, regard shall be had (without limitation) to all of the following matters –

(a) whether it is technically feasible for the relevant ICT services to be supplied, having regard to –

(i) the technology available or likely to become available; and

(ii) the reasonableness of the costs involved; and

(iii) the effect of supplying the ICT services on the integrity, operation or performance of other ICT services or facilities; and

(b) 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

(c) the incentives for investment in the facilities by which the ICT services may be supplied, including the risks involved in making the investment.”⁴

And,

“(c) specifically, in relation to the efficiency objective, that --

(i) declaration would not materially compromise the incentives for efficient investment in any facility over which the wholesale service may be supplied; and

(ii) access or increased access to the wholesale service (as a consequence of declaration) is technically feasible having regard to the specific factors identified in Section 124(2)(a); and

¹ Section 124 (1) (a) of the Act.

² Section 128 (b) of the Act.

³ Section 124 (1) (b) of the Act.

⁴ Section 124 (2) of the Act.

(iii) in the case of wholesale services that are facilities access services, increased access to the wholesale service would avoid inefficient replication of underlying facilities that may be efficiently shared.”⁵

⁵ Sections 128 (c) of the Act.

1. Background

17. Section 129 of the National Information and Communications Technology Act 2009 (the “Act”) gives power to the National Information and Communications Technology Authority (“NICTA”) to issue a recommendation to the Minister that certain wholesale services should be declared services.
18. At NICTA’s advice, on 18 February 2019 the Minister declared certain wholesale services (“Wholesale Service Declaration No. [1] Of 2019”). These declared services included: (i) international submarine cable transmission capacity service, (ii) international submarine cable gateway access services, and (iii) international submarine cable duct access service.
19. On the same day the Minister also declared the wholesale broadband capacity service (“Wholesale Service Declaration No. [2] Of 2019”). At the time of these declarations, the sole provider of these declared services was PNG DataCo Limited (“DataCo”).
20. Subsequently, NICTA adopted the Service-Specific Pricing Principles (Submarine Cable Services) Determination 2019⁶ and the Service-Specific Pricing Principles (Broadband Capacity Service) Determination 2019. These determinations came into effect on 1 January 2020, and established pricing principles and non-price terms and conditions for the supply of the above mentioned declared services.
21. Both declarations expired on 27 March 2024, on the fifth anniversary of their commencement dates. In addition, the associated service-specific pricing principles (“SSPPs”) ceased to be in force in accordance with Section 135 (5) of the Act. Moreover, pursuant to Section 141(2) (b), DataCo’s Reference Interconnection Offer (“RIO”) associated with these services, expired on the same date. This has led to a situation where the supply of the above-mentioned wholesale services, is unconstrained by the expired SSPPs, and in consequence, will likely be detrimental for the advancement of the competition and efficiency objectives of Part VI of the Act (the “Competition and Efficiency Objectives”).
22. To remedy this situation, pursuant to Section 127(2)(a) of the Act, on 14 May 2025 NICTA initiated a Public Inquiry under Section 230 of the Act into a potential declaration of certain wholesale services (the “Public Inquiry”). On the same day, NICTA published a Discussion Paper entitled “Public Inquiry into the Potential Declaration of Certain Wholesale Services” (the “Discussion Paper”), in accordance with Section 232 of the Act.
23. In its Discussion Paper, NICTA reached a preliminary conclusion that five wholesale services should be declared: (i) wholesale International dedicated submarine cable capacity service, (ii) International submarine cable facilities access service, (iii) wholesale long-haul dedicated capacity service, (iv) wholesale local dedicated capacity service, and (v) wholesale Internet access service.
24. Following the publication of the Discussion Paper, NICTA received comments from the following interested parties:
 - a) MYNET,
 - b) Wirespark,
 - c) WeWak Music Centre,
 - d) Digitec Communications Limited T/A Vodafone PNG (“Vodafone”),

⁶ This was later amended by the Service-Specific Pricing Principles (Submarine Cable Services) Amended Determination 2020.

- e) U-Space Communications,
 - f) NiuCom,
 - g) National Broadcasting Corporation (“NBC”),
 - h) Garamut Connect Ltd,
 - i) Digicel (PNG) Limited (“Digicel”), and
 - j) PNG DataCo Limited (“DataCo”).
25. Comments received from all parties overwhelmingly were supportive of NICTA’s view that the five wholesale service proposed for declaration should be declared. DataCo objected to the declaration of the wholesale Internet access service but provided no evidence of its claim that they face competition in the supply of that service.⁷
26. DataCo also objected to the declaration of the wholesale long-haul dedicated capacity service and the wholesale local dedicated capacity service, on grounds that competing fibre infrastructure has been deployed by other operator licensees in certain areas in PNG. DataCo, Digicel and Vodafone provided additional information on these new deployments of alternative fibre infrastructure.
27. The new information supplied to NICTA did not preclude us from recommending the declaration of wholesale long-haul dedicated capacity service and the wholesale local dedicated capacity service. It only required NICTA to exclude from their respective declarations, the segment between the cities of Lae and Mount Hagen, and the national capital district. This is reflected in the final declaration in Annex B.
28. On September 2025, NICTA issued its Public Inquiry Report “Response to Comments and Final Declarations. In Reference to Discussion Paper: Public Inquiry into the Potential Declaration of Certain Wholesale Services”. In said report NICTA addressed the comments received by each interested party and determined that the following five wholesale services should be declared:
- (a) Wholesale International dedicated submarine cable capacity service;
 - (b) International submarine cable facilities access service;
 - (c) Wholesale long-haul dedicated capacity service;
 - (d) Wholesale local dedicated capacity service; and
 - (e) Wholesale Internet access service.
29. Therefore, NICTA is issuing this recommendation to the Minister to adopt the three declarations enclosed in Annex A through C of this report, which cover the five wholesale services listed above.

2. Objective of the Declarations

30. To further the achievement of the competition and efficiency objectives of Part VI of the Act as set out in Section 124.

3. Reasons for NICTA’s Intervention

31. Firstly, the expired declarations required DataCo, the monopoly access provider, to supply these services in accordance with (i) the General Pricing Principles under

⁷ The reasons provided by DataCo seemed to conflate the definitions of retail and wholesale services.

Section 134 of the Act, (ii) the SSPPs under Section 135, and (iii) in accordance with the non-discriminatory obligations under Section 136 of the Act. The general pricing principles and the SSPPs required DataCo to set cost-based prices for the declared services. Moreover, NICTA's SSPPs specified the methodology to be used by DataCo to set these prices, and for one service, the SSPPs set the maximum average price that DataCo could charge. In addition, the expired declarations imposed non-discriminatory obligations on the supply of these services to safeguard against conduct that may lessen competition in ICT markets. These safeguards have ceased to be in force. DataCo is now unconstrained to supply these services as a monopolist, and therefore, charging monopoly prices. NICTA considers this a set back towards progressing in the pursuit of the competition and efficiency objectives in Part VI Section 124 of the Act (the "Competition and Efficiency Objectives").

32. Secondly, the new declarations constitute an improvement over the expired ones. The new declarations include services that were not previously declared, such as wholesale Internet access. Moreover, the definition and delineation of the boundaries of each service has been improved. For example, the so-called broadband capacity service, which was a declared service in one of the expired declarations, has been renamed and divided in two separate services: long-haul dedicated capacity, and local dedicated capacity service. The service definitions were also greatly improved to reflect more accurately the commercial realities of how these two services are used by access seekers.
33. Thirdly, the new declarations are necessary to further the competition objective of Part VI, Section 124 of the Act (the "Competition Objective"). It is NICTA's view that the facilities used by the access provider to supply the wholesale services cannot be feasibly substituted, as a matter of commercial reality, via other facilities in order to supply that same level of service. This creates a situation where the supply of the wholesale service is monopolized. Because these wholesale services are essential inputs in the supply of retail (mobile and fixed) Internet services, the monopolized supply of these wholesale services raises the cost of an essential input, and in consequence, the price of the retail services, holding all else equal.
34. In NICTA's view, the declarations are necessary to bring those costs down and move retail prices closer to the competitive level. Moreover, absent the proposed declarations, the monopolist access provider, which competes with access seekers in retail markets, would have the ability to price the wholesale services at a level high enough to make it unfeasible for access seekers to compete with the access provider in the market for the supply of retail fixed Internet service.
35. Fourthly, the new declarations are expected to increase the supply of the wholesale services which implies an increase on the utilization of the access provider's facilities used for the supply of the wholesale services. Given the large spare capacity in the access provider's facilities, and the relatively low barriers to expansion of these services, the proposed declaration will cause an increase in the efficiency of the access provider. This will further the efficiency objective in Part VI, Section 124 of the Act.
36. Fifthly, each of the three proposed declarations meet all the declaration criteria under Section 128 of the Act.
37. It is for these reasons that NICTA recommends to the Minister the adoption of the three declarations in Annex A through C in this report.

4. The Proposed Declarations Meet all the Declaration Criteria in Section 128 of the Act

4.1 The proposed declarations meet the Declaration Criteria in accordance with Sections 128 (a) and (b) by furthering the achievement of the competition objective

38. It is NICTA's view that the new declarations will further the competition objective by promoting effective competition in markets for ICT services in PNG. In particular, the declarations will further the Competition Objective in several ways explained below.
39. First, the new declarations will promote effective competition in several retail downstream markets including but not limited to, prepaid and post-paid mobile bundled service (voice/SMS and data), and fixed Internet service.⁸ The declarations will require the access provider to supply those services in accordance with the general pricing principles in Section 134 of the Act. That will require the access provider to use cost-based pricing for the wholesale services in the new declarations, causing a decline in the prices of these services which are essential for the supply of downstream retail services. The retail licensed operators will experience a decline in the costs of supplying their services. Suddenly, supplying those services will become more profitable and the retail operators will respond by increasing the supply of their services. This in turn will put downward pressure on retail prices moving these closer to the competitive level, all else equal.
40. Moreover, by enabling lower retail prices, the declarations would induce an increase in the usage of ICT services which in turn would prompt licensed operators to increase investment and expand or upgrade their network infrastructure, all of which promotes effective competition in downstream retail markets.
41. Second, except in rare cases, all of the wholesale services in the enclosed declarations, are supplied via facilities that cannot be feasibly substituted as a matter of commercial reality, via another facility in order to supply the wholesale services. This is because the cost structure of these facilities and services involve a large portion of fixed and sunk costs and a small portion of variable operating costs. Therefore, as more of a wholesale service is sold, the average unit cost declines rapidly (i.e., Kina per unit of capacity). Therefore, a potential competitor would not be able to enter the market because its initial small scale implies a higher cost per unit relative to the incumbent access provider. This cost advantage makes the deployment of an alternative facility to supply these wholesale services not feasible from a commercial point of view, at least in the short to medium term. This effect is compounded when the incumbent access provider has significant spare capacity as DataCo does,⁹ or when barriers to expansion (of capacity) are low as it is the case with fibre optic networks, where the incremental cost of expanding the available capacity is negligible compared with the initial capital investment. For example, when the Coral Sea Cable System ("CS2") launched its service, the lit capacity in the cable was 100 gigabits per second (Gbps). That lit capacity has been increased and can be easily doubled or tripled by purchasing electronic cards costing a small fraction of the initial investment. This implies low barriers to expansion as the incremental costs of doubling or tripling the lit capacity in the CS2 cable is low. This again, makes any potential replication of the existing facilities, by a potential competitor, not commercially viable.
42. Third, in the absence of the proposed declarations, the access provider would have the ability to sell the wholesale services to access seekers, with which it competes in a retail market, at a price high enough to render the retail services offered by access

⁸ Section 128 (b) (i) of the Act requires a declaration to promote effective competition in at least one market other than the market for the wholesale declared services, in reality, these proposed declarations would promote competition in several downstream markets.

⁹ For example, the maximum capacity allocated to PNG in the CS2 cable system is 20 Terabits per second (Tbps), but by the end of 2024 DataCo had lit approximately 200Gbps.

seekers unprofitable, and in an extreme case, may force an access seeker to exit the market. In NICTA's view, the proposed declarations will drastically reduce, if not eliminate, this possibility by imposing certain obligations on the access provider. For instance, the declarations will require the access provider to supply the services in accordance with the general pricing principles in Section 134 of the Act. Specifically, to set cost-based prices for the declared services. In addition, a declaration requires the access provider to supply these services following non-discriminatory obligations in accordance with Section 138 of the Act. All of this will further progress towards the achievement of the Competition Objective in the Act.

43. For the avoidance of doubt, conferring an access provider with the ability to price at a certain level to make an access seeker's retail services unprofitable, does not mean that an access provider will price at that level, or is pricing currently at that level, it merely means that it could if it wanted to do so. Hence, the proposed declarations are necessary to avoid this possibility and advance the Competition Objective in the Act.
44. Included in the enclosed declarations are facilities access services, either as a separate service or comingled with a wholesale service. These facilities access services are not only complementary to the wholesale services, but essential to access those services. For example, access to the wholesale international dedicated submarine cable capacity is unfeasible if there is no access to the associated facilities. This mutual relationship between these wholesale services means that the proposed declaration of related facilities access services will bring about the same benefits stemming from the declaration of the other wholesale services.
45. Given that the facilities access services are supplied via facilities that cannot be feasibly replicated; in the absence of the proposed declarations, the access provider would have the ability to exclude or delay access seekers from accessing the related wholesale services. In consequence, NICTA is of the view that the enclosed declarations are also necessary to increase access to these essential facilities access services, which in turn will further progress towards the achievement of the Competition Objective in the Act.

4.2 The proposed declarations meet the Declaration Criteria in accordance with Sections 128 (a) and (c) by furthering the achievement of the efficiency objective

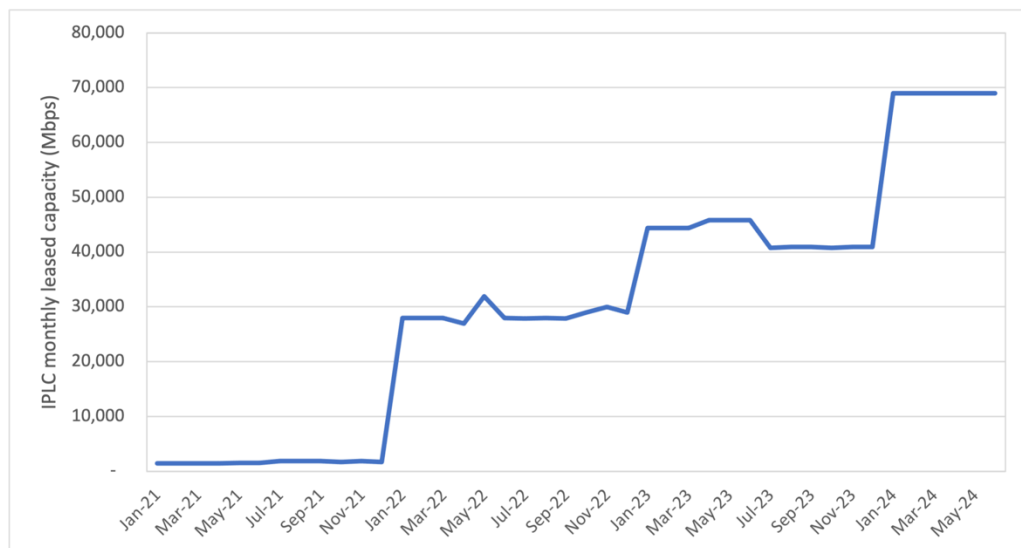
4.2.1 The declarations would not materially compromise the incentives for efficient investment in any facility over which the wholesale services may be supplied

46. The declarations will not compromise the incentives for efficient investment; on the contrary, by increasing the utilization of the access provider's available fibre optic capacity and facilities, including colocation space in the case of facilities access services, the declarations will increase the efficiency of the access provider's investment in these facilities. In turn this will increase the access provider's return on investment and provide a powerful incentive for efficient investment on any facility used for the supply of the wholesale services in the enclosed declarations.

4.2.2 Access or increased access to the wholesale services (as a consequence of the declarations) is technically feasible having regard to the specific factors identified in Section 124(2)(a) of the Act

47. The proposed declarations are consistent with Section 124 (2) (a) of the Act in that it is technically feasible to supply the wholesale services or increase their supply, as evident by the increase on the supply of the previously declared services.

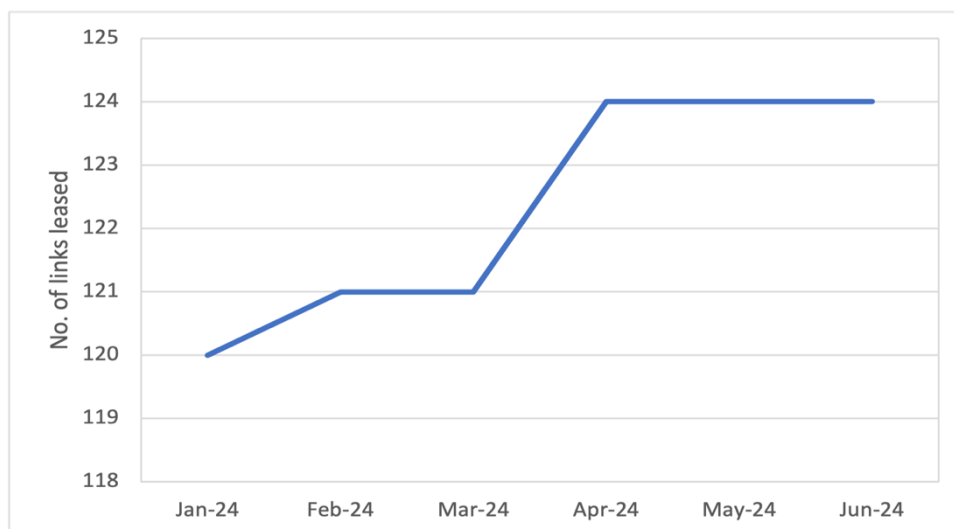
48. For instance, Figure 1 shows the increase in the leased capacity of the international dedicated submarine cable capacity service, commercially known as wholesale IPLC. A similar increasing trend has been observed on the number of leased links of wholesale long-haul dedicated capacity and the number of links of wholesale local (metro) dedicated capacity services. These were declared services that were lumped together in one of the expired declarations and referred as wholesale broadband capacity service. See Figures 2 and 3.
49. Moreover, the costs of providing access or increased access due to the enclosed declarations are reasonable. Once the fibre network has been deployed, most of the costs are fixed or sunk. The incremental cost of adding one more dedicated link is negligible and would not impose any undue burden on the access provider. As evident by Figure 2 (and Figure 3), these wholesale services have been supplied to access seekers in larger quantities through time. From a value of zero or nearly zero when the service was first declared, to 124 long-haul leased links, and 165 local leased links, as shown in Figures 2 and 3. In addition, the integrity, operation, or performance of the access provider's other ICT services or facilities would not be materially compromised by supplying the wholesale services to the access seekers, as evidenced by the experience from the past years when these services were declared.



Note: includes CS2 and PPC-1 cables

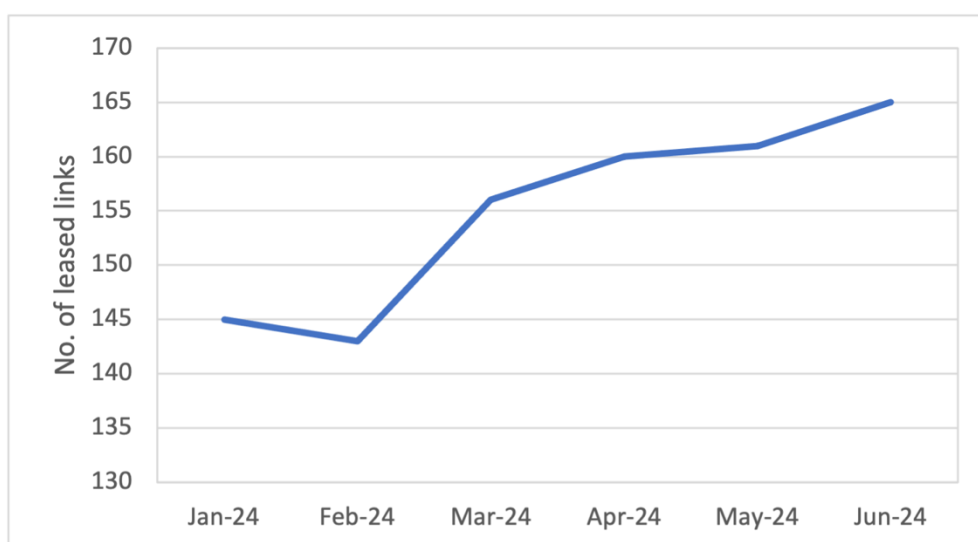
Source: Data source is PNG DataCo Limited

Figure 1. Growth of wholesale international dedicated submarine cable capacity (wholesale IPLC)



Source: DataCo.

Figure 2. DataCo's number of leased links of wholesale long-haul dedicated capacity



Source: DataCo.

Figure 3. DataCo's number of leased links of wholesale local dedicated capacity

50. A similar conclusion is reached when analysing the facilities access services, either as a standalone service or comingled with other wholesale services in the proposed declarations. NICTA is of the view, that the proposed declarations are consistent with Section 124 (2) (a) of the Act in that it is technically feasible to supply the facilities access services, or increase their supply as a consequence of the enclosed declarations. For example, when the expired declarations were in force, access seekers collocated their equipment and facilities to access capacity in the CS2 cable system after it launched services in 2020. Granted, there are limits to the amount of space available for collocation at DataCo's points of presence, but physical collocation

is also feasible at an access provider's switching centre. Alternatively, virtual collocation is a feasible option when there is physically no additional space left.

51. As with the wholesale services in the enclosed declarations, NICTA considers that the costs to the access provider to supply the facilities access services are reasonable as evident by it being supplied on increasing numbers to the access seekers since the prior declaration in 2019. In addition, the integrity, operation, or performance of the access provider's other ICT services or facilities would not be materially compromised by supplying the facilities access service to the access seekers, as evidenced by the experience with the formerly declared services which included facilities access services.

4.2.3 Increased access to the facilities access services would avoid inefficient replication of underlying facilities that may be efficiently shared

52. It is NICTA's view that the proposed declarations will increase the sharing of existing (and future) facilities, which increases the efficiency of these investments. By having access seekers collocate their equipment and facilities with those of the access provider for the purpose of accessing the wholesale services, the proposed declarations would avoid inefficient replication of underlying facilities.

4.2.4 The declarations will further the efficiency objective by enabling the access provider's exploitation of economies of scale and scope

53. It is NICTA's view that the declarations will induce an increase in the utilization of the available capacity and facilities controlled by the access provider. Because the supply of these wholesale services is characterized by large economies of scale, as the used capacity increases, the cost per unit of capacity would decline sharply, permitting the access provider achieve greater economies of scale. Greater economies of scale and lower cost per unit of capacity will cause an increase in the access provider's efficiency.
54. It is NICTA's view that the declarations will also enable the access provider to achieve greater economies of scope. Economies of scope are present when the cost of supplying two or more services by one company is smaller than the total cost of supplying each service separately by standalone companies. This usually occurs when the services have joint or common costs¹⁰. For example, the costs of the submarine cable facilities and associated infrastructure and equipment in DataCo's network, are largely, common to other wholesale services such as wholesale Internet access. For example, both services require the same fibre optic cable, cables landing facilities, and associated terminal equipment. In addition, Wholesale Internet access service requires the domestic segment of DataCo's national fibre optic network to transport the traffic from the domestic points of presence to the international gateway on either the PPC-1 or the CS2 international cables. The domestic terrestrial segment shares some of the same facilities and equipment used for other wholesale services sold by DataCo, such as, long-haul dedicated capacity service. This commonality allows for spreading the fixed and variable (operating) costs of shared facilities and equipment over a larger number of services, thus achieving greater economies of scope. This in turn, furthers the achievement of the efficiency objective of Part VI Section 124 (2).

¹⁰ See ABA Section of Antitrust Law. Telecommunications Antitrust Handbook (2005). American Bar Association, Chicago, IL, U.S., pp. 8. See also, John C. Panzar, "Technological Determinants of Firm and Industry Structure", pp. 15-16, in Richard Schmalensee and Robert Willig (eds.), *Handbook of Industrial Organization Vol.1*, Reprinted 2005, Elsevier Ltd.

5. Conclusions and Recommendation

55. It is NICTA's view that the three proposed declarations are necessary to further the Competition and Efficiency Objectives in the Act. Market forces alone would not be enough to advance these objectives. The facilities used by the access provider to supply the wholesale services cannot be feasibly substituted as a matter of commercial reality, via another facility in order to supply the wholesale services. This has created a situation where the supply of the wholesale services is monopolized, and likely to remain as such for the foreseeable future.
56. The wholesale services in the enclosed declarations are essential inputs in the supply of retail (mobile and fixed) Internet service. The monopolized supply of these essential wholesale services increases the costs of the corresponding retail services. These declarations are necessary to bring those costs down and move retail prices closer to the competitive level. Moreover, absent the proposed declarations, the monopolist access provider which competes with access seekers in the retail market for fixed Internet, would be able to price an essential wholesale service at a level high enough to make it unprofitable for access seekers to compete with the access provider in that retail market.
57. Furthermore, to the extent that the proposed declarations would increase the supply of the wholesale services, they will also increase the utilization of the access provider's facilities, increasing its efficiency, and advancing the efficiency objective in Part VI under Section 124 of the Act.
58. Each of the three proposed declarations meet all the declaration criteria under Section 128 of the Act; in consequence, NICTA strongly recommends the Minister to adopt the enclosed three declarations in Annex A through C.

DECLARATION INSTRUMENT

WHOLESALE SERVICE DECLARATION No. 1 of 2025

National Information and Communications Technology Act 2009

The ACTING MINISTER FOR COMMUNICATIONS AND INFORMATION TECHNOLOGY makes this declaration under section 130 of the National Information and Communications Technology Act 2009.

Dated _____ day of the month _____, 2025

Honourable **Peter Tsiamalili Jr.**
Acting Minister for Communications and Information Technology

PART I – PRELIMINARY

1 Name of Declaration

This Declaration is *Wholesale Service Declaration No.1 of 2025*.

2 Commencement and Expiration

- (1) This Declaration commences 30 calendar days after the date on which it is notified in the National Gazette (*the Commencement Date*).
- (2) This Declaration expires on the day before the fifth anniversary of the Commencement Date unless it is varied or revoked earlier in accordance with section 130 of the Act.

3 Definitions

- (1) Subject to subsection (2), unless the context otherwise requires, terms used in this Declaration have the same meaning as in the Act.
- (2) In this Declaration, unless the context otherwise requires:
- (a) “**Act**” means the *National Information and Communications Technology Act, 2009* and includes any regulations made under that Act;
- (b) “**cable landing station**” is-
- (i) A site at which an international fibre-optic submarine cable is available on shore for the purpose of accessing transmission capacity on the cables; and
- (ii) Includes buildings housing the line terminal equipment, and other necessary equipment and space to interconnect networks and collocate equipment.
- For the avoidance of doubt this includes the cable landing stations located at Kila Kila Police Barracks in Port Moresby (Coral Sea Cable System), Madang (PPC-1 Cable), and any future submarine cable landing station connected to an international submarine cable.
- (c) “**dedicated capacity**” means capacity assigned solely to the access seeker’s point-to-point link; not shared with others;
- (d) “**end point**” means a nominal point at a cable landing station or international gateway switching centre in a foreign jurisdiction that is used to demarcate an end of a service;
- (e) “**international gateway**” means the network equipment at a cable landing station, or at another location on the PNG’s end of an international connection or link;
- (f) “**point of interconnection**” means a location in Papua New Guinea which is a physical point of demarcation between the access seeker's network and the access provider's network;
- (g) “**Switching centre**” means a central node where voice and data traffic is routed within a network or exchanged between two or more networks in PNG.

Note: The following terms are defined in the Act:

- Access
- Access provider
- Access seeker
- Facilities access service
- Network
- Network service
- Operator licensee
- RIO
- Site

PART II – WHOLESALE INTERNATIONAL DEDICATED SUBMARINE CABLE CAPACITY SERVICE

4 Declaration of service

The wholesale international dedicated submarine cable capacity service is hereby declared.

5 Service description

- (1) The wholesale international dedicated submarine cable capacity service is a Network Service:
 - (a) for the carriage of any combination of voice communications and/or data via dedicated capacity in an international fibre-optic submarine cable between -
 - (i) any of the following points of interconnection:
 - (A) a point of interconnection located at the access provider's cable landing station; or
 - (B) a point of interconnection located in the access provider's switching centre the use of which for this purpose is mutually agreed to by the access provider and the access seeker; and
 - (ii) an end point; and
 - (b) with any unit of transmission capacity.
- (2) For the avoidance of doubt -
 - (a) the wholesale international dedicated submarine cable capacity service includes the supply of backhaul transmission capacity by the access provider to the extent that such is necessary to connect an access seeker's facilities at a virtual colocation site in the relevant switching centre to the access provider's facilities in a cable landing station;
 - (b) if an access provider supplies a wholesale international dedicated submarine cable capacity service with a particular transmission capacity from –
 - (i) a cable landing station that is under its control; or
 - (ii) a switching centre that is under its control;

then, subject to the constraints of the relevant submarine cable capacity available through contract or ownership to the access provider, the access provider shall be deemed to be able to supply wholesale international dedicated submarine cable capacity services with different transmission capacities to access seekers with different international capacity requirements.

PART III – INTERNATIONAL SUBMARINE CABLE FACILITIES ACCESS SERVICE

6 Declaration of service

The international submarine cable facilities access service is hereby declared.

7 Service description

- (1) The international submarine cable facilities access service is a facilities access service that provides an access seeker with such access to, or use of, the facility or facilities designated by an access provider at the access provider's -

- (a) cable landing station colocation facility; or
- (b) switching centre that is nearest to the relevant cable landing station and which contains a point of interconnection between the access provider and an operator licensee; or
- (c) switching centre, the use of which for this purpose is mutually agreed by the access provider and the access seeker;

as is necessary to enable the access seeker to interconnect its facilities to an international fibre-optic submarine cable.

- (2) For the avoidance of doubt:

- (a) the international submarine cable facilities access service enables an access seeker to -
 - (i) access the international gateway facilities of an access provider including, but not limited to, physical network infrastructure; and/or
 - (ii) physically collocate its facilities, if technically feasible, in the colocation facility provided by the access provider in the cable landing station; and/or
 - (iii) virtually or physically collocate its facilities if technically feasible in any available space within the access provider's relevant switching centre.

PART IV – GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF THE DECLARED SERVICES

8 General Terms and Conditions

- (1) The price of the abovementioned declared services: (1) wholesale international dedicated submarine cable capacity service and (2) international submarine cable facilities access service (the “Declared Services”), should be set;
 - (a) in accordance with the General Pricing Principles under Section 134 of the Act; or
 - (b) in accordance with the Service-Specific Pricing Principles under Section 135 of the Act, when NICTA makes such determination; and
- (2) The Declared Services shall be supplied in accordance with the Non-Discrimination Obligations under Section 136 of the Act; and
- (3) The Declared Services shall be supplied in accordance with model non-price terms and conditions (“Model Terms”) in force, as determined by NICTA pursuant to Section 133 of the Act; and
- (4) Within 30 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Services shall supply NICTA with the current price list of the Declared Services. At the same time, the price list shall also be published on the access provider’s website; and
- (5) The above-mentioned price list shall be updated quarterly. An access provider of the Declared Services shall supply NICTA with the updated price list and publish it on its website; and
- (6) Within 60 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Services shall supply NICTA with a Reference Interconnection Offer (RIO) in accordance with Section 141 of the Act. Any RIO for the Declared Services shall be consistent with Model Terms for these services as determined by NICTA pursuant to Section 133 of the Act.

PART V – REPORTING OBLIGATIONS

9 Reporting Obligations

- (1) An access provider of the Declared Services shall provide NICTA with monthly sales information of the Declared Services in a format to be specified by NICTA. Such format may include but not be limited to, monthly sales revenue by operator licensee disaggregated by link capacity, and by type of service.
- (2) Using an EXCEL format provided by NICTA, the access provider shall provide a complete list with information about each point-to-point link of the Declared Service supplied to each access seeker.

- (3) The above-mentioned reporting shall be supplied to NICTA quarterly no later than ten days after the end of each quarter.

Annex B. Wholesale Declaration No. 2 of 2025

DECLARATION INSTRUMENT

WHOLESALE SERVICE DECLARATION No. 2 of 2025

National Information and Communications Technology Act 2009

The ACTING MINISTER FOR COMMUNICATIONS AND INFORMATION TECHNOLOGY makes this declaration under section 130 of the National Information and Communications Technology Act 2009.

Dated _____ day of the month _____, 2025

Honourable **Peter Tsiamalili Jr.**
Acting Minister for Communications and Information Technology

PART I – PRELIMINARY

1 Name of Declaration

This Declaration is *Wholesale Service Declaration No.2 of 2025*.

2 Commencement and Expiration

- (1) This Declaration commences 30 calendar days after the date on which it is notified in the National Gazette (*the Commencement Date*).

- (2) This Declaration expires on the day before the fifth anniversary of the Commencement Date unless it is varied or revoked earlier in accordance with section 130 of the Act.

3 Definitions

- (1) Subject to subsection (2), unless the context otherwise requires, terms used in this Declaration have the same meaning as in the Act.
- (2) In this Declaration, unless the context otherwise requires:
- (a) “**Act**” means the *National Information and Communications Technology Act, 2009* and includes any regulations made under that Act;
 - (b) “**dedicated capacity**” means capacity assigned solely to the access seeker’s point-to-point link and not shared with others;
 - (c) “**international gateway**” means the network equipment at a cable landing station, or at another location on the PNG’s end of an international connection or link;
 - (d) “**point of interconnection**” means a location in Papua New Guinea which is a physical point of demarcation between the access seeker's network and the access provider's network;
 - (e) “**premises**” means the location or locations occupied by a retail customer or end-users where retail service is delivered.

Note: The following terms are defined in the Act:

- Access
- Access provider
- Access seeker
- Facility
- Interconnection
- Network
- Network service
- Operator licensee
- Retail customer
- RIO

PART II – WHOLESALE LONG-HAUL DEDICATED CAPACITY SERVICE

4 Declaration of service

The wholesale long-haul dedicated capacity service is hereby declared.

5 Service description

- (1) The wholesale long-haul dedicated capacity service is a Network Service:
 - (a) for the carriage of traffic between two points of the access provider's fibre optic network within the national territory of PNG, except for the segment between the cities of Lae and Mount Hagen; and
 - (b) it involves the provision of domestic dedicated capacity from a point of interconnection to a second point of interconnection.
- (2) For the avoidance of doubt:
 - (a) this point-to-point service could have one end at an international gateway within the national territory of PNG; and
 - (b) may include access to, or use of, the facility or facilities of an access provider to collocate an access seeker's equipment physically or virtually, at the access provider's facilities in order to interconnect the two networks.

PART III – WHOLESALE LOCAL DEDICATED CAPACITY SERVICE

6 Declaration of service

The wholesale local dedicated capacity service is hereby declared.

7 Service description

- (1) The wholesale local dedicated capacity service is a network service:
 - (a) for the carriage of traffic between two points over the access provider's fibre optic network, and within the limits of a city, or a metropolitan area in the national territory of PNG, but excluding the National Capital District; and
 - (b) it involves the provision of domestic dedicated capacity from a point of interconnection to a second point at either:
 - (i) a retail customer premises; or
 - (ii) at an access seeker's point of interconnection.
- (2) For the avoidance of doubt:
 - (a) this wholesale service may include access to, or use of, the facility or facilities of an access provider to collocate an access seeker's equipment physically or virtually, at the access provider's facilities in order to interconnect the two networks.

PART IV – GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF THE DECLARED SERVICES

8 General Terms and Conditions

- (1) The price of the abovementioned declared services: (1) wholesale long-haul dedicated capacity service and (2) wholesale local dedicated capacity service (the “Declared Services”), shall be set;
 - (a) in accordance with the General Pricing Principles under Section 134 of the Act; or
 - (b) in accordance with the Service-Specific Pricing Principles under Section 135 of the Act, when NICTA makes such determination; and
- (2) The Declared Services shall be supplied in accordance with the Non-Discrimination Obligations under Section 136 of the Act; and
- (3) The Declared Services shall be supplied in accordance with model non-price terms and conditions (“Model Terms”) in force, as determined by NICTA pursuant to Section 133 of the Act; and
- (4) Within 30 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Services shall supply NICTA with the current price list of the Declared Services. At the same time, the price list shall also be published on the access provider’s website; and
- (5) The above-mentioned price list shall be updated quarterly. An access provider of the Declared Services shall supply NICTA with the updated price list and publish it on its website; and
- (6) Within 60 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Services shall supply NICTA with a Reference Interconnection Offer (RIO) in accordance with Section 141 of the Act. Any RIO for the Declared Services shall be consistent with Model Terms for these services as determined by NICTA pursuant to Section 133 of the Act.

PART V – REPORTING OBLIGATIONS

9 Reporting Obligations

- (1) An access provider of the Declared Services shall provide NICTA with monthly sales information of the Declared Services in a format to be specified by NICTA. Such

format may include but not be limited to, monthly sales revenue by operator licensee disaggregated by link capacity, and by type of service.

- (2) Using an EXCEL format provided by NICTA, the access provider shall provide a complete list with information about each point-to-point link of the Declared Services supplied to each access seeker.
- (3) The above-mentioned reporting shall be supplied to NICTA quarterly, no later than ten days after the end of every quarter.

Annex C. Wholesale Declaration No. 3 of 2025

DECLARATION INSTRUMENT

WHOLESALE SERVICE DECLARATION No. 3 of 2025

National Information and Communications Technology Act 2009

The ACTING MINISTER FOR COMMUNICATIONS AND INFORMATION TECHNOLOGY makes this declaration under section 130 of the National Information and Communications Technology Act 2009.

Dated _____ day of the month _____, 2025

Honourable **Peter Tsiamalili Jr.**
Acting Minister for Communications and Information Technology

PART I – PRELIMINARY

1 Name of Declaration

This Declaration is *Wholesale Service Declaration No.3 of 2025*.

2 Commencement and Expiration

- (1) This Declaration commences 30 calendar days after the date on which it is notified in the National Gazette (*the Commencement Date*).

- (2) This Declaration expires on the day before the fifth anniversary of the Commencement Date unless it is varied or revoked earlier in accordance with section 130 of the Act.

3 Definitions

- (1) Subject to subsection (2), unless the context otherwise requires, terms used in this Declaration have the same meaning as in the Act.
- (2) In this Declaration, unless the context otherwise requires:
- (a) “**Act**” means the *National Information and Communications Technology Act, 2009* and includes any regulations made under that Act;
 - (b) “**Internet**” means a global system of interconnected computer networks that use the standard Internet protocol suite TCP/IP;
 - (c) “**Internet transit**” means a service that allows an operator licensee to send and receive traffic to and from the Global Internet;
 - (d) “**point of presence**” means a location where an access seeker connects to the access provider’s network;
 - (e) “**port**” means a switch or connection to the global Internet.

Note: The following terms are defined in the Act:

- Access
- Access provider
- Access seeker
- Facility
- Network
- Network service
- Operator licensee
- RIO
- Wholesale service

PART II – WHOLESALE INTERNET ACCESS SERVICE

4 Declaration of service

The wholesale Internet access service is hereby declared.

5 Service description

- (1) The wholesale Internet access service is a Network Service for:
 - (a) accessing the global Internet using a high-capacity port from any location where the access provider has a point of presence in PNG; and
 - (b) provides Internet transmission capacity over the access provider's fibre-optic network including Internet transit to the global Internet.
- (2) For the avoidance of doubt:
 - (a) the wholesale Internet access service includes access to, or use of, the facility or facilities of an access provider to collocate an access seeker's equipment physically or virtually, at the access provider's facilities in order to interconnect the two networks.

PART III – GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF THE DECLARED SERVICE

6 General Terms and Conditions

- (1) The price of wholesale Internet access service (the “Declared Service”) shall be set;
 - (a) in accordance with the General Pricing Principles under Section 134 of the Act; or
 - (b) in accordance with the Service-Specific Pricing Principles under Section 135 of the Act, when NICTA makes such determination; and
- (2) The Declared Service shall be supplied in accordance with the Non-Discrimination Obligations under Section 136 of the Act; and
- (3) The Declared Services shall be supplied in accordance with model non-price terms and conditions (“Model Terms”) in force, as determined by NICTA pursuant to Section 133 of the Act; and
- (4) Within 30 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Service shall supply NICTA with the current price list of the Declared Service. At the same time, the price list shall also be published on the access provider's website; and
- (5) The above-mentioned price list shall be updated quarterly. An access provider of the Declared Service shall supply NICTA with the updated price list and publish it on its website; and
- (6) Within 60 calendar days of this declaration becoming notified in the National Gazette, an access provider of the Declared Service shall supply NICTA with a Reference

Interconnection Offer (RIO) in accordance with Section 141 of the Act. Any RIO for the Declared Services shall be consistent with Model Terms for these services as determined by NICTA pursuant to Section 133 of the Act.

PART IV – REPORTING OBLIGATIONS

7 Reporting Obligations

- (1) An access provider of the Declared Service shall provide NICTA with monthly sales information of the Declared Service in a format to be specified by NICTA. Such format may include but not be limited to, monthly sales revenue by operator licensee disaggregated by link capacity, and by type of service.
- (2) Using an EXCEL format provided by NICTA, the access provider shall provide a complete list with information about each port or access point of the Declared Service supplied to each access seeker.
- (3) The above-mentioned reporting shall be supplied to NICTA quarterly and no later than ten days after the end of every quarter.
