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Section 30R review of the UBA standard terms determination

Process and issues paper

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Purpose of this paper

1. We are reviewing the unbundled bitstream access (UBA) standard terms determination (STD) under section 30R of the Telecommunications Act 2001 (Act). As we announced in April 2015, this review focuses on considering those aspects of the non-price terms of the UBA STD that relate to whether the service is 'fit for purpose'.¹
2. This paper outlines our proposed approach for the UBA section 30R review in more detail. Specifically, this paper:
 - 2.1 explains why we are reviewing the UBA STD;
 - 2.2 outlines the background to the review, including the process to date, the recently completed UBA pricing review determination, and other contextual factors;
 - 2.3 describes the key factors we intend to take into account when undertaking this section 30R review;
 - 2.4 explains our proposed scope for the UBA section 30R review;
 - 2.5 sets out an indicative timeline for the key steps in the review; and
 - 2.6 sets out several questions on which we seek comment from interested parties.

We are reviewing the UBA STD to ensure it is 'fit for purpose'

3. UBA is the most common wholesale input used by retail service providers to deliver fixed-line broadband services to their customers. There are currently approximately 1.1 million UBA connections in New Zealand. The regulated UBA service is delivered over Chorus' fibre-to-the-node (FTTN) network.
4. The UBA service is a designated access service.² We first set the terms for access to the UBA service in December 2007, including the service description and technical specifications.³ Although the UBA STD was updated in November 2011, the technical specifications remained the same as originally determined in 2007.⁴

¹ Commerce Commission "Unbundled Bitstream Access (UBA) Standard Terms Determination (STD) - review under section 30R of the Telecommunications Act 2001 (the Act)" (1 April 2015), paragraph [17].

² Schedule 1, Part 2, Subpart 1 of the Act.

³ Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" 12 December 2007, Decision 611.

⁴ The November 2011 review made 'consequential changes' considered necessary for implementing the amendments made by the Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011 (Amendment Act). Commerce Commission "Decision on consequential changes to Commerce Commission standard term determinations" (24 November 2011). In addition, section 77 of the Amendment Act required us to undertake a review of the UBA STD under section 30R of the Act for the purpose of making any changes necessary to implement the new forward-looking cost-based pricing

5. Under section 30R of the Act we can “commence a review, at any time, of all or any of the terms specified in a standard terms determination”, and we can “replace a standard terms determination or vary, add, or delete any of its terms”, if we consider it necessary to do so after conducting a review.⁵
6. On 1 April 2015, we announced the start of a section 30R review of the UBA STD non-price terms to assess whether the service is ‘fit for purpose’.⁶
7. We continue to consider that there are good reasons to review the non-price terms (since the price terms have been recently reviewed) of the UBA STD now, to ensure they are fit for purpose.
 - 7.1 There have been significant changes affecting the way the regulated UBA service is delivered after we set the service specifications, such as deployment of new digital subscriber line (DSL) based technologies (eg, VDSL), and increased data consumption by end-users (reflecting modern usage requirements).
 - 7.2 Chorus’ incentives to ensure the regulated UBA service keeps up with changing end-user demands are likely to have been affected by structural separation. When the UBA STD was established in 2007, the vertical integration of Telecom and the principle of equivalence of inputs meant that Telecom was incentivised to invest to meet the demands of its retail business, and was required to pass these benefits on to access seekers. As a wholesale only provider, Chorus does not have the same set of incentives.
 - 7.3 Following Chorus’ proposed introduction of the Boost services, there is a concern that Chorus could discontinue investment in the regulated UBA service, leaving it unsuitable for meeting the demands of consumers and effectively bypassing regulation of the UBA service.
 - 7.4 In December 2015 we set updated prices for Chorus’ UBA service, based on the TSLRIC pricing principle. As part of applying this principle, we made modelling decisions about future end-user requirements which differ from the minimum service requirements in the UBA STD. We consider that a review is helpful to consider how aligned the UBA service description and the final pricing principle (FPP) modelling decisions should be.
8. While we support the development of commercial UBA variants alongside the regulated UBA service, we recognise that there is currently a lack of clarity around the distinction between the two. This lack of clarity was highlighted by the Boost process during 2014.⁷ We consider that greater clarity regarding the distinction

principles. On December 2015, we determined prices for the regulated UBA service under the TSLRIC final pricing principle.

⁵ Section 30R(1) and (2) of the Act.

⁶ Commerce Commission “Unbundled Bitstream Access (UBA) Standard Terms Determination (STD) - review under section 30R of the Telecommunications Act 2001 (the Act)” (1 April 2015).

⁷ See paragraphs 14 to 19 below for further details.

between the regulated UBA service and commercial UBA variants will incentivise investment in both the regulated UBA service and commercial UBA variants. This should allow for greater product differentiation by access seekers at the retail level, promoting competition for the long-term benefit of end-users.

9. Our ultimate goal with this review is to ensure that the UBA regulated service meets typical end-users' needs and is capable of evolving over time. In our view, this best gives, or is likely to best give, effect to the section 18 purpose statement.

Background to this UBA section 30R review

What is the regulated UBA service?

10. The regulated UBA service enables telecommunications retailers to access Chorus' copper telephone lines, electronic equipment and software, to provide fixed-line broadband services to customers throughout New Zealand.
11. The regulated UBA service has two main components.
 - 11.1 The unbundled copper local loop (UCLL) component represents the network infrastructure used to connect consumers' homes and workplaces to Chorus' local telephone exchange buildings.
 - 11.2 The UBA additional costs component (also known as the "UBA increment") represents the electronic equipment, software, and other additional infrastructure required to provide the regulated UBA service over Chorus' UCLL network.
12. This review focusses on the non-price terms for that part of the regulated UBA service other than the UCLL input. Regulated access to the UCLL service is provided separately, under the UCLL STD. Any consideration of potential amendments to the UCLL STD is outside the scope of this review.⁸
13. While the focus of this review is on non-price terms, we will consider whether the price should be updated due to a 'change in circumstances', as required by section 30P(1)(a)(ii) of the Act. However, at this stage we do not envisage that amendments to the UBA STD within the proposed scope will result in a requirement to amend the price.

Process to date

14. On 14 May 2014 Chorus announced that it intended to introduce new commercial UBA variants, known as the 'Boost' variants.⁹ At the same time, Chorus proposed to

⁸ We note that Chorus, in accordance with the copper undertakings as required by section 69XB of the Act, must supply itself with the UCLL service on the same terms as access seekers. Any proposed change to the UCLL service would require a section 30R review of the UCLL STD.

⁹ Chorus "Notice of New UBA Variants under Clause 10 of the UBA Standard Terms Determination General Terms" 14 May 2014 (available at <http://www.comcom.govt.nz/dmsdocument/11929>). Chorus amended its proposals relating to the commercial variants on 28 July 2014 (Chorus "New UBA Variants" 28 July 2014 (available at <http://www.comcom.govt.nz/dmsdocument/12166>)).

change elements of the regulated UBA service by capping aggregate throughput at the handover point and withdrawing VDSL as a means of providing the service.

15. We started an investigation under section 156O of the Act on 22 July 2014, in response to a complaint from Spark that the proposed changes to the UBA service breached the UBA STD.¹⁰
16. On 4 September 2014 we published a consultation paper seeking submissions on legal advice provided to us by David Laurenson QC and Dr James Every-Palmer, considering whether Chorus' proposed changes to the regulated UBA service would breach the UBA STD. Their advice was that Chorus' proposed changes would likely breach clause 2.2.1 of the UBA General Terms.¹¹
17. The investigation was suspended on 16 October 2014 after Chorus put the proposed changes to the regulated UBA service on hold.¹² However, we considered that the Spark complaint raised a number of issues in relation to the UBA STD that warranted further consideration.
18. Accordingly, on 2 December 2014 we issued a consultation paper which sought the views of interested parties on whether we should undertake a section 30R review of the UBA STD and, if so, what the scope of the review should be.¹³ Submissions were broadly in favour of undertaking a section 30R review.
19. On 1 April 2015, we announced the start of a section 30R review of the UBA STD non-price terms.¹⁴ The 1 April 2015 notice outlined a high-level scope that focuses on whether the service is 'fit for purpose'. We noted that this might include consideration of whether requirements for how the regulated UBA service is provided by Chorus are clear, and whether it is clear what the regulated UBA service is or should be.

Changes in market structure and pricing principles have affected the regulated UBA service

20. There have been significant changes in the provision of the regulated UBA service since December 2007 which have not yet been fully reflected in the non-price terms of the STD. In particular:

¹⁰ For further information, see <http://www.comcom.govt.nz/regulated-industries/telecommunications/regulated-services/standard-terms-determinations/unbundled-bitstream-access-uba-services/new-uba-variants/>,

¹¹ Commerce Commission "Consultation paper on issues relating to Chorus' proposed changes to the UBA service" (4 September 2014), pp. 4-11. External counsel particular areas of concern are set out in paragraph [11].

¹² <http://www.comcom.govt.nz/regulated-industries/telecommunications/telecommunications-media-releases/detail/2014/commerce-commission-suspends-investigation-into-proposed-changes-to-chorus-regulated-uba-service>

¹³ Commerce Commission "Consultation on possible section 30R review of the UBA STD General Terms and Service Description" (2 December 2014).

¹⁴ Commerce Commission "Unbundled Bitstream Access (UBA) Standard Terms Determination (STD) - review under section 30R of the Telecommunications Act 2001 (the Act)" (1 April 2015).

- 20.1 post separation, Chorus is prohibited from retailing, so is no longer directly exposed to end-user demands; and
- 20.2 the regulated UBA price is now set based on forward-looking costs determined under TSLRIC, rather than a retail-minus approach.¹⁵
21. While a number of amendments were made to the UBA STD in 2011 to prepare for the structural separation of Telecom, Chorus' proposed introduction of the Boost variants has indicated that further amendments may be required to make the UBA STD fit for purpose for the current environment and into the foreseeable future.
22. As indicated in paragraph 7.2 above, the wholesaling incentives of a structurally-separated Chorus are different to those of Telecom. At the time the UBA STD was originally developed, Telecom was the access provider of the regulated UBA service. Telecom was vertically-integrated, serving its own retail customer base as well as providing wholesale services (including UBA).
23. Retail (and wholesale) competition faced by Telecom, largely driven by take-up of the UCLL service, created an incentive to upgrade the regulated UBA service over time. Improvements in service quality helped reduce the risk of Telecom's retail customers switching to other providers, who could potentially offer better quality services (at similar prices to those charged by Telecom) by using the UCLL service rather than purchasing UBA.
24. The incentive for Chorus to invest in upgrades to the regulated UBA service over time is likely to have been reduced by structural separation. Chorus, as the access provider of the service, no longer has its own retail customer base to consider when deciding whether to upgrade UBA.
25. In addition, the UBA pricing principle has changed since the service was first regulated in 2007. In 2011 the UBA pricing principle changed from a retail-minus approach, to a cost-based methodology, which came into effect on 1 December 2014. This change in pricing approach was introduced by the 2011 changes to the Act due to the structural separation of Telecom.¹⁶ Because retail-minus pricing does not necessarily relate to the cost of providing the service, an access provider will generally be able to maintain a margin on the provision of the service thus allowing for continued investment. When prices are set on a TSLRIC basis an access provider may be more concerned to ensure that any further investment can be financed within the regulated price.
26. The TSLRIC price for the regulated UBA service, which we recently determined under the FPP, is discussed in more detail below.

¹⁵ Telecommunications Act 2001, Schedule 1, Part 2, Subpart 1.

¹⁶ The change in pricing principle was required as the 2011 amendments to the Act also prohibited Chorus from providing retail services. Accordingly, a retail-minus approach could no longer be used to determine the price for the UBA service.

The UBA pricing review determination

27. On 15 December 2015 we determined prices for the regulated UBA service under the TSLRIC FPP.¹⁷ The TSLRIC concept is an economic approach commonly used to set regulated prices for access to telecommunications infrastructure. The Act provides us with a definition of TSLRIC, which required us to determine the forward-looking costs over the long run of the UBA increment.
28. Our approach to implement TSLRIC for the regulated UBA service was to estimate forward-looking, long run, efficiently incurred, incremental costs that a hypothetical efficient operator (HEO) would incur in building and operating a new network using modern equivalent assets (MEA), and valuing inputs using current prices. Our view was that the HEO and MEA concepts were consistent with a conventional approach to TSLRIC, and would assist us in creating a model that would implement the section 18 purpose.¹⁸
29. The service specifications modelled in the FPP are not necessarily the same as the minimum service specifications under the STD. For example, the service description in the STD only requires that the regulated UBA service provide a minimum throughput of 32 kbps during any 15 minute period.¹⁹ However, in the UBA FPP we modelled modern equivalent assets with an average throughput of 450 kbps in 2016, increasing by 50% per annum throughout the regulatory period. We explained that:²⁰

We consider that the hypothetical efficient operator would deploy a UBA core network capable of meeting current and future end-user throughput requirements, in order to protect against obsolescence. Further, this UBA service provided would be dynamic and evolve over time as throughput requirements increase.

30. We further consider the role our FPP decision, if any, has to play in this review at paragraphs 62 to 66.

Other contextual factors

31. A fibre-to-the-home (FTTH) access network is currently being deployed to 75% of New Zealanders under the Ultra-Fast Broadband (UFB) initiative. Chorus and the three local fibre companies (LFCs), Northpower Fibre, UltraFast Fibre, and Enable Networks, are building the UFB network in certain regions of New Zealand.²¹
32. Although next generation infrastructure is being rolled out via the UFB initiative, we still consider it important to review the UBA STD now. Chorus' copper network will

¹⁷ Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015).

¹⁸ Ibid, paragraph [95].

¹⁹ Commerce Commission "Standard Terms Determination for Chorus' Unbundled Bitstream Access Service" Schedule 1 UBA Service Description, clause 3.12.

²⁰ Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015), p. 168, paragraph [B53].

²¹ Chorus is responsible for approximately 70% of the UFB rollout, with the remainder being deployed by the LFCs. As at February 2016, 184,000 households and businesses had connected to the UFB network.

remain, for some time, the main infrastructure over which fixed line telecommunications services are provided to New Zealanders.

33. The Ministry of Business, Innovation and Employment (MBIE) is currently undertaking a review of the Act. As part of its review, MBIE is considering the approach to regulating fixed-line services (including UBA) post-2020.
34. Although the MBIE review could potentially affect regulation of UBA, including its pricing principle, we consider it important to ensure the regulated UBA service is fit for purpose now. In doing so, we are required to undertake this section 30R review based on the Act as it currently stands.

Key factors when undertaking this section 30R review

35. This section explains our current thinking on the key factors we intend to take into account when undertaking this section 30R review of the UBA STD. Specifically, it explains:
- 35.1 why we consider that the regulated UBA service is currently, and should remain, an ‘anchor’ service, designed to meet typical end-users’ needs; and
 - 35.2 the key factors we intend to balance when considering potential amendments to the UBA STD, including ensuring the service is future-proofed, there are appropriate incentives to invest and innovate, and FPP considerations.

We think regulated UBA should continue to meet typical end-users’ needs

36. When undertaking this review, it is important to understand the role that the regulated UBA service plays in the wholesale market. The intended role of the regulated UBA service is likely to affect the approach to regulation. For example, key questions include:
- 36.1 Should all UBA variants be regulated, or should only one (or more) ‘anchor’ service(s) be regulated?²²
 - 36.2 If an ‘anchor’ service is to be regulated, should it be a low specification service (designed to meet basic end-user needs), or a higher-specification service?
37. In our view the regulated UBA service has historically acted and should continue to act as an ‘anchor’ for the wholesale bitstream market.²³ An anchor regulation approach leaves scope for Chorus to offer commercial variants with higher and lower specifications. The idea is that although Chorus is free to charge what it likes for commercial UBA variants, the regulated UBA service, where appropriately defined, acts as a constraint on those variants.
38. Defining an appropriate ‘anchor’ regulated UBA service should provide appropriate incentives for Chorus to develop commercial UBA variants, consequently allowing for greater product differentiation by access seekers at the retail level. This product differentiation will likely allow for further competition among access seekers, which in our view is to the long-term benefit of end-users.²⁴
39. An ‘anchor’ regulated UBA service could fall into one of three broad categories:

²² An ‘anchor’ regulation approach is where a service is subject to regulation under terms determined by the regulator. The regulated entity is free to develop/provide commercial variants outside the terms of the regulated service (including pricing).

²³ We currently regulate the Basic UBA service, and three Enhanced UBA variants. Chorus is able to offer commercial services which are differentiated from the regulated variants.

²⁴ Greater wholesale product differentiation gives access seekers the opportunity to tailor retail services, whereby they can target specific categories of end-users.

- 39.1 *Baseline* – a low-specification service, sufficient for basic end-user needs, that sets a floor for the bitstream market (ie, sits below the broadband needs of typical end-users);
- 39.2 *Average* – mid-specification service that meets the needs of typical end-users (ie, sits in the middle of broadband needs/use); or
- 39.3 *Advanced* – a high-specification service that provides for the latest consumer uses (ie sits above the broadband needs of typical end-users).
40. Although the concept of an ‘average’ service is not explicit in the STD, the previously applied retail-minus pricing mechanism established the regulated service in the middle range of end-user needs. Telecom and now Chorus have invested in technology and capacity upgrades over the life of the regulated UBA service to maintain a service that meets the needs of typical end-users, with the service currently provided by Chorus being an ‘average’ (mid-specification) service suitable for typical end-users’ needs.
41. Specifying a mid-specification service as the anchor allows scope for Chorus to offer both higher and lower specification commercial UBA variants. Further, a mid-specification anchor will ensure that the regulated service serves typical end-users. Accordingly, a mid-specification service should allow for greater product differentiation by access seekers, promoting competition which, in our view, is to the long-term benefit of end-users.
42. An ‘advanced’ regulated UBA service may be inconsistent with the section 18 purpose statement, as it might require inefficient investment by Chorus to provision its network for bandwidth demand that does not exist. Also, it might result in end-users incurring additional costs from which they do not derive any benefit (because typical end-users do not use this level of broadband). It would also reduce the scope for Chorus to offer commercial UBA variants with higher specifications.
43. Similarly, a ‘baseline’ service will be insufficient to meet typical end-users’ bandwidth requirements. Given that a ‘baseline’ service would be unsuitable for typical end-users, the regulated service would be unlikely to act as an effective constraint on commercial UBA variants with higher specifications.
44. We also note that in our recent UBA FPP determination, we set the TSLRIC price for the regulated UBA service based on a HEO deploying a network capable of meeting current and future average throughput demand by end-users. In this regard, our view is that our approach to TSLRIC is consistent with a mid-specification regulated UBA service.
45. Therefore, a mid-specification service that meets the reasonable needs of typical end-users is an appropriate starting point. We consider that such a service is likely to give effect to the section 18 purpose statement. We note that there is complexity underlying such an objective and we do not have access to demand data and use cases that are available to RSPs and Chorus. We therefore welcome the views from parties on these matters.

Question(s)

- 1 Do you agree that an anchor regulation approach should be used for the regulated UBA service? Why/why not?
- 2 Should the regulated UBA service be a baseline service, average service, or advanced service? Please explain how your view is consistent with section 18 purpose statement.

Key factors when considering possible amendments to the UBA STD

46. When developing potential solutions, we think it is important to balance the following considerations.
 - 46.1 *The service is future-proofed* – the regulated UBA service improves over time and remains fit-for-purpose.
 - 46.2 *Incentives to invest and innovate* – Chorus has appropriate incentives to invest in upgrading the regulated UBA service over time and develop innovative new commercial UBA variants.
 - 46.3 *FPP considerations* – whether, and the extent to which, the regulated UBA service description should be aligned with the technical specifications of the service modelled in the FPP.
47. Each of these factors is described in more detail below.

The regulated UBA service is future-proofed

48. Broadband consumption by end-users will evolve over time, and therefore the regulated UBA service should not be static; it should be capable of evolving as technology and end-user demand changes.
49. In the UBA FPP we modelled a UBA network that was capable of meeting current and future end-user demand for throughput. Likewise, we believe that any amendments we make to the regulated UBA service specification in this review should also reflect that the regulated UBA service is not static and is capable of evolving with end-users requirements. Equally, Chorus should be compensated for providing a regulated UBA service that evolves over time.
50. In response to our December 2014 consultation paper on whether we should conduct a section 30R review of the regulated UBA service, access seekers agreed that the regulated UBA service should be dynamic. Spark noted that this is what we had expressed in our 2014 UBA FPP draft decision and what had been modelled.²⁵

²⁵ Spark “Consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [8].

Similarly, CallPlus submitted that future-proofing the regulated UBA service would avoid it being side-lined as a niche service.²⁶

51. As we have explained at paragraphs 40 to 45, our view is that an ‘average’ regulated UBA service that meets typical end-users’ needs will best give, or is likely to best give, effect to the section 18 purpose statement. Given end-user demand will evolve over time, the regulated UBA service should evolve over time to remain consistent with an ‘average’ specification service and therefore the section 18 purpose statement. In addition, it will likely minimise the risk of further reviews of the service specification being required in the near future.

Question(s)

- 3 Do you agree that the regulated UBA service should be specified to evolve over the regulatory period to meet the changing needs of end-users?

Chorus has appropriate incentives to invest and innovate

52. We consider it important that Chorus is appropriately incentivised and compensated for investment in:
- 52.1 upgrades to the regulated UBA service over time; and
- 52.2 new commercial UBA variants, which offer capabilities not available through the regulated UBA service.
53. As explained at paragraphs 48 to 51 above, one of the key factors we intend to consider during this review is how to ensure the regulated service is future-proofed, so that it continues to remain relevant over time. This requires consideration of whether Chorus faces incentives to invest in maintaining an appropriate quality of service, reflecting end-users’ changing usage patterns.
54. Both financial and non-financial factors are relevant when considering whether Chorus faces appropriate incentives to invest in the regulated UBA service.
55. We consider that, on average, the current UBA price is likely to be sufficient for upgrades to the UBA service over the regulatory period.²⁷ As explained above, the TSLRIC UBA price we set was designed to cater for both current and future end-user throughput requirements. We modelled average throughput of 450 kbps in 2016, increasing by 50% per annum throughout the regulatory period.

²⁶ CallPlus “Consultation paper on possible s30R review of the UBA General Terms & Service Description” (27 January 2015), paragraph [1].

²⁷ In the UBA FPP determination we set a regulatory period for the regulated UBA price of five years. Under the current legislation, we would expect to conduct a review under section 30R of the Act to update the TSLRIC price payable for the UBA service for the next regulatory period.

56. However, in our view there are currently likely to be limited incentives for Chorus to invest in upgrades to the regulated UBA service. This is because the TSLRIC price we have set compensates Chorus for expected increases in usage over the regulatory period,²⁸ but there is no clear obligation on Chorus to actually deliver a service above the minimum specifications currently contained in the STD.

57. We have previously noted that TSLRIC pricing is likely to lead to limited incremental investment incentives for a regulated supplier, if compared with a regulatory asset base (RAB) approach to setting regulated price-quality paths.²⁹ In the TSLRIC context, there is no direct link between new investment in the UCLL/UBA services undertaken by Chorus and higher regulated prices.³⁰ When considering whether an adjustment should be made to our mid-point estimate of the weighted average cost of capital (WACC) for the FPP, we explained:³¹

Under our TSLRIC model, regulated prices are set based on the costs a hypothetical efficient operator would incur in providing the relevant services, rather than the actual costs incurred by the service provider. The asset base used to determine regulated prices is largely independent of the service provider's actual network. Therefore, new investment undertaken by the service provider does not have a *direct* impact on the price-caps for the relevant regulated services. However, this also means that TSLRIC-based prices generate strong cost-minimisation incentives for the regulated supplier.

58. Chorus may face other incentives to maintain appropriate quality standards for the regulated UBA service, which are not directly related to the TSLRIC price we set. For example:

58.1 In areas where Chorus is building the UFB network, ongoing improvements in copper bitstream service quality (including delivery by VDSL) may assist migration to fibre, by acting as a gateway to demand for higher speed UFB services.³² This could potentially lead to efficiency benefits over time, by reducing the need to operate and maintain two separate networks in parallel.

58.2 In areas where other LFCs are building the UFB network, competitive pressure may generate incentives for Chorus to maintain its copper-based bitstream services.

²⁸ In the UBA FPP we set a regulatory period of five years. For further information, see Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015), paragraphs [322]-[335].

²⁹ Commerce Commission "Cost of capital for the UCLL and UBA pricing reviews: Final decision" (15 December 2015), paragraphs 259 to 265.

³⁰ Although there is no direct link between new investment and regulated prices under TSLRIC, that does not mean that TSLRIC prices are unable to incentivise additional investment. For example, new investment may generate incremental volume (or avoid a loss of volume), the value of which will depend on the regulated TSLRIC price that is set.

³¹ Commerce Commission "Cost of capital for the UCLL and UBA pricing reviews: Final decision" (15 December 2015), paragraph 260.2.

³² On the other hand, improvements in copper bitstream services could potentially slow migration to fibre, if end-users are satisfied with the copper-based services they receive.

- 58.3 Chorus may also face incentives to maintain service quality for copper bitstream services, to help minimise the risk of any reputational damage associated with major network outages (particularly where UFB will not be available).
59. Further, we consider Chorus should be appropriately rewarded for investment in commercial UBA variants, which offer capabilities not available through the regulated UBA service. Investment in innovative new services can generate significant benefits to end-users, particularly in a fast-moving industry such as telecommunications. We have previously noted that there are potentially significant dynamic efficiency benefits associated with investment in new bitstream services.³³
60. However, the development of commercial services should not be at the expense of the regulated UBA service. In our view, Chorus should be free to develop commercial services, so long as the service quality for the regulated UBA service remains at an appropriate level. Clarifying what appropriate service quality for the regulated UBA service means is a key objective of this section 30R review.
61. Clearly defining the service quality requirements for the regulated UBA service should support investment in new commercial services. Chorus is free to determine the price for commercial UBA variants. Therefore, it will face incentives to develop new services (which are differentiated from the regulated UBA service), assuming there is sufficient demand from access seekers.

Question(s)

- 4 Should we provide any additional incentives for Chorus to develop commercial UBA variants, in addition to the ability to set prices outside the regulated price cap? If so, why and how?

Whether, and to what extent, should the UBA Service Description be aligned with the FPP decision

62. There is currently a significant difference between technical service specifications set in our TSLRIC model used to determine the price for the regulated UBA service, and the minimum service specifications set in the UBA STD.
63. When determining the TSLRIC price, we made modelling decisions about the technical specifications of the service (ie, throughput).
64. Although the regulated prices were set based on the costs a HEO would incur in providing the relevant services (and not Chorus' actual costs), as part of this review, we intend to consider whether, and the extent to which, the specifications in the regulated UBA service description should be aligned with the technical specifications used when determining the TSLRIC UBA price under the FPP.

³³ Commerce Commission "Final Decision of the Commerce Commission on the request for a Review/ Clarification of the application of the UBA STD to VDSL technology" (16 April 2010), paragraphs [31]-[32].

65. We note that parties appear to support alignment of the UBA Service description with decisions made in the FPP. For example:
- 65.1 Spark recognised that it is important that the assumptions implicit in the service we modelled in the FPP are not out of step with the non-price terms in the UBA General Terms and Service Description;³⁴
- 65.2 Vodafone noted that it would be unfortunate if the FPP model had to be revisited due to changes flowing from this section 30R review;³⁵ and
- 65.3 In response to our September 2014 consultation paper, Chorus submitted that if we have an expectation that there will be increased investment and “over delivery” of the regulated UBA service, then this should be factored into the UBA FPP pricing.³⁶
66. As indicated in paragraph 12 above, we will also consider whether any changes to the non-price aspects of the UBA STD due to this review should be reflected in a change in price, as required by section 30P(l)(a)(ii) of the Act.

Question(s)	
5	To what extent should the FPP price and underlying modelling assumptions be considered as part of this process?
6	Are there any other key factors we should consider when assessing possible changes to the UBA STD as part of this section 30R review?

³⁴ Spark “Consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [6].

³⁵ Vodafone “Submission on consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [17].

³⁶ Chorus “Submission in response to the Commerce Commission’s Consultation Paper on issues relating to Chorus’ proposed changes to the UBA service” (18 September 2014), paragraph [38].

Our proposed scope for this review

67. We intend to consider the issues listed below during this UBA section 30R review. This proposed scope is based on key issues raised in parties' submissions, and our own analysis.
- 67.1 Are the technical and functional requirements of the regulated UBA service fit for purpose?
 - 67.2 Should the line between the regulated UBA service and commercial variants be clarified?
 - 67.3 Should Chorus be required to provide the regulated UBA service over VDSL, and should it be able to withdraw VDSL?
 - 67.4 Should geographic differences apply to the regulated UBA service specifications?
 - 67.5 Should Chorus be able to prioritise commercial UBA variants over regulated UBA traffic?
 - 67.6 Should a 10xGigE handover option be added to the UBA STD?
 - 67.7 Should the process for introduction and withdrawal of commercial UBA variants be amended?
 - 67.8 Should the enhanced UBA (EUBA) variants be withdrawn from the regulated service?
 - 67.9 Should access seekers have greater visibility of Chorus' systems?

Are the technical and functional requirements of the regulated service fit for purpose?

- 68. Our initial view is that clearer guidance needs to be provided to Chorus so that the regulated UBA service can evolve to meet the growing demands of typical end-users.
- 69. In order to provide certainty for Chorus and access seekers, we think that the 'average' (mid-specification) service concept should be explicitly embedded into the UBA STD. However, capturing such a concept in the Service Description or General Terms (and ensuring that it remains technically relevant for the life of the regulated service) is challenging.
- 70. Due to the fast-moving nature of the broadband market, greater technical specificity of the regulated UBA service is likely to lock in particular service parameters, which will soon become out-dated. Conversely, leaving the terms more fluid (for example retaining minimum technical specs) allows the regulated UBA service to move, but lacks clarity of how such movement will be achieved and when it is required.
- 71. In our view, access principle 2 under clause 5 of Schedule 1 to the Act, as incorporated into the Schedule 1 description by clause 2.3 of the UBA STD, that "the

service must be supplied to a standard that is consistent with international best practice” implies a certain standard of continued service improvement.

72. However, as was evident during the UBA initial pricing principle³⁷, where bitstream comparators were hard to find, the application of ‘international best practice’ to a service specification is unlikely to be commonly understood or agreed upon.
73. We agree with Spark, Wigley and Company, and Vodafone that we should clarify the technical and functional requirements of the regulated UBA service, and more clearly set Chorus’ obligation to deliver a regulated UBA service that meets the needs of typical end-users.³⁸

Question(s)

- 7 Should the UBA STD be updated to explicitly recognise that the regulated UBA service is an ‘average’ mid-specification service (or otherwise)? Why/why not?

Should the line between the regulated UBA service and commercial UBA variants be clarified?

74. As explained at paragraphs 40 to 45, we consider that the regulated UBA service should meet the needs of typical end-users (ie, sit in the middle of broadband needs/use). The implication is that this leaves room for higher and lower specification commercial UBA variants.
75. We have previously stated our support for commercial services that sit alongside the regulated service.³⁹ As noted by Spark, access seekers are also supportive of Chorus providing ‘innovative’ services that are differentiated from the regulated service.⁴⁰
76. The regulated service technical parameters are not specifically defined – DSL technology, throughput, latency, jitter and packet loss. As these metrics are either open (ie, xDSL) or defined as minimums (ie, >32kpbs per user throughput), there is currently a lack of clarity around what the regulated service is (and is not).

³⁷ The previous UCLL price was determined by international benchmarking under the initial pricing principle (IPP). Benchmarking under the IPP is intended to be a relatively quick and low-cost approach to setting regulated prices, compared to the detailed TSLRIC cost modelling required under the FPP.

³⁸ Spark “Consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), p. 5; Wigley and Company “Submission as to consultation on possible s30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [3.19d)]; and Vodafone “Submission on consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [11].

³⁹ <http://www.comcom.govt.nz/regulated-industries/telecommunications/telecommunications-media-releases/detail/2014/commission-to-investigate-complaint-about-chorus-proposed-changes-to-regulated-broadband>.

⁴⁰ Spark “Consultation on possible section 30R review of the UBA STD General Terms and Service Description” (27 January 2015), paragraph [18.a].

77. This lack of clarity has historically created, and continues to generate, a level of uncertainty for Chorus and access seekers in relation to commercial UBA variants. For example, given Chorus provides the regulated UBA service with more throughput than the minimum throughput requirement in the UBA STD, does a bitstream service that guarantees more than the minimum specified qualify as a commercial variant?
78. In our view, providing greater clarity regarding the technical specifications of the regulated UBA service will support investment in innovative new services. Chorus is free to determine the price for commercial UBA variants. Therefore, it will face incentives to develop new services (which are differentiated from the regulated UBA service), assuming there is sufficient demand from access seekers.

Question(s)	
8	Should the line between the regulated UBA service and commercial UBA variants be clarified? If so, why and how?

Should Chorus be required to provide the regulated UBA service over VDSL, and should it be able to withdraw VDSL?

79. Since its introduction in 2007, the regulated UBA service has been a full speed/full speed (FS/FS) service.⁴¹ In our original UBA STD decision we concluded that a single FS/FS UBA service would provide access seekers with the maximum flexibility to differentiate their services from Telecom (the UBA access provider at the time).⁴² Clause 3.6 of the UBA Service Description states:
- The Basic UBA Service available under this service description is a DSL enabled service which has a maximum downstream line speed for data traffic sent to the End User and a maximum upstream line speed for data traffic sent from the End User.
80. In June 2013, Chorus started offering VDSL as a regulated service under the UBA STD. At that time, Chorus said that any proposal to withdraw regulated VDSL would be in relation to fibre migration.⁴³
81. However, on 30 May 2014, Chorus gave notice that from 1 December 2014 the VDSL service provided under the regulated UBA will be withdrawn, subject to consultation.
82. In our September 2014 consultation paper we attached the following legal advice provided by David Laurenson QC and Dr James Every-Palmer:⁴⁴

⁴¹ We note that a full speed/128kbps bitstream service was regulated for a period of time, but was discontinued.

⁴² Commerce Commission “Standard Terms Determination for the designated service Telecom’s unbundled bitstream access” 12 December 2007, Decision 611, paragraph [107].

⁴³ Chorus, “Update on VDSL” (7 May 2013).

⁴⁴ Commerce Commission “Consultation paper on issues relating to Chorus’ proposed changes to the UBA service” (4 September 2014), p. 10.

In terms of VDSL, in our view, the “maximum available downstream speed” service description (clause 3.6) anticipates the use of VDSL when it is available on a line (and subject to the end-users wishes).

83. David Laurenson QC and Dr James Every-Palmer also noted that their view was inconsistent with our April 2010 clarification, where we stated that what DSL technology is used to deliver the regulated service is up to Telecom (now Chorus), “except where they have chosen to make [VDSL] the only DSL technology available in an exchange or cabinet to deliver the regulated service”.⁴⁵
84. Submitters supported the view that Chorus was not permitted to withdraw VDSL where provided under the UBA STD.⁴⁶
85. Our current view is that the UBA STD requires Chorus to provide the regulated UBA service over VDSL, where the technology is available and requested by an access seeker. We also note that the FPP price compensates Chorus for providing the regulated UBA service using VDSL technology.

Question(s)

- 9 Is Chorus required to provide the regulated UBA service over VDSL where available and requested by an access seeker?
- 10 Should Chorus be able to withdraw the regulated UBA service over VDSL where it has already made it available to access seekers?

Should geographic differences apply to the regulated UBA service specifications?

86. There are geographic differences affecting the supply of the UBA service, which are potentially relevant to this review. In particular:
- 86.1 alternative fibre-based bitstream services are available to end-users where the UFB network has been deployed; and
- 86.2 the technology used to deliver the regulated UBA service differs across parts of the country, with Asynchronous Transfer Mode (ATM)(ie, ADSL1) rather than Ethernet (ie, ADSL2+) still used in some areas.
87. End-users have an alternative to copper-based UBA services where UFB has been deployed, potentially reducing the importance of UBA in these areas. UBA regulation is likely to have less of a role in these areas, given that a modern alternative network is available.

⁴⁵ Commerce Commission “Final Decision of the Commerce Commission on the request for a Review/Clarification of the application of the UBA STD to VDSL technology” (16 April 2010).

⁴⁶ Wigley and Company “Submission on Consultation Paper on issues relating to proposed UBA changes” (18 September 2014), paragraph [1.13]; Spark “Consultation paper on issues relating to Chorus’ proposed changes to the UBA service” (18 September 2014), paragraph [21]; and CallPlus “Consultation paper on issues relating to Chorus’ proposed changes to the UBA service” (18 September 2014, paragraph [6.b].

88. Further, Spark has raised concerns about Chorus' network management of ATM, and the associated additional bandwidth commercial charge.⁴⁷
89. We recognise that when the regulated UBA service was introduced there was limited bandwidth available, and network management was required to ensure that bandwidth was distributed evenly. However, as end-users have been migrated across to Ethernet-based UBA, it is unclear whether network management remains necessary.
90. There also remains a question of how the ATM-based UBA service should be treated if, as a result of this review, it is unable to meet any potential changes to the technical specifications of the UBA STD. Spark has suggested that Chorus should be encouraged to upgrade the regulated UBA service where Ethernet is not currently available.⁴⁸

Question(s)

- 11 Should there be geographic differences in the regulated UBA service specifications due to the UFB deployment?
- 12 Should Chorus be obliged to replace its ATM-based network if it is unable to meet potential changes to the technical specifications of the regulated UBA service as a result of this review?
- 13 If not, under what terms should the ATM-based UBA service be provided?

Should Chorus be able to prioritise commercial services over regulated UBA traffic?

91. As part of its Boost proposal, Chorus announced that the Boost variants would have an improved class of service to the regulated UBA service. Where Chorus' network was at, or near, capacity the Boost services would have priority over the regulated UBA service. Accordingly, there was a risk that the performance of the regulated UBA service could be reduced.
92. Our view is that prioritisation is unlikely to be problematic, except where it results in reduction of the performance of the regulated UBA service.
93. Given our initial views on prioritisation, we think that clause 3.25 of the UBA Service Description may require clarification. The clause states:
- Basic UBA Service traffic will not be distinguishable from other traffic supplied at the same Handover Point, such as, Unbundled Bitstream Service traffic.
94. The clause has been present in the UBA STD since its inception in 2007 and its interpretation and application has been contentious.

⁴⁷ Spark "Consultation on possible section 30R review of the UBA STD General Terms and Service Description" 27 January 2015, paragraph [20].

⁴⁸ Ibid, paragraph [21].

95. In September 2014, as part of the Boost proposal, we sought advice from David Laurenson QC and Dr James Every-Palmer on whether Chorus was able to prioritise traffic. Their advice stated:⁴⁹

In terms of prioritisation, we have had difficulty reconciling clause 3.25 of the Service Description which would appear to prevent any form of prioritisation at a handover point, with the Commission's apparent previous acceptance that giving some traffic higher priority over a shared pathway is unobjectionable (see Decision 582 [103]-[108]), actual industry practice and the contrasting wording of clause 4.26. However, even if prioritisation of other traffic is permitted, if this was to undermine the regulated service we consider it would give rise to issues of good faith (and potentially international best practice).

96. In response, Chorus submitted that classes of service are inherently concerned with assigning priorities to different types of traffic.⁵⁰ In Chorus' view, the purpose of clause 3.25 is to prevent discrimination between traffic for service with the same class of service.⁵¹
97. Many of Chorus' commercial services share the UBA switch infrastructure. As these services are likely to be prioritised (above the regulated UBA service), we think consideration should be given to prioritisation and the function of this clause.

Question(s)

- 14 Should Chorus be able to prioritise commercial traffic where performance of the regulated UBA service is not affected?

Should a 10xGigE handover option be added to the UBA STD?

98. With the growth in bandwidth since the introduction of the UBA STD, Spark has submitted that the provision of a 1GigE handover is now insufficient. In Spark's view, a 10GigE handover option has become a standard used by industry and should be provided under the terms of the UBA STD.⁵²
99. Given the growth in bandwidth demand by end-users, we agree that a 1GigE handover may no longer be sufficient to support provision of the regulated UBA service.
100. As the handover service is specific to the regulated UBA service, a 10GigE option would be relevant to the aggregation of regulated UBA traffic only. Where access seekers want to aggregate other traffic in addition to its UBA traffic, they would be required to purchase a commercial handover option.

⁴⁹ Commerce Commission "Consultation paper on issues relating to Chorus' proposed changes to the UBA service" (4 September 2014), p. 10.

⁵⁰ Chorus "Submission in response to the Commerce Commission's Consultation Paper on issues relating to Chorus' proposed changes to the UBA service" (18 September 2014), paragraph [32].

⁵¹ Ibid, paragraph [33].

⁵² Spark "Consultation on possible section 30R review of the UBA STD General Terms and Service Description" 27 January 2015, paragraph [19.a].

101. In adding any new charge, including a 10GigE handover, to the price list we would have to decide an appropriate price for that service. One option would be to use the price we determined for a 10GigE handover in the UBA FPP review.

Question(s)

- 15 Do you agree with the addition of a 10GigE handover option to the UBA STD?
- 16 Do you agree that it is appropriate to use the 10GigE price determined in the FPP determination?
- 17 Are there any other sundry services that we should consider adding to the UBA STD price list as part of this review?

Should the process for introduction of commercial UBA variants be amended?

102. Under the UBA STD, Chorus is able to offer commercial UBA services at different prices to the regulated UBA service. However, before doing so, Chorus must provide us with notice under clause 10 of the UBA STD.
103. In our December 2014 consultation paper we stated that the scope of a consultation on possible section 30R review could include a review of whether the clause 10 process for assessing proposed commercial UBA services is workable and appropriate.⁵³
104. Our current view is that the clause 10 process, in its current form, remains appropriate for assessing the introduction of commercial UBA variants.
105. Where uncertainty has arisen, it is due to the lack of clarity regarding the role, and technical characteristics, of the regulated UBA service. As Chorus has previously stated, the regulated UBA service that it provides, differs from the minimum technical specifications required by the STD.⁵⁴
106. Clarifying the role of the regulated UBA service and the technical characteristics should provide greater clarity on the appropriate key attributes that would allow for Chorus to introduce commercial UBA variants.
107. However, in Vodafone's view, clarifying the delineation between the regulated UBA service and commercial UBA variants requires further elaboration of the criteria listed in clause 10.⁵⁵

⁵³ Commerce Commission "Consultation on possible section 30R review of the UBA STD General Terms and Service Description" (2 December 2014), paragraph [14.1].

⁵⁴ Chorus "Submission in response to the Commerce Commission's Consultation Paper on issues relating to Chorus' proposed changes to the UBA service" (18 September 2014), paragraph [26].

⁵⁵ Vodafone "Submission on consultation on possible section 30R review of the UBA STD General Terms and Service Description" (27 January 2015), paragraph [9].

108. Accordingly, we seek submissions on whether Clause 10 should be amended to explicitly set out the key technical characteristics we should take into account when assessing new commercial UBA variants.

Question(s)

- 18 Should clause 10 of the UBA General Terms be amended to explicitly set out the key attributes? If so, why and how?

Should the enhanced UBA (EUBA) variants be withdrawn from the regulated service?

109. We do not have a clearly defined process for considering the withdrawal of regulated UBA variants from the UBA STD.
110. The EUBA variants were introduced in 2007 to enable access seekers greater flexibility in terms of the retail services they could support, for example, high-quality voice over internet protocol (VoIP). However, developments in VoIP technology and bandwidth available to access seekers have allowed these services to be provided using the Basic UBA service. Accordingly, we have observed very little take up of the EUBA variants.
111. We are seeking parties' views on whether, as part of this review, we should consider the withdrawal of the EUBA variants from the UBA STD.

Question(s)

- 19 Should the EUBA variants be removed from the UBA STD? Why/why not?

Should access seekers have greater visibility of Chorus' systems?

112. Spark has submitted that there should be greater transparency requirements on Chorus, such that access seekers have increased visibility of:⁵⁶
- 112.1 Management of the network;
 - 112.2 Service company service orders and customer information; and
 - 112.3 Transaction charges relating to no fault found and new connection charges.
113. Spark has argued that given Chorus does not have a retail operation, there is no incentive to drive improvements in service charges. Spark has noted that that lack of transparency means that it is unable to provide upfront pricing certainty to end-users.⁵⁷

⁵⁶ Spark "Consultation on possible section 30R review of the UBA STD General Terms and Service Description" 27 January 2015, paragraph [23].

⁵⁷ Ibid, paragraph [11].

114. Any changes would likely be confined to UBA STD Operation Manual.

Question(s)

20 Should the UBA STD be amended to provide greater transparency of Chorus' systems for access seekers?

Other relevant matters

Question(s)

21 Are there any other relevant matters which we should consider as part of this review?

Indicative process for this section 30R review

115. Our indicative dates for the UBA section 30R review process are set out below. We note that these dates may change following finalisation of the scope of this review.

Date	Process Step
7 April 2016	Process and Issues Paper published
5 May 2016	Submissions on Process and Issues Paper due
June 2016	Industry Workshop ⁵⁸
June 2016	Cross-submissions on Process and Issues Paper due
August 2016	Draft Decision published
September 2016	Submissions on Draft Decision due
September 2016	Cross-submissions on Draft Decision due
November 2016	Final Decision published

We are interested in your views

116. We are interested in your views on the proposed approach for the UBA section 30R review outlined in this paper. A summary list of all the questions throughout this paper is contained in Attachment A.
117. Submissions on this process and issues paper are due by 5.00pm on **5 May 2016**. Please address responses to Matthew Clark, c/o telco@comcom.govt.nz.

⁵⁸ We will notify the interested parties about the scope of the workshop after we review the submissions on this Process and Issues Paper.

Attachment A – Summary of questions

1. Do you agree that an anchor regulation approach should be used for the regulated UBA service? Why/why not?
2. Should the regulated UBA service be a baseline service, average service, or advanced service? Please explain how your view is consistent with section 18 purpose statement.
3. Do you agree that the regulated UBA service should be specified to evolve over the regulatory period to meet the changing needs of end-users?
4. Should we provide any additional incentives for Chorus to develop commercial UBA variants, in addition to the ability to set prices outside the regulated price cap? If so, why and how?
5. To what extent should the FPP price and underlying modelling assumptions be considered as part of this process?
6. Are there any other key factors we should consider when assessing possible changes to the UBA STD as part of this section 30R review?
7. Should the UBA STD be updated to explicitly recognise that the regulated UBA service is an 'average' mid-specification service (or otherwise)? Why/why not?
8. Should the line between the regulated UBA service and commercial UBA variants be clarified? If so, why and how?
9. Is Chorus required to provide the regulated UBA service over VDSL where available and requested by an access seeker?
10. Should Chorus be able to withdraw the regulated UBA service over VDSL where it has already made it available to access seekers?
11. Should there be geographic differences in the regulated UBA service specifications due to the UFB deployment?
12. Should Chorus be obliged to replace its ATM-based network if it is unable to meet potential changes to the technical specifications of the regulated UBA service as a result of this review?
13. If not, under what terms should the ATM-based UBA service be provided?
14. Should Chorus be able to prioritise commercial traffic where performance of the regulated UBA service is not affected?
15. Do you agree with the addition of a 10GigE handover option to the UBA STD?
16. Do you agree that it is appropriate to use the 10GigE price determined in the FPP determination?

17. Are there any other sundry services that we should consider adding to the UBA STD price list as part of this review?
18. Should clause 10 of the UBA General Terms be amended to explicitly set out the key attributes? If so, why and how?
19. Should the EUBA variants be removed from the UBA STD? Why/why not?
20. Should the UBA STD be amended to provide greater transparency of Chorus' systems for access seekers?
21. Are there any other relevant matters which we should consider as part of this review?