ISSN 1178-2560
Decision Series
Project no. 13.01/15065

Public version

Section 30R review of Chorus' Unbundled Bitstream Access service

[2017] NZCC 4

Final determination

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Date: 14 March 2017

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Executive summary

Purpose of this review

1. The purpose of this review was to consider the non-price terms of the regulated unbundled bitstream access (UBA) service standard terms determination (STD) to ensure that the UBA STD remains 'fit for purpose'.

2. This paper sets out our final decisions.

Context of this review

3. 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 one million UBA connections in New Zealand (representing just over 80% of total fixed broadband connections supplied by Chorus as of 31 December 2016).

4. Since the introduction of the UBA STD, there have been a number of developments that are relevant to the regulated UBA service. The developments relevant to this review are:

    4.1 increasing end-user demand for bandwidth;

    4.2 the development of new next generation networks;

    4.3 unbundling of the copper local loop by access seekers;

    4.4 structural separation of Telecom (which has since changed its name to Spark);

    4.5 Chorus' proposed introduction, and our subsequent investigation, of Boost variants, which highlighted a lack of clarity around aspects of the regulated UBA service; and

    4.6 the determination of cost-based prices for the regulated UBA service.

5. The Ministry of Business Innovation and Employment (MBIE) has been progressing with a review of the Telecommunications Act 2001 (Act). In February 2017 MBIE published consultation documents on regulation of the copper network,[1] including proposals for the deregulation of Chorus' copper network inside areas where fibre is or becomes available, leaving Chorus free to continue operating it or close it down (subject to some consumer safeguards).

[1] MBIE "Telecommunications Act Review: Post-2020 Regulatory Framework for Fixed Line Services" (February 2017).

Overview of this paper

The questions we focused on in this review

6. Following consultation with Chorus and access seekers the questions we focused on when considering whether the UBA STD remained fit for purpose:

    6.1 which considerations we should have regard to in relation to what a 'fit for purpose' UBA service should look like;

    6.2 whether the regulated UBA service specifications should be amended;

    6.3 whether Chorus should be required to provide the regulated UBA service over VDSL where available and requested by an access seeker;

    6.4 whether Chorus should be able to withdraw the regulated UBA service over VDSL where it has already made it available to access seekers;

    6.5 whether a 10GigE handover connection service is necessary to support delivery of a 'fit for purpose' regulated UBA service, and if so how the price for that service should be determined;

    6.6 whether the process for introduction of new UBA variants, as set out in clause 10 of the UBA General Terms, should be amended;

    6.7 whether the UBA STD should be amended to provide greater transparency of Chorus' systems; and

    6.8 whether the service level terms (SLAs) should also be amended (eg faults, installations, response times and systems).

Our framework for undertaking this review

7. The Act requires us to make the determination that, in our view, best gives or is likely to best give effect to the purpose statement 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.

8. Consistent with section 18, our view is that a 'fit for purpose' regulated UBA service should:

    8.1 deliver an appropriate quality of service suitable for a range of general internet use;

    8.2 keep pace with end-users needs; and

    8.3 provide a platform on which access seekers can develop competing, differentiated retail services.

Updating the service specifications for the regulated UBA service

9. We are adding a new link utilisation service specification to the UBA Service Description that will require Chorus to maintain uncongested links on the local aggregation path between the DSLAM and the first data switch (LAP). We are setting a link utilisation threshold that requires average throughput (in Mbps), over any five minute period to never exceed 95% of the total throughput capacity available on a LAP.

10. We are also requiring Chorus to report monthly on peak utilisation of all LAPs used to provide the regulated UBA service, by reference to numbers of LAPs within a range of utilisation bands. Chorus must provide additional information for specific LAPs where utilisation exceeds 80%.

11. We considered whether this new obligation should apply across all technologies over which the regulated 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' ATM and other non-fibre LAPs (which currently serve approximately one percent of end-users).[2] Setting utilisation thresholds that are likely to impose upgrade requirements on Chorus' ATM and other non-fibre LAPs now, may lead to inefficient investment in areas where Government funding may be targeted.

12. Therefore, we have decided to exempt Chorus' ATM and other non-fibre LAPs from the 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 Chorus' ATM and other non-fibre LAPs 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 and other non-fibre LAPs by including these links in the monthly peak utilisation reporting obligation.

13. In taking a forward-looking perspective, we have considered our amendments to the service specification for the regulated UBA service against the backdrop of the ongoing migration to fibre. We consider that our decision to amend the service specifications for the regulated UBA service will not lead to inefficient outcomes in the context of the ongoing migration to fibre.

14. The UBA service is likely to remain an important service for some time, despite the roll out of UFB. The changes we are making to the service description are dynamic in nature and will only trigger investment by Chorus where utilisation levels threaten the quality of the UBA service. As migration to UFB frees up capacity, such investment requirements will diminish.

15. Furthermore, augmenting capacity on most LAPs is relatively simple process and the electronics can also be used to deliver UFB services.

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[2] Our references to Chorus' ATM and other non-fibre links refer to services provided over ATM and Ethernet over microwave radio.

16. We are also comfortable that our decisions are not likely to lead to inefficient investment in copper, even if copper is deregulated in UFB areas, as currently proposed by MBIE.

VDSL technology

17. Our decision is not to amend the UBA STD to specifically require Chorus to provide the regulated UBA service using VDSL. This is because the UBA STD already requires Chorus to deliver the regulated UBA service as an internet-grade full-speed/full-speed (FS/FS) service. In areas where Chorus has deployed VDSL, the requirement to offer a FS/FS service means that Chorus must provide the regulated UBA service over VDSL where requested by an access seeker. However, the decision whether to deploy VDSL in the first place remains with Chorus.

18. We have also decided not to amend the UBA STD to specifically allow for the retirement of legacy DSL technologies. In our view, it is open to Chorus to retire legacy technologies where there is an alternative that complies with the requirements of the UBA STD, such as the FS/FS requirement. The retirement of a particular DSL technology must be done in accordance with the standard access principles and the UBA service specifications. We consider that a proposal to retire DSL technology that leads to an end-user receiving a lower quality of service would not be consistent with the UBA STD.

Addition of 10GigE handover connection to the UBA STD

19. We are adding a 10GigE handover connection service to the UBA STD and we are capping the price for multiple 1GigE handover connections at the 10GigE handover connection price. We set the cost of installation of the 10GigE handover equal to the cost to the 1GigE handover installation.

20. We are also clarifying that the availability of the 10GigE handover connection service is limited to those handover sites where it is made available by Chorus – ie, Chorus decides if it will offer a 10GigE handover connection service or multiple 1GigE handover connections (the price capped at the 10GigE handover price) to access seekers.

21. We have 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 Act.

Process for introduction of new UBA variants

22. We are not amending the processes for the introduction of new commercial variants because we believe our changes to the UBA service description will help provide the necessary clarity on the regulated UBA service performance. The effect of the utilisation threshold requirements that we have added to the service specification is that, with the exception of the ATM and other non-fibre LAPs, Chorus is now obliged to provide sufficient capacity to keep pace with end-user demand.

23. We note that submitters generally have the view that it is unlikely that there will be much demand for commercial variants.

Transparency of Chorus operating systems and service level specifications

24. We have decided not to amend the UBA STD to update Chorus' current obligations regarding information available to access seekers for operational processes (for example, pre-qualification and fault reporting).

25. Clause 9 of the General Terms allows Chorus and access seekers to discuss and agree changes to the UBA Operations Manual 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.

26. However, we are including some additional consultation requirements to clause 9, which in our view will provide more transparency about Chorus' review process. This review by Chorus must happen every 24 months.

27. We have also decided not to amend Chorus' SLAs, because we have not received any evidence that caused us to believe that it would be appropriate to review them at this point in time.

28. In relation to the penalties applicable to Chorus in the case of a breach of the new utilisation threshold service specification, we accept that the current SLAs do not provide strong financial incentives on Chorus to comply with the new utilisation threshold service specification. However, we believe that we will be better positioned to address this matter once we have clarity about the outcomes of the ongoing review of the Act.

Chapter 1 – Introduction

29. We have reviewed the UBA STD under section 30R of the Telecommunications Act 2001 (Act). This review has focused on the non-price terms of the UBA STD to ensure that the UBA service is 'fit for purpose'. This review has focused on the non-price terms of the UBA STD as we completed a pricing review determination in December 2015.[3]

30. This paper sets out our final decisions on this section 30R review.

Structure of this final decision

31. This Chapter sets out the structure of our final decision and our process.

32. Chapter 2 describes the regulated UBA service, and sets out the relevant background and our reasons for undertaking this review.

33. Chapter 3 sets out the relevant considerations for this section 30R review.

34. Chapter 4 sets out our final decisions on the UBA service specifications.

35. Chapter 5 sets out our final decision on the treatment of VDSL in the UBA STD.

36. Chapter 6 sets out our final decisions on UBA handover connections.

37. Chapter 7 sets out our final decision on the process for the introduction of new UBA variants, as set out in clause 10 of the UBA General Terms.

38. Chapter 8 sets out our final decisions on the transparency of Chorus' systems and service level terms (SLAs).

39. Attachment 1 sets out amendments to the UBA STD.

40. We have also attached an updated version of the UBA STD, including:

    40.1 UBA STD General Terms;

    40.2 UBA STD Schedule 1 Service Description; and

    40.3 UBA STD Schedule 4 Operations Manual.

Our process for this section 30R review

41. 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

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

standard terms determination or vary, add, or delete any of its terms", if we consider it necessary to do so after conducting a review.[4]

42. Our notice starting this section 30R review outlined a high-level scope that focused 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.[5]

43. These are the process steps we have taken:

43.1 We gave public notice of the commencement of this review on 2 April 2015.[6]

43.2 We issued a process and issues paper on 7 April 2016.[7]

43.3 We received submissions on our process and issues paper on 5 May 2016.[8]

43.4 On 15 June 2016 Commission staff conducted a workshop with industry participants. The purposes were:

43.4.1 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

43.4.2 to help us understand the changes that participants consider necessary to make the UBA STD 'fit for purpose'.[9]

43.5 On 1 July 2016 we received cross-submissions on our process and issues paper.

43.6 On 5 September 2016 we requested further information from Chorus regarding all of Chorus' LAP links (including ATM links).

43.7 On 9 November 2016 we published our draft decision.[10]

43.8 On 30 November 2016 we received submissions on our draft decision.

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4 Section 30R(1) and (2) of the Act.

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

6 Available at https://gazette.govt.nz/notice/id/2015-au2007. We deferred the process and issues paper until completion of the UBA and UCLL final pricing principle determinations.

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

8 Available at 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/.

9 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).

10 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016).

43.9 On 15 December 2016 we received cross-submissions on our draft decision.

43.10 We will give public notice of the result of this review after its publication.

Chapter 2 – The regulated UBA service, the relevant background and why we undertook this section 30R review

45. This chapter sets out the regulated UBA service, the relevant developments to the regulated UBA service, and why we undertook this section 30R review.

The regulated UBA service

46. 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 one million UBA connections in New Zealand (representing just over 80% of total fixed broadband connections supplied by Chorus as of 31 December 2016). It is a designated access service described in the Act as follows:[11]

> **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

47. The UBA service has two main components:

    47.1 the unbundled copper local loop (UCLL) component represents the network infrastructure used to connect consumers' homes and workplaces to Chorus' local telephone exchange buildings.

    47.2 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 First Data Switch (FDS) required to provide the UBA service over Chorus' UCLL network.

48. 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).[12] At that time, Telecom was the access provider of the regulated UBA

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

12 Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007). This standard terms determination 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".

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.

49. 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.[13] We concluded:[14]

> 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.

50. In our 2016 review of Schedule 1 services, we concluded that the regulated 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.[15]

Relevant background to this 30R review

51. Since the introduction of the UBA STD there have been a number of developments that are relevant to the regulated UBA service. The developments relevant to this review are:

    51.1 increasing end-user demand for bandwidth;

    51.2 the development of new next generation networks;

    51.3 unbundling of the copper local loop by access seekers;

    51.4 structural separation of Telecom;

    51.5 Chorus' proposed introduction, and our subsequent investigation, of Boost variants, which highlighted a lack of clarity around some aspects of the regulated UBA service;

    51.6 the determination of cost-based prices for the regulated UBA service; and

    51.7 MBIE's review of the Act, in particular the recent proposal to deregulate parts of Chorus' copper network.

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

14 Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007) at [106].

15 Commerce Commission "Review of Designated and Specified Services under Schedule 1 of the Telecommunications Act 2001 - Reasons for final decision on whether to commence an investigation under clause 1(3) of Schedule 3 of the Telecommunications Act 2001" (30 June 2016) at [101].

Increasing end-user demand for bandwidth

52. 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.[16] 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.[17]

53. In Chorus' 2016 annual report it noted that in June 2016 the average household data consumption was approximately 100 GB per month (with average throughput per end-user reaching 660kbps).[18] By December 2016, Chorus reported average monthly data consumption had reached 132 GB per household (114GB per month for copper services, and 206GB per month for fibre).[19]

The development of new next generation networks

54. 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 initially to 75% of New Zealand's population.[20]

55. 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.

56. 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.[21] A request for proposal was issued for the second phase of the RBI in October 2016 and it is expected that the first contracts will be awarded by June 2017.[22] On 26 January 2017, the Government announced that the UFB initiative will be extended to provide fibre to 85% of New Zealand's population by 2024.[23]

57. 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.

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16 Commerce Commission "Annual Telecommunications Monitoring Report 2015", page 22.
17 Ibid, page 23.
18 Chorus Annual Report 2016, page 3.
19 Chorus Investor Presentation FY17 Half Year Result, page 26.
20 Partial Government funding for the period between construction of the new network and migration of end-users to it assisted the deployment.
21 See https://www.beehive.govt.nz/release/govt-launches-next-stage-broadband-rollout.
22 See https://www.beehive.govt.nz/release/next-phase-flagship-rural-connectivity-rollout-launched.
23 See https://www.beehive.govt.nz/release/ultra-fast-broadband-extended-151-towns

Unbundling of the copper local loop by access seekers

58. Unbundling is where an access seeker purchases the UCLL (or unbundled sub-loop (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.[24] Telecom faced increasing competition at the retail level (where end-users could switch to competitors who had started to unbundle exchanges).

59. 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.

60. In more recent years, the threat from unbundling has been lower due to cabinetisation and to the increasing focus on fibre. The 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 June 2016, and further to 98,000 lines by December 2016.[25]

61. We expect this trend will continue as the UFB programme proceeds, access seekers increasingly focus on fibre services and the possible withdrawal of UCLL in parts of the copper network post-2020, as explained later in this chapter. As competitors have not been investing in unbundling to the same extent, the competitive pressure on Chorus to continue investing in the UBA service has changed since 2007.

Structural separation of Telecom

62. The Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011 (Amendment Act) introduced a number of changes that are relevant to the UBA service, in particular:

    62.1 Chorus was to structurally separate from Telecom, and became the access provider for the regulated UBA service. Structural separation occurred on 1 December 2011;

    62.2 Chorus was prohibited from providing retail services, and entered into undertakings to provide wholesale services on a non-discriminatory basis;[26]

    62.3 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;

    62.4 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

[24] Commerce Commission "Annual Telecommunications Monitoring Report 2015", page 6.

[25] Chorus Half Year Report (for the six months ended 31 December 2016), page 5.

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

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 any price drop and provide them with time to adapt to the new pricing principle;[27]

62.5 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.[28]

63. Chorus' incentives to ensure the regulated UBA service keeps up with changing end-user demands 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 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.

64. 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 the competitive threat provided by unbundlers and alternative network providers.

Chorus' 2014 proposed changes to the UBA service

65. On 14 May 2014, Chorus proposed changes to the regulated UBA service when it announced new commercial UBA variants, known as the 'Boost' variants.[29] These proposed changes highlighted a lack of clarity around some of the technical and functional requirements of the UBA STD service specification. 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.

66. 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.[30]

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27 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].

28 Section 76 of the Amendment Act.

29 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)).

30 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/.

67. 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.[31] [32]

68. We suspended our investigation after Chorus put the proposed changes to the regulated UBA service on hold.[33] 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.

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

69. 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.

70. Following the 2011 changes to the Act, we set the price for the UBA increment by international benchmarking under the initial pricing principle (IPP)[34] and updated the benchmark data set for the UCLL price.[35] We started the UCLL and UBA final pricing principle (FPP) processes after receiving applications for pricing reviews, following our benchmarking determinations.[36] [37]

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31 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].

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

33 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.

34 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).

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

36 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).

37 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).

71. 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.[38] [39] 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).

72. 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.

73. 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.

MBIE's review of the Act

74. MBIE is conducting a review of the Act to assess "whether the current regulatory framework for telecommunications in New Zealand is the optimal one for competition, investment and innovation after 2020".[40]

75. MBIE recently published consultation documents proposing the deregulation of Chorus' copper network inside areas where fibre is or becomes available, leaving Chorus free to continue operating it or close it down (subject to some consumer safeguards).[41]

Why we are undertaking this review

76. In the context of these developments, we conducted this section 30R review of the UBA STD to ensure that it continues to be 'fit for purpose'. Our review was limited to:

    76.1 reviewing the service specifications for the regulated UBA service; and

    76.2 clarifying some of the UBA STD service requirements.

77. The first stage of our process for this section 30R review involved the identification of the relevant issues. This first stage included our process and issues paper,

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

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

40 MBIE "Telecommunications Act review: Public Questions and Answers", page 1.

41 MBIE "Telecommunications Act Review: Post-2020 Regulatory Framework for Fixed Line Services" (February 2017).

submissions on the process and issues paper, an industry workshop, and cross-submissions on the process and issues paper.

78. A primary consideration at this first stage was the role of the regulated UBA service as a way of informing what a 'fit for purpose' service should look like going forward.

79. Following the first stage of this review, the questions we focused on in this review were:

79.1 which considerations we should have regard to in relation to what a 'fit for purpose' UBA service should look like;

79.2 whether the regulated UBA service specifications should be amended;

79.3 whether Chorus should be required to provide the regulated UBA service over VDSL where available and requested by an access seeker;

79.4 whether Chorus should be able to withdraw the regulated UBA service over VDSL where it has already made it available to access seekers;

79.5 whether a 10GigE handover connection service is necessary to support delivery of a 'fit for purpose' regulated UBA service, and if so how the price for that service should be determined;

79.6 whether the process for introduction of new UBA variants, as set out in clause 10 of the UBA General Terms, should be amended;

79.7 whether the UBA STD should be amended to provide greater transparency of Chorus' systems;

79.8 whether the service level terms (SLAs) should also be amended (eg faults, installations, response times and systems).

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

80. This chapter outlines the framework under which we conducted this section 30R review of the UBA STD non-price terms.

81. In summary:

    81.1 The Act requires us to make the determination that, in our view, best gives or is likely to best 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 this process.[42]

    81.2 Consistent with section 18, we consider that a 'fit for purpose' regulated UBA service should provide an appropriate quality of service, suitable for a range of general internet use, keep pace with end-users needs and provide a platform on which access seekers can develop competing, differentiated retail services.

    81.3 In applying this concept of a 'fit for purpose' service, to best give effect to section 18 in this review:

        81.3.1 we consider Chorus' varied incentives to invest in the regulated UBA service (in particular as a consequence of competition between Chorus and alternative network operators); and

        81.3.2 we are informed by the other legal requirements of the Act, such as clause 6(1a) of Schedule 1, the pricing principle of TSLRIC and the relativity between the UBA and UCLL services.

Section 18 is a mandatory consideration and we considered it throughout our process

82. 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.

83. 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

[42] 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].

> 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.

84. 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)".[43] 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.

85. Section 18(2) relates to efficiencies that "will result" or are outcomes of our decision-making. We treat "efficiencies" in section 18(2) as referring to static (allocative and productive) and dynamic efficiencies. This is consistent with the High Court's comments regarding our IPP determination, where Kós J stated that it was "common ground that "efficiencies" refer to both static and dynamic efficiencies".[44]

86. Section 18(2A) was inserted into the Act following Telecom's decision to participate in the UFB initiative.[45, 46, 47] Our view is that a determination that undermines incentives to undertake efficient investment would place future innovation at risk, and would be likely to undermine competition over the long-term.

87. 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 on investment and innovation in capital intensive new telecommunications services.

Relativity between the UCLL service and the UBA service

88. 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.

89. 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 found that relativity guided us less towards attempting to promote unbundling, and more towards the efficiency aspects of the section 18 purpose statement. We

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

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

45 *Chorus* v *Commerce Commission* [2014] NZCA 440 at [16].

46 Telecommunications (TSO, Broadband, and Other Matters) Amendment Bill 2010 (250-2) (select committee) at 1–2.

47 Telecommunications (TSO, Broadband, and Other Matters) Amendment Act 2011 (the 2011 Act).

concluded that we should be neutral in promoting unbundling and allow for unbundling to occur to the extent that it is efficient.[48]

90. Equally, in this section 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.

A 'fit for purpose' regulated UBA service should provide an appropriate quality of service, suitable for a range of general internet use, keep pace with end-users needs and provide a platform on which access seekers can develop competing, differentiated retail services

91. A 'fit for purpose' regulated UBA service should provide an appropriate quality of service, suitable for a range of general internet use, keep pace with end-users needs and provide a platform on which access seekers can develop competing, differentiated retail services.

92. 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 or streaming video. The regulated UBA service should be able to support access seekers to develop competitive retail broadband services that meet these differing uses.

93. 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.

94. Our view is aligned with what would be expected if the market in which the UBA service is supplied was 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.[49] 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 would be expected to support similar outcomes at the retail level for end-users.

95. Our view is also consistent with the scheme of the Act. Access principle 2 under clause 5 of Schedule 1 to the Act (as incorporated into the Schedule 1 description by clause 2.3 of the UBA STD) states that "the service must be supplied to a standard

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

49 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. See http://www.vodafone.co.nz/media-centre/press-and-media-releases-2015/. On 20 October 2016, Vodafone announced its FibreX pricing plans, offering up to gigabit speeds on its DOCSIS 3.1 network. See http://www.vodafone.co.nz/press-release/vodafone-unveils-competitive-pricing-and-commits-to-three-day-connection-of-fibrex-services-in-wellington-kapiti-and-christchurch/.

that is consistent with international best practice". In our view, this is consistent with a network that keeps pace with growing demand.

How our thinking has evolved

96. 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 how we thought about 'fit for purpose'. 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.[50]

97. In that 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 should not be static and should be capable of evolving with end-users' requirements. We noted that this approach was 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).[51]

98. 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: a low-specification 'baseline' service; mid-specification 'average' service'; or a high-specification 'advanced' service.

99. 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.[52]

100. Submitters had different views regarding a mid-specification 'anchor' regulation approach:

    100.1 Vodafone agreed with us, submitting 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";[53]

    100.2 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

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

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

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

53 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.

backhaul"), and that anticipates developments as technology and end-user demand changes";[54]

100.3 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";[55]

100.4 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;[56] and

100.5 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.[57]

101. In cross-submissions, parties generally agreed that the regulated UBA service should be specified to evolve over the regulatory period to meet the changing needs of end-users.[58] Further:

101.1 some parties highlighted the general agreement in relation to the 'fit for purpose' concept;[59] [60]

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54 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 2.

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

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

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

58 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 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".

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

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

101.2 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;[61] and

101.3 Chorus stressed its commitment to meet growth with a "congestion free network", saying "The network is designed to meet bandwidth needs at busy times in order to maintain this headroom."[62]

102. Our thinking in relation to how we consider the role of the regulated UBA service evolved during our consultation process. As we noted in our draft decision, there were differing interpretations of what an anchor approach would mean for the regulated UBA service, and we agreed with submitters that the concept of 'anchor regulation' was not necessarily helpful for this process.[63]

103. Our draft decision was that in considering the requirements of the regulated UBA service it is appropriate to focus on how it is used by access seekers to provide retail broadband services, in a way that keeps pace with end-users needs and can be used by access seekers to provide differentiated retail broadband products. In this regard, we considered 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.[64]

104. We noted in our draft decision that we consider that this approach is consistent with the original UBA STD, where we stated that "…there is a trend towards focussing on services for end-users that a broadband connection can support, rather than the specifications of the broadband service itself".[65] [66]

105. 2degrees, Chorus, Spark, InternetNZ and Trustpower agreed with the concept and definition of 'fit for purpose',[67,68,69,70,71] and a number of parties have submitted that

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

62 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].

63 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [91].

64 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [79]-[94].

65 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [93].

66 Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007) at [71].

67 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Submission to the Commerce Commission." (30 November 2016) at page3.

68 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [7].

69 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [2].

the current service levels provided by Chorus allow them to do this and a 'fit for purpose' STD should capture this.

106. We have not received any submission disagreeing with our view in our draft decision.

107. Consistent with section 18, our final decision is that a 'fit for purpose' regulated UBA service should provide an appropriate quality of service, suitable for a range of general internet use, keep pace with end-users needs and provide a platform on which access seekers can develop competing, differentiated retail services.

108. We consider this definition of 'fit for purpose' is also 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.[72]

In applying this concept of a 'fit for purpose' UBA service, we have considered Chorus' varied incentives to invest and innovate

109. Having defined what a 'fit for purpose' regulated UBA service looks like, we have considered what changes are required to the UBA STD, taking into account Chorus' varied incentives to invest and innovate in the regulated UBA service. Incentives are important to the extent that they influence Chorus' behaviour, including Chorus' investment decisions.

110. Chorus is likely to face a range of incentives relating to investment in the regulated UBA service, including:

    110.1 incentives to reduce costs by deferring or avoiding investment in additional capacity, given the regulated price cap. This may potentially increase congestion and compromise the quality of the regulated UBA service;

    110.2 incentives to invest and upgrade the regulated UBA service, particularly where Chorus faces some competitive pressure to do so. Chorus' incentives to invest in and improve the UBA network will be different in different parts of the country, being limited in areas where end-users have no competitive alternatives.

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70 InternetNZ "Section 30R review of Chorus' UBA Service. InternetNZ Submission." (30 November 2016) at [4.1].

71 Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [6.1.2]-[6.1.4].

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

How our thinking has evolved

111. In our process and issues paper we noted that we considered it important that Chorus is appropriately incentivised and compensated for investment in upgrades to the regulated UBA service over time.[73]

112. We noted 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.[74]

113. 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.[75] In its view, Chorus has ongoing incentives in those areas to ensure that the network remains 'fit for purpose'.

114. At the industry workshop, Chorus expressed concern that the UBA STD should not be used to force inefficient investment in its network.[76] In cross-submissions on the process and issues paper, Chorus noted that it already faced incentives to invest in the replacement of its network, including: its commitment to deliver better broadband to New Zealand; network development from other infrastructure providers, such as Vodafone through the RBI initiative; and its desire to minimise its costs relative to the regulated price.

115. 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.[77]

116. In its cross-submission on the process and issues paper, 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.[78]

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

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

75 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.

76 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].

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 [25].

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

117. In our draft decision we considered whether Chorus' incentives were sufficient for the regulated UBA service to keep pace with end-users' needs, and support investment in competitive retail services.[79]

118. We did not receive any submissions specifically commenting on our view expressed in our draft decision.

119. We continue to hold the view that it is appropriate to consider Chorus' incentives to invest in the regulated UBA service in applying the concept of a 'fit for purpose' UBA STD. As part of this, we have considered the strength and direction of Chorus' range of incentives as follows.

120. The price cap for the regulated UBA service provides Chorus with an incentive to become more efficient by reducing the costs of supplying the regulated UBA service. However, without appropriate non-price terms, Chorus' incentives to reduce costs by deferring or avoiding investment in additional capacity could lead to increased congestion and reduced quality for the regulated UBA service.

121. By contrast, in areas where Chorus faces competition such as 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. Also, while the development of mobile services may have a more complementary relationship with fixed-line services, 4G, Vodafone's cable network and FWA services may also represent competitive alternatives to Chorus' fixed network, providing other alternatives for end-users.

122. However, in areas where end-users do not have competitive alternatives, there are limited incentives for Chorus to further invest in upgrades to the regulated UBA service (as distinct from cost saving investment).

We are not providing Chorus with additional incentives (on the top of Chorus' ability to set prices outside the regulated price cap) to develop commercial UBA variants

123. The Act anticipates that there will be opportunities for Chorus to offer commercial UBA variants. We support the introduction of commercial UBA variants where there is demand for such variants and where the regulated UBA service is not degraded. Chorus currently has the incentive and the ability to develop such commercial variants where there is demand, and as a result, we do not consider that any amendments to the UBA STD are required as part of this review.

124. In our process and issues paper we 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. Submitters answers were "no" because:

    124.1 we should "let competition between competing infrastructures play out, rather than specifically 'incentivising' Chorus to develop commercial UBA

[79] Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [99].

variants, with the resulting risk of distortion in the retail market to a legacy service";[80]

124.2 Chorus' incentives to invest have already been factored into the UCLL and UBA prices and provided through the UFB and RBI subsidies;[81] and

124.3 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'.[82] [83]

125. At the industry workshop, access seekers seemed to have the view that there is limited scope for the development of commercial services.[84]

126. Having concluded that the development of commercial UBA variants by Chorus was not a problem, our draft view was that it was 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.[85] We also noted that submitters generally have the view that it is unlikely that there will be much demand for commercial variants.[86]

127. We did not receive further submissions on this matter.

128. Our view remains that Chorus currently has the incentive and the ability to develop such commercial variants where there is demand, and as a result, we do not consider that any amendments to the UBA STD are required as part of this review.

Legal requirements inform this 30R review, including TSLRIC considerations to the extent relevant and the approach in the FPP and the STD should be broadly consistent

129. We are informed by the other legal requirements of the Act, such as:

129.1 clause 6(1)(a) of Schedule 1, which states that "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"; and

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80 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.

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

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

83 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 3.

84 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].

85 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [112].

86 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].

129.2 the pricing principle of TSLRIC in the Act, which required us to determine the forward-looking costs over the long run to compensate Chorus to provide the regulated UBA service.

130. We expect that the approach in the FPP and the UBA STD should be broadly consistent, meaning that the regulated UBA service should evolve and result in performance approaching the one modelled in the FPP over time. The UBA STD should not require Chorus to provide a level of service beyond that which the TSLRIC model compensates it for.

131. The TSLRIC prices for Chorus' copper-based services were determined against a backdrop of much of its copper network being overbuilt by the UFB initiative before the end of the economic life of the copper assets. Therefore, in our view, there is no direct link between TSLRIC revenues and the UBA service standard that should be required immediately, particularly at the high-cost edge of the network. In all cases, our primary consideration is section 18 and while this is informed by the TSLRIC pricing principle, section 18(2) also requires us to consider the efficiency of the investment involved.

132. We consider that the TSLRIC considerations are particularly relevant for our UBA handover connection final decision where we set a price for the 10GigE handover.

Background – the FPP process

133. We set updated prices for Chorus' UBA service in December 2015 using the FPP as set out in the Act.[87] The Act provides a definition of TSLRIC which required us to determine the forward-looking costs over the long run of the UBA increment.

134. Our approach to implementing TSLRIC for the regulated UBA service was to estimate the forward-looking, long run, efficiently incurred, incremental costs that a hypothetical efficient operator (HEO) would incur in building and operating a new network using modern equivalent assets, and valuing inputs using current prices.[88, 89]

135. 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

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

88 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).

89 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]).

New Zealand context and that the HEO concept was the best tool for ensuring that appropriate incentives are set.[90]

136. 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.

137. 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.[91]

How our thinking has evolved

138. 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.[92]

139. 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.[93]

140. 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:

    140.1 Spark acknowledged the difficulties in working with a hypothetical modelled network,[94] 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;[95]

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90 Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [228].

91 Commerce Commission ""Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" at [161] and [162].

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

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

94 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].

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

140.2 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";[96]

140.3 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";[97]

140.4 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"[98]; and

140.5 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 resetting the service standards through the s 30R review and then re-visiting the FPP price.[99]

140.6 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";[100]

140.7 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".[101]

141. In our draft decision we considered that the TSLRIC considerations should inform this section 30R review to the extent relevant, and that the approach in the FPP and the

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96 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 3.

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

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

99 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].

100 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].

101 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.

STD should be broadly consistent (eg the regulated UBA service should evolve over time).[102]

142. We have not received submissions or evidence supporting a change to our view expressed in the draft decision. We maintain that view as expressed in the paragraph above in this final decision.

143. We expect that the approach in the FPP and the UBA STD should be broadly consistent, meaning that the regulated UBA service should evolve and result in performance approaching the one modelled in the FPP over time. The UBA STD should not require Chorus to provide a level of service beyond that which the TSLRIC model compensates it for.

144. The TSLRIC prices for Chorus' copper-based services were determined against a backdrop of much of its copper network being overbuilt by the UFB initiative before the end of the economic life of the copper assets. Therefore, in our view, there is no direct link between TSLRIC revenues and the UBA service standard that should be required immediately, particularly at the high-cost edge of the network. In all cases, our primary consideration is section 18 and while this is informed by the TSLRIC pricing principle, section 18(2) also requires us to consider the efficiency of the investment involved.

145. We consider that the TSLRIC considerations are particularly relevant for our UBA handover connection final decision where we set a price for the 10GigE handover.

[102] Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [125].

Chapter 4 – UBA service specifications

Purpose

146. In this chapter we assess whether the regulated UBA service specifications should be amended.

Our final decisions

147. Our final decisions are to:

147.1 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 any five minute period, because:

147.1.1 a 'fit for purpose' regulated UBA service will reflect an appropriate quality of service that keeps pace with end-user needs, suitable for a range of general internet use; and

147.1.2 this is best achieved by a requirement for Chorus to maintain an uncongested network.

147.2 provide an exemption from the new utilisation threshold for Chorus' ATM and other non-fibre LAPs. We will consider whether a new section 30R review is required when a final decision regarding phase 2 of the RBI is made.

147.3 require the following reporting obligations on all of Chorus' regulated UBA LAPs:

147.3.1 Percentage utilisation of each UBA LAP;

147.3.2 Chorus' network plans for LAPs exceeding 80% capacity where upgrades have been approved.

148. Attachment 1 sets out our drafting amendments to the UBA STD.

We are adding a new LAP utilisation threshold specification to the UBA Service Description

149. As set out in Chapter 3, a 'fit for purpose' regulated UBA service should provide an appropriate quality of service, suitable for a range of general internet use, keep pace with end-user needs and provide a platform on which access seekers can develop competing, differentiated retail services.

150. While the FS/FS requirement of the UBA STD remains appropriate, we consider that the other service specifications are not sufficient to ensure that the regulated UBA service remains 'fit for purpose'.

151. The regulated UBA service's parameters are not specifically defined – they are either open (ie, xDSL) or defined as minimums (ie, throughput greater than 32kbps per user). In the process and issues paper we stated that this had created a lack of clarity around what the parameters of the regulated UBA service are (and are not).

Accordingly, our view was that it would be appropriate to clarify the technical and functional requirements of the service.[103]

152. In submissions on our process and issues paper, access seekers agreed that the UBA STD should be updated to capture what Chorus is providing today and ensure that continues to evolve going forward. For example:

152.1 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.[104]

152.2 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.[105]

152.3 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.[106]

152.4 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.[107]

153. In our draft decision, we considered two options for updating the service specifications on the LAP to reflect a 'fit for purpose' regulated UBA service:

153.1 adding a new service metric that requires Chorus to maintain uncongested links on the LAP between the DSLAM and FDS; and

153.2 updating the minimum throughput service metric, by replacing the 32kbps minimum throughput requirement with an updated number that more accurately reflects bandwidth use by end-users.

154. Our draft decision was to add a new service metric that requires Chorus to maintain uncongested links on the LAP between the DSLAM and FDS.[108] We proposed doing

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

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

105 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (5 May 2016) at page 1.

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

107 Vodafone "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.

108 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [128.1].

this by adding a new utilisation threshold service specification to the UBA Service Description. We also said the following:

154.1 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 UBA-based broadband services, and provides appropriate signals to Chorus to invest in the network where needed.

154.2 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 an uncongested regulated UBA service provides a platform on which access seekers can develop competing, differentiated retail services that meet evolving consumer demand.

154.3 The minimum throughput option might lead to 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.[109]

155. Chorus and access seekers supported our draft decision to add a utilisation threshold to the UBA Service Description.[110]

156. InternetNZ, however, disagreed with our proposed approach. While recognising that a minimum throughput approach would likely lead to inefficient outcomes, InternetNZ highlighted that it called for a combined approach – a FS/FS service with a minimum throughput.

157. Our view remains that a utilisation threshold is the best means of ensuring the UBA service that keeps pace with changing end-user needs. This is because it is a dynamic service specification requiring a LAP's capacity to evolve with end-user demand. Chorus is required to augment capacity only where end-user demand requires it.

158. We do not consider that our decision to amend the service specifications for the regulated UBA service will lead to inefficient outcomes in the context of the ongoing migration to fibre.

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109 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [156].

110 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [14]; Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [8]; Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [5]; 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Submission to the Commerce Commission." (30 November 2016) at page2; Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [2.1.1]; and Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [9].

158.1 The changes that we have made to the service specification for the regulated UBA service ensure that the service specification is more dynamic and evolves in response to changing demand. In order to meet the new service specification, Chorus will only be required to invest in additional capacity on a LAP where utilisation reaches a level that threatens the quality of the UBA service.

158.2 The regulated UBA service is likely to remain an important service for some time. As noted in Chapter 2, the UBA service currently covers approximately 80% of broadband connections supplied by Chorus.

158.3 Although the number of UBA lines is declining, the UBA service will remain important, particularly in areas beyond the reach of the UFB initiative. The UFB2 footprint of 85% is geographically focused and will only be reached by 2024.

158.4 We note that we have been undertaking this section 30R review during a period when the UFB deployment and migration to fibre-based services has been progressing. Within this context, parties have generally been supportive of updating the service specification for the regulated UBA service.

158.5 In particular, we note Chorus' own commitment to "managing a congestion free network"[111] and "to invest to meet that growth with a "no congestion" philosophy – the vast majority of consumers experience a congestion free broadband network".[112]

158.6 Chorus has indicated that augmenting capacity on the majority of LAPs is a [ ]**CNZCI.**[113]

158.7 We note that such investment on the electronics may also be used for UFB-based services.

158.8 We expect that ongoing migration to fibre is likely to "free up" capacity in the copper network, which means that the level of investment in the copper network is likely to be reduced over time.

159. We are also comfortable that our decisions are not likely to lead to inefficient investment in copper, even if copper is deregulated in UFB areas, as currently proposed by MBIE.

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111 Chorus "Submission for Chorus in response to Section 30R review of the UBA standard terms determination Process and issues paper" (7 April 2016) at [6.2].

112 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [8].

113 Chorus response to Commission request for additional information for section 30R review of the UBA STD.

160. We continue to consider that an updated minimum throughput requirement (including where it is combined with a utilisation threshold) might lead to inefficient outcomes. This is because it will require Chorus to invest in additional capacity regardless of end-user demand for bandwidth. It could therefore result in Chorus incurring additional costs, without providing any noticeable benefit to end-users.

161. While both Chorus and access seekers supported adding a utilisation threshold to the regulated UBA service description, access seekers disagreed with our proposed levels. We discuss the metrics we have set for the utilisation threshold in the following section.

Congestion on local aggregation paths must not exceed 95% measured over any five minutes

162. Having decided to adopt the utilisation threshold approach, we have set an appropriate threshold which utilisation on a LAP cannot exceed.

163. In our draft decision, we proposed a threshold of 95% measured over 15 minutes.[114] In reaching our draft view, we considered:

163.1 submissions we had received in prior reviews on how the industry manages capacity consistent with "general commercial practice";[115] and

163.2 the balance between the risk of end-users experiencing network congestion against the risk of inefficient levels of spare capacity.

164. In terms of "general commercial practice" we noted that:

164.1 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;[116]

164.2 Spark had previously submitted that it applies a network capacity policy of adding capacity to links when usage hits 85%;[117] and

164.3 during the FPP process, Chorus stated that best practice suggests that additional capacity should be added when a link has reached 85% utilisation.[118]

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114 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [151].

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

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

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

118 Chorus "Submission in response to Draft Pricing Review Determinations for Chorus' Unbundled Copper Local Loop and Unbundled Bitstream Access Services" (20 February 2015) at [540].

165. We also noted in our draft decision that Crown Fibre Holdings (CFH) is consulting on utilisation thresholds for the UFB network, and that we considered it would be appropriate to set consistent specifications across the UBA and UFB networks.

166. Following our draft decision, CFH released its proposed service levels for the UFB network. In its paper, CFH proposed setting a 95% utilisation threshold over a five minute period. CFH also proposed decreasing the utilisation threshold in 5% increments where the utilisation level does not support other service levels for frame loss, frame delay, and frame delay variation.

167. In response to our draft decision, we received several submissions on both our proposed utilisation threshold and the measurement period:

    167.1 Access seekers generally supported an 85% utilisation threshold measured over either 5 or 15 minutes.

        167.1.1 Spark noted that it operates its network so that it triggers a project to augment capacity when link utilisation reaches 70% to ensure that no link exceeds 85%.[119]

        167.1.2 Vocus submitted that an 85% threshold was appropriate – "if the limit is set too high – 95% - then it risks driving costs into RSP's through customer complaints and churn as consumers get degraded performance due to link congestion".[120]

        167.1.3 Vodafone recognised that the choice of threshold would be a judgement call, but submitted that a lower threshold, such as 85%, would have a significant impact on the amount of time the network faces congestion.[121]

        167.1.4 Trustpower supported the 95% threshold but measured over five minutes.[122]

    167.2 Chorus agreed with our draft decision to set a 95% threshold over 15 minutes. Chorus noted that the 95% threshold was a failsafe and would be used to plan investment such it is not reached.[123] Chorus also reiterated its preference for an exceptional circumstances exception, proposing that the exception is limited to "events beyond our reasonable control, and which

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119 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [12].

120 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Cross Submission to the Commerce Commission" (15 December 2016) at [16].

121 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [8].

122 Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [3.1.1].

123 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [15].

Chorus could not have avoided by exercising reasonable care at a reasonable cost".[124]

168. The information we have received during our consultation process suggests there is a range of industry practice regarding utilisation targets. Previous information provided by access seekers suggested that they invested in the 80-85% utilisation range. Submissions on our draft decision suggest that access seekers might initiate investment as early as 70%.

169. Spark noted that there is no bright line utilisation point at which end-user performance starts to deteriorate.[125] However, it referenced a Chorus white paper which suggested that end-users may notice some degradation when utilisation reaches 90-95%. The paper also noted that Chorus never intends the network to enter that space.

170. Our view remains that the 95% threshold is an appropriate level. While we expect that Chorus will prudently monitor and invest for expected traffic growth to avoid reaching levels where the threshold is breached and end-user experience is degraded, we recognise that traffic volumes on its network are largely outside of its control. Therefore, we consider that setting a higher utilisation of 95% provides appropriate headroom to allow for unexpected spikes in traffic. Given we are setting the threshold at 95% rather than the lower levels proposed, we consider that an "exceptional circumstances" clause is not necessary to protect against unexpected spikes in traffic.

171. To further minimise the risk of end-users experiencing sustained periods of congestion, we have reduced the measurement period to five minutes.

172. In submissions on our draft decision, access seekers supported a five minute reporting period.[126] Chorus accepted that a five minute period would improve reporting precision, but would be no more accurate in identifying congestion. Chorus considered that it will therefore "make no difference to our investment planning or consumer experience".[127]

173. We recognise that traffic is statistically variable, so there will always be periods of time where there is some spare capacity on a given LAP. Since a LAP can never be more than 100% utilised, average utilisation will inevitably be less than 100%. Averaging results over a longer period simply provides for more 'headroom' to disguise periods of congestion, increasing the risk that end-user experience is affected.

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124 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [37].

125 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [9].

126 2degrees submission, page 4; Trustpower submission at [2.1.1]; Vodafone submission at [10]

127 Chorus "Cross-submission on Draft Determination in Section 30R review of Chorus' Unbundled Bitstream Access Service" (15 December 2016) at [15].

174. Therefore, in our view a five minute measurement period is more consistent with our principle of ensuring an uncongested network, and ultimately supporting a 'fit for purpose' regulated UBA service.

175. We also note that the five minute period is consistent with the measurement period set by CFH for the UFB network.

We are excluding the ATM networks and other non-fibre LAPs from the new LAP utilisation threshold service specification

176. Unlike Chorus' Ethernet based network, LAPs on its ATM network and other non-fibre LAPs are to a large extent at, or nearing, capacity. In our process and issues paper, we sought views 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.[128]

177. In submissions on our process and issues paper, we received a range of views regarding how we should treat Chorus' ATM-based network.

    177.1 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 30O provided us with the power to specify timeframes for Chorus to phase out the ATM network.[129]

    177.2 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.[130]

    177.3 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.[131]

    177.4 Chorus suggested that we exclude ATM and other non-fibre links from any proposed utilisation requirements.[132]

178. 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

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128 Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2015) at [90].

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

130 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.

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

132 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]

technology.[133] Chorus submitted that it would continue to upgrade its ATM network where efficient to do so.[134]

179. Our draft decision was to exempt Chorus from maintaining uncongested links on its ATM network, because:[135]

179.1 Setting upgrade requirements on Chorus now may lead to inefficient investment in areas where Government funding may be targeted. There is a tender process underway for phase two of the RBI.[136] Phase two of the RBI forms part of the Government's connectivity targets for broadband in areas outside the UFB areas. The Government's vision is for:[137]

179.1.1 99 percent of New Zealanders able to access broadband speeds of at least 50Mbps;

179.1.2 The remaining one percent able to access 10Mbps.

179.2 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.

180. We, therefore, proposed adding an exception to the UBA STD whereby Chorus would not be required to meet link utilisation threshold requirements on its ATM network.[138] We noted that we expected to review this provision after a final decision regarding RBI phase 2 is made.

181. Chorus[139] and access seekers[140] recognised the issues regarding the ATM network and were generally supportive of our draft decision.

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133 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].

134 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].

135 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [165]-[169].

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

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

138 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.

139 Chorus "Cross-submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (15 December 2016) at [21].

140 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [18]-[22]; Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [2.1.12]; Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [12]; and Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [11].

182. Chorus' submission referred to "non-fibre fed LAPs (including ATM-based services)".[141] We agree with Chorus. We clarify in this final decision that our exclusion refers not only to ATM LAPs, but also to other non-fibre LAPs (ie, LAPs provided over microwave radio, which represents [ ]**CNZCI** DSLAMs).

183. 2degrees suggested that rather than exempting the entire ATM network, we should exempt particular geographic areas such as those that receive RBI funding.[142]

184. Our preferred approach is to provide a full exemption to ATM and the other non-fibre LAPs, as it remains unclear where RBI funding will be directed. In our view, it would be inappropriate to exempt geographic areas without visibility of the overlap between the ATM and other non-fibre LAPs, and RBI funded areas.

185. InternetNZ considered it "regrettable, but partly understandable" to remove the ATM network from the utilisation requirements. InternetNZ further stated that if we are to exclude ATM LAPs we "should also explain how carving out ATM from the service specification while continuing to subsidise Chorus via "averaged" pricing improves competiveness".[143]

186. We recognise that in some areas there is a gap between the modelled service which we used to set prices for the regulated UBA service and the actual regulated UBA service. However, our model used to set the regulated UBA prices was based on a hypothetical efficient network built using modern equivalent assets. This met the TSLRIC definition, which requires us to determine forward-looking costs over the long run. Therefore, it is inevitable there is (and there will continue to be in the short term) a gap between the modelled network and Chorus' actual network, which uses ATM technology and microwave radio backhaul.[144]

187. While there are differences between the modelled network in the FPP and Chorus' actual network, our view is that the TSLRIC price we set in the FPP compensates Chorus so that its network and the modelled network become broadly consistent over time.

188. We continue to expect to review our decision regarding the ATM and other non-fibre LAPs exemption when phase 2 of the RBI is complete.

189. When we do review our decision in relation to Chorus' ATM network and other non-fibre LAPs, we expect to use the same framework as that used for this review in our decision making.

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141 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at page 5.

142 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Cross Submission to the Commerce Commission." (15 December 2016) at page 5.

143 InternetNZ "Section 30R review of Chorus' UBA Service. InternetNZ Submission." (30 November 2016) at [5.2]-[5.4].

144 Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [B44].

190. Chorus' submitted early in this process that "an STD cannot require investment to achieve service standards that are not reasonably technically or operationally practicable, having regard to our network as it exists today – as confirmed by the limits on the special access principles in the Act"..[145]

191. Our draft decision was that the wording of clause 6 does not constrain us from obliging Chorus to upgrade its network.[146]

192. In response to our draft decision, Chorus submitted that it continued "to disagree with the Commission's view that it has the power to specify service standards that are not practical to achieve for the current network. However, given the Commission's view in the Draft Determination that it will exclude ATM-based and non-fibre services from the utilisation requirement, we do not address this point in detail in this submission."[147]

193. Our view remains that 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".

194. 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).[148] [149]

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145 Chorus at "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 [25].

146 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [172].

147 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [21].

148 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".

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

We are adding congestion reporting requirements on all UBA local aggregation paths

195. In our draft decision, we proposed requiring Chorus to report the following information on all UBA LAPs:[150]

195.1 the percentage utilisation of each UBA LAP; and

195.2 Chorus' network plans for LAPs that exceeded 85% capacity.

196. Our view was that the 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.

197. Our draft decision was that the requirements should apply to both Ethernet and ATM LAPs on Chorus' UBA network. We considered it important to provide access seekers and end-users with visibility of congestion issues on the ATM LAPs that might affect end-users' experience, given our decision to exempt those LAPs from our proposed utilisation requirements.

198. Submissions from Chorus and access seekers largely supported our proposed approach. However, access seekers suggested that the additional reporting threshold of 85% was too high. In its cross-submission, Chorus suggested it was willing to support a lower reporting threshold of 80%. Chorus noted that the lower level was unlikely to provide any additional benefit as it made no difference to its investment planning or end-user experience.[151]

199. Our draft decision requiring Chorus to calculate the peak utilisation for each LAP and then report on the number of LAPs in peak utilisation bands each month is maintained in this final decision. This includes both Ethernet and ATM and other non-fibre LAPs.

200. However, we have amended our final decisions relating to Chorus' additional reporting requirements where the peak utilisation on a LAP is nearing capacity:

200.1 Where utilisation on a LAP is above 80% in any five minute period and Chorus has internally approved upgrade plans, Chorus will be required to provide additional LAP information to access seekers and us.

200.2 Where utilisation on a LAP is above 80% in any five minute period and Chorus does not have internally approved upgrade plans, Chorus will be required to provide additional LAP information only to us.

201. Attachment 1 sets out the specific reporting obligations for Chorus.

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150 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [174]-[177] and Attachment 1.

151 Chorus "Cross-submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (15 December 2016) at [18].

202. Given Chorus' submission that it starts investment planning when utilisation reaches around 65%, we consider that Chorus should be in a position to provide access seekers with additional information on its internally approved plans for augmenting capacity when LAPs exceed 80% capacity.[152] Doing so will provide additional transparency regarding how Chorus is managing potential congestion issues on its network.

203. However, as some access seekers also compete with Chorus (for example Spark using FWA and Vodafone, using FWA and cable), our view is that Chorus should only provide network planning information where it has approved plans.

204. In order to enable us to monitor congestion issues and Chorus' investment incentives, we are therefore requiring Chorus to provide us with a list of LAPs where utilisation is above 80% and it does not have approved plans.

205. Chorus and access seekers sought clarity regarding the information that Chorus provides on LAPs with congestion above the reporting threshold:

    205.1 Chorus suggested that its obligation be limited to providing cabinet identification and location of approved upgrades, and the estimated completion date;[153]

    205.2 Spark suggested that Chorus should provide additional link performance metrics, such as packet loss;[154]

206. We are not requiring Chorus to provide information on other service metrics, such as packet loss. As set out above, the purpose of the reporting requirements is to provide transparency regarding Chorus' response to potential congestion issues on the UBA network. We do not consider these additional metrics are necessary to provide transparency to access seekers and, therefore, the cost of providing them will outweigh any benefit.

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152 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [16].

153 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [41].

154 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [14].

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

Purpose of this chapter

207. In this chapter we assess whether 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.

Our final decision

208. Our final decision is not to amend the UBA STD to specifically require Chorus to provide the regulated UBA service over VDSL. The UBA STD already requires Chorus to deliver the regulated UBA service as an internet-grade FS/FS service. In areas where Chorus has deployed VDSL, the requirement to offer a FS/FS service means that Chorus must provide the regulated UBA service over VDSL where requested by an access seeker. However, the decision whether to deploy VDSL in the first place remains with Chorus.

209. Amending the UBA STD to refer to VDSL specifically could be interpreted as excluding the next generation of DSL technology to be deployed. As Chorus' put it "today's VDSL is tomorrow's ATM".[155] This would not give best effect to section 18 of the Act.

210. We have also decided not to amend the UBA STD to specifically allow for the retirement of legacy DSL technologies. In our view it is open to Chorus to retire legacy technologies where there is an alternative that complies with the requirements of the UBA STD, such as the FS/FS requirement. The retirement of a particular DSL technology must be done in accordance with the standard access principles and the UBA service specifications. We consider that a proposal to retire DSL technology that leads to an end-user receiving a lower quality of service would not be consistent with the UBA STD.

The history of our thinking about VDSL in the UBA STD

VDSL in the UBA STD

211. 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.

212. Our April 2010 clarification of the UBA STD concluded that Telecom:[156]

> …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,

[155] 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].

[156] 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].

whether there were grounds to include the new services as a regulated service through the S30R process

213. 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.[157]

214. 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).[158] 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.

215. Since its introduction in 2007, the regulated UBA service has been a FS/FS service.

216. In our process and issues paper we explained 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.

217. In our process and issues paper we also noted that the FPP price compensates Chorus for providing the UBA service using VDSL technology.[159] 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.

218. Access seekers and InternetNZ were unanimous that VDSL should be included in the regulated service, and that Chorus should not be able to withdraw it.[160]

    218.1 Spark was 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;[161]

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157 Commerce Commission "Final Clarification of the Standard terms Determinations on Telecom's Unbundled Bitstream Access Service" (10 May 2010).

158 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)).

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

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

161 Spark "Section 30R review of the UBA standard terms determination: process and issues paper" (5 May 2016) at [45]-[46].

218.2 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";[162]

218.3 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".[163]

219. 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.[164]

220. In its cross-submission to the process and issues paper, Chorus' view was that "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".[165]

221. Our view in the draft decision was not to amend the UBA STD, because in our view the UBA STD as it stands required Chorus to provide the regulated UBA service over VDSL where the technology is available and requested by an access seeker.[166]

222. No submissions to our draft decision argued that this view was incorrect. We maintain our view in our process and issues paper and in our draft decision.

223. Therefore, we are not amending the UBA STD to require Chorus to provide the regulated UBA service over VDSL. The UBA STD already requires Chorus to deliver the regulated UBA service as an internet-grade FS/FS service. In areas where Chorus has deployed VDSL, the requirement to offer a FS/FS service means that Chorus must provide the regulated UBA service over VDSL where requested by an access seeker. However, the decision whether to deploy VDSL in the first place remains with Chorus.

224. We note Chorus proposed amending the UBA STD to clarify that "the type of DSL technology used to deliver the UBA service is determined by Chorus".[167] We

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162 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.

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

164 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].

165 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].

166 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [11]

167 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at[Appendix C].

understand that this change was requested by Chorus in the context of Chorus being able to retire legacy technology.

225. We do not consider the amendment necessary. As we noted back in 2011, it is "the service that is subject to the regulation and not the technology of the delivery of the service that is regulated".[168]

226. 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'.

227. Therefore, in our view it is open to Chorus to retire legacy technologies where it has deployed an alternative that complies with the terms of the UBA STD. Any proposal by Chorus to retire a particular DSL technology must be done in accordance with the standard access principle two (ie, "the service must be supplied to a standard that is consistent with international best practice") and the UBA Service Description.

228. We consider that a proposal to retire a DSL technology that resulted in a reduction of the "maximum available downstream speed" leading to an end-user receiving a lower quality of service would not be consistent with the standard access principles and the UBA STD.

229. If Chorus wishes to propose adding a migration plan to the UBA STD, we note that it can do so using clause 9 of the UBA General Terms.

[168] Commerce Commission "Final clarification of the Standard Terms Determination on Chorus's Unbundled Bitstream Access service", Decision no.746, 19 December 2011 at [17].

Chapter 6 – UBA handover connections

Purpose of this chapter

230. In this chapter we assess whether a 'fit for purpose' regulated UBA service requires the addition of a 10GigE handover connection service to the UBA STD Price List and the price for that connection service.

Our final decisions

231. Our final decisions are:

231.1 to add a 10GigE handover connection service to the UBA STD Price List. A 10GigE handover connection service option is appropriate for a 'fit for purpose' regulated UBA service;

231.2 to amend the existing installation charge in Schedule 2 (UBA Price List) so that costs to install 1GigE and 10GigE handovers are the same;

231.3 to use the prices calculated in the TSLRIC model during the UBA and UCLL FPP processes in December 2015 (ie $1,114.67 per month, decreasing to $957.77 per month in 2019) for a 10GigE handover connection;

231.4 to cap the price for multiple 1GigE handover connections at the 10GigE handover connection price at all UBA handover sites; and

231.5 that the availability of the 10GigE handover connection service is limited to those handover sites where it is made available by Chorus – ie, Chorus decides if it will offer a 10GigE handover connection service or multiple 1GigE handover connections or multiple 1GigE handover connections (the price capped at the 10GigE handover price) to access seekers.

232. Our final decisions remain largely unchanged from our draft decisions.

Background

233. 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.[169] That is, Chorus manages and provides access to the local loop, the local exchange or cabinet (and the equipment in it, including a DSLAM), and the LAP to transport the broadband traffic to the handover point.

234. The UBA STD requires access seekers to establish interconnection for the UBA service at a minimum of one handover point.[170] Interconnection at a handover point is required to handover broadband traffic between Chorus and the access seeker.

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169 The handover point is defined in Schedule1 of the UBA STD: "Handover Point means Chorus' first data switch, or equivalent facility, located in the Coverage Area".

170 Clause 3.23 of Schedule 1 of the UBA STD.

235. The previous handover services in the UBA STD included a 1Gbps for Ethernet option. This is commonly referred to as 1GigE.[171]

236. In the UBA FPP we determined UBA prices using TSLRIC, and also set non-recurring charges (NRCs) for UBA.[172] In the UBA FPP 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[173]

We are adding a 10GigE handover connection service to the UBA STD Price List

How our thinking has developed

237. In our process and issues paper we stated that with the increase in bandwidth demanded by end-users, a 10GigE handover connection service might be necessary to support delivery of the regulated UBA service.[174]

238. All access seekers and InternetNZ supported the addition of a 10GigE handover connection service to the UBA STD in their submissions to our process and issues paper. 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.[175]

239. Spark also made the suggestion that the installation charge for a 1GigE handover connection and a 10GigE handover connection should be the same as there is no additional work installing a 10GigE compared to a 1GigE card.[176] There were no further submissions on this point.

240. Chorus questioned the need to include a 10GigE connection in the UBA STD in its submission to our process and issues paper. Chorus noted that it already offers a

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171 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].

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

173 Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [600].

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

175 For example: 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].

176 Spark "Section 30R review of the UBA standard terms determination: process and issues paper, Cross-submission" (1 July 2016) at [18].

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).[177]

241. Our draft decision was add a 10GigE handover connection service to the UBA STD Price List.[178] All submitters agreed with this draft decision,[179] though Chorus noted that "there is no need to regulate 10 GigE handovers", but "if there is to be regulation, we think the Commission's proposal is reasonable."[180]

242. Our final decision remains that a 10GigE handover connection is appropriate for a 'fit for purpose' UBA regulated service.

242.1 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 encouraging Chorus and access seekers to effectively manage end-users traffic where a 10GigE handover connection is made available by Chorus to access seekers.

242.2 Handover connections are part of the regulated UBA service, and as discussed in Chapter 3, a regulated UBA service that is 'fit for purpose' supports retail services by providing a platform that can be used by access seekers to provide a range of differentiated retail broadband products.

242.3 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 regulated UBA service. We explain our decisions in relation to the price of the handover connection services in the section below.

243. We are amending the existing installation charge in Schedule 2 (UBA Price List) so that costs to install 1GigE and 10GigE handovers are the same. We agree with Spark that the price for installation of a 1GigE handover card should be the same for a 10GigE handover card. There is no compelling reason why there should be a different charge for installation of a 10GigE handover connection. This approach is consistent

177 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].

178 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service - Draft determination" (9 November 2016) at [200].

179 For example: Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [2]; 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Submission to the Commerce Commission." (30 November 2016) at page [1]; Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [5.1.1]; Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [13]; and Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [14].

180 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [45].

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.[181]

244. For clarification we have updated the description of Service Components 1.42 and 1.43 in the UBA STD Price List to reflect that these Service Components relate to installation of either a 1GigE or 10GigE handover connection.

We have used TSLRIC prices for the 10GigE handover connection price

How our thinking has developed

245. In our process and issues paper, we asked interested parties whether it would be appropriate to use the 10GigE price determined in the FPP determination.[182]

246. Having considered the views expressed in submissions on our process and issues paper and at the workshop, our draft decision was to use the prices calculated in the TSLRIC model during the UBA and UCLL FPP processes in December 2015.[183]

247. We summarise the different views from submitters in this process in relation to the pricing principle, price and consultation considerations below.

248. *Pricing principle of TSLRIC:*

248.1 In response to our process and issues paper:

248.1.1 Chorus submitted that if a 10GigE handover 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.[184]

248.1.2 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.[185] 2degrees submitted that the Act requires TSLRIC as the appropriate pricing principle to be applied to the regulated UBA

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181 Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" Decision 611 (12 December 2007) at [303].

182 Commerce Commission "Section 30R review of the UBA standard terms determination - Process and issues paper" (7 April 2016) at page 23.

183 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [219].

184 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] and Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [Appendix B].

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

service, but 2degrees did not agree that it is appropriate to use the 10GigE price calculated in the FPP model.[186]

248.2 Chorus and Trustpower agreed with our draft decision that the Act requires the use of TSLRIC to set prices.[187, 188]

249. *TSLRIC prices would be "too high":*

249.1 In submissions and cross-submissions on our process and issues paper, Spark, Vodafone and Vocus suggested that the UFB price for a 10GigE handover connection (ie $300 per month) be used, or using a benchmarked relationship between the UFB prices for 1GigE and 10GigE.[189]

249.2 In response to our draft decision:

249.2.1 2degrees stated in its view "prices are significantly above cost" and it was "concerned that proposed pricing is not cost-based".[190] They suggested we test up-to-date actual costs with Chorus.[191] 2degrees stated that
[ ]**2degrees CI**.[192]

249.2.2 Vocus submitted the prices are "at odds with ... real world costs".[193]They further suggested there needs to be a 'sanity' check on prices from the FPP model.[194]

249.2.3 Vodafone submitted "the proposed price over compensates Chorus" and "the UFB prices serve as sense check, the proposed prices fail that check."[195]

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186 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - A Submission to the Commerce Commission" (1 July 2016) at page 5.

187 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [Appendix B].

188 Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [5.1.1].

189 For example: Spark "Section 30R review of the UBA standard terms determination: process and issues paper" (5 May 2016) at [61]; 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; Vocus "Section 30R review of the UBA standard terms determination" (5 May 2016) at [61]- [64].

190 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper. A Submission to the Commerce Commission." (30 November 2016) at page [4,5].

191 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper. A Submission to the Commerce Commission." (30 November 2016) at page [4].

192 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper. A Submission to the Commerce Commission." (30 November 2016) at [Pg 5].

193 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [14].

194 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [15].

250. *Consultation of the TSLRIC prices:*

250.1 In submissions on our process and issues paper, Spark and 2degrees suggested that the price set in our TSLRIC model was not robustly tested or submitted on during the FPP process.[196,197]

250.2 In submissions on our draft decision:

250.2.1 Vodafone submitted that there had been insufficient consultation on these prices and that Attachment 2 of the draft decision covered only the final steps of the calculation and neglected to provide reasoning for the key assumptions.[198]

250.2.2 Chorus agreed that our FPP consultation process was extensive.[199]

251. *Change in circumstances:*

251.1 In submissions on our draft decision:

251.1.1 Vodafone further submitted that we should reassess the price of 10GigE handovers under section 30P(1)(a)(ii) of the Act and that "the surge in data usage that has led the Commission to propose introducing regulation of 10GigE handovers would meet the definition of a change in circumstances."[200]

251.1.2 Chorus noted that "the TSLRIC model stands as a whole, and is not susceptible to reconsideration of its constituent parts. If the FPP model is reopened to reflect one change, it will be necessary to reopen the whole model to ensure consistency".[201]

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195 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [14-19].

196 For example: 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.

197 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Submission to the Commerce Commission." (30 November 2016) at page [4].

198 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [21]-[22].

199 Chorus "Cross-submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (15 December 2016) at [25].

200 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [20].

201 Chorus "Cross-submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (15 December 2016) at [24].

Our final decision

252. Our final decision is to use the TSLRIC prices calculated in our FPP model to set the price in the UBA STD Price List. The prices for the 10GigE handover connection service are summarised in the following table:

Table 1 – 10GigE handover connection charges ($/month)

Effective from[202]	**16 December 2016**	**16 December 2017**	**16 December 2018**	**16 December 2019**
10GigE capacity for Basic UBA service only	1,114.67	1,071.05	1,017.70	957.77
10GigE capacity for Enhanced UBA services only	1,114.67	1,071.05	1,017.70	957.77

253. We set out our reasoning in response to the pricing principle, price and consultation considerations concerns raised by submitters below:

254. *Pricing principle*. Our view remains that we have applied the correct pricing principle to setting an appropriate TSLRIC price for the 10GigE handover connection service.

254.1 We started the UCLL and UBA FPP processes after receiving applications to do so under section 42(1) of the Act.

254.2 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.[203]

254.3 This view was supported by Spark, Vodafone, CallPlus and Wigley and Company in the FPP process.[204] 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

[202] Prices in the FPP model were determined for the five years (starting on 16 December 2015). Note that year 1 has now passed. Year 2 will be the first prices set when the charges are added to the UBA STD price list.
Year 1 = 16 December 2015 to 15 December 2016.
Year 2 = 16 December 2016 to 15 December 2017.
Year 3 = 16 December 2017 to 15 December 2018.
Year 4 = 16 December 2018 to 15 December 2019.
Year 5 = 16 December 2019 to 15 December 2020.

[203] Commerce Commission "Final pricing review determination for Chorus' unbundled copper local loop service [2015] NZCC 37" (15 December 2015) at [750].

[204] Spark "Setting prices for service transaction charges for UBA and UCLL services'" (9 October 2014)at [7]; Vodafone "Submission on consultation paper on setting prices for service transaction charges for UBA and UCLL services" (9 October 2014)at page. 2; CallPlus "Submission on the Commerce Commission's Consultation paper: setting prices for service transaction charges for UBA and UCLL" (9 October 2014)at [8]; and Wigley and Company "Submission on consultation on setting prices for service transaction charges for UBA and UCLL services" (9 October 2014) at [4.2].

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".[205]

254.4 We continue to agree with the view Spark expressed in the FPP process. We also agree with 2degrees, Trustpower and Chorus that TSLRIC is the right pricing principle for this section 30R review. We do not consider that the Act requires or allows us to use any pricing principle other than TSLRIC.

254.5 Therefore, we do not agree with access seekers who suggested we should or could use UFB prices to set a price. We explain our reasoning at paragraph 255.1 below.

255. *The prices set by our TSLRIC model are "too high"*. Our view remains that we have set an appropriate TSLRIC price for a 10GigE handover connection service. We also note that there are not any relevant comparators available.

255.1 We consider that UFB prices are not relevant comparators. The UFB prices are not TSLRIC prices. They were negotiated under commercial agreements with government funding. We agree with Vodafone's assumption that "the negotiations between CFH and the LFCs were undertaken in good faith".[206] However, we disagree with Vodafone that the negotiations "are likely a good reflection of costs given the information available at the time", because one specific item of a complex commercial arrangement cannot be considered in isolation.[207]

255.2 TERA is not aware of any similarly modelled 10GigE TSLRIC price to compare against.[208]

255.3 2degrees and Vocus both referred to the relative prices of 10GigE cards compared to 1GigE cards.[209,210] The TSLRIC model determined the prices for the handover connection services that included the total recoverable costs of the modelled network that were allocated to handover services. It is not appropriate to consider the relative prices of the cards in isolation, as these

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205 Spark "Setting prices for service transaction charges for UBA and UCLL services'" (9 October 2014) at [6].

206 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [18].

207 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [18].

208 TERA is a French-based economic cost modelling consultancy firm we engaged to build a TSLRIC model for UBA and UCLL.

209 2degrees (Confidential) "Section 30R Review of the UBA STD: Process and Issues Paper. A Submission to the Commerce Commission." (30 November 2016) at page [5].

210 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [14-20].

are only one small aspect driving the cost of providing the 10GigE handover connection service. [211]

255.4 In response to 2degrees submission that the prices are not cost-based:

255.4.1 there is no TSLRIC based evidence that the price we have set for a 10GigE handover is above cost; and

255.4.2 the price for the period from 16 December 2016 is 23 percent lower than the current commercial price charged by Chorus (Chorus' commercial price is $1,444.00 per month), and the price will continue to decrease until December 2019.

256. *Consultation of 10GigE handover prices.* We continue to disagree with access seekers that there has been insufficient consultation on these prices. As we noted in our draft decision on this section 30R review, we conducted a number of consultation rounds throughout the FPP process and on our TSLRIC model.

256.1 TERA conducted workshops with industry participants early in the FPP process. These were intended to help interested parties to interact with the model. Also, our draft FPP decisions included the reasons for our modelling decisions and TERA produced reports outlining the modelling changes made between our December 2014 drafts, our July 2015 further drafts, and our December 2015 final determinations.[212,213]

256.2 As Chorus noted in their cross-submission to our draft decision on this section 30R review,[214] Spark and Vodafone's expert cost modeller (WIK) provided specific comments on the price of 10GigE handovers during the FPP process.[215] Chorus' expert cost modeller (Analysys Mason) also submitted on the price of 10GigE handovers in the model during the FPP process.[216] We referred to these comments in our final UBA FPP determination.[217]

256.3 The input costs and cost allocation methodology used in the calculation of handover prices were also used to calculate the UBA recurring charges in the TSLRIC model. Our reasoning and key assumptions for how we determined input costs and cost allocation are detailed with reasons in our FPP

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211 Schedule 1 of the UBA STD sets out that the handover connection includes: the port on the relevant switch; the optical fibre from the port to Chorus' OFDF; and the OFDF.

212 TERA "TSLRIC price review determination for the Unbundled Copper Local Loop and Unbundled Bitstream Access services Implemented modelling changes" June 2015.

213 TERA "TERA Model changes – December 2015" (15 December 2015).

214 Chorus "Cross-submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (15 December 2016) at [25].

215 WIK submission on behalf of Spark and Vodafone on further draft determination for UBA and UCLL services (12 August 2015) at [123]-[127].

216 Analysys Mason on behalf of Chorus on further draft determination for UBA and UCLL services (11 August 2015) at [4.4].

217 Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) at [610]-[613].

determinations.[218, 219] Attachment 2 of our draft decision on this section 30R review was designed for the purpose of illustrating the calculation that determines the relativity between the 1GigE handover price and the 10GigE handover price – which was not explained in our FPP determinations.

257. *Change in circumstances.* We have received no evidence in submissions that causes us to conclude that it is necessary to update the calculation of the 10GigE handover price due to a "change in circumstances" under section 30P(1)(a)(ii).

257.1 We do not consider the recent growth in data usage as a change in circumstances. Our FPP modelled network included the cost of additional network elements that are required to meet the growing bitstream throughput at a 50% per annum growth rate in traffic.[220]

257.2 We note that there is no appetite from submitters to review any of the FPP prices. We agree that a review would create an undesirable level of uncertainty for all interested parties.

258. We agree with Chorus that consistency is important and if the price for a 10GigE handover connection were to be set or assessed alternatively the resulting price is unlikely to be consistent with the existing price of the 1GigE handover connection.

259. Therefore, we continue to believe it is appropriate 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 relevant information available to us.

We decided to cap the price for multiple 1GigE handover connections at the 10GigE handover connection price

How our thinking has developed

260. In response to the process and issues paper, Chorus submitted that if a 10GigE handover option is to be added to the UBA Price List its obligation to provide a 10GigE connection should be limited to a pre-defined list, as some handover points do not have the demand to support 10GigE handovers.[221]

261. Chorus stated in the workshop and its cross-submission on our process and issues paper that it does not plan to build network capacity to support 10GigE handovers at

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

219 We note that the input costs are confidential.

220 Commerce Commission "Final pricing review determination for Chorus' unbundled bitstream access service [2015] NZCC 38" (15 December 2015) Attachment B at [B13]

221 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].

all of the 104 potential UBA handover points. However, it does plan to make 10GigE capacity available at all points where there is sufficient demand to warrant it.[222, 223]

262. Chorus also noted that if there was an issue of availability of 10GigE handovers, it is willing to discuss providing 10GigE handover connections where they are not currently available.[224]

263. At the workshop Spark suggested a cap on the price of multiple 1GigE handovers as a response to the potential issue of availability where Chorus does not currently provide a 10GigE option. [225] This was supported by Vocus in its cross-submissions on our process and issues paper.[226]

264. Our draft decision was to cap the price for multiple 1GigE handovers at the 10GigE handover connection price at locations where a 10GigE handover connection is currently unavailable.

265. In its submission on our draft decision, Chorus further suggested that a cap on 1GigE handovers "should only apply where 10 GigE handovers are not available, for as long as 10 GigE handovers are not available."[227] We understand this view to be that the price cap should be removed once one 10GigE handover is available at any particular handover site.

266. Chorus further submitted that it supports "the availability of 10 GigE handovers being limited to those links where it is available, with the decision left to us to determine whether there is sufficient demand."[228]

267. Access seekers were generally supportive of our draft decision to cap the price of multiple 1GigE handovers.[229] However, in cross-submissions, some access seekers

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222 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].

223 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].

224 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].

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

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

227 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at page [12].

228 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at page [12].

229 For example: Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [45]; Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [2]; and Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [5.1.1].

disagreed that Chorus should be able to determine the sites where a 10GigE handover connection is provided.[230]

267.1 Vodafone suggested it is important that Chorus face the incentive to build capacity for a second or third 10GigE handover at each handover site.[231]

267.2 Vocus and Spark highlighted the inefficiencies and additional costs of managing their traffic across multiple 1GigE connections compared with a single 10GigE connection.[232,233,234]

Our final decision

268. Our final decision is to cap the price for multiple 1GigE handover connections at the 10GigE handover connection price at all UBA handover sites.

269. We are also clarifying that the availability of the 10GigE handover connection service is limited to those handover points where it is made available by Chorus – ie, Chorus decides if it will offer a 10GigE handover connection service or multiple 1GigE handover connections (the price capped at the 10GigE handover price) to access seekers.

270. Capping the price for multiple 1GigE handovers should incentivise Chorus to avoid the additional costs and inefficiencies arising from provisioning multiple 1GigE handover ports instead of a single 10GigE handover port.

271. We acknowledge the concerns raised by some access seekers about the additional costs potentially arising from manging traffic across multiple 1GigE connections. However, our view is that on balance these are an acceptable trade-off against requiring Chorus to make potentially inefficient investment in 10GigE handover connections at all 104 potential handover points.

272. Our view remains that without a price cap, Chorus may not be incentivised to invest in 10GigE handovers where there is sufficient demand, without requiring the provision of 10GigE handovers at all 104 potential UBA handover sites. We agree with Vodafone that the cap should also incentivise the provision of multiple 10GigE handovers at UBA handover sites, and should therefore apply to all handover sites.

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230 For example: Vodafone "Cross Submission on Section 30R Review of the Unbundled Bitstream Access Service." (15 December 2016) at [11]; Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Cross Submission to the Commerce Commission" (15 December 2016) at [19]; and Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Cross Submission |Commerce Commission." (15 December 2016) at [25-26].

231 Vodafone "Cross Submission on Section 30R Review of the Unbundled Bitstream Access Service." (15 December 2016) at [11].

232 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [16].

233 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Cross Submission to the Commerce Commission" (15 December 2016) at [18].

234 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Cross Submission |Commerce Commission." (15 December 2016) at [25].

Chapter 7 – Process for introduction of new UBA variants

Purpose of this chapter

273. In this chapter we assess whether the process for introducing new UBA variants, as set out in clause 10 of the UBA General Terms, should be amended.

Our final decision

274. Our final decision is to not amend clause 10, because:

274.1 in our view, our amendments to the service specifications as set out in Chapter 4 should provide clarity to all parties regarding the regulated UBA service performance. With the exception of the ATM and other non-fibre LAPs,[235] the effect of the utilisation threshold requirement that we have added to the service specification is that Chorus is now obliged to provide sufficient capacity to keep pace with end-user demand.

274.2 an approval regime, as suggested by some submitters, could be inconsistent with section 30S, as it could improperly impact Chorus and access seekers commercial negotiations; and

274.3 there is little demand from access seekers for commercial variants.

275. Our final decisions remain largely unchanged from our draft decisions.

How our thinking has evolved

276. When Chorus proposes introducing a new UBA variant, clause 10 of the UBA General Terms requires it to give at least 20 working days' notice to the Commission and access seekers of that new variant.[236] 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.[237]

277. 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.[238] 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.[239]

278. In submissions to our process and issues paper:

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235 Our decision on Chorus' ATM networks and other non-fibre links is explained in Chapter 4.

236 Clause 10.1.3 of the UBA General Terms.

237 Clause 10.2 of the UBA General Terms.

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

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

278.1 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";[240]

278.2 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;[241] and

278.3 Vocus and InternetNZ supported amending clause 10 in their submissions, without providing any specific reason or suggested amendments.[242] [243]

279. 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.[244] 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.[245]

280. In its cross-submission on our process and issues paper, Spark suggested amending clause 10 to provide for a 2-tier process, along with a "pause" for proposals that are not straight-forward:[246]

280.1 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

280.2 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.

281. Vocus and 2degrees supported amending clause 10 in their cross-submissions.[247] [248]

282. Chorus, however, reiterated that we should be cautious moving from a notification requirement, which is consistent with transparency obligations and provides us with

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

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

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

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

244 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].

245 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].

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

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

248 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.[249]

283. According to Chorus, an approval regime would be inconsistent with the Act, because we do not have the power to foreclose commercial offerings (which are specifically contemplated by section 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.[250]

284. 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.[251]

285. 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.[252]

286. In our draft decision we considered the following options to review the process for introduction of new UBA variants:

286.1 no change to clause 10 process; and

286.2 amend clause 10, as suggested by Spark (and supported by other access seekers).

287. Our draft decision was not to amend the clause 10 process.[253]

288. In submissions on our draft decision, parties were generally supportive of our decision not to amend clause 10.[254] We note that Trustpower submitted that an approval process for new commercial UBA variants "would provide a useful check that that [sic] the proposed commercial service did not fall within a regulated

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249 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].

250 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].

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

252 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.

253 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access Service: Draft Determination" (9 November 2016) at [234].

254 For example: Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at page [7]; Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [45]; and 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Cross Submission to the Commerce Commission." (15 December 2016) at page [2].

service", but also that it is "comfortable with the Commission's decision not to amend clause 10 of the UBA General Terms".[255]

The current Clause 10 process is appropriate for considering new commercial variants

289. Having not received submissions or evidence supporting a change to our view expressed in the draft decision, our final decision remains that the current clause 10 process is appropriate for considering new UBA variants.

290. The key issue during the Boost process was a lack of clarity regarding performance expectations and the potential degradation of the regulated UBA service (rather than the process of reviewing the Boost variants).

291. Our view is that our amendments to the service specifications as set out in Chapter 4 and Attachment 1 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, with the exception of the ATM and other non-fibre LAPs,[256] the effect of the utilisation threshold requirements that we have added to the service specification is that Chorus is now obliged to provide sufficient capacity to keep pace with end-user demand.

292. Access seekers and Chorus have indicated that there is little demand for commercial variants.[257] This would further suggest that there is little benefit to be gained by amending clause 10.

293. 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.

294. Therefore, our final 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. This is because we believe that the service's performance expectations are now clearer, particularly that the regulated UBA service must be provided over an uncongested network.

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255 Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [6.1.1].

256 Our decision Chorus' ATM networks and other non-fibre links is explained in Chapter 4.

257 For example, see 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].

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

Purpose of this chapter

295. In this chapter we assess whether the UBA STD should be amended to provide greater transparency of Chorus' systems, and whether the service level terms (SLAs) should also be amended in this review (eg faults, installations, response times and systems).[258]

Our final decisions

296. Our final decision on transparency of Chorus systems is to:

296.1 not review nor amend the UBA STD to provide greater transparency of Chorus' systems because:

296.1.1 the UBA STD 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)[259] and we have no reasons to believe that that mechanism is no longer appropriate; and

296.1.2 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.

296.2 include some additional consultation requirements to clause 9, which are explained in this chapter.

297. Our final decision on SLAs is not to review nor amend the SLAs, because we have not received any evidence causing us to believe that it would be appropriate to review the current SLAs at this point in time.

298. In relation to the penalties applicable to Chorus in case of breach of the new utilisation threshold service specification, we accept that the current SLAs might not provide strong financial incentives on Chorus to comply with the new utilisation threshold service specification.

299. However, we believe that we will be better positioned to address this matter once we have clarity about the outcomes of the ongoing review of the Act. Once we have certainty about the new regime, we will consider whether a new section 30R review (or any other appropriate process) is required for the UBA and other STDs (eg, the UCLL STD) to review the SLAs.

300. In the meantime, we expect Chorus to continue to comply with the SLAs. The new monitoring requirements, which will be published monthly, will provide transparency to us and access seekers regarding Chorus' compliance with the new utilisation threshold service specification.

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[258] The SLAs are set out in Schedule 3 to the UBA General Terms.

[259] Clause 9 of the UBA General Terms is set out in Attachment 1 of this final decision.

301. Our final decisions are largely unchanged from our draft decisions.

Clause 9 process provides sufficient powers for the industry to agree on any changes to the transparency of Chorus' systems

302. Clause 9 of the UBA General Terms sets out the change mechanism for Chorus and access seekers to amend the UBA Operations Manual and the UBA SLAs. We must approve the proposed changes.

303. 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 section 30R review.[260]

304. Submitters were generally supportive of access seekers having greater visibility of Chorus' systems.[261]

305. At the workshop, Commission staff sought clarity from interested parties on the changes necessary to provide greater transparency to Chorus' systems. Commission staff also highlighted that the UBA STD already includes a process for updating the UBA operations manual without requiring a section 30R review (ie, clause 9).[262, 263] Spark shared a handout proposing some technical changes.[264]

306. In cross-submissions:

306.1 Chorus noted that it was happy to discuss specific proposals for additional transparency, and that a TCF forum seems appropriate;[265]

306.1.1 Vocus and 2degrees broadly supported Spark's suggestions and recommended we either conduct further technical workshops or

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

261 For example, see 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]; and Vocus "Section 30R review of the UBA standard terms determination - Submission to Commerce Commission" at [9].

262 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].

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

264 Spark "UBA s30R workshop paper" (16 June 2016).

265 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].

direct a TCF working party be formed with adequate guidance and clear timeframe; [266] [267]

306.1.2 Vodafone and InternetNZ also requested that we provide guidance and require the TCF to propose specific amendments for our consideration;[268, 269] and

306.1.3 Spark submitted that its proposed changes to Chorus' transparency obligations (as updated in cross-submission) would drive changes in costs and for that reason the industry is unlikely to reach agreement.[270]

307. Our draft decision was not to amend the UBA STD because the UBA STD already sets out a process for Chorus and access seekers to resolve potential issues related to the UBA operations manual.[271]

308. Parties generally agreed with our draft decision. In particular, 2degrees, Chorus, Trustpower and Vodafone agreed that the clause 9 process provides sufficient powers for the industry to agree on any changes to the transparency of Chorus' systems.[272, 273, 274, 275]

309. Having not received any submission that made us change our view on this matter, we maintain our draft decision.

310. Transparency concerns raised by the submitters early in this process generally related to the information made available by Chorus for provisioning events, fault events, diagnostic tools and processes.

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

267 2degrees "Section 30R Review of the UBA STD: Process and Issues Paper - Cross-Submission to the Commerce Commission" (1 July 2016) at [2.3].

268 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.

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

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

271 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service : Draft Determination" (9 November 2016) at Chapter 8.

272 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Cross Submission to the Commerce Commission." (15 December 2016) at page 4.

273 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [27]-[29]. Chorus noted that "we have already started informal discussions with RSPs and have made good progress". Chorus further noted that "the TCF has established processes which can be a good way to facilitate multi-party engagement on technical matters. We think this can be done within the consultation framework proposed by the Commission".

274 Trustpower "Trustpower Submission: Draft Determination on Section 30R review the UBA Standard Terms Determination" (30 November 2016) at [7.1.2].

275 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [24]-[27].

311. We agree 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.

312. 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.

313. Transparency of relevant information on Chorus' systems can assist access seekers to develop competing, differentiated retail services, and improve the service experience for end-users.

314. However, in our view Chorus and access seekers are best placed to discuss and agree on changes, given their visibility and understanding of Chorus' existing operating systems and the fact that the potential changes are very technical.

315. Therefore, we consider that a clause 9 process is the best approach to amend Chorus' transparency obligations. Clause 9 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. In response to Spark's submission at paragraph 306.1.3, where Chorus and access seekers cannot agree on a proposed change, the proposed change is referred to an independent recommendation maker.[276]

316. 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).[277]

317. That proposal by Telecom was unanimously agreed by the TCF Working Party.[278] It appears that access seekers have not attempted to use clause 9 and we have not received any evidence that lead us to believe that clause 9 no longer works.

Guidance on the principles for a review of the UBA Operations Manual

318. We noted in the draft decision that if we were to request the TCF to propose specific amendments for our consideration we would provide some specific guidance on the

[276] Clause 9.5-9.11 of the UBA General Terms.
[277] Telecom Standard Terms Proposal, paragraph [35].
[278] Telecom Standard Terms Proposal, paragraph [60 (c)].

principles for the review of the UBA Operations Manual to assist Chorus and access seekers in forming proposals.[279]

319. We proposed using the following principles as a starting point for our guidance to Chorus and access seekers:

319.1 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.

319.2 Parties are guided by the following criteria (which are aligned with Telecom's objectives behind its UBA STP):

319.2.1 Clear, simple and practical – proposed updates are clear and simple to understand, and the processes are practical;

319.2.2 Workable – proposed updates will increase efficiency and reduce transaction costs for all parties;

319.2.3 Sufficiently flexible to adapt over time – proposed updates should remain current, workable, and flexible;

319.2.4 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.

319.3 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.

320. Chorus and Spark expressed support for our guidance on these principles.[280] [281] We did not receive any submission rejecting those principles. If we were to request the TCF to propose specific amendments for our consideration, we would use these principles as a starting point for our guidance to Chorus and access seekers.

321. We note that InternetNZ "encourage the Commission to take an active role in ensuring that operational systems and transparency throughout the industry are "fit for purpose"".[282] We expect Commission staff to be involved in the negotiations between Chorus and access seekers.

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279 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service : Draft Determination" (9 November 2016) at [280].

280 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [28].

281 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [29] and [30].

282 InternetNZ "Section 30R review of Chorus' UBA Service. InternetNZ Cross Submission." (15 December 2016) at [5.2].

Our amendments to the review mechanism of the Operations Manual in clause 9

322. Chorus must review the UBA 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.[283]

323. In our draft decision we noted that there was a lack of transparency regarding that review, and we proposed some changes to clause 9.[284, 285]

324. Our view continues to be that greater transparency of the process by which Chorus conducts the required review will generate visibility and clarity for access seekers and us.

325. As discussed in Chapter 2, 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.

326. 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.

327. Our draft decision was to add some additional consultation requirements to clause 9.12 to improve transparency of the review process.[286]

328. 2degrees, Spark, Vocus and Vodafone supported our proposed changes.[287] [288] [289] [290] Chorus proposed some amendments.[291]

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283 Clause 9.12 of the UBA STD General Terms.

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

285 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service: Draft Determination" (9 November 2016) at [282].

286 Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service: Draft Determination" (9 November 2016) at [287] and Attachment 1.

287 2degrees "Section 30R Review of the UBA STD: Draft Determination. A Submission to the Commerce Commission." (30 November 2016) at page 3.

288 Spark "Section 30R review of Chorus' Unbundled Bitstream Access Service – draft determination. Submission |Commerce Commission". (30 November 2016) at [29].

289 Vocus "Section 30R review of Chorus' Unbundled Bitstream Access Draft Determination. Submission to the Commerce Commission" (30 November 2016) at [7(b)].

290 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at page 7.

291 Chorus "Submission on Draft Determination in Section 30R Review of Chorus' Unbundled Bitstream Access Service." (29 November 2016) at [Appendix C].

329. We agree with Chorus' change to our draft clause 9.13 – ie, Chorus will continue to determine whether changes are "necessary or desirable as a result of a review under clause 9.12". We believe this is not an issue, since the clause 9 process continues to be available for access seekers. We also agree with Chorus' proposed clause 9.12.3 (and deletion of our proposed clause 9.14.1) with a minor clarification. Chorus' proposal is aligned with our view that we and access seekers should receive a summary with the results of the review.

330. Attachment 1 sets out our amendments to the UBA STD. We are also publishing a consolidated version of the UBA General Terms alongside this decision.

No changes to the SLAs in this section 30R review

331. The UBA SLAs set out:

331.1 the quality and performance of the service level commitments of Chorus to access seekers for the delivery of the regulated UBA service; and

331.2 the penalty mechanism where Chorus fails to meet those service levels.

332. In its submission to our process and issues paper, Vodafone suggested that the industry review the SLAs for UBA to ensure that they are best positioned to promote a quality customer experience for copper broadband customers.[292]

333. Vodafone did not identify any specific issues regarding whether the current SLAs are 'fit for purpose' to consider as part of this review. Accordingly, in our draft decision we stated that we had no reason to believe that the current SLAs are not appropriate.

334. We noted in our draft decision that if Vodafone identifies any specific issues, it can propose amendments to the SLAs through clause 9 of the General Terms, and 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.[293]

335. Except for the issue of penalties applicable to Chorus in case of breach of the new utilisation threshold service specification explained below, we did not receive any submission on our draft decision not to review nor amend the SLAs. Our draft decision is maintained in this final decision.

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[292] 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.

[293] Commerce Commission "Section 30R review of Chorus' Unbundled Bitstream Access service: Draft determination" (9 November 2016) at [290] and [291].

We will turn our minds to the issue of penalties applicable to Chorus in case of breach of the new utilisation threshold service specification after we have clarity about the outcomes of the ongoing review of the Act

336. Vodafone submitted on our draft decision that "to avoid the risk of a congested network the Commission should change one or more of the following features (…) establish clear up-front penalties for breaching the threshold that do not include exceptions or mitigating circumstances. This will ensure that the thresholds are viewed as strict upper bounds, as is intended by the Commission".[294]

337. Similarly, InternetNZ submitted that it was not clear what meaningful sanction there was for breaching the 95% threshold and what incentive there is for Chorus to do anything more than report and provide a plan on links with utilisation greater than 85%.[295]

338. We respond to Vodafone and InternetNZ below.

339. Sections 3.9 to 3.13A of Schedule 1 (UBA Service Description) set out the UBA service specifications.

340. In our original UBA STD decision we decided to treat non-performance (ie, not meeting the service specifications) as a fault.[296]

341. Appendix 1 of Schedule 3 (UBA Service Level Terms) provides the "Fault Management for UBA Service". When non-performance occurs, the SLAs 14-16 set out that Chorus must notify us and access seekers of the expected restoration time, which "will be provided in accordance with Chorus' fault prioritisation systems".[297]

342. Where Chorus does not meet the tolerance level for SLA 16 (ie, 90% of faults restored within the restoration time set by Chorus), then a performance penalty is calculated in accordance with the formula set out in item N. 16 of Appendix 3 of Schedule 3.

343. Item N. 16 of Appendix 3 of Schedule 3 sets out that for every day that Chorus does not restore the fault within the notified expected restoration time a penalty rate of 7% of the monthly charge applies, increasing by one percentage point every day multiplied by the number of lines affected.

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294 Vodafone "Submission on Section 30R Review of the Unbundled Bitstream Access Service." (30 November 2016) at [10(c)].

295 InternetNZ "Section 30R review of Chorus' UBA Service. InternetNZ Submission." (30 November 2016) at [6.4].

296 *354. At the UBA conference, TelstraClear and Telecom were in general agreement that the most practical method to measure compliance with the service specifications would be on an "exceptions" basis, as part of the fault resolution process. 355. The Commission agrees that the most appropriate approach is to treat non-performance as a fault. Therefore, the Service Levels that apply in the event of non-performance are those attached to restoring the fault.* (Commerce Commission "Standard Terms Determination for the designated service Telecom's unbundled bitstream access" 12 December 2007, Decision 611, paragraphs [354] and [355]).

297 Appendix 1 of Schedule 3, pages 11 and 12.

344. In other words, given that Chorus would only pay penalty rates if it is not able to meet upgrade plans that it sets itself, the SLAs will not provide strong financial incentives on Chorus to comply with the new utilisation threshold service specification. Therefore, amending the SLAs in this review could strengthen the incentives on Chorus to meet the threshold.

345. MBIE is currently conducting a review of the Act to assess "whether the current regulatory framework for telecommunications in New Zealand is the optimal one for competition, investment and innovation after 2020".[298]

346. We believe that we will be better positioned to address the issue related to the penalties on Chorus in case of non-compliance with the STDs once we have clarity about the outcomes of the ongoing review of the Act.

347. Once we have certainty about the new regime, we will consider whether a new section 30R review (or any other appropriate process) is required for the UBA and other STDs (eg, the UCLF and UCLL STDs) to review the SLAs.

348. In the meantime, we expect to Chorus to continue to comply with the SLAs. Also, we expect that the new monitoring requirements, which will be published monthly, will provide transparency regarding Chorus' compliance with the service specification.

[298] MBIE "Telecommunications Act review: Public Questions and Answers", page 1.

Attachment 1 – Amendments to the UBA STD

Purpose of this attachment

349. This attachment sets out amendments to the UBA STD in order to give effect to the final decisions set out in this paper. The amendments are marked as track changes.

350. Changes to the UBA General Terms made in Chapter 8:

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); ~~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~~.~~; and

9.12.3 Chorus must provide a report to the Commission and Access Seekers summarising the results of the reviews referred to at clauses 9.12.1 and 9.12.2 at the end of each review process.

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~~clause 9.

9.14 Chorus must submit any proposed change to the Commission by email and copying in 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 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.

351. Changes to Schedule 1 (UBA Service Description) made in Chapter 4:

ATM	means Asynchronous Transfer Mode
Peak Utilisation	means, in relation to a LAP, the highest Utilisation on that LAP within a calendar month.

Utilisation means, in relation to a LAP, the average throughput in Mbps (measured for both upstream and downstream traffic) over a five minute period, expressed as a percentage of the throughput capacity available on that LAP.

3.13A Where the Basic UBA Service does not use ATM and is supplied using a fibre-based LAP, the Utilisation must not exceed 95% for any five minute period either for upstream or downstream traffic.

4.11A Where the Enhanced UBA Services are supplied using a fibre-based LAP, the Utilisation must not exceed 95% for any five minute period either for upstream or downstream traffic.

352. Changes to Schedule 2 (UBA Price List) made in Chapter 6:

1.42	**Access Seeker Handover Connection Installation – GigE or 10GigE capacity. Basic UBA Service only.**	Standard installation of a Handover Connection– GigE or 10GigE capacity.	S	On completion of installation.	Clause 3.1.1 and Clause 3.1.2.	$532.26 Based on a field service company cost of [ ] **CHORUS COI** plus [ ] **CHORUS COI** administration charge and [ ] **CHORUS COI** to cover the estimated direct front office costs to manage each transaction. [ ] **CHORUS COI** mark up to cover common costs
1.43	**Access Seeker Handover Connection Installation – GigE or 10GigE capacity. Enhanced UBA Services only.**	Standard installation of a Handover Connection– GigE or 10GigE capacity.	S	On completion of installation.	Clause 3.1.1 and Clause 3.1.2.	$532.26 Based on a field service company cost of [ ] **CHORUS COI** plus [ ] **CHORUS COI** administration charge and [ ] **CHORUS COI** to cover the estimated direct front office costs to manage each transaction. [ ] **CHORUS COI** mark up to cover common costs
2.14	**Access Seeker Handover Connection Monthly Rental Charge – 10GigE capacity. Basic UBA Services only.**	Standard Monthly rental for an Access Seeker Handover Connection– 10GigE capacity.	S	Monthly in advance.	None	**Year 1**: $1,160.49 **Year 2**: $1,114.67 **Year 3**: $1,071.05 **Year 4**: $1,017.70 **Year 5**: $957.77

2.15	**Access Seeker Handover Connection Monthly Rental Charge – 10GigE capacity. Enhanced UBA Services only.**	Standard Monthly rental for an Access Seeker Handover Connection– 10GigE capacity.	S	Monthly in advance.	None	**Year 1**: $1,160.49 **Year 2**: $1,114.67 **Year 3**: $1,071.05 **Year 4**: $1,017.70 **Year 5**: $957.77

353. Changes to Schedule 4 (UBA Operations Manual) made in Chapter 4:

18 LAP Utilisation reporting

18.1 LAP Utilisation reporting

18.1.1 Within 10 Working Days following the end of each month Chorus must:

(a) determine the Peak Utilisation for that month on each LAP both for upstream and downstream traffic;

(b) make available on a website accessible by the Access Seekers and the Commission a report showing, separately for upstream and downstream traffic:

(i) the number of LAPs in each Peak Utilisation band, as set out in Appendix L;

(ii) for each LAP where the Peak Utilisation as calculated at 18.1.1(a) exceeds 80% and for which Chorus has an internally approved upgrade plan:

1 Exchange/cabinet identifier and location for the LAP;

2 details of the proposed upgrade; and

3 estimated completion date of the upgrade, together with any commentary (if relevant).

(c) for each LAP where Peak Utilisation as calculated at 18.1.1(a) exceeds 80% and for which Chorus does not have an internally approved upgrade plan, provide a report to the Commission showing:

(i) Exchange/cabinet identifier and location for the LAP;

(ii) the peak utilisation on each LAP;

(iii) the number of times Peak Utilisation exceeded 80%; and

(iv) any relevant commentary.

354. New Appendix L to Schedule 4 (UBA Operations Manual) made in Chapter 8:

APPENDIX L – Chorus' LAP utilisation dashboard

Month [XXX] of Year [XXX]			
Peak Utilisation band (downstream traffic)	LAP other than Ethernet fibre-based LAP	Ethernet fibre-based LAP	Total
0-25%			
25-35%			
35-45%			
45-55%			
55-65%			
65-75%			
75-80%			
80-85%			
85-90%			
90-95%			
95-100%			

Month [XXX] of Year [XXX]			
Peak Utilisation band (upstream traffic)	LAP other than Ethernet fibre-based LAP	Ethernet fibre-based LAP	Total
0-25%			
25-35%			
35-45%			
45-55%			
55-65%			
65-75%			
75-80%			
80-85%			
85-90%			
90-95%			
95-100%			