

Section 30R review of Chorus' Unbundled Bitstream Access service

Draft determination

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Executive summary

Purpose of this review

1. The purpose of this review is to provide clarity around the non-price terms of the regulated unbundled bitstream access (UBA) service standard terms determination (STD), and to ensure that the UBA STD remains 'fit for purpose'.
2. This paper sets out, and seeks the views of interested parties on, our draft decisions.

Context of this review

3. Since the introduction of the UBA STD, there have been a number of developments that are relevant to the regulated UBA service:
 - 3.1 increasing end-user demand for bandwidth;
 - 3.2 the development of new next generation networks;
 - 3.3 unbundling of the copper local loop by access seekers;
 - 3.4 structural separation of Telecom (which has since changed its name to Spark);
 - 3.5 Chorus' proposed introduction, and our subsequent investigation, of Boost variants, which highlighted a lack of clarity around aspects of the regulated UBA service; and
 - 3.6 the recently determined prices for the regulated UBA service.
4. The regulated UBA service 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. Therefore we are considering whether the current STD is 'fit for purpose'.

Overview of this paper

Our framework for undertaking this review

5. The Telecommunications Act 2001 (Act) requires us to make the determination that, in our view, best gives or is likely to give effect to the section 18 purpose statement. That purpose is found in section 18(1), which is:

... to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.
6. Consistent with section 18, our view is that a 'fit for purpose' regulated UBA service should deliver an appropriate quality of service suitable for a range of general internet use. By this we mean that the service should provide a platform on which access seekers can develop competing, differentiated retail services which meet the current and future needs of end-users.

Updating the service specifications for the regulated UBA service

7. We propose adding a new service specification to the UBA Service Description obliging Chorus to maintain congestion free links from the DSLAM to Chorus' first data switch (which is referred to as the local aggregation path (LAP)).
8. To do so we propose setting a link utilisation threshold of 95% that traffic on a LAP cannot exceed over a 15 minute period. We propose requiring Chorus to report on percentage utilisation of each UBA LAP and network plans for links nearing capacity.
9. In addition, we have considered whether this proposed new obligation should apply across all technologies over which the UBA service is provided. We note that the Government has issued a request for proposals to extend the rural broadband initiative (RBI) which might overlap with Chorus' legacy ATM network (which currently serves approximately 1% of end-users). Setting upgrade requirements on Chorus' ATM network now may lead to inefficient investment in areas where Government funding may be targeted.
10. Therefore, our draft decision is to exempt Chorus' ATM network from the proposed service specification that requires Chorus to maintain uncongested links on the LAP between the DSLAM and first data switch (FDS). We will consider whether a new section 30R review focusing on the ATM network is required when a final decision regarding phase 2 of the RBI is made. In the meantime we intend to monitor congestion issues on Chorus' ATM network.

VDSL

11. Our draft decision on the treatment of VDSL is not to review or amend the UBA STD. In our view the UBA STD as it stands requires Chorus to provide the regulated UBA service over VDSL where the technology is available and requested by an access seeker.

Addition of 10GigE handover connection to the UBA STD

12. We are proposing to add a 10GigE handover connection service to the UBA STD.
13. Parties have noted that growth in bandwidth demand means that the current handover connection services in the UBA STD are no longer sufficient to deliver the regulated UBA service.
14. We have therefore decided that adding a new 10GigE connection option to the UBA STD will ensure that Chorus and access seekers can effectively manage end-user traffic where a 10GigE handover connection is available.
15. We propose to set the price for a 10GigE handover connection service using the TSLRIC model we finalised in December 2015. Some parties suggested an alternative method using Chorus UFB contract prices. However, in our view, this approach would not be consistent with the pricing principles set out in the Telecommunications Act.

Transparency of Chorus operating systems

16. Parties have suggested amendments to Chorus' reporting obligations for a number of operational processes as part of this s 30R review (for example, pre-qualification and fault reporting).
17. We are proposing not to amend the UBA STD to update Chorus' current obligations regarding information available to access seekers for a number of operational processes.
18. We note that in the original UBA STD (Decision 611), Telecom and access seekers agreed to the addition of clause 9 to the General Terms allowing them to discuss and agree changes without involving us. Given the complexity of operating systems, in our view, the industry is best placed to discuss potential changes through the clause 9 process.
19. The Operations Manual can be updated as a result of agreed changes through the clause 9 process without the need for a s 30R review.

Other considerations

20. We have considered updating the UBA STD to clarify that VDSL is included in the regulated service. In our view, the current UBA STD requires Chorus to provide the regulated UBA service over VDSL where available so no update is necessary.
21. We have also considered amending clause 10 of the General Terms to clarify the processes for the introduction of new commercial variants. In our view, no amendment is required and our proposed changes to the UBA service description will help provide clarity for the regulated UBA service.
22. Finally, we have not identified any reasons to provide Chorus with additional incentives (on the top of Chorus' ability to set prices outside the regulated price cap) to develop commercial UBA variants. We also note that submitters generally have the view that it is unlikely that there will be much demand for commercial variants.¹ However, we remain supportive of the introduction of innovative commercial variants that do not degrade the regulated UBA service.

¹ Eg Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [11].

Chapter 1 – Introduction

23. We are in the process of reviewing the UBA STD under section 30R of the Telecommunications Act 2001 (Act). This review focuses on the non-price terms of the UBA STD that relate to whether the service is 'fit for purpose'.
24. This paper sets out, and seeks the views of interested parties on, our draft decision.

Structure of this draft decision

25. Chapter 2 describes the regulated UBA service and sets out why we are undertaking this review, relevant background and process to date.
26. Chapter 3 sets out the relevant considerations for this section 30R review.
27. Chapter 4 sets out our draft decisions on the UBA service specifications in order to make the regulated UBA service 'fit for purpose'.
28. Chapter 5 sets out our draft decision on the treatment of VDSL in the UBA STD.
29. Chapter 6 sets out our draft decisions on UBA handover connections, in particular whether we should add a 10GigE handover connection option to the UBA STD.
30. Chapter 7 sets out our draft decision on the process for introduction of new UBA variants, as set out in clause 10 of the UBA General Terms.
31. Chapter 8 sets out our draft decision on the transparency of Chorus' systems and service level terms (SLAs).
32. Attachment 1 sets out proposed amendments to the UBA STD.
33. Attachment 2 explains the calculation of the 1GigE and 10GigE handover connection prices in our TSLRIC model.

Invitation to make submissions

Timeframes and address for submissions

34. We invite submissions on this draft decision by 5pm on 30 November 2016. We then invite cross-submissions by 5pm on 15 December 2016. Please address submissions and cross-submissions to Matthew Clark, c/o telco@comcom.govt.nz.

Requests for confidentiality

35. We encourage full disclosure of submissions so that all information can be tested in an open and transparent manner. However, we offer the following guidance where you wish to provide information in confidence:
 - 35.1 if you include confidential material in a submission, both confidential and public versions of the submissions should be provided; and

- 35.2 the responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.
36. We request that you provide multiple versions of your submission if it contains confidential information or if you wish for the published electronic copies to be 'locked'. This is because we intend to publish all submissions and cross-submissions on our website. Where relevant, please provide both an 'unlocked' electronic copy of your submission, and a clearly labelled 'public version'.

Chapter 2 – The regulated UBA service, why we are undertaking this 30R review, relevant background and process to date

37. This chapter sets out the regulated UBA service, why we are undertaking this 30R review, the relevant background/developments to the regulated UBA service, and our process to date.

The regulated UBA service

38. The regulated UBA service is the most common wholesale input used by retail service providers to deliver fixed-line broadband services to their customers, with approximately 1.1 million UBA connections in New Zealand. It is a designated access service described in the Act as follows:²

Chorus's unbundled bitstream access

Description of service: A digital subscriber line enabled service (and its associated functions, including the associated functions of operational support systems) that enables access to, and interconnection with, that part of a fixed PDN that connects the end-user's building (or, where relevant, the building's distribution frame) to a first data switch (or equivalent facility), other than a digital subscriber line access multiplexer (DSLAM)

To avoid doubt, unless otherwise requested by the access seeker, the supply of this service must not be conditional on a requirement that the access seeker, end-users, or any other person must purchase any other service from the access provider

39. The UBA service has two main components:
- 39.1 the unbundled copper local loop (UCLL) component represents the network infrastructure used to connect consumers' homes and workplaces to Chorus' local telephone exchange buildings.
 - 39.2 the UBA additional costs component (also known as the "UBA increment") represents the electronic equipment, software, and other additional infrastructure (such as backhaul infrastructure from the local exchange or cabinet to the FDS) required to provide the UBA service over Chorus' UCLL network.
40. We first set terms for access to the regulated UBA service, including the service description and technical specifications, in December 2007 (the original UBA STD, Decision 611).³ At that time, Telecom was the access provider of the regulated UBA service and was a vertically-integrated entity, serving its own retail customer base as well as providing a range of wholesale services, including the UBA and UCLL services.

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" Decision 611 (12 December 2007). This review was initiated under section 30C of the Act, which establishes that "the Commission may, on its own initiative, initiate the standard terms development process for a designated access service or specified service".

41. In the original UBA STD we set terms for four UBA variants – the Basic UBA service and three Enhanced UBA variants (EUBA40, EUBA90 and EUBA180). For the Basic UBA service, we proposed a single best efforts internet-grade full speed/ full speed (FS/FS) service suitable for a range of general internet use, with no priority for real-time services, and no upstream or downstream line speed specified.⁴ We concluded:⁵

A single FS/FS Basic UBA service provides Access Seekers with the maximum flexibility to use bitstream access to differentiate their retail services from Telecom’s retail broadband services. The Commission has concluded that a single FS/FS Basic UBA service is likely to best give effect to promotion of competition for the long-term interests of end-users.

Why we are undertaking this review

42. We are conducting this section 30R review of the UBA STD to ensure that it continues to be ‘fit for purpose’ and that includes:
- 42.1 ensuring that the regulated UBA service meets evolving end-user needs. As evidenced by Chorus’ proposed introduction of the Boost services, there is a concern that Chorus might stop investing in the regulated UBA service, leaving the service unsuitable for meeting the demands of end-users; and
 - 42.2 clarifying the UBA STD service requirements, to provide certainty for Chorus, access seekers and end-users.

Relevant background to this 30R review

43. Since the introduction of the UBA STD there have been a number of developments that are relevant to the regulated UBA service:
- 43.1 increasing end-user demand for bandwidth;
 - 43.2 the development of new next generation networks;
 - 43.3 unbundling of the copper local loop by access seekers;
 - 43.4 structural separation of Telecom;
 - 43.5 proposed introduction, and our subsequent investigation, of Boost variants highlighted a lack of clarity around aspects of the regulated UBA service; and
 - 43.6 the recently determined prices for the regulated UBA service.

Increasing end-user demand for bandwidth

44. There continues to be strong growth in the amount of data consumed by fixed-line end-users.

⁴ The Enhanced UBA variants provided a real-time class of service in addition to the Basic UBA best efforts service.

⁵ Commerce Commission “Standard Terms Determination for the designated service Telecom’s unbundled bitstream access” Decision 611 (12 December 2007) at [106].

45. In our 2015 annual monitoring report, we noted that average monthly data used by fixed-line broadband subscribers reached 48GB per month in 2015, compared to 10GB per month in 2010.⁶ We also referred to Chorus data on broadband traffic conveyed on its access network, showing that average throughput per end-user had increased from less than 100 kbps in 2011 to more than 500 kbps by the end of 2015.⁷

The development of new next generation networks

46. In 2010, the Government implemented the Ultrafast Broadband (UFB) initiative, which aims to expand and develop New Zealand's broadband services. Chorus, along with the local fibre companies (LFCs), is deploying the UFB fibre-to-the-home (FTTH) network to 75% of New Zealand's population.⁸
47. The Government also announced the rural broadband initiative (RBI) in 2010. The RBI sought to improve broadband speeds to selected areas outside the UFB areas. Chorus (along with Vodafone) partnered with the Government to deliver the first phase of the RBI, upgrading or installing over 1,000 rural telecommunications cabinets and extending its existing fibre network by about 3,350 kilometres.
48. In early 2015, the Government announced its intention to expand the UFB project to reach at least a further 5% of the population (being 80% in total), and expand the RBI.⁹ A request for proposal was recently issued for the second phase of the RBI.¹⁰
49. New next generation networks also include the upgrade of the mobile networks to 4G capability supporting both mobile and fixed-wireless access (FWA) services, and upgrades to Vodafone's localised Hybrid fibre-coaxial (HFC) network.

Unbundling of the copper local loop by access seekers

50. Unbundling is where an access seeker purchases the UCLL (or SLU) service and installs its own equipment in the exchange (or cabinet). At the time we set the terms for the UBA service in 2007, unbundling was starting to increase. The number of unbundled lines increased from 3,000 lines in 2008 to 129,000 lines by 2013.¹¹ Telecom faced increasing competition at the retail level (where end-users could switch to competitors who had started to unbundle exchanges).
51. The increasing competitive threat from unbundling in 2007 provided an incentive for Telecom to invest in its broadband infrastructure in order to retain retail customers and to reduce the risk that access seekers would switch from the UBA service to the UCLL service.

⁶ Commerce Commission "Annual Telecommunications Monitoring Report 2015", page 22.

⁷ Ibid, page 23.

⁸ Partial Government funding for the period between construction of the new network and migration of end-users to it assisted the deployment.

⁹ See <https://www.beehive.govt.nz/release/govt-launches-next-stage-broadband-rollout>.

¹⁰ See <https://www.beehive.govt.nz/release/next-phase-flagship-rural-connectivity-rollout-launched>.

¹¹ Commerce Commission "Annual Telecommunications Monitoring Report 2015", page 6.

52. In more recent years, the threat from unbundling, while still relevant, is likely to be lower, due to cabinetisation and to the increasing focus on fibre. As a result, demand for the UCLL service has started to decline in recent years, from a peak of 129,000 lines in 2013 to 108,000 lines in 2016.¹² We expect this trend is likely to continue as the UFB programme proceeds and access seekers increasingly focus on fibre services. As competitors have not been investing in unbundling to the same extent, the competitive pressure on Chorus to continue investing in the UBA service is likely to have changed since 2007.

Structural separation of Telecom

53. The Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011 (Amendment Act) introduced a number of changes that are relevant to the UBA service, for example:
- 53.1 Chorus was to structurally separate from Telecom, and become the access provider for the regulated UBA service. Structural separation occurred on 1 December 2011;
 - 53.2 Chorus was prohibited from providing retail services, and entered into undertakings to provide wholesale services on a non-discriminatory basis;¹³
 - 53.3 the pricing principle for the UBA service changed from retail-minus to cost-based, as retail minus was no longer appropriate for a wholesale-only Chorus;
 - 53.4 the retail minus UBA price as at the date of separation continued to apply to existing lines for three years (that is, until 1 December 2014). The purpose of the UBA price freeze was to insulate Chorus and access seekers (particularly unbundlers who may have made investment decisions based on the level of the UBA price) from an immediate potential price drop and provide them with time to enable them to adapt to the new pricing principle;¹⁴
 - 53.5 we were required to update the UBA STD to make ‘consequential changes’ considered necessary for implementing structural separation but otherwise all non-price terms were frozen for the same period and we were prohibited from commencing any investigation or otherwise amending the STD during that time other than to establish the new pricing principle.¹⁵
54. 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, Telecom was vertically integrated and therefore had a direct relationship with both retail and wholesale customers. As a consequence of competition from unbundlers, Telecom was incentivised to improve

¹² Chorus Annual Report 2016, page 15.

¹³ Section 51 of the Amendment Act, inserting new part 2A into the 2001 Act, including new subpart 3 (line of business restrictions).

¹⁴ Ministry of Economic Development “Regulatory impact statement: regulatory issues resulting if Telecom becomes a partner in the ultra-fast broadband initiative” 11 April 2011 at [45]-[52].

¹⁵ Section 76 of the Amendment Act.

retail services in order to meet end-users needs. Equivalence of inputs requirements meant that Telecom had to pass on these service improvements to access seekers. As a wholesale only provider, Chorus no longer has a direct relationship with end-users although it also has equivalence of input obligations. Its incentive to invest in the UBA service comes from whatever competitive threat is provided by unbundlers and alternative network providers.

Chorus' proposed changes to the UBA service

55. On 14 May 2014, Chorus proposed changes to the regulated UBA service when it announced new commercial UBA variants, known as the 'Boost' variants.¹⁶ These proposed changes highlighted a lack of clarity around the UBA STD service requirements. Chorus proposed changing elements of the regulated UBA service by capping aggregate throughput at the handover point and withdrawing VDSL, a service it had been offering under the UBA STD since 2013.
56. We started an investigation under section 156O, in response to a complaint from Spark that Chorus' proposed changes to the UBA service breached the UBA STD.¹⁷
57. We published a consultation paper, in which we sought submissions on legal advice provided to us by David Laurenson QC and Dr James Every-Palmer. Their advice considered whether Chorus' proposed changes to the regulated UBA service would breach the UBA STD and concluded that Chorus' proposed changes would be likely to breach clause 2.2.1 of the UBA General Terms. Clause 2.2.1 requires Chorus to carry out its obligations under the UBA terms in good faith and in furtherance of the purposes set out in the Act.^{18 19}
58. We suspended our investigation after Chorus put the proposed changes to the regulated UBA service on hold.²⁰ However, we considered that the Spark complaint along with submissions received from industry during the investigation raised a number of issues in relation to the UBA STD that warranted further consideration, such as lack of clarity regarding the service specifications.

¹⁶ 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>)).

¹⁷ 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/>.

¹⁸ 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].

¹⁹ Section 2.2.1: [The Parties must] carry out their obligations under the UBA Terms in good faith and in furtherance of those purposes.

²⁰ For further information, see <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>.

We have set cost-based prices for the regulated UBA service

59. 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. This change came into effect on 1 December 2014.
60. Following the 2011 changes to the Act, we set the price for the UBA increment by international benchmarking under the initial pricing principle (IPP)²¹ and updated the benchmark data set for the UCLL price.²² We started the UCLL and UBA final pricing principle (FPP) processes after receiving applications for pricing reviews, following our benchmarking determinations.^{23 24}
61. After receiving applications under section 42(1), we set updated prices for Chorus' UCLL and UBA services in December 2015 using the FPP as set out in the Act.^{25 26} These prices are the outcome of detailed modelling of the efficient costs of providing the UCLL and UBA services, under an approach referred to in the Act as total service long run incremental cost (TSLRIC).
62. The TSLRIC concept has historically been an economic approach commonly used to set regulated prices for access to telecommunications infrastructure. The Act provides a definition of TSLRIC which required us to determine the forward-looking costs over the long run. The TSLRIC-based price compensates Chorus on the basis of a UBA service dimensioned to meet existing and expected demand by end-users.
63. Chorus will always have an incentive to minimise the cost of supplying the service (at any given level of quality). However, because the TSLRIC price is largely independent of Chorus' actual costs, the regulated price does not, of itself, incentivise Chorus to invest in increasing the quality of the service in order to meet end-user needs. This is because such investment will not directly influence the regulated price, compared to

²¹ Commerce Commission "Final determination to amend the price payable for the regulated service Chorus' unbundled bitstream access made under s 30R of the Telecommunications Act 2001" [2013] NZCC 20 (5 November 2013). 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 final pricing principle (FPP).

²² Commerce Commission "Final determination on the benchmarking review for the unbundled copper local loop service" Decision No. NZCC 37 (3 December 2012).

²³ We received five applications for a pricing review determination of the prices we set for the UCLL service (Applications were received from Chorus New Zealand Ltd, Telecom New Zealand Ltd (now Spark New Zealand Ltd), Vodafone New Zealand Ltd, CallPlus Ltd and Kordia Ltd (Kordia Ltd was withdrawn).

²⁴ Chorus, in parallel with its FPP application, appealed our UBA IPP determination to the High Court under section 60 of the Act. Chorus' appeal was dismissed, as was Chorus' subsequent appeal of the High Court judgment to the Court of Appeal (*Chorus v Commerce Commission* [2014] NZHC 690 and *Chorus v Commerce Commission* [2014] NZCA 440).

²⁵ UCLL Determination: Commerce Commission "Final pricing review determination for Chorus' unbundled copper local loop service" [2015] NZCC 37 (15 December 2015).

²⁶ UBA Determination: Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015).

a pricing principle where any new investment is rolled into the regulatory asset base.²⁷

64. We explain how we took account of TSLRIC considerations in this process in Chapter 3.

This section 30R review – process to date

65. 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.²⁸
66. Our notice starting this section 30R review 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.²⁹
67. The process steps we have taken to date are:
- 67.1 We issued a process and issues paper on 7 April 2016.³⁰
- 67.2 We received submissions on our process and issues paper on 5 May 2016.³¹
- 67.3 On 15 June 2016 Commission staff conducted a workshop with industry participants. The purposes were:
- 67.3.1 to provide participants with the opportunity to present their views on solutions to amending the UBA STD in line with their submissions on our process and issues paper; and
- 67.3.2 to help us understand the changes that participants consider necessary to make the UBA STD ‘fit for purpose’.³²
- 67.4 On 1 July 2016 we received cross-submissions.
68. We requested further information from Chorus regarding its ATM network on 5 September 2016.

²⁷ See for example, Commerce Commission “Final pricing review determination for Chorus’ unbundled copper local loop service” (15 December 2015) at [652.1] and [687].

²⁸ Section 30R(1) and (2) of the Act.

²⁹ Commerce Commission “Unbundled Bitstream Access (UBA) Standard Terms Determination (STD) - review under section 30R of the Telecommunications Act 2001 (the Act)” (1 April 2015).

³⁰ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016).

³¹ <http://www.comcom.govt.nz/regulated-industries/telecommunications/regulated-services/standard-terms-determinations/unbundled-bitstream-access-uba-services/uba-30r-review-of-non-price-terms/>.

³² Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016).

Chapter 3 – The relevant considerations for this section 30R review

69. This chapter outlines the framework under which we are conducting this section 30R review of the UBA STD non-price terms to consider whether the regulated UBA service is ‘fit for purpose’.
70. In summary:
- 70.1 The Act requires us to make the determination that, in our view, best gives or is likely to give effect to the section 18 purpose statement. To ensure that our decisions in this process best meet the section 18 purpose statement, we consider section 18 throughout and in respect of each decision.³³ In making these decisions we are also mindful of:
- 70.1.1 competition between Chorus and retail service providers (RSPs) who use different network inputs (for example, where RSPs use wholesale services such as UFB or have deployed their own networks in some locations such as FWA or cable);
- 70.1.2 potential distortions of network/technology choices by access seekers, as such distortions would not promote competition for the long-term benefit of end-users; and
- 70.1.3 relativity between the UBA and UCLL services.
- 70.2 Consistently with section 18, a ‘fit for purpose’ regulated UBA service should deliver an appropriate quality of service suitable for a range of general internet use. By this we mean that the service should provide a platform on which access seekers can develop competing, differentiated retail services which meet the current and future needs of end-users.
- 70.3 In considering whether the STD is ‘fit for purpose’, we consider Chorus’ incentives to improve the service, and whether these incentives are sufficient for the regulated UBA service to keep pace with end-users’ needs, and support investment in competitive retail services.

Section 18 considerations

71. Section 19 requires us to consider “the purpose set out in section 18” and make the decision that, in our view, will best give or is likely to best give effect to that purpose. That purpose is found in section 18(1), which is:
- ... to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.

³³ This approach is similar to the one we took in the UBA FPP process. See Commerce Commission “Final pricing review determination for Chorus’ unbundled bitstream access service” (15 December 2015) at [157] and [162].

72. Section 18(2) and (2A) identify particular matters that we are required to consider when determining what promotes competition in telecommunications markets for the long-term benefit of end-users:
- (2) In determining whether or not, or the extent to which, any act or omission will result, or will be likely to result, in competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand, the efficiencies that will result, or will be likely to result, from that act or omission must be considered.
 - (2A) To avoid doubt, in determining whether or not, or the extent to which, competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand is promoted, consideration must be given to the incentives to innovate that exist for, and the risks faced by, investors in new telecommunications services that involve significant capital investment and that offer capabilities not available from established services.
73. As the High Court has observed, section 18(1) is the “dominant” provision in section 18, and subsections (2) and (2A) “are specified for the purpose of assisting analysis under section 18(1)”.³⁴ In this sense, subsections (2) and (2A) are not isolated considerations on their own. Rather, they form part of the consideration of whether competition is promoted to the long-term benefit of end-users.
74. Put simply, we are required to make a decision that best promotes competition for the long-term benefit of end-users, and as part of this assessment we must consider the impact of our decisions on efficiencies as well as investment in capital intensive new telecommunications services.
75. To ensure that our decisions in this process best meet the section 18 purpose statement, we consider section 18 throughout and in respect of each individual decision. In making these decisions we are mindful of competition between Chorus and RSPs who use different network inputs (for example, where RSPs use wholesale services such as UFB or have deployed their own networks in some locations such as FWA or cable). In considering the non-price terms of the regulated UBA service, it is important to avoid distortions of network/technology choices by RSPs, as such distortions would not promote competition for the long-term benefit of end-users.

Relativity between the UCLL service and the UBA service

76. Section 19(b) requires us to consider any additional matters specified in Schedule 1 regarding the application of section 18. For the UCLL/UBA services, that additional matter is the relativity between the UCLL service and the UBA service.
77. In terms of price, the relativity of the price of the UCLL service to the price of the UBA service will affect incentives to unbundle. In the UBA FPP determination we noted that we found that relativity guided us less towards attempting to promote unbundling, and more towards the efficiency aspects of the section 18 purpose

³⁴ *Chorus v Commerce Commission* [2014] NZHC 690 at [34].

statement. We concluded that we should be neutral in promoting unbundling and allow for unbundling to occur to the extent that it is efficient.³⁵

78. Equally, in this 30R review we are not seeking to actively encourage or facilitate unbundling. Rather, we are reviewing the non-price terms of the UBA STD in a way that is neutral towards unbundling. We have no reasons to change our view that we should allow for unbundling to occur to the extent that it is efficient.

An appropriate quality of service

Our current view

79. A 'fit for purpose' STD should oblige Chorus to provide an appropriate quality of service, suitable for a range of general internet use. By this we mean that the service should provide a platform on which access seekers can develop competing, differentiated retail services which meet the current and future needs of end-users.
80. We consider this description of the regulated service to be consistent with the original UBA STD, where we proposed a single internet-grade FS/FS Basic UBA service, suitable for a range of general internet use, with no priority for real time services, and no upstream or downstream line speed specified.³⁶
81. The term 'range of general internet use' captures the fact that different end-users use their broadband connections for a range of purposes from, for example, simple internet browsing through to more data heavy applications such as video conferencing/streaming video. The regulated UBA service should be able to support access seekers to develop competitive retail broadband services that meet these differing uses.
82. End-users' needs have been changing over time, and therefore the regulated service should change over time as well. In our view, a regulated UBA service that keeps pace with end-users' needs is one that best meets the section 18 purpose. This is what would be expected if the market in which the UBA service is supplied were effectively competitive. As end-user demand increases, a competing supplier would be expected to invest in network and capacity upgrades in order to gain a competitive advantage over its rivals.³⁷ In doing so, end-users would benefit through higher quality services. In the absence of an effectively competitive market, a 'fit for purpose' regulated UBA service might be expected to support similar outcomes at the retail level for end-users.
83. This approach is also consistent with the scheme of the Act – ie, access principle 2 under clause 5 of Schedule 1 to the Act, as incorporated into the Schedule 1

³⁵ Eg Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [336], [337] and [541].

³⁶ Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007) at [58].

³⁷ For example, on 9 November 2015, Vodafone announced an upgrade to its cable network in Wellington and Christchurch, using next-generation DOCSIS 3.1 technology. Vodafone expects to be able to progressively offer 1Gbps plans during 2016. See <http://www.vodafone.co.nz/media-centre/press-and-media-releases-2015/>.

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” is consistent with a network that keeps pace with growing demand. In addition, it will likely minimise the risk of further reviews of the STD being required in the near future. It is also consistent with the TSLRIC requirements that inform the FPP for the service. We discuss how we have considered the TSLRIC price in our recent FPP decision later in this chapter.

84. We are also informed by the legal requirements of the Act, such as clause 6(1)(a) of Schedule 1 – ie “principles 1 to 4 set out in clause 5 are limited by the following factors: (a) reasonable technical and operational practicability having regard to the access provider’s network”.

How our thinking has evolved

85. In our process and issues paper we considered the role the regulated UBA service plays in the wholesale market, as we considered this would likely affect the approach to regulation. We expressed the view that the regulated UBA service has historically acted and should continue to act as an ‘anchor’ for the wholesale bitstream market.³⁸
86. In our process and issues paper we also suggested that any amendments we make to the regulated UBA service specification in this review should reflect that the regulated UBA service is not static and is capable of evolving with end-users requirements. This approach is consistent with the one taken in the UBA FPP (where we modelled a UBA network that was capable of meeting current and future end-user demand for throughput).³⁹
87. To this end, we set out our view in the process and issues paper that an ‘anchor’ regulated UBA service could fit into one of three broad categories:
- 87.1 a low-specification ‘baseline’ service;
 - 87.2 a mid-specification ‘average’ service’; or
 - 87.3 a high-specification ‘advanced’ service.
88. Our view was that a mid-specification service that meets the reasonable needs of typical end-users was an appropriate starting point, because such a service would likely give effect to the section 18 purpose statement.⁴⁰
89. Submitters had different views regarding a mid-specification ‘anchor’ regulation approach:

³⁸ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [37].

³⁹ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [49].

⁴⁰ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2015) at [45].

- 89.1 Vodafone agreed with us, having submitted that “an anchor regulation approach for a regulated service is appropriate” and “an anchor service would be designed to meet a typical end-users’ needs”;⁴¹
- 89.2 2degrees supported the use of an ‘anchor’ regulation approach “provided that the ‘anchor’ product is set at an appropriate level over the regulatory period, which is at least to the standard of the regulated UBA service levels delivered to RSPs today (being a full speed xDSL service with “unconstrained backhaul”), and that anticipates developments as technology and end-user demand changes”;⁴²
- 89.3 Spark did not support an anchor approach for the UBA service. According to Spark “the UBA service should be an underlying wholesale building block service that evolves over time so that it continues to be capable of supporting retail services that meet end-user need, and makes all the inherent capabilities and features of modern deployed technologies and systems available to users. It would require limited changes to the UBA non-price terms within the current framework to reflect these outcomes”;⁴³
- 89.4 Trustpower submitted that “the regulated UBA service that is currently, and that has historically been, in the market is not an ‘anchor’ service. It is a full speed/full speed service, with no throughput cap, subject to certain complementary prioritised services” Trustpower also noted that it struggled to define a ‘typical’ end-user;⁴⁴ and
- 89.5 Vocus submitted that our grading of the regulated UBA service as an ‘average’ service was wrong. According to Vocus, “the best indicator [to define the regulated service] is what it actually has been”, namely a full speed service operating to the physical capability of the line, and which has not been subject to de-prioritising of traffic or throttling.⁴⁵
90. In cross-submissions, submitters generally agreed that the regulated UBA service should be specified to evolve over the regulatory period to meet the changing needs of end-users.⁴⁶ Further:

⁴¹ Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016) at page 9.

⁴² 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission” (5 May 2016) at page 2.

⁴³ Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [11] and [18].

⁴⁴ Trustpower “Trustpower submission: Section 30R Review of the UBA Standard terms Determination” (5 May 2016) at [4.2.2-4.2.4].

⁴⁵ Vocus “Section 30R review of the UBA standard terms determination” (5 May 2016) at [11].

⁴⁶ Eg Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [30]; Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016) at page 10; Vocus “Section 30R review of the UBA standard terms determination” (5 May 2016) at [29] and [30]; 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission” (5 May 2016) at page 2; Trustpower “Trustpower submission: Section 30R

- 90.1 some parties highlighted the general agreement in relation to the ‘fit for purpose’ concept;^{47 48}
- 90.2 Trustpower noted that a regulated UBA service that is suitable for a range of general internet use can be informed by the standard access principle in the Act, that the service must be supplied to a standard that is consistent with international best practice;⁴⁹ and
- 90.3 Chorus stressed its commitment to meet growth with a “congestion free network” (ie “The network is designed to meet bandwidth needs at busy times in order to maintain this headroom”).⁵⁰
91. Our thinking in relation to how we consider the role of the UBA regulated service has evolved during this consultation process. There were differing interpretations of what an anchor approach would mean for the regulated UBA service and we agree with submitters that the concept of ‘anchor regulation’ is not necessarily helpful for this process. Our current view is that in considering the quality requirements of the regulated service it is more appropriate to focus on how it is used by access seekers to provide retail broadband services.
92. In considering what a ‘fit for purpose’ regulated UBA service looks like today, we agree with submitters that describing the service as a mid-specification service that meets the reasonable needs of typical end-users may not be helpful for this process. Doing so would, among other things, require a definition of a ‘typical’ end-user. We agree with 2degrees and Trustpower that ‘typical’ end-user is a difficult term to define, and a focus on ‘typical’ end-users’ needs may not best give effect to the section 18 purpose by limiting the quality of service to meet a particular ‘type’ of end-user.
93. Rather, we are focusing on how the regulated UBA service has been used by access seekers to provide retail broadband services to end-users, and ensuring that an appropriate quality of service continues to be provided to support those retail services. We consider this approach consistent with the original UBA STD, where we stated that “...there is a trend towards focussing on services for end-users that a

Review of the UBA Standard terms Determination” (5 May 2016) at [4.1] [5.2]; 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - Cross-Submission to the Commerce Commission (1 July 2016) at page 3” .

⁴⁷ Trustpower “Trustpower Cross-Submission: Section 30R Review of the UBA Standard terms Determination” (1 July 2016) at [2.1.1(a)].

⁴⁸ Spark “Section 30R review of the UBA standard terms determination: process and issues paper - Cross-submission | Commerce Commission” (1 July 2016) at [3(a)]

⁴⁹ Trustpower “Trustpower Cross-Submission: Section 30R Review of the UBA Standard terms Determination” (1 July 2016) at [3.2.4].

⁵⁰ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) page 3 and [10].

broadband connection can support, rather than the specifications of the broadband service itself”.⁵¹

94. In this regard, we consider that a ‘fit for purpose’ regulated UBA service should provide a platform that can be used by access seekers to provide differentiated retail broadband products, suitable for a range of general internet uses. This is again consistent with the approach we took in the original UBA STD.
95. As a number of parties have submitted, the current service levels provided by Chorus allow them to do this and a ‘fit for purpose’ STD should capture this. We agree.
96. A regulated UBA service which fails to provide an appropriate quality of service may constrain the ways in which retail UBA-based broadband services could be used, limiting retail competition and/or distorting end-user choices between alternative technologies. In our view, a regulated UBA service that provides an appropriate quality of service is therefore likely to best promote competition for the long-term benefit of end-users and is likely to give effect to the section 18 purpose statement.

Incentives to invest and innovate

Our current view

97. The UBA service remains a regulated service in Schedule 1 of the Act. In our recent review of Schedule 1 services, we concluded that the UBA service should remain in Schedule 1, as the UBA service is a key wholesale input into the provision of retail broadband services, and Chorus’ supply of the UBA service would be unlikely to be constrained in the absence of regulation. In supplying the regulated UBA service, Chorus is compensated on the basis of a service which evolves to meet existing and expected demand by end-users.
98. The rollout of new next generation networks by other network operators may provide incentives for Chorus to improve the UBA network in parts of the country. However, in areas where there are no competitive alternatives, Chorus may face limited incentives to invest in the regulated UBA service.
99. Therefore, in considering whether the STD is ‘fit for purpose’, we consider Chorus’ incentives to improve the service, and whether these incentives are sufficient for the regulated UBA service to keep pace with end-users’ needs, and support investment in competitive retail services.

How our thinking has evolved

100. In our process and issues paper we noted that we considered it important that Chorus is appropriately incentivised and compensated for investment in:⁵²

100.1 upgrades to the regulated UBA service over time; and

⁵¹ Commerce Commission “Standard Terms Determination for the designated service Telecom’s unbundled bitstream access” Decision 611 (12 December 2007) at [71].

⁵² Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [52].

- 100.2 new commercial UBA variants, which offer capabilities not available through the regulated UBA service.
101. We considered that, on average, the current UBA price would likely be sufficient to compensate Chorus for upgrades to the UBA service over the regulatory period. This is because the TSLRIC-based UBA price was set on the basis of current and expected future end-user throughput requirements. However, we also noted that there are potentially limited incentives for Chorus to invest in upgrades to the regulated UBA service.⁵³
102. We also noted that Chorus may face other incentives to invest in its network, for example as a result of the deployment of next generation networks such as the UFB.⁵⁴
103. Vodafone submitted that there was little to gain in forcing Chorus to invest in areas where next generation networks are available, or will be shortly.⁵⁵ In its view, Chorus has ongoing incentives in those areas to ensure that the network remains ‘fit for purpose’.
104. At the industry workshop, Chorus expressed concern that the UBA STD should not be used to force inefficient investment in its network.⁵⁶ Chorus did not elaborate on how the efficiency of investment should be best considered in the context of a regulated service provided over an enduring bottleneck. In cross-submissions, Chorus noted that it already faced incentives to invest in the replacement of its network, including:
- 104.1 its commitment to deliver better broadband to New Zealand;
- 104.2 network development from other infrastructure providers, such as Vodafone through the RBI initiative; and
- 104.3 its desire to minimise its costs relative to the regulated price.
105. Spark noted that there were end-users who will only ever have access to copper based services, and it was essential that Chorus has the correct incentives to upgrade technology.⁵⁷

⁵³ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [56] and [57].

⁵⁴ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [58].

⁵⁵ Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016), p. 7.

⁵⁶ Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [24].

⁵⁷ Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [25].

106. In cross-submissions, InternetNZ agreed with Spark that the current incentives were incorrect, but could not see how the incentive for Chorus to make efficient investment could be corrected without revisiting the price.⁵⁸
107. We recognise the rollout of new next generation networks by other network operators may provide incentives for Chorus to improve the UBA network in parts of the country. In areas where Chorus faces competition from the LFCs, Chorus is likely to be motivated to upgrade its fixed access network in order to compete with the LFC's fibre-based services. While the development of mobile services may have a more complementary relationship with fixed-line services, 4G and FWA services may represent competitive alternatives particularly at the edge of Chorus' fixed network, providing some protection for end-users who are served in more remote locations.
108. In areas where end-users do not have competitive alternatives, there may be limited incentives for Chorus to further invest in upgrades to the regulated UBA service (as distinct from cost saving investment). A regulated UBA service that does not keep pace with end-user needs may constrain the ways in which retail UBA-based broadband services could be used and/or distort end-user choices between alternative technologies.
109. Therefore, in considering whether the regulated service is 'fit for purpose', we consider it relevant to take into account Chorus' incentives to improve the service. In particular, whether these incentives are sufficient for the regulated UBA service to keep pace with end-users' needs.
110. We also asked interested parties whether we should provide any additional incentives for Chorus to develop commercial UBA variants, in addition to the ability to set prices outside the regulated price cap, and submitters answers were "no" because:
- 110.1 we should "let competition between competing infrastructures play out, rather than specifically 'incentivising' Chorus to develop commercial UBA variants, with the resulting risk of distortion in the retail market to a legacy service";⁵⁹
- 110.2 Chorus' incentives to invest have already been factored into the UCLL and UBA prices and provided through the UFB and RBI subsidies;⁶⁰ and
- 110.3 in practice the scope for Chorus to innovate and provide variants on the 'last mile' (to the first data switch) is limited, and innovation is likely to come from RSPs and 'over the top players'.^{61 62}

⁵⁸ InternetNZ "Cross-submission: Section 30R review of the UBA standard terms determination" (1 July 2016) at [4.4].

⁵⁹ Vodafone "Chorus UBA: Non-price terms - Response to the Commerce Commission's Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper" (5 May 2016) at page 10.

⁶⁰ Spark "Section 30R review of the UBA standard terms determination: process and issues paper" (5 May 2016) at [32].

⁶¹ Vocus "Section 30R review of the UBA standard terms determination" (5 May 2016) at [34]-[40].

111. At the industry workshop, access seekers seemed to have the view that there is limited scope for the development of commercial services.⁶³
112. After reviewing submissions, we have concluded that it is not necessary to provide Chorus with additional incentives (on the top of Chorus' ability to set prices outside the regulated price cap) to develop commercial UBA variants. We also note that submitters generally have the view that it is unlikely that there will be much demand for commercial variants.⁶⁴ However, we remain supportive of the introduction of innovative commercial variants that do not degrade the regulated UBA service.
113. The success of potential commercial variants will be determined by demand for those variants by RSPs and end-users. Accordingly, we anticipate that the development of potential commercial variants will likely be driven by a cooperative approach between Chorus and RSPs.

TSLRIC considerations

Our current view

114. Our framework for implementing TSLRIC considered a network that would be deployed by a hypothetical efficient operator (HEO). We took the view that the HEO would deploy a UBA core network capable of meeting current and future end-user throughput requirements, in order to protect against obsolescence, and that the UBA service provided would be dynamic and evolve over time as throughput requirements increase. This was the network service that best met the TSLRIC and section 18 considerations and was the reference network against which the regulated UBA service is priced.
115. We consider that similar section 18 considerations to those that informed our TSLRIC considerations of the UBA service are likely to be relevant here. Our view of a 'fit for purpose' UBA service as one in respect of which Chorus *provides* and *maintains* an appropriate quality of service suitable for a range of general internet use, subject to the requirements of the Act, is consistent with the approach we took in setting the UBA FPP price.
116. Therefore, we consider that the TSLRIC considerations should inform this 30R review to the extent relevant, and that the approach in the FPP and the STD should be broadly consistent (eg the regulated UBA service should evolve over time).

⁶² 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 3.

⁶³ Eg Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [11].

⁶⁴ Eg Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [11].

Background – the FPP process

117. We set updated prices for Chorus’ UBA service in December 2015 using the FPP as set out in the Act.⁶⁵ The Act provides a definition of TSLRIC which required us to determine the forward-looking costs over the long run of the UBA increment.
118. Our approach to implement TSLRIC for the regulated UBA service was to estimate the forward-looking, long run, efficiently incurred, incremental costs that a HEO would incur in building and operating a new network using modern equivalent assets, and valuing inputs using current prices.^{66 67}
119. We considered that the HEO approach would promote the section 18 purpose statement. In particular, we considered build/buy incentives to be important in the New Zealand context and that the HEO concept was the best tool for ensuring that appropriate incentives are set.⁶⁸
120. In some cases, we took into account real-world evidence as a guide to our implementation of TSLRIC in relation to modelling decisions on matters that were, to some extent, objectively measurable (for example, throughput assumptions). In these instances we exercised our judgement as to what provided the best objectively measurable input.
121. In the FPP process we considered section 18 throughout in respect of our individual modelling decisions. In some cases, we found that the primary effect of an individual modelling decision on the section 18 purpose was its impact on the final price.⁶⁹

How our thinking has evolved

122. In our process and issues paper we noted that the service specifications modelled in the FPP were not necessarily the same as the minimum service specifications set in the UBA STD.⁷⁰

⁶⁵ Commerce Commission “Final pricing review determination for Chorus’ unbundled bitstream access service [2015] NZCC 38” (15 December 2015).

⁶⁶ Our view was that the HEO concept was the most appropriate approach to implementing TSLRIC. In particular, we considered that this approach was the best fit with the statutory requirement to model “forward-looking” and “long run” costs (which are relevant elements of our statutory task), and consistent with the conventional approach for implementing TSLRIC (which was the best way of implementing our statutory task).

⁶⁷ The Court of Appeal explained that it is reasonable to assume that Parliament has chosen the pricing principle (in this case, TSLRIC) because it is consistent with, and will implement, the purpose statement in section 18, and determination of the FPP in accordance with the statutory definition of TSLRIC will itself involve implementation of the section 18 purpose (*Chorus Ltd v Commerce Commission* [2014] NZCA 440 at [153]).

⁶⁸ Commerce Commission “Final pricing review determination for Chorus’ unbundled bitstream access service [2015] NZCC 38” (15 December 2015) at [228].

⁶⁹ Commerce Commission “Final pricing review determination for Chorus’ unbundled bitstream access service [2015] NZCC 38” at [161] and [162].

⁷⁰ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [29].

123. Therefore, 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 asked interested parties 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.⁷¹
124. Submitters generally acknowledged the limitations of the hypothetical network, but had different views on the relevance of the FPP price and underlying modelling assumptions being considered as part of this process. We took the following submissions into account in informing our current view:
- 124.1 Spark acknowledged the difficulties in working with a hypothetical modelled network,⁷² but submitted that the regulated service must over time provide at least the level of service implied by the FPP modelling assumptions, including with regard to minimum throughput;⁷³
- 124.2 2degrees also acknowledged the limitations of the hypothetical network, but had the view that "the approach of the STD and FPP should be broadly consistent";⁷⁴
- 124.3 Vocus submitted that "the FPP model is a complex, holistic model based on a snapshot of what we know now and is far from an exacting exercise. Therefore taking 'bits out of the model' and pinning the regulated service down to assumptions and metrics in the model is in Vocus' opinion 'inconveniently' problematic";⁷⁵
- 124.4 Trustpower submitted that "it would be inappropriate to set the service description of the regulated UBA service based on what has been modelled in the FPP (...) However, we note that modelling decisions in the FPP may have been made based on information, research, and forecasts. It may be appropriate to consider the same information, research, and forecasts in this review"⁷⁶; and
- 124.5 In InternetNZ's view the FPP model set a minimum service description of 450kbps increasing by 50% per annum, and it could see the advantages to carrying this aspect of the FPP through to the STD – the alternative would be

⁷¹ Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2016) at [64].

⁷² Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [41].

⁷³ Spark "Section 30R review of the UBA standard terms determination: process and issues paper" (5 May 2016) at [34].

⁷⁴ 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 3.

⁷⁵ Vocus "Section 30R review of the UBA standard terms determination" (5 May 2016) at [31].

⁷⁶ Trustpower "Trustpower submission: Section 30R Review of the UBA Standard terms Determination" (5 May 2016) at [5.4.1] and [5.4.2].

resetting the service standards through the s 30R review and then re-visiting the FPP price.⁷⁷

124.6 According to Chorus there is little value to be gained from using FPP modelling assumptions, and if we consider that updating the UBA STD is necessary, then Chorus expects that “it will be aligned with FPP modelling assumptions to the extent they may be relevant, recognising the limitations of hypothetical modelling”;⁷⁸

124.7 Vodafone expressed the view that it had “the FPP UBA price reflects a far higher service specification than is offered today” and Vodafone has “no expectation that any changes considered in this review would necessitate the Commission revisiting the UBA pricing exercise”.⁷⁹

125. Having reviewed submissions to our question in the process and issues paper, we consider that the TSLRIC considerations should inform this 30R review to the extent relevant, and that the approach in the FPP and the STD should be broadly consistent (eg the regulated UBA service should evolve over time).

⁷⁷ Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [43].

⁷⁸ Chorus “Submission for Chorus in response to Section 30R review of the UBA standard terms determination Process and issues paper” (7 April 2016) at [13].

⁷⁹ Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016) at page 9.

Chapter 4 – UBA service specifications

Purpose

126. The purpose of this chapter is to set out our draft decisions in relation to the regulated UBA service specifications.
127. We note that:
- 127.1 the regulated UBA service has been evolving to meet growing user demands; and
 - 127.2 Chorus has been upgrading capacity with an intention to run a “congestion free network”.⁸⁰

Our current thinking

128. Our draft decisions are to:
- 128.1 add a new service specification setting a link utilisation threshold of 95% that traffic on a local aggregation path (LAP – the path between the DSLAM and FDS) cannot exceed over a 15 minute period, because:
 - 128.1.1 a ‘fit for purpose’ service will reflect an appropriate quality of service that keeps pace with end-user needs, suitable for a range of general internet use; and
 - 128.1.2 this is best achieved by a requirement for Chorus to maintain an uncongested network.
 - 128.2 provide an exemption from the utilisation threshold for Chorus’ ATM LAPs. We will consider whether a new section 30R review is required when a final decision regarding phase 2 of the RBI is made.
 - 128.3 require the following reporting obligations on all of Chorus’ regulated UBA LAPs:
 - 128.3.1 Percentage utilisation of each UBA LAP;
 - 128.3.2 Chorus’ network plans for links nearing capacity.
129. Attachment 1 sets out our proposed drafting amendments to the UBA STD.

How our thinking has evolved

Updating the UBA service specifications

130. In this section we explain our current thinking and set out our draft decision regarding the Ethernet-based network. We set out the issues identified in

⁸⁰ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [36].

submissions and our draft decision relating to Chorus' ATM network at paragraph 158.

131. In the process and issues paper we stated that the regulated UBA service's parameters are not specifically defined – they were either open (ie, xDSL) or defined as minimums (ie, throughput greater than 32kbps per user). We noted that this had created a lack of clarity around what the regulated UBA service is (and is not). Accordingly, our view was that it would be appropriate to clarify the technical and functional requirements of the service.⁸¹ In submissions, access seekers noted that the UBA STD should be updated to capture what Chorus is providing today and ensure that continues to evolve going forward. For example:
- 131.1 Spark submitted that there should be clarity regarding what the UBA regulated service is about and expected outcomes. In addition, we should guard against quality measures that create static new minimums which would over time fail to achieve the intended purpose.⁸²
- 131.2 2degrees submitted that the UBA STD should be updated to reflect the current regulated service delivered to RSPs – a full speed unconstrained service, and that the service evolve over time.⁸³
- 131.3 Vocus submitted that the overriding principle for updates is that the regulated service continues to perform as it has to date, and keeps pace with international developments.⁸⁴
- 131.4 Vodafone noted that the technical and functional requirements of the regulated UBA service had been superseded by Chorus. Accordingly, we should introduce a requirement that Chorus may not degrade the service quality below current service levels.⁸⁵
132. At the industry workshop, Chorus encouraged a less prescriptive approach to amending the UBA STD in order to maintain flexibility going forward. Similarly, Trustpower noted that being overly prescriptive risked adverse side effects.⁸⁶ Chorus suggested that the UBA STD should be updated to reflect what is currently happening – maintenance of a congestion free network.⁸⁷

⁸¹ Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2016) at [76-77]

⁸² Spark "Section 30R review of the UBA standard terms determination: process and issues paper – submission" (5 May 2016) at [30].

⁸³ 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at p 1.

⁸⁴ Vocus "Section 30R review of the UBA standard terms determination – submission" (5 May 2016) at [45].

⁸⁵ Vodafone "Response to the Commerce Commission's Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper" (5 May 2016) at p 10.

⁸⁶ Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [19].

⁸⁷ Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [24].

133. At the workshop Commission staff asked parties to provide specific suggestions on how the UBA STD should be amended to capture the service provided today and to ensure continuous improvement.
134. In its cross-submission, Spark stated that the UBA service description should be updated to provide clarity on service performance expectations. According to Spark, doing so would reduce uncertainty and align the incentives of access seekers and Chorus to invest and innovate.⁸⁸
135. Spark suggested amending the service specifications to ensure that links (ie, the LAP between the DSLAM and FDS) on Chorus' Ethernet network are never more than 80% full, over a 15 minute busy hour basis.⁸⁹ Similarly, Vodafone suggested that no Ethernet link be more than 80% congested at peak time.⁹⁰
136. 2degrees, Trustpower and Vocus supported Spark's proposal.⁹¹ Vocus also stated that the UBA service specifications should be clear that the regulated UBA service operates to the full capability of the line between the home and the first data switch with no constraints applied.⁹²
137. While Chorus submitted that if a commitment is required, we should add a requirement that peak utilisation on Ethernet links not reach 100%, except where "exceptional circumstances exist". Chorus noted that this was the standard that it currently manages the network to.⁹³
138. InternetNZ's view was that the throughput level used in the FPP (450kbps increasing by 50% per annum) is the absolute minimum standard that will provide a UBA service, suitable for general use.⁹⁴
139. Based on submissions, we have considered the following options for updating the service specifications to reflect a 'fit for purpose' regulated UBA service:
- 139.1 add a new service metric that requires Chorus to maintain uncongested links on the LAP between the DSLAM and FDS; and

⁸⁸ Spark "Section 30R review of the UBA standard terms determination: process and issues paper – Cross-submission" (1 July 2016) at [8].

⁸⁹ Spark "Section 30R review of the UBA standard terms determination: process and issues paper – Cross-submission" (1 July 2016) at [15.b].

⁹⁰ Vodafone "Vodafone New Zealand cross-submission: Process and issues paper for the s 30R review of the UBA STD" (1 July 2016) at p 3.

⁹¹ 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper – Cross-submission to the Commerce Commission" (1 July 2016) at page 3; Trustpower "Cross-submission: Section 30R review of the UBA Standard Terms Determination" (1 July 2016) at [3.2.7]; and Vocus "Section 30R review of the UBA standard terms determination – Cross-submission" (1 July 2016) at [9].

⁹² Vocus "Section 30R review of the UBA standard terms determination – Cross-submission" (1 July 2016) at [10].

⁹³ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [4.2].

⁹⁴ InternetNZ "Cross-submission: Section 30R review of the UBA standard terms determination" (1 July 2016) at [3.4].

- 139.2 update the existing minimum throughput service metric. This approach would involve replacing the current 32kbps minimum throughput requirement with an updated number that more accurately reflects bandwidth use by end-users.
140. Our draft decision is to add a new service metric that requires Chorus to maintain uncongested links on the LAP between the DSLAM and FDS.⁹⁵ We propose doing this by amending the UBA Service Description to add a new service specification that requires Chorus to augment capacity on a LAP where utilisation reaches 95% of the LAPs capacity.⁹⁶ Attachment 1 sets out our proposed amendments to the UBA Service Description.
141. We set out our reasoning below.
142. When the UBA STD was first set in 2007, Telecom faced an increasing competitive threat from access seekers utilising the UCLL service, the terms of which were determined in the UCLL STD in November 2007. As a result, Telecom had an incentive to invest in its broadband services at both the retail level and the wholesale (UBA) level, in order to prevent switching to UCLL-based services.
143. At the time of the UBA STD, Telecom was also a vertically integrated provider and reacted to increases in bandwidth demand by its own retail customers. The Separation Undertakings then required Telecom to provide the same quality of service to access seekers (ie, equivalence of inputs). As discussed in Chapter 3, a ‘fit for purpose’ service will reflect an appropriate quality of service that keeps pace with end-user needs, suitable for a range of general internet use. Given that Chorus, as a wholesale only provider, does not directly face end-user signals for increasing bandwidth demand, our view is that the UBA STD should be updated to more directly link end-users’ needs with Chorus’ service requirements.
144. In our view, this is best achieved by a requirement for Chorus to maintain an uncongested network. Requiring Chorus to maintain an uncongested network will ensure that sufficient capacity is available so that end-users are not constrained in how they use retail broadband services, and provides appropriate signals to Chorus to invest in the network where needed. In this regard, we agree with Chorus’ submission that:⁹⁷
- ...if an Ethernet fibre link is not congested, then, by definition, throughput has been allowed to evolve.
145. An uncongested regulated UBA service is likely to best promote competition for the long-term benefit of end-users and is likely to best give effect to the section 18 purpose statement. This is because a regulated UBA service which failed to provide

⁹⁵ Our current view in relation to Chorus’ ATM network is explained later in this chapter.

⁹⁶ Where utilisation is the highest throughput during any 15 minute period divided by the capacity of the LAP.

⁹⁷ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [4.1].

‘fit for purpose’ service may constrain the ways in which retail UBA-based broadband services could be used and/or distort end-user choices between alternative technologies.

146. We recognise that Chorus (and Telecom beforehand) have invested in technology and capacity upgrades over the life of the regulated UBA service aiming at providing a service that meets the needs of end-users. In our view, adding a new service specification that ensures the network remains uncongested should provide additional certainty to access seekers, supporting the ongoing development of competitive retail broadband services.
147. In adopting this proposed approach we must set an appropriate threshold which utilisation on a link cannot exceed. As noted above at paragraphs 135 and 137, Spark and Vodafone suggested a threshold of 80% while Chorus suggested a threshold of 100%.
148. We consider that a threshold of 95% is appropriate. In reaching our view on an appropriate threshold, we have considered previous submissions we have received on how the industry manages capacity consistent with “general commercial practice”,⁹⁸ while also considering the balance between the risk of end-users experiencing network congestion against the risk of inefficient levels of spare capacity:
- 148.1 A higher utilisation threshold could result in end-users experiencing prolonged amounts of congestion within a 15 minute period, while the average remains below the allowed threshold.
- 148.2 Conversely, a lower utilisation threshold will minimise the risk of congestion, but could result in excessive amounts of spare capacity not being utilised.
149. In terms of “general commercial practice”:
- 149.1 Vocus submitted that it operates on the basis that once it hits 80% usage it invests in additional capacity as required to meet demand and avoid congestion;⁹⁹
- 149.2 Spark has previously submitted that it applies a network capacity policy of adding capacity to links when usage hits 85%;¹⁰⁰ and
- 149.3 during the FPP process, Chorus stated that best practice suggests that additional capacity should be added when a link has reached 85% utilisation.¹⁰¹

⁹⁸ In the original STD, where relevant, we took into account “general commercial practice”. See Decision 611 at [332].

⁹⁹ Vocus “Section 30R review of the UBA standard terms determination – submission” (5 May 2016) at [16].

¹⁰⁰ Spark “Boost and Commercial Handover Connection Services issues paper – cross submission” (15 August 2014), paragraph [8].

150. The submissions by parties' appear to relate to the level where they initiate investment, rather than acting as a threshold which they do not exceed. Our aim is to set a utilisation threshold which should incentivise Chorus to invest in additional capacity before reaching that threshold.
151. Accordingly, in our view, a 95% threshold will provide an appropriate level of space for Chorus to initiate investment in links nearing capacity before it breaches the STD. We also consider a 95% threshold consistent with submissions from access seekers which suggest "general commercial practice" is to invest in the 80%-85% range to avoid congestion.
152. We understand Crown Fibre Holdings (CFH) is currently consulting with industry on utilisation thresholds for the UFB network. We intend to monitor the outcome of CFH's consultation as it seems to be appropriate to set consistent utilisation thresholds across different technologies.
153. Finally, we noted earlier in this chapter that Chorus suggested adding a caveat for "exceptional circumstances". We remain open to amend the service specifications to allow for exceptional circumstances. However, at this stage, we do not consider Chorus' suggestion improves clarity for the service performance of the regulated UBA service.
154. We have also considered updating the existing throughput service specification,¹⁰² as suggested by InternetNZ.
155. While InternetNZ's suggested approach would ensure that end-users' current bandwidth demands are met on average, the actual throughput provided by Chorus might not keep pace with end-users' needs on certain links.
156. Therefore, this approach may result in inefficient outcomes, either by requiring Chorus to invest in additional capacity where it is not required, or alternatively lead to congestion where end-user demand has grown at a faster rate than the required minimum.
157. Accordingly, we do not consider this approach appropriate, as we are not satisfied that it will ensure the regulated UBA service remains 'fit for purpose', improve clarity of the regulated UBA service in the foreseeable future, or support efficient investment.

Upgrading the ATM network

158. Unlike Chorus' Ethernet based network, LAPs on its ATM network are to a large extent at, or nearing, capacity. In our process and issues paper, we sought views

¹⁰¹ Chorus "Submission in response to Draft Pricing Review Determinations for Chorus' Unbundled Copper Local Loop and Unbundled Bitstream Access Services" 20 February 2015, paragraph [540].

¹⁰² Clause 3.12 of the Schedule 1 of the UBA STD: 99.9% probability of providing to any provisioned End User a minimum uplink and downlink average throughput of 32kbps during any 15 minute period on demand.

from parties on how Chorus' ATM network should be treated if it was unable to meet any potential changes to the service specification for the regulated UBA service.¹⁰³

159. We have received a range of views regarding how we should treat Chorus' ATM-based network:
- 159.1 Spark recognised the challenge of bridging the gap between what Chorus currently provides and the capability that it is funded for through the FPP. Spark submitted that section 300 provided us with the power to specify timeframes for Chorus to phase out the ATM network. Accordingly, Spark recommended the following requirements:¹⁰⁴
- 159.1.1 Chorus reports on links where throughput is constrained, and planned network upgrades (if any); and
- 159.1.2 Chorus provides time bound plans for progressive upgrades to legacy DSLAMs and associated backhaul.
- 159.2 Vodafone submitted that competitive pressure from next generation networks meant that Chorus is already incentivised to invest in its ATM-based network. Accordingly, there is no need to require Chorus to invest in its ATM-based network.¹⁰⁵
- 159.3 InternetNZ's view was that we should require Chorus to invest immediately in order to provide all end-users with an appropriate quality of service.¹⁰⁶
160. In its cross-submission, Chorus suggested that we exclude non-fibre and ATM links from any proposed utilisation requirements.¹⁰⁷
161. Chorus noted that it is actively replacing ATM DSLAMs – with approximately 19,000 customers remaining on the network. Chorus highlighted its plans to upgrade 140 cabinets, improving service for around 4,500 end-users, and that it currently provides information to access seekers on its investment plans for replacing ATM technology.¹⁰⁸ Chorus submitted that it would continue to upgrade its ATM network where efficient to do so.¹⁰⁹

¹⁰³ Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2016) at p 21.

¹⁰⁴ Spark "Section 30R review of the UBA standard terms determination: process and issues paper – submission" (5 May 2016) at [49-51]

¹⁰⁵ Vodafone "Response to the Commerce Commission's Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper" (5 May 2016) at p 12.

¹⁰⁶ InternetNZ "Cross-submission: Section 30R review of the UBA standard terms determination" (1 July 2016) at [5.2].

¹⁰⁷ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [18]

¹⁰⁸ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [27].

¹⁰⁹ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [36].

162. Chorus also argued that the Act’s standard access principles mean that we are not permitted to set an STD which “requires access that is beyond the level able to be achieved by Chorus’ network”.¹¹⁰
163. In contrast, Spark reiterated that we have the power to mandate service improvement through s 300 to align the service with the FPP price. However, Spark recognised that the FPP provides little advice on the rate at which assets are replaced. Accordingly, Spark submitted that we should require Chorus to make transparent its plans and commitments to replace assets; and clarify that we would impose specific performance improvements if Chorus’ plans are not acceptable.¹¹¹
164. We requested further information from Chorus in order to greater understand the scale of congestion on its ATM network on 5 September.¹¹² The confidential information provided by Chorus showed that a large number of the 19,000 end-users remaining on Chorus’ ATM network currently experience congestion, or will in the near future.
165. As explained in Chapter 3, our view is that a ‘fit for purpose’ service will reflect an appropriate quality of service that keeps pace with end-user needs, suitable for a range of general internet use. In our view, a regulated UBA service that provides an appropriate quality of service is therefore likely to best promote competition for the long-term benefit of end-users and is likely to best give effect to the section 18 purpose statement.
166. However, the Government is currently considering where to direct funding for the second phase of the RBI. Therefore, our draft decision is to exempt Chorus’ ATM network from the proposed service specification that requires Chorus to maintain uncongested links on the LAP between the DSLAM and FDS. We will consider whether a new section 30R review is required when a final decision regarding phase 2 RBI is made. We explain our thinking below.
167. Upgrading congested ATM links is likely to be more complex than upgrading the Ethernet network because in a number of cases upgrading capacity will require network build to add capacity to existing infrastructure. This raises the question of whether requiring Chorus to upgrade its ATM network may lead to inefficient network investment.
168. We note that there is a tender process underway for phase two of the RBI.¹¹³ Phase 2 of RBI forms part of the Government’s connectivity targets for broadband in areas outside the UFB areas. The Government’s vision is for:¹¹⁴

¹¹⁰ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [36].

¹¹¹ Spark “Section 30R review of the UBA standard terms determination: process and issues paper – Cross-submission” (1 July 2016) at [19-25]

¹¹² Commerce Commission “Letter to Chorus re additional information for UBA 30R review” (5 September 2016).

¹¹³ See <https://www.beehive.govt.nz/release/next-phase-flagship-rural-connectivity-rollout-launched>.

¹¹⁴ See <https://www.beehive.govt.nz/release/ambitious-target-set-rural-broadband>.

- 168.1 99 percent of New Zealanders able to access broadband speeds of at least 50Mbps;
- 168.2 The remaining 1 percent able to access 10Mbps.
169. Given the quality of service experienced by users of the ATM network and the Government’s connectivity targets for broadband, we expect that there will be some overlap between Chorus’ ATM network and the areas targeted by RBI phase 2. Therefore, setting upgrade requirements on Chorus now may lead to inefficient investment in areas where Government funding may be targeted.
170. Given our draft decision to exempt Chorus from maintaining uncongested links on its ATM network, we propose adding a service exception to the UBA STD whereby Chorus would not be required to meet link utilisation threshold requirements on its ATM network.¹¹⁵ We expect to review this provision after a final decision regarding RBI phase 2 is made.
171. When we do review our decision in relation to Chorus’ ATM network, we expect to use the framework for this review in our decision making. Regarding Chorus’ view on the limits on application of standard access principles set out in clause 5 of Schedule 1 of the Act (and the limitations set out in clause 6(1)(a) in particular), our view is that the wording of clause 6 does not constrain us from obliging Chorus to upgrade its network.
172. Clause 6 just provides limits on the application of the standard access principles set in clause 5. For instance, principle 2 in clause 5 sets out that “the service must be supplied to a standard that is consistent with international best practice”. This obligation, as incorporated by clause 2.3 of the UBA STD, is limited by the factors listed in clause 6, including the “reasonable technical and operational practicability having regard to the access provider’s network”.
173. We consider that our interpretation of the limitations to the Act’s standard access principles is consistent with the background to the legislative history of the Act. The official’s report to the Select Committee stated the following about clause 6 (then principle 3):

The proposed wording [from Telecom] better captures whether the required service is ‘**practical**’. However, the reference to the ‘existing network resources would not be appropriate as **most access services will require some level of network investment**. Recommend amending to e.g. “reasonable technical and operational practicability having regard to the access provider’s network” (emphasis added).^{116 117}

¹¹⁵ The current service description has a service exception for lines that cannot meet minimum line speed requirements, ie, when we first set the STD we recognised that parts of the network would not meet the minimum service specifications and allowed for appropriate exceptions.

¹¹⁶ Principle 3 of the Telecommunications Bill, as submitted for first reading stated: “Principles 1 and 2 are limited by the following factors: (a) technical and operational feasibility”.

¹¹⁷ Telecom submission to clause 3(a) was: “The existing wording does not take into account reasonable practicability (given existing network resources) of a technology or method of delivery. Amend to

Congestion reporting requirements

174. In order to provide further clarity to the UBA regulated service, access seekers also submitted that Chorus should provide more information regarding potential congestion on its network. Chorus suggested providing a monthly report on the link utilisation of its Ethernet network to give visibility to access seekers and us of these potential congestion issues, including:¹¹⁸

174.1 the number of links on the UBA regulated network at different levels of utilisation (see Figure 1 for illustrative example); and

174.2 additional reporting on any links with utilisation exceeding 95% along with their network plans for those links.

Figure 1: Chorus' proposed Ethernet fibre link utilisation dashboard

	Feb-16	Mar-16	Apr-16
0 - 25%	7,258	7,212	7,179
25 - 35%	246	275	302
35 - 45%	60	64	84
45 - 55%	30	31	28
55 - 65%	16	23	18
65 - 75%	8	13	8
75 - 85%	1	0	0
85 - 95%	0	0	0
95 - 99%	0	0	0
99 - 100%	0	0	0
Totals	7,619	7,618	7,619

175. We consider it appropriate to require Chorus to report on all UBA regulated LAPs:

175.1 percentage utilisation of each UBA LAP; and

175.2 Chorus' network plans for LAPs that are nearing capacity.

"reasonable technical and operational practicability having regard to the access provider's existing network resources".

¹¹⁸ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [16] and [17].

176. These additional reporting obligations should provide further clarity to access seekers regarding service performance of the regulated UBA service and Chorus' ongoing investment to meet capacity constraints on its network.
177. While Chorus suggested that the monitoring requirements apply to its Ethernet-based network only, our view is that the requirements should apply to both Ethernet and ATM LAPs on Chorus' UBA network. Given our draft decision to exempt Chorus' ATM LAPs from utilisation, we consider it important to provide access seekers and end-users with visibility of congestion issues that might affect end-user's experience.

Chapter 5 – Treatment of VDSL (Very High-Speed Digital Subscribers Line)

Purpose of this chapter

178. This chapter sets out our draft decision on the treatment of VDSL in the UBA STD.

Our current thinking

179. Our draft decision on the treatment of VDSL is not to review or amend the UBA STD, because in our view the UBA STD as it stands requires Chorus to provide the regulated UBA service over VDSL where the technology is available and requested by an access seeker.
180. Further, amending the UBA STD to refer to VDSL specifically could, by implication, be interpreted as excluding the next generation of DSL technology to be deployed. As Chorus' put it "today's VDSL is tomorrow's ATM".¹¹⁹ This would not give best effect to section 18 of the Act.

How our thinking has developed so far

VDSL in the UBA STD

181. The treatment of VDSL in the UBA STD has been under consideration since the introduction of VDSL was first proposed by Telecom. In 2009 Telecom submitted an application requesting us to consider whether the UBA STD extended to VDSL based services. The initial question revolved around whether the retail prices of UBA services delivered over Telecom's VDSL service should be included in the retail-minus calculation of the wholesale UBA price.
182. In our April 2010 clarification of the UBA STD we concluded that Telecom "should be able to offer new UBA services on a commercial basis, but a prior notification process should be instituted to enable the Commission, on a case-by-case basis, to assess whether a proposed commercial service was different from the regulated services, and if so, whether there were grounds to include the new services as a regulated service through the S30R process".¹²⁰
183. We excluded the VDSL prices from calculation of the regulated UBA price on the grounds that VDSL services represented an "emerging technology capable of delivering significant benefits to end-users such as increased speeds and facilitating the development of innovative new services". In reaching this decision, we were mindful of ensuring the incentives for investment in new DSL technologies were maintained.¹²¹

¹¹⁹ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)" (1 July 2016) at [78].

¹²⁰ 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) at [23].

¹²¹ Ibid, at [7].

184. In May 2010 we made another clarification to the UBA STD requiring Telecom to provide us with sufficient information about any proposed new service to allow us to determine whether the new service was captured within the regulated UBA terms.¹²²
185. In October 2010, Telecom provided notice to us that it was proposing a new variant of the UBA service based on VDSL, which would offer a guaranteed minimum 96 kbps throughput, with minimum line speed of 15Mbps down and 5 Mbps up. We found that the proposed service incorporated a number of features not included in the regulated UBA service and was sufficiently differentiated such that it was not captured.¹²³
186. In June 2013, Chorus started offering the regulated UBA service under the UBA STD using VDSL technology where it was available and requested. At that time, Chorus said that any proposal to withdraw regulated VDSL would be in relation to fibre migration.¹²⁴
187. In May 2014, Chorus announced that it intended to introduce new commercial UBA variants, known as the ‘Boost’ variants. Chorus gave notice that from 1 December 2014 the VDSL service under the UBA STD would be withdrawn (subject to consultation).¹²⁵ As explained in Chapter 2, we started an investigation in July 2014, and the investigation was suspended in October 2014 after Chorus put the proposed changes to the regulated UBA service on hold.
188. In our process and issues paper we explained that since its introduction in 2007, the regulated UBA service has been a full speed/full speed (FS/FS) service.¹²⁶ We also highlighted that in our September 2014 consultation paper we attached the following legal advice provided by David Laurenson QC and Dr James Every-Palmer:¹²⁷

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). This is consistent with the concern expressed by the Commission in Decision 582 [122] that “any attempt to differentiate [between DSL technologies] or define the bitstream access service according to specific technologies, for example to exclude ADSL2+, would generate a considerable risk that the service is rendered obsolete and ineffective through the introduction of new technology.” However, our view does not appear to match the view taken by the Commission in either:

¹²² Commerce Commission “Final Clarification of the Standard terms Determinations on Telecom’s Unbundled Bitstream Access Service” (10 May 2010).

¹²³ Commerce Commission “Final Decision of the Commerce Commission on the applicability of the UBA STD to Telecom’s Wholesale VDSL2 Service” (20 December 2010) at [5].

¹²⁴ Chorus “Update on VDSL” (7 May 2013).

¹²⁵ 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>)).

¹²⁶ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [79].

¹²⁷ Commerce Commission “Consultation paper on issues relating to Chorus’ proposed changes to the UBA service” (4 September 2014) at page 10.

- i. the 16 April 2010 review/clarification decision which noted at [41] 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”; or
- ii. the IPP benchmarking decision (Decision [2013] NZCC 20 at [152]-[153]) which we read as finding that VDSL was not necessary/efficient for the regulated service.

In the context of the UBA FPP process, the Commission may wish to reconsider the inclusion of VDSL technology in the modern equivalent asset.

189. In relation to our views referred to in the above legal opinion:
- 189.1 16 April 2010 review/clarification: the situation does not occur in practice. The cards used by Chorus to provide VDSL also provide ADSL2+, so the case of VDSL being the only DSL technology available does not generally occur.
 - 189.2 IPP benchmarking decision: the IPP benchmarking decision was concerned with the positioning of VDSL services in benchmarked countries, and found that VDSL was used to provide premium services in those markets. These premium services would typically have higher costs (eg higher throughput), and therefore did not necessarily reflect the costs of providing the regulated service in New Zealand. We had also found that VDSL, where a superior service was guaranteed, was not necessarily captured by the UBA STD.¹²⁸
190. In the FPP, we modelled modern equivalent assets that were capable of providing both ADSL2+ and VDSL-based bitstream services.
191. Our view in the process and issues paper was 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 compensated Chorus for providing the UBA service using UBA technology.”¹²⁹
192. We asked submitters if Chorus should be required to provide the regulated UBA service over VDSL where available and requested by an access seeker, and whether Chorus should be able to withdraw the regulated UBA service over VDSL where it has already made it available to access seekers.
193. Access seekers and InternetNZ are unanimous that VDSL should be included in the regulated service, and that Chorus should not be able to withdraw it.¹³⁰

¹²⁸ Where Telecom was offering a 96 kb/s guaranteed throughput, ‘premium best efforts’ class of service and minimum 15Mbps/5 Mbps speed guarantee. Commerce Commission “Final Decision of the Commerce Commission on the applicability of the UBA STD to Telecom’s Wholesale VDSL2 Service” (20 December 2010).

¹²⁹ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [85].

¹³⁰ See for example Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016)

- 193.1 Spark is of the view that Chorus is already required to provide VDSL as part of the regulated service where the technology is available and requested by an access seeker. Spark also submitted that we should amend the STD confirming VDSL is part of the regulated service to avoid future arguments;¹³¹
- 193.2 Vodafone submitted that “VDSL is part of the UBA regulated service, and a requirement for Chorus to provide regulated UBA over VDSL is consistent with the advice provided to the Commission by James Every-Palmer”;¹³²
- 193.3 Vocus submitted that “VDSL is simply an evolution of the regulated UBA service, not a different service. Internationally VDSL is widely used and it is impossible to buy DSLAM cards that are not VDSL capable. In our opinion the regulated service includes VDSL and future xDSL variants”.¹³³
194. At the workshop Chorus noted that it considered VDSL a part of the current service, and encouraged a less prescriptive approach to amending the STD to maintain flexibility going forward.¹³⁴
195. In cross-submission, Chorus’ views were:¹³⁵
- In the clarification to the UBA STD of 19 December 2011 the Commission stated “*it is the service that is subject to regulation and not the technology of delivery of the service that is regulated.*” We agree and think there is scope to improve the STD by reinforcing its technology neutrality and ensuring we are able to manage our network and technology life cycles efficiently.
- Accordingly, no amendments are required to the UBA STD to clarify that VDSL is included in the regulated service: we provide regulated UBA over VDSL technology. Attempting to “lock in” VDSL into the UBA will inevitably limit the adoption of future technology – today’s VDSL is tomorrow’s ATM.
196. No submissions argued that the view we expressed in the process and issues paper, ie 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”, was incorrect.
197. As we set out in Chapter 3, our goal is for a ‘fit for purpose’ service. This requires Chorus to provide an appropriate quality of service, suitable for a range of general internet use. This means that, at this point in time, Chorus must provide the regulated UBA service over VDSL, where the technology is available and requested

at page 12; and Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [45].

¹³¹ Ibid, at [45] and [46].

¹³² Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016) at page 12.

¹³³ Vocus “Section 30R review of the UBA standard terms determination” (5 May 2016) at [50].

¹³⁴ Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [4].

¹³⁵ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [77] and [78].

by an access seeker, because in our preliminary view this is required by the “maximum available downstream speed” provision contained in section 3.6 of the service description where the technology is available.¹³⁶

198. Our draft decision is that a technologically neutral UBA STD is likely to best give effect to section 18, since a technologically specific STD could force Chorus to retain an old technology that is not ‘fit for purpose’.

¹³⁶ Commerce Commission “Standard Terms Determination for the designated service Chorus’ unbundled bitstream access – Schedule 1 UBA service Description (updated 30 November 2011) at [3.6].

Chapter 6 – UBA handover connections

Purpose of this chapter

199. This chapter sets out our draft decisions on UBA handover connections, in particular whether we should add a 10GigE handover connection option to the UBA STD.

Our current thinking

200. Our draft decisions are to:

200.1 add a 10GigE handover connection service to the UBA STD price list. Our view is that a 10GigE handover connection service option is appropriate for a ‘fit for purpose’ regulated UBA service.

200.2 use the prices calculated in the TSLRIC model during the UBA and UCLL FPP processes in December 2015 (ie \$1,160 per month in year 1, decreasing to \$957 per month in year 5, as per table 1)¹³⁷; and

200.3 cap the price for multiple 1GigE handover connections at the 10GigE handover connection price.

How our thinking has developed so far

201. When Chorus provides the regulated UBA service, it handles the broadband traffic between the end-user and the handover point on behalf of the access seeker. That is, Chorus manages and provides access to the local loop, the exchange or cabinet (and the equipment in it, including a DSLAM), and the local aggregation path to transport the broadband traffic to the “data switch” containing the handover point.

202. The current handover services in the UBA STD include a 1Gbps for Ethernet option. This is commonly referred to as 1GigE.¹³⁸

203. The UBA FPP determined UBA prices using TSLRIC, and also set non-recurring charges (NRCs) for UBA.¹³⁹ We decided not to introduce any new charges, including a charge for a 10GigE handover connection service. We considered that any new proposals for the UBA STD were outside the scope for the FPP review and that access seekers are able to use alternative processes outside of the price review process to request changes to the UBA STD.¹⁴⁰

¹³⁷ Prices in the FPP model were determined for the five years (starting on 16 December 2015).

¹³⁸ Commerce Commission “Standard terms determination for Chorus’ unbundled bitstream access service: Schedule 2: UBA price list, public version” (5 November 2013) Table 2 at [2.9] and [2.10].

¹³⁹ These NRCs enable Chorus to recover costs associated with one-off events (or events that occur irregularly), such as new connections.

¹⁴⁰ Commerce Commission “Final pricing review determination for Chorus’ unbundled bitstream access service [2015] NZCC 38” (15 December 2015) at [600].

204. In the process and issues paper we stated that with the increase in bandwidth demanded by end-users, a 10GigE handover connection service may be necessary to support delivery of the regulated service.¹⁴¹
205. In submissions, all access seekers and InternetNZ supported the addition of a 10GigE handover connection service to the UBA STD. In their view, a 10GigE handover connection is necessary to ensure the regulated service remains ‘fit for purpose’ because growth in bandwidth means 1GigE handover connections are no longer sufficient to support provision of the regulated UBA service.¹⁴²
206. At the workshop and in its cross-submission, Chorus questioned the need to include a 10GigE connection in the UBA STD. Chorus noted that it already offers a commercial 10GigE handover service, at a price similar to the TSLRIC price calculated in the FPP model (Chorus’ commercial price is \$1,444.00 per month).¹⁴³
207. In cross-submissions, access seekers reiterated their view that we should add a 10GigE handover connection service to the UBA STD price list. However, they had different views on the relevant pricing principle, price and consultation considerations:
- 207.1 *Pricing principle.* Spark’s view was that it was unclear whether we could jump straight to the FPP without first determining an IPP for the 10GigE handover price.¹⁴⁴ 2degrees submitted that the Act requires TSLRIC as the appropriate pricing principle to be applied to the regulated UBA service, but 2degrees did not agree that it is appropriate to use the 10GigE price calculated in the FPP model.¹⁴⁵
- 207.2 *Price.* Spark, Vodafone and Vocus suggested the use of the UFB price for a 10GigE handover connection (ie \$300 per month), or using a benchmarked relationship between the UFB prices for 1GigE and 10GigE.¹⁴⁶

¹⁴¹ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [99].

¹⁴² Eg Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [60]; Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016) at page 3; Vocus “Section 30R review of the UBA standard terms determination” (5 May 2016) at [61]-[64]; 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission” (5 May 2016) at page 5; Trustpower “Trustpower submission: Section 30R Review of the UBA Standard terms Determination” (5 May 2016) at [6.1.1]; InternetNZ “Section 30R review of the UBA standard terms determination” (5 May 2016) at [2.23].

¹⁴³ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper” (1 July 2016) at [70].

¹⁴⁴ Spark “Section 30R review of the UBA standard terms determination: process and issues paper, Cross-submission” (1 July 2016) at [16].

¹⁴⁵ 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission” (1 July 2016) at page 5.

¹⁴⁶ Eg Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [60]; Vodafone “Chorus UBA: Non-price terms - Response to the Commerce Commission’s Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper” (5 May 2016)

- 207.3 *Consultation*. Spark and 2degrees submitted that the price set in our TSLRIC model was not robustly tested or submitted on during the FPP process.¹⁴⁷
208. Chorus submitted that if a price is to be added, the Act requires it to be based on TSLRIC and it would be inappropriate to adopt a shortcut such as an international or UFB benchmarked price. Chorus stated its view is that the FPP-modelled price is a fully developed TSLRIC cost and should be used if a price is to be set in the UBA STD.¹⁴⁸
209. Chorus also submitted that its obligation to provide a 10GigE connection should be limited to a pre-defined list, as some handover sites do not have the demand to support 10GigE handovers.¹⁴⁹ Chorus further noted that if there was an issue of availability of 10GigE handovers, Chorus are willing to discuss providing 10GigE handover connections where they are not currently available.¹⁵⁰
210. In response to the availability of 10GigE handovers, Vocus submitted that it supported Spark's suggestion that any 10GigE handover price that we set should also cap the price of multiple handovers where Chorus does not provide a 10GigE option.^{151 152}
211. Spark also suggested that the installation charge for a 1GigE handover connections and a 10GigE handover connection should be the same as there is no additional work installing a 10GigE compared to a 1GigE card.¹⁵³

Addition of a 10GigE handover connection service to the UBA STD

212. Our draft decision is to add a 10GigE handover connection service to the UBA STD price list.
213. We agree with access seekers that a 10GigE handover connection is appropriate for a 'fit for purpose' UBA regulated service. The use of 10GigE handover connections reflects the change in the industry standards for how the regulated UBA service is delivered since the UBA STD was created in 2007.

at page 3; Vocus "Section 30R review of the UBA standard terms determination" (5 May 2016) at [61]-[64].

¹⁴⁷ Eg Spark "Section 30R review of the UBA standard terms determination: process and issues paper, Cross-submission" (1 July 2016) at [16]; 2degrees' "Section 30R Review of the UBA STD: Process and Issues Paper – Cross-submission to the Commerce Commission" (1 July 2016) at page 5.

¹⁴⁸ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper" (1 July 2016) at [72]-[73].

¹⁴⁹ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper" (1 July 2016) at [70]-[75].

¹⁵⁰ Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper" (1 July 2016) at [71].

¹⁵¹ Spark "UBA s30r workshop paper" (16 June 2016) at page 4, amendment 4.

¹⁵² Vocus "Section 30R review of the UBA standard terms determination. Cross-Submission to the Commerce Commission" (8 July 2016) at [12].

¹⁵³ Spark "Section 30R review of the UBA standard terms determination: process and issues paper, Cross-submission" (1 July 2016) at [16].

214. In this regard, as discussed in Chapter 2, there has been a strong growth in the amount of data consumed by fixed-line end-users. By adding the option of the 10GigE handover connection service to the UBA STD price list, we are ensuring that Chorus and access seekers effectively manage end-users traffic where a 10GigE handover connection is available.
215. As discussed in Chapter 3, ensuring that the quality of the regulated UBA service provided is appropriate to support retail services should provide a platform that can be used by access seekers to provide a range of differentiated retail broadband products. The handover connection is part of the regulated UBA service.
216. We further note that in a competitive market firms will offer a range of options to drive greater uptake of services and therefore generate greater revenues. A handover connection with insufficient capacity or excessive pricing may distort decisions by access seekers regarding the use of the UBA service.
217. We do not propose adding a new charge to differentiate installation costs between 1GigE and 10GigE handovers. We agree with Spark that the price for installation of a 1GigE handover card should be the same for a 10GigE handover card. Our view is that there is no compelling reason why there should be a different charge for installation of a 10GigE handover connection. This approach is consistent with our decision in the original UBA STD, where we stated that the cost of installing a handover connection is the same regardless of the capacity.¹⁵⁴

Price for the 10GigE handover connection service

218. The options we have considered are as follows:
- 218.1 using the relevant pricing principles in the Act, a TSLRIC price being the price calculated in the FPP model; and
- 218.2 using UFB prices for a comparable service.
219. Our draft decision is to use the TSLRIC price recently calculated in our FPP model to set the price for the 10GigE handover connection service in the UBA STD price list. Our proposed prices for the 10GigE handover connection service are summarised in the following table.

Table 1 – 10GigE handover connection charges

	Year 1	Year 2	Year 3	Year 4	Year 5
10GigE capacity for Basic UBA service only	1,160.49	1,114.67	1,071.05	1,017.70	957.77
10GigE capacity for Enhanced UBA services only	1,160.49	1,114.67	1,071.05	1,017.70	957.77

¹⁵⁴ Commerce Commission “Standard Terms Determination for the designated service Telecom’s unbundled bitstream access” Decision 611 (12 December 2007) at [303].

220. In terms of pricing principle, we noted in Chapter 2 that we started the UCLL and UBA FPP processes after receiving applications to do so under section 42(1) of the Act.
221. Our conclusion on the FPP was that the correct interpretation of section 42(1) was to focus on the “designated access service”, which included all of the charges that were related to it, recurring and non-recurring.¹⁵⁵
222. This view was supported by Spark, Vodafone, CallPlus and Wigley and Company.¹⁵⁶ Spark in particular noted that section 42(1) did not constrain us in the review of all charges, as the “the FPP is a completely new pricing review determination process, pursuant to which a completely different pricing methodology used to determine prices for the designated access service”, and that the FPP “is a wholly new process for determining prices for the designated access services under a completely different methodology”.¹⁵⁷
223. We continue to agree with the view Spark expressed in the FPP process. We also agree with 2degrees and Chorus that TSLRIC is the right pricing principle for this 30R review. We do not consider that the Act requires or allows us to use any pricing principle other than TSLRIC.
224. It follows that we do not agree with access seekers who suggested we should or could use UFB prices to set a price, as these prices have been negotiated under commercial agreements with government funding.
225. We disagree with Spark and 2degrees that the price calculated by the FPP model has not been tested. We conducted a number of consultation rounds throughout the FPP process (and on our FPP model), which finished less than one year ago.
226. We note that TERA conducted workshops with industry participants early in the process. These were intended to help interested parties to interact with the model.¹⁵⁸ Also, our draft decisions included the reasons for our modelling decisions¹⁵⁹ and TERA produced a report outlining the modelling changes made between our December 2014 drafts and our July 2015 further drafts.¹⁶⁰ Therefore,

¹⁵⁵ Commerce Commission “Final pricing review determination for Chorus’ unbundled copper local loop service [2015] NZCC 37” (15 December 2015) at [750].

¹⁵⁶ Spark “Setting prices for service transaction charges for UBA and UCLL services” 9 October 2014, paragraph [7]; Vodafone “Submission on consultation paper on setting prices for service transaction charges for UBA and UCLL services” 9 October 2014, p. 2; CallPlus “Submission on the Commerce Commission’s Consultation paper: setting prices for service transaction charges for UBA and UCLL” 9 October 2014, paragraph [8]; and Wigley and Company “Submission on consultation on setting prices for service transaction charges for UBA and UCLL services” 9 October 2014, paragraph [4.2].

¹⁵⁷ Spark “Setting prices for service transaction charges for UBA and UCLL services” (9 October 2014) at [6].

¹⁵⁸ At the industry kick-off workshop on 9 April 2014 TERA presented an overview of the intended modelling approach. On 2 December 2014 TERA presented the modelling approach and assumptions used for the December 2014 draft determinations.

¹⁵⁹ Commerce Commission “Further draft pricing review determination for Chorus’ unbundled bitstream access service” (2 July 2015) at [704]-[709].

¹⁶⁰ TERA “TSLRIC price review determination for the Unbundled Copper Local Loop and Unbundled Bitstream Access services *Implemented modelling changes*” June 2015.

we think it is appropriate and available to us to use the TSLRIC price for a 10GigE handover connection service as produced by the FPP model, as it is based on the best and the most up-to-date information available to us.

227. Also, this 30R review focuses on non-price terms of the UBA STD and all submitters in this process have encouraged us not to review the FPP prices.
228. Having said this, in response to Spark and 2degrees, we explain the calculation of the 1GigE and 10GigE handover connection prices in the FPP model in Attachment 2, and encourage parties to submit on this calculation again if they consider it appropriate to do so.
229. In our view, the TSLRIC price for a 10GigE handover connection service calculated in the FPP model will best promote consistency with the other FPP prices and the non-price terms. The model calculated handover connection prices for both 1GigE and 10GigE, as explained in Attachment 2. If the price for a 10GigE handover connection were to be set using the other options that have been suggested in submissions (such as the UFB handover connection prices), the resulting price is unlikely to be consistent with the existing price of the 1GigE handover connection.

Capping the price of multiple 1GigE handovers

230. Our draft decision is to cap the price for multiple 1GigE handover connections at the 10GigE handover connection price at handover locations where a 10GigE handover connection is currently unavailable.
231. Chorus stated in the workshop and reiterated in its cross-submission that although Chorus do not plan to build network capacity to support 10GigE handovers at all of the 104 potential UBA handover sites, it does plan to make 10GigE capacity available at all sites where there is sufficient demand to warrant it.^{161 162}
232. We agree with Spark's proposed amendment that was generally supported by access seekers.¹⁶³ Our view is that without a price cap, Chorus may not be incentivised to invest in 10GigE handovers where there is sufficient demand, without requiring provision of 10GigE handovers at all 104 potential UBA handover sites.

¹⁶¹ Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [49].

¹⁶² Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper" (1 July 2016) at [74]-[75].

¹⁶³ E.g. Vocus "Section 30R review of the UBA standard terms determination. Cross-Submission to the Commerce Commission" (8 July 2016) at [12]; 2degrees' "Section 30R Review of the UBA STD: Process and Issues Paper – Cross-submission to the Commerce Commission" (1 July 2016) at page 3.

Chapter 7 – Process for introduction of new UBA variants

Purpose of this chapter

233. This chapter sets out our draft decision on the process for introduction of new UBA variants, as set out in clause 10 of the UBA General Terms.

Our current thinking

234. Our draft decision is to not amend clause 10, because:

234.1 in our view, our proposed amendments to the service specifications as set out in Chapter 4 should provide clarity to all parties regarding the regulated UBA service performance and that this service will not be degraded by any potential UBA variants. This is because Chorus will be obliged to continue to invest in the UBA regulated service to keep pace with end-users needs.

234.2 an approval regime could be inconsistent with section 30S, because it could improperly impact Chorus and access seekers commercial negotiations; and

234.3 there is little demand for commercial variants.

How our thinking has developed so far

235. As explained in Chapter 2, when Chorus announced that it intended to introduce the ‘Boost’ variants, Chorus also proposed to 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.

236. The UBA STD requires that when Chorus proposes to offer a new UBA variant, it must first give at least 20 working days’ notice to the Commission and access seekers of that new variant.¹⁶⁴ When giving notice, Chorus must provide information about the new variant, including an explanation of the variant that distinguishes it from the regulated services supplied under the UBA STD.¹⁶⁵

237. In the process and issues paper we sought submissions on whether the process for introducing new UBA variants should be amended. We noted that our view was that where uncertainty had arisen, it was due to a lack of clarity regarding the role, and technical characteristics of the regulated service.¹⁶⁶ We further stated our then view that the clause 10 process, in its current form, was appropriate for assessing the introduction of commercial UBA variants.¹⁶⁷

238. In submissions:

¹⁶⁴ Clause 10.1.3 of the UBA General Terms.

¹⁶⁵ Clause 10.2 of the UBA General Terms.

¹⁶⁶ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [105].

¹⁶⁷ Commerce Commission “Section 30R review of the UBA standard terms determination - Process and issues paper” (7 April 2016) at [104].

- 238.1 Trustpower submitted that the clause 10 process should be amended to one where “Chorus can apply to the Commission to offer a new UBA variant”;¹⁶⁸
- 238.2 Spark noted that the current process could allow Chorus to introduce commercial variants at a premium after a set time if Chorus has not had any firm decision from the Commission;¹⁶⁹ and
- 238.3 Vocus and InternetNZ supported amending clause 10 in their submissions, without providing any specific reason or suggested amendments.^{170 171}
239. At the workshop, Chorus suggested that no change to clause 10 is required. Chorus noted that the Boost process showed that clause 10 works well.¹⁷² Spark stated that the Boost proposal had created uncertainty around the UBA regulated service, and identified gaps in the process. In Spark’s view, the clause 10 process only required notification of a commercial variant, and was not a complete process for testing the variant against the regulated service.¹⁷³
240. In its cross-submission, Spark suggested amending clause 10 to provide for a 2-tier process, along with a “pause” for proposals that are not straight forward:¹⁷⁴
- 240.1 to provide us with the ability to give Chorus a “quick steer” on whether we consider a variant would fall outside the regulated service; or
- 240.2 to enable us to take a more considered path to consider and determine whether a new variant may fall within, outside, or degrade the regulated service.
241. Vocus and 2degrees supported the amendment of clause 10 in their cross-submissions.^{175 176}
242. Chorus, however, reiterated that we should be cautious moving from a notification requirement, which is consistent with transparency obligations and provides us with

¹⁶⁸ Trustpower “Trustpower submission: Section 30R Review of the UBA Standard terms Determination” (5 May 2016) at [4.3.2(d)].

¹⁶⁹ Spark “Section 30R review of the UBA standard terms determination: process and issues paper” (5 May 2016) at [63].

¹⁷⁰ Vocus “Section 30R review of the UBA standard terms determination” (5 May 2016) at [65]-[68].

¹⁷¹ InternetNZ “Section 30R review of the DBA standard terms determination Submission to the Commerce Commission” at [3.26] and [3.27].

¹⁷² Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [57].

¹⁷³ Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [58].

¹⁷⁴ Spark “Section 30R review of the UBA standard terms determination: process and issues paper - Cross-submission | Commerce Commission” (1 July 2016) at page 14.

¹⁷⁵ Vocus “Section 30R review of the UBA standard terms determination - Cross-Submission to Commerce Commission” at [19(b)].

¹⁷⁶ 2degrees “Section 30R Review of the UBA STD: Process and Issues Paper - Cross-Submission to the Commerce Commission” at page 5.

the opportunity to exercise our powers under the Act, to a more prescriptive regime that requires our approval before a commercial variant is introduced.¹⁷⁷

243. According to Chorus, an approval regime would be inconsistent with the Act, because we do not have power to foreclose commercial offerings (which are specifically contemplated by s 30S of the Act), and setting a process in an STD which purports to regulate how we can offer services which fall outside the STD goes beyond what the Act contemplates for an STD.¹⁷⁸
244. Trustpower cross-submitted that clause 10 should be amended to provide a process for approving, amending, or withdrawing new UBA variants. In addition, Trustpower suggested including a requirement for Chorus to provide information on cost sharing between any new variant and the regulated UBA service, in order to determine whether we should reconsider the regulated price.¹⁷⁹
245. Vodafone recommended in its cross-submission that TCF develops an improved regime for the introduction of new variants, whether they are proposed by Chorus or access seekers.¹⁸⁰
246. We have considered the following options to review the process for introduction of new UBA variants:
- 246.1 no change to clause 10 process; and
- 246.2 amend clause 10, as suggested by Spark (and supported by other access seekers).
247. Our draft decision is to not amend clause 10.
248. Regarding access seekers suggestion that it would be appropriate to amend clause 10 to provide for an approval regime, we note that the key issue during the Boost process was lack of clarity of performance expectations and the potential degradation of the regulated UBA service (rather than the process of reviewing the Boost variants).
249. In our view, our proposed amendments to the service specifications as set out in Chapter 4 should provide clarity to all parties regarding the regulated UBA service performance and that this service will not be degraded by any potential UBA variants. This is because Chorus will be obliged to continue to invest in the UBA regulated service to keep pace with end-users needs.

¹⁷⁷ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [68].

¹⁷⁸ Chorus “Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper (7 April 2016)” (1 July 2016) at [68].

¹⁷⁹ Trustpower “Trustpower Cross-Submission: Section 30R Review of the UBA Standard terms Determination” (1 July 2016) at [4.1.1].

¹⁸⁰ Vodafone “Vodafone New Zealand cross-submission: Process and issues paper for the s 30R review of the UBA STD” (1 July 2016) at page 3.

250. Finally, we also believe that it is not necessary to amend clause 10 because access seekers and Chorus have indicated that there is little demand for commercial variants.¹⁸¹
251. In case Chorus does deploy a new UBA variant, Chorus would need to notify us and access seekers, and provide relevant information about the new variant in accordance with clause 10.
252. Therefore, our current view is that the existing clause 10 process, together with our proposed amendments to the service specifications should avoid a “Boost’ type of experience” from happening in future.
253. We do not consider the proposed “two tier” approach (as suggested by Spark) provides any additional clarity to the existing process. In our view, the proposed approach may in fact be counterproductive as it may lead to increased uncertainty (eg the suggested concept of a “quick steer”). Conversely, the current clause 10 process allows us to initially consider the new variant and tailor the timeframe for assessing a new variant on a case-by-case basis.
254. Regarding Spark’s submission that we should amend the clause so that access seekers may request new variants within the regulated terms, there is nothing constraining us from adding new variants to the UBA STD. We would consider adding a new variant to the STD where there is evidence of market failure to provide the variant commercially.¹⁸²
255. Finally, if submitters disagree with this draft decision we do encourage them to propose amendments to the UBA STD which are certain, clear, practically workable and consistent with the Act.

¹⁸¹ Eg Commerce Commission “Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed” (27 June 2016) at [11] and [57].

¹⁸² See paragraph [9] of our April 2010 VDSL decision for our view regarding when we would consider a 30R review to include a new variant to the UBA STD (<http://www.comcom.govt.nz/dmsdocument/8240>).

Chapter 8 – Transparency of Chorus’ systems and service level terms

Purpose of this chapter

256. This chapter sets out our draft decision on the transparency of Chorus’ systems and service level terms (SLAs).¹⁸³

Our current thinking

257. Our draft decision on transparency of Chorus systems is to not review nor amend the UBA STD because:

257.1 the UBA STD already sets out a process for Chorus and access seekers to resolve potential issues related to transparency of Chorus’ systems (ie clause 9 of the UBA General Terms)¹⁸⁴;

257.2 the clause 9 process was unanimously agreed by the New Zealand Telecommunications Forum (TCF) working party when the UBA STD was being developed;

257.3 we have no reasons to believe that the mechanism in clause 9 is no longer appropriate;

257.4 it is unclear to us the materiality of the issues and the costs associated with updating Chorus’ systems and likely benefits to access seekers/end-users; and

257.5 the potential changes are very technical and the industry has greater visibility and understanding of the existing systems in order to propose and agree on the potential changes to the UBA STD.

258. However, we propose the following additional consultation requirements to the change mechanism in the UBA General Terms to improve transparency of Chorus’ 24 month review of the Operations Manual:

258.1 Chorus must notify us and access seekers when it is undertaking a review under clause 9.12;

258.2 Chorus must seek proposed changes from access seekers as per clause 9.13, where a change is necessary or desirable, the change must be proposed using the change process under clause 9;¹⁸⁵ and

258.3 at the conclusion of a review, Chorus must make a report available to us and access seekers summarising the results of the review.

¹⁸³ The SLAs are set out in Schedule 3 to the UBA General Terms.

¹⁸⁴ Clause 9 of the UBA General Terms is set out in Attachment 1 of this draft decision.

¹⁸⁵ Commerce Commission “Standard Terms Determination for the designated service Chorus’ unbundled bitstream access” Decision 611 (updated 30 November 2011) at [9.13].

259. Our draft decision on SLAs is to not review nor amend the SLAs, because we have not received any evidence that caused us to believe that the current SLAs are not appropriate.
260. If we were to make any amendment to the UBA STD ourselves we would need to either broaden the scope of this review or include these potential changes in the scope of a different process. This is because the UCLL and UBA operations manuals and SLAs are very similar and having different terms of related services could have undesired and unintended consequences.

How our thinking has developed so far

Transparency of Chorus systems

261. In the process and issues paper we asked interested parties if the UBA STD should be amended to provide greater visibility of Chorus' systems, and if there are any other relevant matters which we should consider as part of this 30R review.¹⁸⁶
262. Submitters were generally supportive of access seekers having greater visibility of Chorus' systems, and of a review of the UBA SLAs (eg faults, installations, response times and systems).¹⁸⁷
263. At the workshop, Commission staff sought clarity from interested parties on changes necessary to provide greater transparency to Chorus' systems, and highlighted that the UBA STD already includes a process for updating the UBA operations manual without requiring a 30R review (ie clause 9).^{188 189}
264. Spark shared a handout proposing specific technical changes.¹⁹⁰ These included issues surrounding: provisioning events, fault events, diagnostic tools and processes. Spark noted that while some of these issues could be considered through TCF and recommendations put to the Commission, other issues could only be considered by the Commission.¹⁹¹

¹⁸⁶ Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2016) at pages 24 and 25.

¹⁸⁷ Eg Vodafone "Chorus UBA: Non-price terms - Response to the Commerce Commission's Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper" at pages 13 and 14; 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission (5 May 2016) at page 5; InternetNZ "Section 30R review of the UBA standard terms determination - Submission to the Commerce Commission" (5 May 2016) at [2.11] and [3.30]; Spark "Section 30R review of the UBA standard terms determination: process and issues paper - Submission | Commerce Commission" at [25]; Trustpower "Trustpower Submission: Section 30R review of the UBA Standard Terms Determination" at [6.3]; Vocus "Section 30R review of the UBA standard terms determination - Submission to Commerce Commission" at [9].

¹⁸⁸ Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [50].

¹⁸⁹ Clause 9 of the UBA STD provides the change mechanism for UBA operations manual and UBA service level terms.

¹⁹⁰ Spark "UBA s30r workshop paper" (June 2016).

¹⁹¹ Commerce Commission "Section 30R review of the UBA standard terms determination - Industry workshop on process and issues paper - Summary of views expressed" (27 June 2016) at [52].

265. In cross-submissions:
- 265.1 Chorus noted that it was happy to discuss specific proposals for additional transparency, and that a TCF forum seems appropriate;¹⁹²
 - 265.2 Vocus and 2degrees broadly supported Spark's suggestions made at the workshop and suggested we either conduct further technical workshops or direct a TCF working party be formed with adequate guidance and clear timeframe;^{193 194}
 - 265.3 Vodafone and InternetNZ also requested that we provide guidance and require the TCF to propose specific amendments for our consideration;^{195,196} and
 - 265.4 Spark submitted that its proposed changes (as updated in cross-submission) will drive changes in costs and for that reason the industry is unlikely to reach agreement. Spark's view is that the industry has had years to agree changes and has not done so; therefore we "should set out Chorus obligations in the draft decision, and then convene a technical workshop to develop an implementation plan".¹⁹⁷
266. We have considered the following options for improving the transparency of Chorus systems:
- 266.1 do not amend the UBA STD;
 - 266.2 request the TCF to propose specific amendments for our consideration; and
 - 266.3 include our considerations of specific amendments to the STD in the scope of this draft decision.
267. Our draft decision is not to amend the UBA STD to address some submitters concerns regarding the transparency of Chorus systems. This is because the UBA STD already sets out a process for Chorus and access seekers to resolve potential issues related to the UBA operations manual.
268. Transparency concerns raised by the submitters generally relate to the information made available by Chorus for provisioning events, fault events, diagnostic tools and

¹⁹² Chorus "Cross-submission for Chorus in response to Section 30R review of the UBA Standard Terms Determination Process and Issues Paper" (7 April 2016) at [50]-[54].

¹⁹³ Vocus "Section 30R review of the UBA standard terms determination - Cross-Submission to Commerce Commission" (8 July 2016) at [2] and [18].

¹⁹⁴ 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - Cross-Submission to the Commerce Commission" (1 July 2016) at [2.3].

¹⁹⁵ Vodafone "Vodafone New Zealand cross-submission: Process and issues paper for the s 30R review of the UBA STD" (1 July 2016) at page 2.

¹⁹⁶ Internet NZ "Cross-submission: Section 30R review of the UBA standard terms determination - Submission to the Commerce Commission (1 July 2016) at [6].

¹⁹⁷ Spark "Section 30R review of the UBA standard terms determination: process and issues paper - Cross-submission | Commerce Commission" (1 July 2016) at [47]-[49].

processes. Our view is that Chorus and access seekers are best placed to discuss and agree on changes, given their visibility of Chorus' existing operating systems.

269. Clause 9 of the UBA General Terms sets out that Chorus and access seekers must try to reach agreement on the proposed changes. If agreement cannot be reached then a negotiation takes place through the TCF. We must approve the proposed changes.

270. The clause 9 process was proposed by Telecom on the grounds that:

[it had] "**sufficient checks and balances so that it should not be necessary for the Commission to become involved in the review and change of process at this operational level.** The change mechanism will also ensure that the UBA Operations Manual can be continually improved over time and in particular after the UBA Service has been bedded down initially. Of course the Commission retains its oversight jurisdiction under the Act and the UBA General Terms prevail over the terms set out in the UBA Operations Manual" (emphasis added).¹⁹⁸

271. Telecom also noted in its proposal that:

"the details of the UBA Operations Manual and UBA SLA change process **unanimously agreed** to by the TCF Working Party" (emphasis added).¹⁹⁹

272. As discussed in Chapter 3, the regulated UBA service should be 'fit for purpose'. This relates not only to the ongoing quality of the regulated UBA service, but also to the systems and processes which govern one-off transactions such as provisioning and fault restoration. Transparency of relevant information on Chorus' systems can assist access seekers in improving the service experience for end-users.

273. Our view is that access seekers should have appropriate visibility of Chorus' systems to keep end-users informed of the expected costs and timeframes for establishing a new service or restoring faults.

274. However, the UBA STD already provides for a mechanism to change to the UBA operations manual. It appears that access seekers have not attempted to use clause 9 to propose changes to the Operations Manual and we have not received any evidence that lead us to believe that clause 9 no longer works.

275. Also, it is unclear to us the materiality of the issues and the costs to update Chorus' systems and likely benefits to access seekers/end-users.

276. In addition, the potential changes are very technical and the industry has greater visibility and understanding of the existing systems in order to propose and agree changes to the UBA operations manual.

277. Finally, many of the provisions in the UBA terms are common to both the UBA and the UCLL and co-location services.²⁰⁰ Therefore, if we were to make any amendment

¹⁹⁸ Telecom Standard Terms Proposal, paragraph [35].

¹⁹⁹ Telecom Standard Terms Proposal, paragraph [60 (c)].

²⁰⁰ Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007) at [334].

to the UBA STD ourselves we would need to either broaden the scope of this review or include these potential changes in the scope of a different process.

278. We have also considered requesting the TCF to propose specific amendments for our consideration. Most submitters (aside from Spark) support forming a TCF working party to consider changes to the UBA operations manual.
279. This is not our preferred option because, as explained in this chapter, the UBA STD already sets out a process for Chorus and access seekers to resolve potential issues related to transparency of Chorus' systems.
280. To assist submitters we note that if we were to request the TCF to propose specific amendments for our consideration we would provide the following guidance on the principles for the review of the UBA operations manual to assist Chorus and access seekers in forming proposals:
- 280.1 We expect that, as a rule, Chorus will make any information requested by access seekers available, unless Chorus has relevant reasons not to do so.
- 280.2 Parties are guided by the following criteria (which are aligned with Telecom's objectives behind its UBA STP):
- 280.2.1 Clear, simple and practical – proposed updates are clear and simple to understand, and the processes are practical;
- 280.2.2 Workable – proposed updates will increase efficiency and reduce transaction costs for all parties;
- 280.2.3 Sufficiently flexible to adapt over time – proposed updates should remain current, workable, and flexible;
- 280.2.4 Balanced – proposed updates set an appropriate balance between the rights, obligations and responsibilities for both access seekers and Chorus, and improve outcomes for end-users.
- 280.3 We would encourage the industry to start the discussions by reviewing the proposals made by Spark at the workshop, as updated in its cross-submission, as Spark's proposed changes were generally supported by other access seekers.
281. We also considered reviewing and possibly amending the UBA STD ourselves. We accept Spark's argument that this would "force" parties' to turn their minds to this matter and propose solutions within the timeframe specified in our draft decision.²⁰¹ However, we disagree that we should initiate the changes for the reasons mentioned at paragraphs 268 and 276. We also note that making the specific amendments to

²⁰¹ Spark "Section 30R review of the UBA standard terms determination: process and issues paper - Cross-submission | Commerce Commission" (1 July 2016) at [48].

the UBA STD ourselves would considerably delay the timeframes, as we would need to gather further information from Chorus and access seekers.

Amendment to the change mechanism

282. While our view is that industry participants are best placed to agree changes to the Operations Manual through the change mechanism set out in clause 9 of the General Terms, we recognise that there is currently a lack of transparency regarding the review of the Operations Manual that Chorus must conduct under clause 9.12.²⁰²
283. At present Chorus must review the Operations Manual every second year on the anniversary of the determination date of the UBA STD (12 December 2007), or earlier if requested by the Access Seeker and an earlier review is agreed by Chorus.
284. Our view is that greater transparency of the process by which Chorus conducts the required review will generate visibility and clarity for access seekers and us.
285. As discussed in Chapter 3, Chorus' incentives to ensure the regulated UBA service evolves have likely been affected by structural separation. When the UBA STD was established in 2007, the vertically integrated Telecom was incentivised by retail competition from unbundlers to review the Operations Manual where Telecom Retail sought improvements to operational processes. Telecom's equivalence of inputs requirements under the Separation Undertakings then required any service or process improvements to be passed on to access seekers.
286. Following structural separation, the need for Chorus to engage with access seekers to ensure that operational processes are optimised to satisfy all parties has increased. As a wholesaler only, Chorus is no longer competing for end-users and therefore may have less incentive to update the Operations Manual to improve the end-user experience.
287. Our draft decision is to add additional consultation requirements to clause 9.12 to improve transparency of the review process so that:
- 287.1 Chorus must notify us and access seekers when it is undertaking a review under clause 9.12;
- 287.2 as per clause 9.13, where a change is necessary or desirable, the change must be proposed using the change process under clause 9,²⁰³ and
- 287.3 at the conclusion of a review, Chorus must make a report available to us and access seekers summarising the results of the review.
288. Attachment 1 sets out our proposed drafting amendments to the UBA STD.

²⁰² Commerce Commission "Standard Terms Determination for the designated service Chorus' unbundled bitstream access" Decision 611 (updated 30 November 2011) at [9.12].

²⁰³ Commerce Commission "Standard Terms Determination for the designated service Chorus' unbundled bitstream access" Decision 611 (updated 30 November 2011) at [9.13].

Service level terms

289. Vodafone has submitted that the industry should review the service level terms for UBA to ensure that they are best positioned to promote a quality customer experience for copper broadband customers.²⁰⁴
290. Vodafone has not identified any specific issues regarding whether the current service level terms are 'fit for purpose' to consider as part of this review. Accordingly, we have no reason to believe that the current service level terms are not appropriate. However, we note that if Vodafone identifies any specific issues, it can propose amendments to the service level terms through clause 9 of the General Terms.
291. Also, we highlight that it might be inappropriate to review and amend the UBA SLA without also reviewing the UCLL SLA because their SLAs are very similar and having different terms of related services could have undesired and unintended consequences.

²⁰⁴ Vodafone "Chorus UBA: Non-price terms - Response to the Commerce Commission's Section 30R Review of the UBA Standard Terms Determination: Process and Issues Paper" (5 May 2016) at page 14.

Attachment 1 – Proposed amendments to the UBA STD

Purpose of this attachment

292. This attachment sets out proposed drafting amendments to the UBA STD, in order to give effect to the draft decisions set out in this paper. The proposed amendments are marked as track changes.

293. Proposed changes to the UBA General Terms:

9.12 In addition to any change proposed under clause 9.2:

9.12.1 ~~Telecom~~ Chorus must review the UBA Operations Manual every 24 months (with the first review commencing on the second anniversary of the UBA Standard Terms Determination being made). Chorus must give Notice to Access Seekers and the Commission of the commencement of the review. ~~and~~

9.12.2 ~~Telecom~~ Chorus may review the UBA Operations Manual at any time at its discretion, including where any Access Seeker makes a request for an earlier review and Chorus agrees.

9.13 Any ~~changes Chorus determines to be necessary or desirable as a result of a~~ review under clause 9.12 must be proposed using the change process under this section 9.

9.14 Chorus must submit any proposed change to the Commission copying Access Seekers. The proposed change must have with:

9.14.1 an updated version of the of the UBA Operations Manual or UBA Service Level Terms (as the case may be) containing the proposed change;

9.14.2 the reasons for the proposed change; ~~and~~

9.14.3 information on which Parties agree or disagree with the proposed change; and

9.14.4 a report summarising the results of the review.

and the Commission will advise whether a proposed change is approved or not within 10 Working Days of receipt of that proposed change, unless otherwise agreed between the Commission and the Parties.

294. Proposed changes to Schedule 1 (UBA Service Description):

Utilisation means the highest throughput during any 15 minute period divided by the capacity of the LAP.

3.14 Where the Basic UBA Service does not use ATM and is supplied using a fibre-based LAP, the Utilisation of that LAP must not reach 95%.

4.12 Where the Enhanced UBA Services are supplied using a fibre-based LAP, the Utilisation of that LAP must not reach 95%.

295. Proposed changes to Schedule 4 (UBA Operations Manual):

18 LAP Utilisation reporting

18.1 LAP Utilisation reporting

18.1.1 Chorus must each month make available on a website accessible by the Access Seekers and the Commission a report showing the peak Utilisation (as defined in the UBA Service Description) of LAPs used to provide the UBA Service in the preceding month. This report must set out:

(a) total number of LAPs in each Utilisation (as defined in the UBA Service Description) increment, in the format of Appendix L;

(b) plans for each LAP where the report shows peak Utilisation is greater than 85%.

APPENDIX L – Chorus’ link utilisation dashboard

<u>Month [XXX] of Year [XXX]</u>			
<u>Utilisation increment</u>	<u>ATM</u>	<u>Ethernet</u>	<u>Total</u>
<u>0-25%</u>			
<u>25-35%</u>			
<u>35-45%</u>			
<u>45-55%</u>			
<u>55-65%</u>			
<u>65-75%</u>			
<u>75-85%</u>			
<u>85-95%</u>			
<u>95-100%</u>			

Attachment 2 – Description of TSLRIC handover price calculation

Purpose of this attachment

296. This attachment explains the calculation of the 1GigE and 10GigE handover connection prices in our TSLRIC model. The prices determined by the model are set out in table 2.

Calculation methodology

297. The prices of the 1GigE (P_{1GigE}) and 10GigE (P_{10GigE}) handover connections were set in the FPP process to ensure that the total annual cost allocated to RSP interconnection (TC_{RSP}) in our model could be recovered assuming constant customer demand for each service over the regulatory period (D_{1GigE} and D_{10GigE}).²⁰⁵

$$TC_{RSP} = D_{1GigE} \times P_{1GigE} + D_{10GigE} \times P_{10GigE}$$

298. The total annual costs allocated to RSP interconnection were allocated in the same calculation as all other costs in our model.

299. The constant customer demand for each service was set at the number of ports for each type of handover connection in Chorus' network in 2014. This is consistent with other inputs to the model and our decision to model constant demand in the hypothetical efficient operator's network over the regulatory period.²⁰⁶

300. A gradient (r) was used to calculate the price of 10 GigE handovers based on the price of a 1GigE handovers. This gradient ensures full annual cost recovery while setting a price differential between 1GigE and 10GigE that reflects the cost differential between 1GigE handovers and 10GigE handovers.

$$P_{10GigE} = P_{1GigE} \times r$$

301. The cost-based gradient was calculated by using the differential between the cost per port of a fully loaded FDS rack with 1GigE handovers and the cost per port of a fully loaded FDS rack with 10GigE handovers.

$$r = \frac{C_{Full\ 10GigE\ network}}{C_{Full\ 1GigE\ network}}$$

302. We used the cost-based gradient because we believed it was the best indicator of the driver of costs for handover connections. We also considered that this approach was consistent with allocations used elsewhere in the model.

²⁰⁵ We set an expiry date of five years from the start date of the regulatory period (ie 16 December 2015). Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [324].

²⁰⁶ Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [A4.3].

303. The price of a 1GigE handover was set by rearranging the equation so that total annual costs are divided across the customer base for 1GigE handovers and the customer base for 10GigE handovers multiplied by the gradient.

$$P_{1GigE} = \frac{TC_{RSP}}{D_{1GigE} + r \times D_{10GigE}}$$

304. The annual price of a 1GigE handover is divided by 12 to calculate the monthly charge for a 1GigE handover connection.
305. The monthly 10GigE handover price is calculated by multiplying the monthly 1GigE handover price by the gradient.

Table 2 handover connection charges

	Year 1	Year 2	Year 3	Year 4	Year 5
1GigE capacity for Basic UBA service only	152.72	150.70	148.99	145.89	141.70
1GigE capacity for Enhanced UBA services only	152.72	150.70	148.99	145.89	141.70
STM1 capacity	152.72	150.70	148.99	145.89	141.70
STM4 capacity	152.72	150.70	148.99	145.89	141.70
10GigE capacity for Basic UBA service only	1,160.49	1,114.67	1,071.05	1,017.70	957.77
10GigE capacity for Enhanced UBA services only	1,160.49	1,114.67	1,071.05	1,017.70	957.77