

14 July 2022

Aileen Chia
Deputy Chief Executive (Connectivity Development & Regulation)
Director-General (Telecoms and Post)
Info-communications Media Development Authority
10 Pasir Panjang Road
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By Email: consultation@imda.gov.sg

Dear Ms Chia,

PUBLIC CONSULTATION ("CONSULTATION") ON NETLINK MANAGEMENT PTE LTD'S (AS TRUSTEE OF NETLINK TRUST) INTERCONNECTION OFFER

1. Nucleus Connect Pte Ltd ("**Nucleus Connect**") refers to the Authority's email and Consultation document dated 17 May 2022 on the above.
2. We welcome the opportunity to comment on NetLink Trust's ("**NLT**") proposed changes its Interconnection Offer ("**NLT ICO Revision 2022**").
3. Our submission is enclosed at **ANNEX 1**. Unless specifically defined herein, all capitalised terms shall have the meanings ascribed to them in the NetCo Interconnection Code (the "**Code**").
4. Please do not hesitate to contact me should anything in this letter require clarification or elaboration.

Yours sincerely
For and on behalf of
Nucleus Connect Pte Ltd,



Philip Loh Ter Khuan
Government & Strategic Affairs

Encl.

ANNEX 1

INTRODUCTION

1. Nucleus Connect is the official Operating Company ("**OpCo**") of Singapore's NBN. Since its incorporation on 14 April 2009, Nucleus Connect has been operating the active network of Singapore's NBN, and plays an important role in the provision of wholesale bandwidth services to RSPs like StarHub Ltd ("**StarHub**"), Singapore Telecommunications Ltd ("**Singtel**") and M1 Net Ltd ("**M1**").

2. As the official OpCo of the NBN, Nucleus Connect relies heavily on the services of the NetCo, the sole fibre provider of the NBN's passive network. Therefore, the importance of the NetCo's services to Nucleus Connect cannot be understated.

SUMMARY OF NUCLEUS CONNECT'S POSITION

3. While Nucleus Connect is pleased with some of the proposed changes (such as the removal of the EFTO, and the formalisation of the change to NLT's planned service interruption hours for residential fibre), we have strong concerns over the other proposed changes. This is especially in areas where NLT's charges are involved.

4. In our views, care must be taken to ensure that NLT does not introduce new ICO charges in an arbitrary manner, and under the guise of the ICO revision exercise. This includes NLT's proposed imposition of the "Fault Investigation Charge" under Schedule 12 and Schedule 12C, and One-Time Charge ("**OTC**") for the correction of unnecessary Personal Data.

5. We have strong concerns over NLT's proposed change to impose its fault rectification charges on the RL, instead of on the End-User directly, as this constitutes a major (and unacceptable) change from what was concluded and agreed upon during the NLT ICO revision exercise of 2012.

6. We also believe much should be done to improve NLT's Co-location Service, which – as we have shared previously – we would rank below and sub-par of Singapore's general industry standards. We have therefore proposed for a complete and thorough review of NLT's Schedule 12 and Schedule 12C, and to ensure that NLT's Co-Location Service is aligned with Singapore's general industry standards, especially through the availability of an SLG of 99.9x% with an associated credit rebate compensation scheme for the RL.

NUCLEUS CONNECT'S COMMENTS

The following section sets out Nucleus Connect's comments on the proposed NLT ICO changes, as outlined in the Appendix of the Consultation document.

Billing of Fault Rectification Cost:

7. NLT has proposed to bill fault rectification charges to the RL, instead of to the End-User. NLT has proposed to effect this change by making revisions to the existing Clause 11.8(d) of Schedule 1 and Schedule 2.
8. Nucleus Connect is strongly disagreeable with this proposal.
9. During the NLT ICO revision exercise of 2012¹ (approved by the Authority on 10 July 2012), the Authority Directed NLT (then-OpenNet) to provide an option for the End-User to deal directly with it for TP-related services (e.g. removal, relocation and repair of TP), to promote greater efficiency and for the convenience of the End-User. As stated at paragraph 59 of the Authority's Explanatory Memorandum of 3 July 2012, such TP-related charges are to be billed by NLT directly to the End-User. To allow NLT to proceed with this change will constitute a major change and deviation from the processes that have been established and agreed upon since 2012.
10. For this Consultation, Nucleus Connect has discussed the matter with the operational stakeholders of its RSP (StarHub), and understands that for residential TP fault cases, the End-User has been dealing directly with NLT since the NLT ICO was approved by the Authority on 10 July 2012. As TP-related matters are discussed directly between the End-User and NLT, the RSP and OpCo will have no visibility at all concerning matters and discussions that transpired between NLT and the End-User. This is especially so for matters concerning charges that have been agreed upon between NLT and the End-User.
11. Should the proposed change be allowed to proceed, we can foresee that there will be a significant number of monthly bill dispute cases between the parties involved in the NBN's multi-tiered industry provisioning process, resulting eventually in significant inefficiencies between the operators, and ultimately a major inconvenience to the End-User. RSPs will find themselves in disputes between NLT and the End-User as to what had been agreed between them, putting the RSPs in an unsustainable position.

¹ Please see: Further Direction and Explanatory Memorandum dated 3 July 2012 (under Section 5 - Bypassing Requesting Licensees/Retail Service Providers for TP-related Services) <https://www.imda.gov.sg/regulations-and-licensing/Regulations/consultations/Consultation-Papers/2016/review-of-interconnection-offer-for-the-provision-of-services-on-the-next-generation-nationwide-broadband-network>

Enhanced Fibre Take Over (“EFTO”):

12. NLT has proposed to remove the EFTO due to lack of demand. NLT has proposed to effect this change by removing the existing Clause 21 and Annex 1E of Schedule 1 in their entirety. As Nucleus Connect has noted in the past, we do not believe there is any demand for fibre takeover. We are fully supportive of this move.

Personal Data Protection:

13. NLT has proposed to: (a) include personal data protection provisions in the ICO; and (b) impose an OTC for the removal of any unnecessary personal data from its records. NLT has proposed to effect these changes by: (a) adding the new Clause 19A at the Main Body of the ICO Agreement; (b) adding new sub-clauses under the existing Clause 9 of the relevant Schedules; and (c) making revisions to the existing Schedule 15 and Schedule 18.

Personal Data Protection Provisions

14. While we understand the necessity of including personal data protection provisions in the ICO agreement, we are disagreeable with the way the legal language has been drafted by NLT. Our proposed revisions (in underlined italics and strikethrough) are instead as follows.

Clause 19A.2

The Requesting Licensee shall not disclose or transfer any Personal Data belonging to the Requesting Licensee’s employees, agents, contractors and End-Users or any other Third Party to NetLink Trust unless the disclosure or transfer of the said Personal Data is expressly required under this Agreement or allowed under any applicable law, ~~or the said Personal Data is reasonably required for the provisioning of any Services.~~

In the event that any Personal Data is disclosed or transferred to NetLink Trust pursuant to this Agreement, ~~the Requesting Licensee will~~ both Parties shall comply with all applicable data protection and privacy laws to safeguard the Personal Data that is necessary pursuant to this Agreement, including and not limited obtaining. In relation to such Personal Data that is necessary pursuant to this Agreement, the Requesting Licensee shall be responsible to obtain consent from the Requesting Licensee’s employees, agents, contractors, customers or End-Users, whichever applies, allowing the collection, use and disclosure of their Personal Data to NetLink Trust and NetLink Trust’s agents and contractors, ~~for the purpose of carrying out all activities reasonably required for the provisioning of any Services under this Agreement.~~

15. In our views, the words “...., or the said Personal Data is reasonably required for the provisioning of any Services.” and “...., for the purpose of carrying out all activities reasonably required for the provisioning of any Services under this Agreement.” are unnecessary. As long as the disclosure of such Personal Data is necessary pursuant to the NLT ICO Agreement, it need not be explained what such Personal Data disclosure is required for. Furthermore, such Personal Data disclosure is required not only for the provisioning of services, but also for purposes such as service Relocation, fault management and/or Deactivation.

16. We also believe that the Personal Data protection obligations must be similarly imposed on NLT, and not just on the RL, on a reciprocal basis. These obligations should not be one-sided, and only in the favour of NLT, in the NLT ICO Agreement. In short, for any necessary Personal Data that is sent or disclosed by the RL to NLT pursuant to the ICO Agreement, NLT must have the obligation to protect them.

Imposition of OTC

17. As regards NLT’s proposed imposition of OTC for its removal of unnecessary Personal Data, we do not see why this should be allowed. Checks should instead be built into NLT’s system to ensure that unnecessary Personal Data such as NRIC or FIN is not inadvertently entered into its system via the NLT portal or B2B connection.

18. NLT should also ensure that the RL is provided with secured direct login access into NLT’s system, so that any unnecessary Personal Data that is inadvertently sent over by the RL can be corrected.

Definition of “Personal Data” (Schedule 18)

19. As regards the definition of “personal data” at Schedule 18, we believe it should be aligned with the wordings adopted under the Personal Data Protection Act, for consistency reasons:

“personal data” means data, whether true or not, about an individual who can be identified -
(a) from that data; or
(b) from that data and other information to which the organisation has or is likely to have access;

Planned Service Interruption Hours for Residential End-User Connections:

20. NLT has proposed to change its planned service interruption hours from the existing window of 9am to 6pm to the revised window of 1am to 6am. NLT has proposed to effect this change by making revisions to the existing Clause 9.5 and Clause 9.8 of Schedule 1.

21. We note that NLT's proposed change is in line with the Authority's recent decision on the matter, as set out in the Authority's letters of 29 November 2021 and 25 February 2022, addressed to the RLs. Nucleus Connect is fully supportive of this move.

22. Nevertheless, as shared in our email sent to the Authority on 4 April 2022, in situations where NLT requires to conduct its planned service interruption during the 9am to 6pm window, i.e. in situations falling under the "exceptions" scenario as set out under the new Clauses 9.8(a)-9.8(d), NLT should provide its reasons upfront in its email notifications of planned service interruption sent to the RL.

23. Not only will this minimise the exchange of emails to and fro between the many parties involved in the NBN's operations (i.e. the End-User, RSP, RL and NLT), but also it will help to expedite the dissemination of information downstream. This is important, because NLT is only obliged to notify the RL four (4) weeks in advance² of the interruption, but it is left to the RL and RSP to ensure that the End-User is informed of NLT's planned service interruption date during this period of time.

24. We urge the Authority to consider: (a) making it a requirement for NLT to provide its reasons in its email notifications to the RL; and (b) formalising this requirement by making revisions to the existing Clause 9.5 of Schedule 1 as necessary.

Planned Service Interruption Hours for non-residential connections:

25. NLT has proposed to change its planned service interruption hours for the non-residential fibre from the existing window of 1am-6am to 12am-6am. NLT has proposed to effect this change by making revisions to the existing Clause 9.8 of Schedule 2.

26. We have discussed this matter with the operational stakeholders of our RSP (StarHub), and understand that this change will cause a significant amount of inconvenience to the End-User, particularly the F&B customers who are subscribing to StarHub's Pay-TV services.

27. Although the proposed change is only by one (1) additional hour, a planned service interruption that starts at 12am will mean an unacceptable service disruption to the F&B customers, who televise "live" broadcast of Premier League football matches and/or other major sports events (e.g. Wimbledon or French Open tennis) at their outlets to their customers. As most sports fans would know, such sports events frequently air late into the early morning hours, during both the weekdays and weekends.

28. We can foresee a major customer outcry from the F&B business customer community, should this change be allowed to proceed. We would also note that NLT should not be making use of the time permitted within the planned service interruption window, to conduct its own preparatory works in relation to the planned service interruption.

² Please see: the existing Schedule 1 (Clause 9.5).

NLT's Notification of Planned Service Interruption:

29. NLT has proposed to allow the RL to feedback and request a change to its planned service interruption dates. NLT has proposed to effect this change by making revisions to the existing Clause 9.5 of Schedule 1, Schedule 2 and Schedule 3.

30. We note from NLT's proposed revisions at Clause 9.5 however, that the RL is only given two (2) business days to respond and request for a change of date. Considering the many parties involved in the NBN's multi-tiered industry provisioning layer, a response time of two (2) business days is totally unrealistic, given that some time is needed for the necessary information to flow downstream to the End-User.

31. In fact, we understand from our discussions with the operational stakeholders at StarHub that, based today's working experience, most End-Users would only respond to NLT's planned service interruption notification 1-2 days before the scheduled service interruption dates.

32. In consideration of such realities, we would request that the RL be given at least three (3) weeks to respond to NLT and request a date change. This time is needed for the RL and RSP to ensure that sufficient time is given for: (a) the information pertaining to NLT's planned service interruption to travel downstream to the End-User; and (b) the End-User to respond to NLT's planned service interruption accordingly.

Timeframe to request for optical power reading:

33. NLT has proposed to impose a time limit of thirty (30) business days for the RL to submit its optical power reading request to NLT. NLT has proposed to effect this change by making revisions to the relevant clauses under the existing Clause 6 of Schedules 4 through 11.

34. Nucleus Connect notes that the optical power reading is very important to ensure a smooth provisioning workflow under the NBN. However, it is unclear why this option was originally made available only for the services under Schedules 4 through 11.

35. Respectfully, we submit that this option should also be made available for the services under Schedules 1 through 3.

Fault Investigation Charge in Schedules 12 and 12C:

36. NLT has proposed to impose a Fault Investigation Charge if its contractor is required to be onsite during joint investigation of faults. NLT has proposed to effect this change by: (a) proposing revisions to the existing Clause 2.6 of Annex 12D to Schedule 12 and 12C; and (b) adding the new Clause 12.15 and Clause 12C.16 to the existing Schedule 15.

37. We are strongly disagreeable with NLT's proposal.
38. During the course of a joint investigation, the RL's contractor may be equally required to be onsite to assist with the investigations. If NLT is allowed to impose this charge, the RL will then need to bear charges of both the NLT's contractor and its own contractor.
39. We could also argue that if NLT is allowed to on-pass its contractors' charges to the RL, will the RL be similarly allowed to on-pass such charges to the RSP? Will the RSP be allowed to on-pass such charges to the End-User?
40. Respectfully, we believe care should be taken to ensure that NLT is not allowed to on-pass such unjustifiable charges to the RL downstream, which will be detrimental to the NBN's health in the long run, due to cost increases being passed down from NLT's end in an arbitrary manner. Rather, we believe that NLT and the RL should both absorb their own costs of any joint investigation of faults.

Central Office Diversity Connections (Schedule 22):

41. NLT has proposed to add the CO Diversity Connection as a new service offering under the standard ICO. NLT has proposed to effect this by: (a) adding the new Schedule 22 to the ICO; and (b) adding the new Clause 18 to the existing Schedule 15; and (c) making revisions to the existing Schedule 18.
42. For services under the CO Diversity Connection, it can be safely assumed that the fibre routing distance of a CO Diversity Connection will very likely be longer than that of its corresponding Primary Connection. This could well impact on the signal loss associated with the CO Diversity Connection. In consideration of this, we believe NLT should state upfront and advise the RL what is the theoretical optical power loss of the CO Diversity Connection, based on the address provided by the RL. We believe NLT should do this upon its receipt of the RL's CO Diversity Connection Request, but before it commences any of its desktop study and/or site survey activities (which we understand constitute part of NLT's overall Project Study).
43. By doing so, the RL will be given the opportunity to decide whether or not to proceed with the Project Study, which we understand can result in a cancellation and/or site survey charges being imposed on the RL. This is especially so, in situations where the RL determines after the site survey that the measured optical power loss of a CO Diversity Connection is unacceptable, because the distance of its installation address is too far from NLT's designated CO.
44. In relation to this, we note that NLT has proposed a procedure at Clause 5.4 of the new Schedule 23, in which NLT will notify the RL (within twenty (20) Business Days of the Request Date) that its COD Connection Request is rejected because the optical power loss is more than -28dB. In consideration of our proposed procedures at paragraphs 42 and 43

above, we believe NLT's proposed Clause 5.4 should be revised according to the procedure that we have proposed.

Point-to-Point Connections (Schedule 23):

45. NLT has proposed to add the Point-to-Point Connection as a new service offering under the standard ICO. NLT has proposed to effect this by: (a) adding the new Schedule 23 to the ICO; (b) adding the new Clause 19 to the existing Schedule 15; and (c) making revisions to the existing Schedule 18.

46. We note from Clause 5.4 of the new Schedule 23, that the procedures proposed by NLT for Point-to-Point Connection is different from that for CO Diversity Connection. For example, under Schedule 23, NLT will provide a Desktop Study Report to the RL, while for Schedule 22, it will provide a Project Study instead.

47. Considering the procedures for both services are largely similar (for example, both services involve NLT's provision of a theoretical optical power loss to the RL upon its receipt of a Request), the provisioning procedures for the Point-to-Point Connection should be aligned to that for CO Diversity Connection, for consistency reasons.

OTHER MATTERS

Matters raised in the following section were not outlined in the Authority's Consultation document. Nevertheless, we believe they should be taken into consideration and reviewed as part of the Authority's overall ICO review exercise under NLT ICO Revision 2022.

Co-location Service (Schedule 12 & 12C) Onsite Charge:

48. At the Industry Briefing conducted by NLT and the Authority on 16 November 2021 concerning "Fault Rectification on Sundays and Public Holidays", it was raised by an RL that should any residential fibre fault rectification require the RL's presence at any of the NLT COs, the RL would be imposed with an exorbitant NLT Co-location Service Onsite Charge of \$800 (Sunday to 9am the next day if < 4hrs)/\$1,600 (Sunday to 9am the next day if > 4hrs)/\$1,500 (Public Holidays to 9am the next day) on a per activation basis.³

49. Nucleus Connect strongly agrees with the said RL, in that NLT's Onsite Charge is entirely too high and unrealistic. NLT should be requested to provide a justification of how these charges had been derived.

50. With the NLT ICO revision and price review exercise currently underway, we submit that now would be an opportune time for the Authority to take a thorough and closer look at these charges, and review them accordingly as part of the overall ICO review exercise.

³ Please see: the existing Schedule 15 (Clause 12.7 & Clause 12C.7).

Co-location Service (Schedule 12 & 12C) Service Level Guarantee (“SLG”) and Credit Rebate:

51. In our submission of 6 June 2022 responding to the Authority’s consultation on NLT’s proposed diverse cooling system⁴, we commented that there is a lack of an SLG of 99.9x%, with an associated credit rebate compensation scheme for the RL, in NLT’s Co-location Service.

52. Specifically, in referencing the existing Clause 1.7(a) of Schedule 12 and Clause 1.8(a) of Schedule 12C, NLT has explicitly stated that it will provide a credit rebate to the RL only for the provisioning of its Co-location Service (the “**Provisioning SLG**”). We also commented in our submission of 6 June 2022, that an SLG of 99.9x% with an associated credit rebate compensation scheme is a commonplace in the service agreements of most commercial data centres in Singapore.

53. With the NLT ICO revision and price review exercise currently underway, we submit that now would be an opportune time for the Authority to conduct a thorough review of NLT’s Schedule 12 and Schedule 12C in totality, and to align it towards Singapore’s general industry standards. Specifically, NLT must be directed to revise Schedule 12 and Schedule 12C, such that an SLG of 99.9x% with an associated credit rebate compensation scheme is made available to the RL.

CONCLUSION

54. Nucleus Connect appreciates the opportunity to comment on the proposed NLT ICO changes. While we are happy with some of the proposed changes, we are very concerned with NLT’s proposal to impose new charges such as “Fault Investigation Charge” under Schedule 12 and Schedule 12C, as well as an OTC for the correction of unnecessary Personal Data.

55. We also strongly believe that a complete and thorough review should be conducted on NLT’s Co-location Service, as part of the overall NLT ICO review exercise. This is to ensure that NLT, as a Dominant Entity, provides its Co-location Service to the RL based on fair and reasonable prices, terms and conditions, in accordance with the provisions of the Telecom and Media Competition Code. Specifically, an SLG of 99.9x% with its associated credit rebate compensation scheme must be made available to the RL under Schedule 12 and Schedule 12C.

⁴ Please see: The Authority’s email dated 25 March 2022 entitled “Industry Brief on NLT’s Diverse Cooling proposal”.