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Mr Michael Callan
Regulation Branch
Commerce Commission
44 The Terrace, Wellington 6011

Dear Michael,

Submission on Telco Application of Equivalence and Non-Discrimination Obligations

1. Vector Communications welcomes the Commission's initiative to consider the important concepts of equivalence and non-discrimination in the context of fibre unbundling. We appreciate the opportunity to provide our views on the Commission's 18 October 2019 letter and accompanying paper by Professor Vogelsang.

2. In our view, this is a critical piece of work given the potentially adverse implications for fibre unbundling should the price and non-price terms for unbundled fibre not pass the important tests of equivalence and non-discrimination. Put simply, if the current terms that Chorus has offered the industry for its unbundled fibre product stand unaltered, the uptake of fibre unbundling will be extremely limited, if there is any interest at all. This will have obvious detrimental impacts on competition, innovation and price of fibre products for years, not least given that cost-based terms will not come into effect the January 2025 (after RP1).

3. Our comments in this submission are naturally focused on the Vogelsang paper, however, we would like to raise with the Commission other relevant issues relating to equivalence and non-discrimination, particularly our experiences with operational and non-price terms. We will address those separately with the Commission.

4. In this submission we recommend the Commission undertake the following measures when determining whether the requirements of Part 4AA have been met and compliance with undertakings for equivalence and non-discrimination for Chorus. The Commission should:

    - Settle on a clear methodology for measuring price equivalence and non-discrimination. A clearly defined methodology, whether it is based on resource costs (bottom up) or avoidable costs (top-down), will provide certainty for industry on the expectations for equivalence pricing.

- Recognise a well-defined methodology for determining price equivalence and non-discrimination will eliminate the need for specifying a range of acceptable pricing. For example, a range based on different methodologies with an upper limit set at the standalone cost for the Layer 1 service will provide a pricing range that is so broad that any pricing terms are likely to satisfy such a loosely defined test to the detriment of the principles of equivalence of price and non-discrimination.

- Appreciate the four very different approaches discussed by Professor Vogelsang for ascertaining layer 1 access prices when using the top down efficient component pricing rule (ECPR) test can lead to very different outcomes for equivalence. The four different ECPR methods suggested are the "clean margin", Armstrong-Doyle Vickers (ADV), cost of incumbent expansion and efficient entrant costs. Should the Commission adopt a top down method ECPR method we recommend the most widely recognised version of this rule and determine avoidable costs by reference of the efficient entrants' costs. Of the methods explored in the paper an efficient rival test for avoidable costs is most consistent with the purpose of Part 4AA.

- Be aware of how multi-part tariffs for the service can result in complications for equivalence and potentially frustrating the purpose of Part 4AA. Accordingly, we recommend the Commission consider whether the proposed terms for the Chorus PONFAS service do in fact compromise the objectives of equivalence and non-discrimination with respect to pricing.

- Examine Part 4AA compliance for proposed non-price terms such as provisioning timelines and service availability for both layer 1 and layer 2 services as part of an ongoing framework for measuring equivalence.

Background to telecommunications unbundling

5. Telecommunications access regulation for targeted wholesale and unbundled inputs in New Zealand over the last 20 years has oscillated from light handed regulation to more specific targeted ex ante regulation. In each instance, where a restrained approach has been adopted to unbundling, it has stifled the development of New Zealand's telecommunications sector and economy-wide productivity.

6. The Commission first considered the regulation of the integrated Telecom New Zealand's unbundled copper local loop (UCLL) in 2004. The failure to implement an unbundled

regulated service was a key reason for New Zealand's poor performance in the OECD on broadband penetration.

7. The absence of an unbundled product and restrictive terms for wholesale broadband by the incumbent - such as requiring competing internet service providers to also acquire wholesale line rental and local calling services - contributed to excessively high access prices for broadband and landline calling services in New Zealand. It was this experience that resulted in reforms of the Telecommunications Act. The reforms prescribed requirements for Telecom New Zealand to offer unbundled access to its last mile copper access network and for Telecom to commit to separating its business into three separate functional units.

8. The separation of Telecom into three separate units (namely network access, wholesale services division and retail division) was supported by legally binding undertakings submitted to the Crown. The separation undertakings were submitted under the now defunct operational separation provisions of the Telecommunications Act. It was these undertakings which first prescribed substantive obligations around equivalence and non-discrimination for alternative providers wishing to invest in complementary telecommunications fixed line infrastructure to provide services using access inputs from Telecom New Zealand. In 2008, Telecom also committed to upgrading its last mile copper access network to improve its broadband capability by rolling out more than 3500 roadside cabinets with ADSL2+ technology fed by optical fibre across the country – the cabinetisation programme.

9. The cabinetisation programme successfully improved the capability of the copper network for broadband but created more complications for network access and complementary infrastructure. The improvement with cabinetised broadband meant facilities-based competition based on exchange-based access provider equipment could not expect to deliver a broadband and landline service equivalent to Telecom New Zealand on cabinetised copper lines. However, access competition for broadband and telephone line rental was still possible on copper pairs (of lengths less than 1.5 kilometres) serviced from the exchange. The competitive tension provided by exchange-based competition and the Commission's decision to regulate call termination services on cellular networks was pivotal in transforming calling service offerings. The availability of unbundled and regulated service inputs enabled much more attractive calling bundles, such as unlimited calling across previously defined segments such as toll-calling and land line calls to mobiles. These innovations were enabled by unbundlers of the fixed local loop.

10. In October 2011, the Commission reached a settlement with Telecom for breaching its discrimination obligations in the operational separation undertakings. The Commission found Telecom failed to provide access seekers with the equivalent inputs to replicate its bundled local calling and line rental product with cabinetised broadband internet. The failure of Telecom to provide an equivalent service (the subsequently offered sub-loop extension service) for access seekers to replicate the Telecom bundle with their own exchange-based equipment resulted in the Commission settling the breach for $31 million.

11. The Ultra-Fast Broadband (UFB) initiative was designed to accelerate the roll-out of optical fibre infrastructure to 75 percent of New Zealanders by 2019. The primary objective of the initiative was to improve New Zealand's broadband quality through the accelerated replacement of the remaining last mile of the copper fixed local loop. The Telecommunications Act was amended 2011 by the *Telecommunications (TSO, Broadband and Other Matters) Amendment Act 2011* to facilitate the UFB programme and settle the access arrangements for the network services. The requirement for parties that chose to participate in the UFB process was a commitment to provide enforceable undertakings committing to providing services on a non-discriminatory and equivalent basis to its own service offering for layer 2 services. The final purpose statement of the new section 156AC included the requirement of 156AC(c) to facilitate efficient investment in telecommunications infrastructure. This limb was inserted to align the purpose statement with the structural separation undertakings of Telecom.

12. The enforcement of the undertaking regime in Part 4AA of the Telecommunications Act has largely been dormant for the first decade of the UFB programme. This has coincided with the build of the UFB programme and restraint on the obligation of UFB providers to provide a point-to-multi-point unbundled fibre access service (PONFAS)[1] – which reflects the characteristics of the unbundled copper local loop and sub-loop services. However, the importance of Part 4AA in the Telecommunications Act is underscored by the quantum of the pecuniary penalty for breaching the requirements of the statutory and regulatory provisions of the part, which attract a pecuniary penalty of up to $10 million.

13. We are now fast approaching the timeline for the requirement of a PONFAS service to be offered to the market which gives effect to the provisions of Part 4AA and the Chorus undertakings. This timing coincides with Chorus transitioning from "build mode" to managing its investment. Chorus has recently described this as "reaping the rewards" of its investment. We do have concerns with Chorus' assumption as this suggests it will reduce its own investment programme and also look to reap rewards by seeking to limit

[1] This is what Chorus refers to its layer 1 unbundling obligation

innovation in in its own service suite and the market more broadly to the detriment of competing unbundlers and telecommunications end-users.

14. There is understandably considerable uncertainty about the PONFAS service. Chorus describes its proposed service offering for PONFAS as a multi-part tariff for a single service. The service consists of a $200 per month for an aggregated infrastructure element and $28.55 for a distribution fibre to the customer's premises. The Chorus 2019 annual report noted "the Commission has said it will develop guidance on fibre equivalence and non-discrimination obligation following concerns from some retailers about our proposed pricing." Chorus appears to have recognised its proposed terms for PONFAS may have consequences for its Part 4AA obligations. We consider the terms proposed do in fact create concerns around Part 4AA and need to be urgently considered before the obligation for Chorus to provide the PONFAS service comes into effect.

15. At the very least, the proposed terms for PONFAS indicate the intention of Chorus to mimic pricing structures which have come at the detriment of service innovation and telecommunications competition. The NBN Co in Australia offered a similar type of pricing construct for its wholesale bitstream access offerings, with access seekers forced to pay a service bundle for NBN wholesale services. This comprises a bundle of the connected virtual circuit (CVC) and aggregated virtual circuit (AVC) charge. The bundled service offering has been very unpopular with industry. Most recently, Telstra Chief Executive Andrew Penn in a blog post and address to the Australian National Press Club recommended the removal of the CVC charge. To date, Chorus and local fibre companies (LFCs) have restrained from adopting multi-part tariff designs for wholesale bitstream services. However, the proposed terms for PONFAS indicates a willingness of Chorus to start exploring such pricing constructs to frustrate service innovation (either in terms of speed, contention, service support or price) from unbundled competition.

Professor Vogelsang's paper - Part 4AA – Telecommunications Act

16. Professor Vogelsang has been asked by the Commission to interpret the terms equivalence and non-discrimination in section 156AB of the Act and he has done so particularly as it applies to the level of the price for the unbundled product (the term PONFAS is used in these submissions).

17. Part 4AA is the relevant part of the Act, which deals with the fibre network constructed with Crown investment as part of the UFB.

18. The relevant part of Part 4AA is sub-part 2. The purposes of sub-part 2 (section 156AC) are to:

> *"… (a) promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services in New Zealand; and*
> *(b) require transparency, non-discrimination, and equivalence of supply in relation to certain telecommunications services; and*
>
> *(c) facilitate efficient investment in telecommunications infrastructure and services."*

19. Part 4AA of the Telecommunications Act was inserted as part of the *Telecommunications (TSO, Broadband and Other Matters) Amendment Act 2011*. As discussed above, the inclusion of section 156AC (c) specifically sought to replicate the terms of the Telecom operational separation undertakings and to encourage efficient investment for unbundled competition to help encourage service innovation in the market.

20. Requirements for equivalence, and non-discrimination, are implemented through the undertakings under sub-part 2 of Part 4AA. Section 156AD requires that the undertakings:

> *"… (b) provide for the LFC to supply unbundled layer 1 services on all parts of its fibre-to-the-premises access network on and after the specified date; and*
> *(c) provide for the LFC to—*
>
> *(i) achieve non-discrimination in relation to the supply of relevant services; and*
> *(ii) design and build the LFC fibre network in a way that enables equivalence in relation to the supply of unbundled layer 1 services to be achieved on and after the specified date; and*
> *(iii) achieve equivalence in relation to the supply of unbundled layer 1 services on and after the specified date; …"*

21. The undertakings referred to are, in respect of Chorus, the Deed of Open Access Undertakings for Fibre Services (the Fibre Deed) dated 6 October 2011.[2]

22. Equivalence is defined in the Fibre Deed (clause 6.3) with respect to price as "Chorus must deliver that Input Service to itself and the Access Seekers on the same timescales and on the same terms and conditions (including price and service levels)…" (paragraph (b)).

[2] In these submissions, we refer mainly to Chorus, but the same points are applicable to the other LFCs

23. The “same” means exactly the same, subject to some specific exceptions that do not appear relevant to this analysis (clause 6.4).

24. The Input Services include PONFAS (clause 1.1) and these must be provided to the Equivalence standard from 1 January 2020 (clause 6.2).

25. In terms of non-discrimination (clause 5.1):

> *“When doing or omitting to do anything in respect of a Service Chorus will not Discriminate:*
> *(a) between Access Seekers;*
>
> *(b) in favour of any Chorus Related Party; or*
>
> *(c) where Chorus supplies a Service to itself, in favour of Chorus itself.”*

26. Discrimination is defined in clause 5.2 as follows:

> *“In these Undertakings, “to Discriminate” means to treat differently, except to the extent a particular difference in treatment is objectively justifiable and does not harm, and is unlikely to harm, competition in any telecommunications market.”*

The purpose of PONFAS

27. When we consider Professor Vogelsang’s paper and his analysis, we must keep the historical and legal context in the front of our minds. Chorus was required, from the beginning of the UFB initiative to offer an unbundled service (terms of contract between Chorus and CIP) by 1 January 2020.

28. As noted above, the Act required that this service (PONFAS) be provided on an equivalence basis and be subject to non-discrimination. This requirement was implemented through the Fibre Deed and is binding on Chorus.

29. The requirement for Chorus to provide PONFAS is to promote competition to Chorus at Layer 2 and above. Requiring equivalence, and non-discrimination, achieves the purpose of promoting competition in sub-part 2, by ensuring that Chorus cannot treat access seekers differently to itself.

30. As discussed above, the timing for PONFAS unbundling from 1 January 2020 is to ensure Chorus has the discipline of unbundled competition to ensure its UFB Layer 2 services continue to deliver value for telecommunications end-users.

Top down pricing methodologies such as retail minus or ECPR

31. One of the options considered by Professor Vogelsang is a variant of "retail minus" (retail minus avoidable costs). This is a generally accepted pricing principle for wholesale access and has achieved new prominence recently in particular for access to NGN networks in Europe as a specific type of *ex-ante* margin squeeze test.

32. Professor Vogelsang discusses four very different permutations for ascertaining price replicability based on this type of methodology. The approaches he discusses are:

    - The clean margin rule;
    - Armstrong Doyle Vickers (ADV);
    - Incumbent cost of expansion (equally efficient operator); and
    - An efficient entrant's costs.

33. As opposed to the other methods discussed in the paper, the clean margin rule is a very unorthodox version for determining avoidable costs. The method is based on measuring the "costs saved" by the incumbent not supplying the downstream element. As opposed to the other methods which seek to identify "avoidable" costs – a clean margin approach will only identify avoided costs. This approach would result in perverse outcomes where significant components of the layer 2 service are in fact captured in the layer 1 access price (namely large capital items which are defined by Vogelsang as sunk). We do not believe this approach will lead to outcomes consistent with the purpose of Part 4AA.

34. The ADV approach for determining avoidable costs measures the "downstream margin" by the displacement ratio – a measure of the number of downstream units the incumbent must sell its regulated input product. The methodology is highly theoretical and suffers from measurement accuracy. Therefore, we strongly discourage the Commission for adopting this type of methodology when assessing price equivalence and non-discrimination.

35. The next approaches considered by Vogelsang are the incumbent cost of expansion and an efficient entrant's costs. These approaches are similar but vary to the extent to which

costs are based on the type of firm which can either be assumed to have the same characteristics of the incumbent or an efficient entrant looking to enter the market. We do not favour the incumbent expansion approach as it will limit the exercise of ascertaining avoidable costs to those of the incumbent which is less likely to be replicable by a new entrant. Rather, we consider the most appropriate benchmark for determining costs is by assessing an efficient entrants' costs for equivalence.

36. The term "economic replicability test" (**ERT**) was used to distinguish the *ex-post* competition law margin squeeze test.

37. As BEREC stated[3], the application of an economic replicability test:

> *"… implies that there should be a non-negative margin of the retail prices for an end-user product offered by the SMP operator and the sum of the costs necessary to provide the downstream service (see above), so an efficient operator would be allowed to earn a reasonable rate of return on capital employed in order to compete in the downstream market".*

38. Any Access Seeker does not enjoy the same scale and other benefits as Chorus. Therefore, if an Access Seeker had to be effectively in the same position as Chorus' Layer 2 operations, then the Access Seeker would *not* be able to economically replicate Chorus' Layer 2 services.

39. Professor Vogelsang essentially makes the same point when he proposes that the reasonably efficient operator (REO) or adjusted equally efficient operator (adjusted EEO) standard, is appropriate in this context. We believe this is the correct approach.

40. The European Commission stated that a REO standard is the correct approach in these circumstances[4]:

> "*In the specific context of ex ante price controls aiming to maintain effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs,* ***a 'reasonably efficient competitor test' will normally be more appropriate***". (Emphasis added)

[3] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:251:0035:0048:EN:PDF, Recital 26
[4] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:251:0035:0048:EN:PDF, Recital 26

41. In its guidance on the regulatory accounting approach to the economic replicability test[5], BEREC explained further the circumstances in which a reasonably efficient operator standard would be the correct approach[6]:

> *"While the pure EEO test relies on static efficiency any adjustments to this approach taking into account transitory disadvantages of even efficient competitors in terms of e.g. lower scale and volumes/density of lines draws on the benefits of (an improved) dynamic efficiency in a long-run perspective. Therefore the REO/adjusted EEO approach is more suitable in a situation where dynamic efficiency is likely to overcompensate static inefficiencies resulting from (slightly) higher end user prices as the case may be, i.e. if alternative operators can be expected to grow and reach economies of scale comparable to the SMP operator's.* ***Thus the focus of the REO/adjusted EEO approach lies on promoting sustainable competition and with this fostering infrastructure investment of alternative operators as well****".* (Emphasis added)

42. If the EEO standard is applied, i.e., Chorus' costs, then there may be static efficiency benefits, however there will also be dynamic efficiency costs, as it would require the Access Seeker to have similar costs to Chorus to profitably provide Layer 2 services based on a Layer 1 input. Conversely, with the REO or adjusted EEO standard, there may be some static efficiency costs, but there are likely to be dynamic efficiency benefits of enhanced Layer 2 and above broadband competition by allowing higher downstream costs to be deducted in the calculation.

43. We see great importance of a REO concept given the uncertainty of access prices following the expiration of the agreements for service terms with CIP and the new regulatory framework for Chorus. For example, the inclusion of return on investment for past losses for Chorus as part of new access prices means there is considerable uncertainty as to the change in costs for Layer 2 prices for customers and telecommunications end-users. A REO standard will ensure telecommunications end users will benefit from the innovation unbundlers will bring.

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[5] https://www.berec.europa.eu/eng/document_register/subject_matter/berec/download/0/4782-berec-guidance-on-the-regulatory-account_0.pdf

[6] Adjusted EEO starts with the SMP operator's cost and adjusts it to the scale of the generic (alternative) operator

Equivalence in the PONFAS context

44. PONFAS is about allowing new market entry to allow Access Seekers to compete with Chorus at a different level of the value chain. Accordingly, dynamic efficiency considerations should be recognised for the enduring benefit they offer on ensuring the market continues to deliver to the expectations of end-users in terms of speeds, contention, service support and price.

45. When considering this issue in the context of the VULA margin, Ofcom said[7]:

> "*We do not consider that an EEO approach would be effective in achieving our aim [to support effective retail competition in the future]. Setting a minimum VULA margin based on BT's costs would prevent an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers*."

46. And Ofcom concluded on this point[8]:

> "*We consider that an adjusted EEO approach is more effective in achieving our aim …*"

47. We also note that the new regulatory framework is a balance or a blend between supporting investments for Chorus and LFCs and promoting competition and innovation which is especially relevant in respect of the Layer 1 services (PONFAS and DFAS). A robust and strongly enforced equivalence framework for PONFAS will complement Chorus investment which is supported through its revenue cap mechanism and its periodic recalibration.

48. Accordingly, we believe the REO or adjusted EEO standard for determining equivalence would mean that Chorus' Layer 2 operations would be able to trade profitably if it paid the same wholesale access costs as Access Seekers, given the scale and other circumstances of a reasonably efficient operator.

Importance of equivalence

49. Equivalence is a key pillar in the telecommunication's regulatory framework and, accordingly, Equivalence of Pricing must be given a substantial meaning. If equivalence means only that Chorus' costs can be considered (e.g., EEO) in determining avoidable

[7] Ofcom, "Approach to VULA Margin" 2015, paragraph 5.24
[8] Ibid, paragraph 5.27

costs, then equivalence is neutered as a regulatory principle. This cannot have been the intention of Parliament.

Avoidable costs

50. Professor Vogelsang's paper does not say much about what costs that would be necessary for Chorus to incur to provide the Layer 2 service if it was acquiring the Layer 1 input on an equivalence basis. In our view, it is important for the avoidable costs to be ascertained transparently. We consider the following, at a minimum, are relevant avoidable costs for the provision of the Layer 2 service:

    - Cost of installing an ONT in end user premises
    - Cost of replacing or changing the FFP
    - Cost of adding electronics at the exchange
    - Operation and maintenance costs of electronics
    - Hardware vendor support
    - Licencing
    - Port costs on OLT
    - Product development and management costs
    - Marketing costs
    - Service and assure costs for layer 2 support services

51. Equivalence requires consideration of Chorus in the same situation as an Access Seeker and these costs will all be required to be incurred by customers wishing to acquire the PONFAS service.

Clean Margin pricing

52. In certain cases, Professor Vogelsang contemplates a clean margin rule applying. However, he suggests the application of this rule would "strangle" the attractiveness of Layer 1 unbundling, in Professor Vogelsang's words, and so could not possibly address equivalence and non-discrimination requirements. We also believe this type of rule is contrary to the purpose of Part 4AA as only considering "avoided" costs as opposed to avoidable costs will not result in equivalence as contemplated by the Act.

Application of a top down approach to equivalence

53. If the top down approach for equivalence of pricing was followed (applying REO or adjusted EEO), then there is a valid question of what Layer 2 prices would be used as the basis of the calculation. A weighted average of Layer 2 prices may be possible to construct. However, any weighted average must consider the different service combinations adopted for the Layer 2 service. For example, the level of assure bundled with Layer 2 services will be different and result in different prices.

Equivalence on non-price terms

54. When the Commission is preparing its guidance on equivalence and non-discrimination, we request that it gives due weight to non-price terms. We consider that many of the difficult issues that arise with Chorus' proposed PONFAS terms relate to non-price matters. We have identified problems in terms of the ordering and provisioning process (which result in significantly longer lead times for a Layer 1 service than the downstream Layer 2 service offered by Chorus), feeder service requirements, service disruption for end-users and the transparency or the separation of the L1 and L2 services. We would like to discuss these issues further with the Commission.

Yours sincerely

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