ISBN: 978-1-991085-94-8
Project no. PRJ0046884

Copper Services Investigation under section 69AH of the Telecommunications Act

Approach paper

Date of Publication: 22 April 2024

Associated documents

Publication date	Reference	Title
5 July 2016	ISSN 1178-2560	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
7 December 2023	ISBN 978-1-991085-60-3	Fibre fixed line access service deregulation review under section 210 of the Telecommunications Act – Draft assessment framework paper

Glossary

Table of terms and abbreviations	
The Act	Telecommunications Act 2001
ACCC	Australian Competition and Consumer Commission
Access seeker	Has the meaning given in section 5 of the Act and includes a retail service provider
ADSL	Asymmetric Digital Subscriber Line – a copper-based technology that can provide basic fixed line broadband services
AMR	Annual Telecommunications Monitoring Report
ASNAPOI	Access Seeker's Nearest Available Point Of Interconnection
Commission	The Commerce Commission
Designated service	A service described in Part 2 of Schedule 1, which includes both price and non-price terms for access
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
End-user	A person who is the ultimate recipient of a service or of another service whose provision is dependent on a service
FDS	First Data Switch
FWA	Fixed Wireless Access
Handover point	A handover point is the point in Chorus' network where a (regulated) service is handed over to the Access Seeker. A handover link provides connectivity between the Chorus network and a service provider's network, to deliver traffic
HD	High Definition
HFC	Hybrid Fibre-Coaxial
IP	Internet Protocol
LEO	Low Earth Orbit – satellite services which orbit the earth at an altitude below 2000km
Local exchange	The Exchange at which the Access Seeker is being supplied with, or may potentially be supplied with, the UCLF Service
MBNZ	Measuring Broadband New Zealand (report)
OIA	Official Information Act 1982
RCS	Rural Connectivity Study
Relevant copper services	The five copper services in scope of this Investigation, outlined in section 69AH of the Act. Note: 'copper fixed line access services' encompasses

Table of terms and abbreviations	
	two services, Chorus's unbundled bitstream access and Chorus's unbundled copper low frequency service
RSP	Retail Service Provider
SFA	Specified Fibre Areas
Specified service	A service described in Part 3 of Schedule 1, which includes only non-price terms for access
STD	Standard Terms Determination
TSO	Telecommunications Service Obligations
UBA	Unbundled Bitstream Access
UBA Backhaul	Unbundled Bitstream Access Backhaul
UCLF	Unbundled Copper Low Frequency
UCLL	Unbundled Copper Local Loop network
UCLL Backhaul	Unbundled Copper Local Loop network Backhaul (telephone exchange to interconnect point)
UCLL Co-location	Unbundled Copper Local Loop network Co-location
UFB	Ultra-Fast Broadband (government initiative)
VDSL	Very High-Speed Digital Subscriber Line – a copper based broadband connection that allows higher speeds than ADSL technology
VoIP	Voice over Internet Protocol

Contents

Chapter 1 Introduction

Investigation purpose

1. We are required under section 69AH of the Telecommunications Act 2001 (the Act) to undertake and complete an investigation into the regulation of five copper services (the relevant copper services),[1, 2] by no later than 31 December 2025, or provide reasons why there are not reasonable grounds for starting such an investigation. We have decided to proceed with an investigation.[3, 4]

Paper purpose

2. This paper explains the **proposed approach** for our investigation into whether Schedule 1 of the Act should be altered, in respect of the regulation of the relevant copper services, in any of the ways set out in sections 66 and 67 of the Act (the Investigation).

3. This paper outlines:

   3.1 the background to the Investigation;

   3.2 the proposed Investigation process;

   3.3 the assessment frameworks and key definitions we propose to apply; and

   3.4 the types and sources of evidence we propose to consider.

Paper structure

4. The paper is structured as follows:

   4.1 **Chapter 1 Introduction** – outlines the purpose and structure of the paper;

   4.2 **Chapter 2 Background and context** – provides a background to the copper network in New Zealand and relevant context for the Investigation;

   4.3 **Chapter 3 Legal framework** – covers the legal framework for the Investigation;

---

1 Four copper services are listed in s 69AH; copper fixed line access services, Chorus's unbundled bitstream access backhaul (UBA Backhaul), Chorus's unbundled copper local loop network co-location (UCLL Co-location), and Chorus's unbundled copper local loop network backhaul (UCLL Backhaul). However as described in s 5, copper fixed line access services encompasses two services (as they are described in subpart 1 of Part 2 of Schedule 1); Chorus's unbundled bitstream access (UBA), and Chorus's unbundled copper low frequency service (UCLF).

2 These five copper services are all of the remaining regulated copper services in sch 1 of the Act.

3 See Chapter 3 "Legal framework" and Chapter 4 "Investigation process" as to the process we have adopted with respect of commencing the Investigation, as well as the process we intend to follow throughout the course of the Investigation.

4 This paper, along with a Gazette notice, provide public notice of the Investigation.

4.4 **Chapter 4 Investigation process** – briefly outlines the proposed approach to the Investigation;

4.5 **Chapter 5 Economic framework** – describes a generic economic framework to be used for this and future Schedule 3 reviews;

4.6 **Chapter 6 Defining the copper services** – proposes the descriptions of the relevant copper services;

4.7 **Chapter 7 Identifying alternative services** – outlines the characteristics we propose to use to consider whether alternatives to the relevant copper services are effective substitutes;

4.8 **Chapter 8 Assessing competition** – describes how we propose to assess the extent to which the effective substitutes constrain (via competition) the regulated services in question;

4.9 **Chapter 9 Costs and benefits of amending regulation** – outlines what we propose to consider if we were to amend Schedule 1; and

4.10 **Chapter 10 Evidence for the investigation** – proposes the types and sources of evidence we will consider when undertaking the Investigation.

Information for interested parties on making a submission

Invitation to provide submissions

5. We invite submissions and feedback on:

5.1 the proposed economic framework (Chapter 5);

5.2 the application of the economic framework to the Copper Services Investigation (Chapters 6 – 9), in particular the approach to defining geographic areas (in Chapter 6);

5.3 the evidence we plan to use (Chapter 10) including any additional evidence you believe would be useful to include; and

5.4 any other considerations that you may deem relevant.

Process and timeline for making submissions

6. We are seeking submissions on the proposed approach outlined in this paper by 5pm Wednesday 22 May 2024. We then intend to invite cross-submissions by 5pm Friday 7 June 2024.

7. You should address your responses to:

7.1 Rachael Coyle (Head of Telecommunications) c/o telecommunications@comcom.govt.nz.

8. Please include “Copper Services Investigation” in the subject line. We prefer responses to be provided in a file format suitable for word processing in addition to PDF file format.

Confidentiality

9. Please note that we intend to publish all submissions on this approach paper.

10. The protection of confidential information is something the Commerce Commission (the Commission) takes seriously. The process requires you to provide (if necessary) both a confidential and non-confidential/public version of your submission and to clearly identify the confidential and non-confidential/public versions.

11. When including confidential information in your submission:

    11.1 Please provide clearly labelled confidential and public versions. We intend to publish all public versions on our website.

    11.2 The responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.

    11.3 Please note that all submissions we receive, including any parts that we do not publish, can be requested under the Official Information Act 1982 (OIA). This means we would be required to release material that we do not publish unless a good reason existed under the OIA to withhold it. Should there be an OIA request, where practical, we would consult with you first before providing the requester with our response.

Chapter 2 Background and context

Purpose of this chapter

12. This chapter provides the background to the copper network in New Zealand and the Investigation.

13. Telecommunications is a dynamic industry where new services are frequently introduced, and legacy services are withdrawn or retired. This is the case regarding the technology used to provide voice and internet services.

14. Copper fixed line access services, used to provide voice and internet services, are currently regulated under the Act. The Act requires us to investigate the regulation of these services by the end of 2025. The Investigation is timely given the growing availability of alternative technologies and the increasing shift by some end-users away from copper services.

15. In this section we provide a brief history of the voice and internet service markets and provide an overview of copper regulation.

New Zealand's copper network

16. New Zealand's copper network has existed for over 140 years, initially to provide telegraph services, followed by landline voice (telephone) services, and then from the late 20th century to connect to the internet. At its peak, the copper network was widely present, reaching 98% of the places where New Zealanders lived and worked.

17. The copper network was originally owned and managed by The New Zealand Post Office until 1987, when Telecom New Zealand was formed.[5] Telecom was then privatised in 1990 and operated the copper network with limited competition into the 2000s.

18. Starting from 2008, Telecom 'cabinetised' a majority of the copper network. Cabinetisation significantly reduced the length of copper lines by installing fibre-fed cabinets closer to end-users' homes. More fibre and less copper in the network, coupled with upgrades to the network electronics (such as ADSL and then VDSL), improved copper broadband performance to the levels we observe today.

Regulation of copper services

19. The Act introduced a regulatory regime specific to the telecommunications industry in New Zealand intended to support competition for the long-term benefit of end-users, including by providing access seekers with the ability to seek regulated access

[5] Under the State-owned Enterprises Act 1986, the New Zealand Post Office was split into state trading companies including NZ Post, Postbank and Telecom Corporation.

to telecommunications services listed in Schedule 1 of the Act if commercial negotiations failed.[6]

20. However, Telecom's monopoly position and unwillingness to provide competitive access to its copper network led to the Telecommunications Amendment Act 2006. This regulated a range of additional services providing legislated, wholesale access to different parts of the copper network, in particular the local loop, or the 'last mile', connecting homes to the network.

21. The proceeding years saw the Commission publish price and non-price access terms for these services, opening the way for Telecom's competitors to purchase wholesale copper inputs and begin to offer more competitive retail voice and broadband services.[7] The legislative term for each of these access terms was a Standard Terms Determination (STD) – often referred to as a 'reference offer' in other jurisdictions.[8]

22. The access terms in the STDs reflected the nature of the copper network at the time they were established; an extensive network, limited competition and one geographic price supporting cross-subsidisation from urban to rural.

23. The Telecommunications (New Regulatory Framework) Amendment Act 2018 (2018 Amendment) included key changes to the regulation of copper, including:

    23.1 introducing Part 2AA 'Deregulating copper fixed line access services';

    23.2 removing Chorus' obligation to supply copper services in areas served by Ultra-Fast Broadband (UFB) fibre, called specified fibre areas (SFAs);[9]

    23.3 putting consumer protections in place that Chorus must meet before withdrawing copper in SFAs;[10] and

    23.4 removing the Unbundled Copper Local Loop network (UCLL) service from Schedule 1 of the Act.[11]

Rise of copper alternatives

24. From the late 1990's, New Zealand saw the introduction and rise of alternative telecommunications networks capable of providing voice and internet services.

---

6 Schedule 1 currently contains 11 regulated wholesale services (including nine designated services, and two specified services).

7 For designated services, we are able to determine price and non-price terms of access, but we are limited to determining only non-price terms of access for specified services. Price terms outline the charge for each of the service components contained in the regulated service. Non-price terms include the terms on which the service provider must provide their services to other telecommunications providers (Access Seekers), including terms on access, quality, liability, and disputes.

8 The 2007 unbundled copper local loop network STD required Telecom to retain and provide access to the existing copper network but didn't require them to extend the network further.

9 The Commission carries out an annual assessment to determine the geographic areas in which specified fibre services are available to end-users. These geographic areas become SFAs.

10 Chorus must meet the minimum requirements set out in the Copper Withdrawal Code (2024).

11 Chorus's Sub-loop UCLL (SLU) service was also regulated under the UCLL service meaning SLU, SLU Backhaul and SLU Co-location also ceased to be designated access services.

These included technologies such as fibre, Fixed Wireless Access (FWA), Hybrid Fibre-Coaxial (HFC), satellite, mobile and Voice over Internet Protocol (VoIP).

25. The rapid expansion of internet use in New Zealand in the early 2000s drove demand for more and faster internet services, primarily via broadband.[12] With New Zealand lagging behind similar countries in broadband uptake,[13] in 2009 the government committed up to $1.5 billion to accelerate the deployment of high-speed broadband infrastructure over the following ten years.[14]

26. This investment supported the funding of the UFB initiative, which aimed to build fibre-to-the-home networks, initially to 75% of the population by 2019 but then, following additional funding, to 87% of the population by 2022.[15] Telecom and Chorus were structurally separated as a condition of Chorus winning the majority of the UFB contracts, supporting separation of the wholesale and retail markets.[16]

27. UFB successfully met its target in December 2022, and was supported by additional schemes designed to provide and improve broadband services in more remote areas of the country, primarily through the use of upgraded copper and FWA technologies.[17, 18]

28. Commercial investment in alternative wireless technologies, particularly mobile networks, has meant the availability and capability of wireless alternatives have similarly grown steadily throughout the 2000s.[19] These technologies are suited to serving remote and/or hard to reach end-users.[20] In the last five years, this

---

12 Between June 2006 and December 2010, the number of fixed broadband connections grew from 0.48m (11.6 for every 100 people) to 1.09m (25 for every 100 people). Commerce Commission "2010 Annual Telecommunications Monitoring Report", see page 6 https://comcom.govt.nz/__data/assets/pdf_file/0022/63832/2010-Annual-Telecommunications-Monitoring-Report-29-April-2011.pdf.

13 OECD "The Development of Broadband Access in the OECD Countries" 2001, see https://www.oecd-ilibrary.org/docserver/233822327671.pdf?expires=1705272012&id=id&accname=guest&checksum=CAC392020FBDE2E9DA537EAB38920B1F.

14 Ministerial release "Budget kick starts broadband investment" 2009, see https://www.beehive.govt.nz/release/budget-kick-starts-broadband-investment.

15 Ministerial release "Ultra-Fast Broadband in 190 more towns" 2017, see https://www.beehive.govt.nz/release/ultra-fast-broadband-190-more-towns.

16 Chorus was formed in 2008 as a Telecom business unit operating at arm's length from the rest of the organisation. In 2011 Chorus was formally separated from Telecom, taking most of the network infrastructure.

17 Initiatives such as the Rural Broadband Initiative Phase 2, Rural Capacity Upgrades programme and the Remote Users Scheme.

18 FWA technologies provide internet and voice services via mobile towers, meaning some locations that don't have copper cabling to the door (or access to fibre) can access these services. The speeds vary based on several factors, but on average are about the same as VDSL.

19 We estimated that as of June 2022 there were 291,000 wireless broadband connections across New Zealand. Commerce Commission "2022 Telecommunications Monitoring Report", see page 16 https://comcom.govt.nz/__data/assets/pdf_file/0028/318907/2022-Annual-Telecommunications-Monitoring-Report-15-June-2023.pdf.

20 Currently, less than half of rural end-users (defined in the Commission AMR as end-users who don't have access to fibre) use a copper broadband service. The majority use Wireless Internet Service Provider FWA, satellite, cellular FWA, other technologies or have no connection. Commerce Commission "2022 Telecommunications Monitoring Report", see page 85.

investment has increased, with a focus on satellite services and the ongoing 5G rollout, including investment in spectrum.[21, 22]

The decline of copper

29. Despite its early coverage and uptake, there has been a steady decline in the number of copper connections across New Zealand since 2015.[23] In the 12 months to December 2023, Chorus' total copper connections declined from 287,000 to 193,000, a reduction of 94,000 (or 32%).[24, 25]

30. Demand for more and faster internet has driven the migration of end-users away from copper to fibre or other alternative broadband technologies. We estimate that, at June 2022, only 5% of urban broadband connections were copper, and less than half of rural New Zealand is now served by copper technology.[26]

31. Similarly, the widespread use of mobile phones, and the development of VoIP technology (allowing voice calls to be made over a broadband connection) has meant that the reliance on copper for voice services has also decreased.[27] Residential landline connections fell 24% between 2021 and 2022, with voice only connections dropping 33%, from 6% to 4% of total residential fixed line connections (approximately 70,000 residential voice-only connections remain). The majority of remaining landline connections are part of broadband-voice bundles.[28]

32. While the decline in copper connections has been seen most prominently in urban areas (where the UFB network has been completed), connection numbers in rural areas are similarly falling. For example, Chorus reported that it had 101,000 copper connections in non-fibre areas as at 31 December 2023, a reduction of 24,000 connections (19%) over the previous 12 months.[29] The introduction of low earth orbit (LEO) satellite services (such as Starlink), and continued investment in wireless

---

21 Commerce Commission "2022 Telecommunications Monitoring Report", see page 25.

22 Ministerial release "Kiwis to benefit from accelerated 5G roll-out" 2022, see https://www.beehive.govt.nz/release/kiwis-benefit-accelerated-5g-roll-out.

23 See previous Commission Annual Monitoring Reports, https://comcom.govt.nz/regulated-industries/telecommunications/monitoring-the-telecommunications-market/annual-telecommunications-market-monitoring-report.

24 Calculated from Chorus "Q2 FY24 Connections Update" slide 6 https://assets.ctfassets.net/7urik9yedtqc/nzx-doc-411496/8e7754e2326c029d078da3f3497b4be5/Q2_FY24_Connections_Update.pdf.

25 RSPs that have access to alternative networks are making commercial decisions to stop selling copper services ahead of Chorus' anticipated copper withdrawal.

26 Commerce Commission "2022 Telecommunications Monitoring Report", see pages 36 and 86.

27 Spark are currently retiring its Public Switched Telephone Network (PSTN), a network of switches that connects calls from one person to another over copper lines. This is a separate and unrelated withdrawal process to Chorus' copper withdrawal under Part 2AA of the Act. Both changes are just taking place at the same time.

28 Broadband and voice bundles make up 31% of residential voice-only connections. Combined with the number of voice-only connections, this means 65% of residential fixed line connections don't include a voice service. Commerce Commission "2022 Telecommunications Monitoring Report" see page 142.

29 Calculated from Chorus "Q2 FY24 Connections Update" slide 6.

technologies, has meant many remote users have additional options to purchase voice and broadband services.

The current landscape

33. New Zealand's telecommunications landscape has changed considerably since the Act was first established. The majority of New Zealanders can now access a modern fibre network, and where they can't, alternative technologies such as FWA and satellite continue to grow in availability.[30]

34. The result is that the role of the copper network, along with the wider competitive environment for voice and internet services, has changed.

35. The wider policy and regulatory regime for copper services, including STDs (and their access terms) and Telecommunications Service Obligations (TSOs) all play a role in promoting competition in telecommunications markets for the long-term benefit of end-users. These determinations were all developed and subsequently updated to reflect the policy principles and drivers at the time, to ensure they remained fit-for purpose.

36. While this Investigation is limited to consideration of whether the relevant copper services in Schedule 1 should be altered in any of the ways set out in sections 66 and 67 of the Act, we will be mindful of the wider regulatory and competitive landscape including the TSOs, STDs and existing Codes.

37. For example, the continued decline in demand for copper services raises the question as to whether, at some point, copper services will be unprofitable to continue to supply. Economic regulation is a remedy to the potential exploitation of market power, and we note that in such a situation, it is unlikely there would be any market power to exploit.

[30] Commerce Commission "2022 Telecommunications Monitoring Report", see page 7.

Chapter 3 Legal framework

Overview

38. The relevant copper services to which this Investigation relates to are classified as designated services in Schedule 1.

39. To ensure that the scope of Schedule 1 remains appropriate, we are required by Schedule 3 to consider, at least every five years, whether to carry out an investigation into whether regulation remains justified for each service.

40. For the relevant copper services, Schedule 3 is modified in certain respects by section 69AH as set out below.

41. This chapter sets out the legal framework we will apply to this investigation in light of these modifications.

Section 69AH

42. We are required under section 69AH of the Act to undertake an investigation into the regulation of the relevant copper services by no later than 31 December 2025, or to provide reasons (within a reasonable time after 31 December 2025) why there were not reasonable grounds for starting such an investigation.

Purpose of the investigation

43. Section 69AH is contained within Part 2AA of the Act entitled "Deregulation of copper fixed line access services". Part 2AA was inserted as part of the 2018 Amendment Act. The purpose of Part 2AA is to: [31]

    43.1 deregulate copper fixed line access services in areas where fibre fixed line access services are available; and

    43.2 provide protections for end-users of copper fixed line services and certain other designated services in deregulated areas; and

    43.3 provide for the Commission to investigate whether the regulation of copper fixed line access services and certain other designated services should be altered.

44. Schedule 3 is covered by the purpose section in section 18 of the Act, which provides for the promotion of competition in telecommunications markets for the long-term benefit of end-users of telecommunications services, by regulating, and providing for the regulation of, the supply of certain telecommunication services between service providers.[32]

---

31 Telecommunications Act, s 69AA.

32 Telecommunications Act, s 18(1).

45. In that regard, section 18 requires that:

    45.1 in determining whether or not (or to the extent to which) any act or omission will result (or will be likely to result) in competition in telecommunications markets for the long term-benefit of end-users, the efficiencies that will (or will be likely to) result from those acts or omissions must be considered;[33] and

    45.2 in determining whether or not competition for the long-term benefit of end-users is promoted, 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 must also be given consideration.[34]

46. The statutory purpose of the Investigation, in light of section 18 and Part 2AA of the Act, is to examine whether Schedule 1 of the Act should be altered, to ensure that the regulation of relevant copper services remains fit for purpose, having regard to the purpose in section 18.[35, 36]

47. In particular, we must inquire into whether a telecommunications service should be added to or omitted from Schedule 1; or in respect of a service, whether an amendment is required.[37]

48. In making our decision or recommendation we are required to:[38]

    48.1 consider the purpose set out in section 18; and

    48.2 if applicable, consider the additional matters set out in Schedule 1 regarding the application of section 18; and

    48.3 make the decision or recommendation that we consider best gives, or is likely to best give, effect to the purpose set out in section 18.

49. In exercising our powers under Schedule 3, we are also required to have regard to any economic policies of the Government that are provided to the Commission by the Minister.[39] There are currently no such policy statements that we consider relevant to this investigation.

---

33 Telecommunications Act, s 18(2).

34 Telecommunications Act, s 18(2A).

35 While s 69AH was not explicitly discussed, the Parliamentary debates on the 2018 Amendment Act (which introduced s 69AH into the Act), was that the 2018 Amendment Act's objective was to create a regulatory regime that was "fit for purpose" and able to best achieve the objectives of the 2018 Amendment Act.

36 Telecommunications Act, s 69AA(c).

37 Telecommunications Act, sch 3 cl 1, and s 66 and s 67.

38 Telecommunications Act, s 19.

39 Telecommunications Act, s 19A(1).

Initiation of an investigation

50. The presumption under section 69AH is that we will carry out and complete an investigation into the relevant copper services by 31 December 2025, unless there are no reasonable grounds for commencing one. We are of the view we should proceed to an investigation.

51. Notwithstanding the above presumption and while we are not required to provide reasons for commencing an investigation, the trends referred to in Chapter 2 and the time that has elapsed since the relevant copper services were last reviewed under Schedule 3, provide relevant context for the Investigation.

Process for conducting an investigation

52. Section 69AH(2) states that in respect of the Investigation, we are required to complete it in accordance with Part 1 of Schedule 3, with the exception that the 240-working day deadline provided for in clause 4(1) of Schedule 3 does not apply.[40]

53. As such, we must follow the timing in section 69AH, instead of clauses 1 and 4(1) of Schedule 3 and thereby complete our investigation by 31 December 2025.[41, 42] In all other respects we must follow the procedure set out in Part 1 of Schedule 3.

54. The Schedule 3 process for regulating, amending, or deregulating a service is as follows:

    54.1 The Commission must give public notice of the commencement of an investigation under Part 1 of Schedule 3.[43] Once notice has been given, a provider of the relevant service can submit voluntary undertakings within 40 working days of the investigation commencing.[44] These trigger various adjustments to the process.

    54.2 After public notice of the investigation has been given, we are required to prepare a draft report and provide public notice of the same. In that public notice, we will:[45]

        54.2.1 set a date for submissions (which must not be later than 20 working days after release of the draft report); and

40 Telecommunications Act, s 69AH(2).
41 Schedule 3, cl 1 is expressly stated as being subject to section 69AH (sch 3, cl 1(7)).
42 The standard timing for considering an investigation in sch 3 of the Act is at intervals of 5 years. However, s 69AH(1) expressly provides that the Commission must complete, no later than 31 December 2025, an investigation under Part 1 of sch 3 into whether sch 1 should be altered in any of the ways set out in s 66 and s 67.
43 Telecommunications Act, sch 3 cl 1(6).
44 Telecommunications Act, sch 3A cl 15.
45 Telecommunications Act, sch 3 cl 2(1)(c).

54.2.2 if we decide to hold a conference or public hearing, set a date for this (which must not be later than 10 working days after the closing date for submissions).

54.3 Upon receipt of submissions and any information provided at any conference or hearing, we will prepare a final report taking all information received into account.[46]

54.4 We are required to then provide the final report to the Minister and publish it. In the case of the Investigation, this must be by 31 December 2025.[47] Failure to comply with the statutory deadline does not invalidate the report.[48]

55. We may include in our recommendations that the Minister defer a decision on a relevant copper service. If the Minister accepts a recommendation to defer a decision, then at the end of the deferral period we must prepare:[49]

55.1 a draft report setting out any changes to our recommendations, on which submissions will be made (which must not be later than 20 working days after the date a public notice of our draft report is made), to which a subsequent final report to the Minister will be made; or

55.2 a final report recommending the Minister accept an undertaking offered under Schedule 3A.

Final report and our recommendations

56. As the Investigation is a Schedule 3 Part 1 investigation, we can inquire into, and recommend, any of the matters in sections 66 and 67.[50, 51] These matters include adding or omitting a relevant copper service, or amending the current regulation in any of the ways set out in section 66(1)(c).

57. Our final report does not need to recommend any alterations to Schedule 1. As a result of our findings, we may conclude that no alterations are required and advise the Minister accordingly. However, in the event we recommend some alterations to Schedule 1, the Act requires that the draft and final reports will contain:[52]

57.1 detail of any proposed alterations;

57.2 include recommendations as to any alterations, and any potential deferral of those;

46 Telecommunications Act, sch 3 cl 4(2).
47 Telecommunications Act, s 69AH(1)(a).
48 Telecommunications Act, sch 3 cl 4(4A).
49 Telecommunications Act, sch 3 cl 7(1)(b).
50 See Appendix 1 for the full list of matters we can inquire into and make recommendations on, as per s 66(1).
51 Telecommunications Act, sch 3 cl 1(1).
52 Telecommunications Act, sch 3 cls 2 and 4.

57.3 identify any recommendations that the Commission considers to be sufficiently related to each other that they ought to be considered together;

57.4 reasons for the Commission's views on the above matters, including both majority and dissenting views (if any).

58. Our final report, if it proposes alterations, must include all relevant details necessary for inclusion in Schedule 1, and the reasons for our views on those matters. Depending on the extent of the alteration(s) proposed, our final report may cover:[53]

58.1 the description of the service;

58.2 any applicable conditions that must be met before access obligations apply;

58.3 the description of access seekers;

58.4 the description of access providers;

58.5 the description of the applicable access principles;

58.6 the description of the limits (if any) on the applicable access principles;

58.7 any applicable initial pricing principle, the applicable final pricing principle, and any requirement referred to in section 45 for the applicable final principle;[54] and

58.8 any additional matters that must be considered regarding the application of the section 18 purpose.

59. Upon receiving our final report, the Minister may:[55]

59.1 seek clarification or additional information on any point, or seek reconsideration of a particular issue from us;

59.2 alter Schedule 1 of the Act in the way recommended (or defer consideration of the alteration for a period recommended by the Commission); or

59.3 decline our recommended approach.

60. Depending on whether and how Schedule 1 has been altered, the Commission may then be required to commence the STD review process under Part 2 of the Act.[56] As such, any detailed pricing issues will be dealt with in a subsequent process.

---

53 Telecommunications Act, sch 3 cl 4, and s 66(1)(c).

54 Schedule 1 can include options in relation to some matters, for example having two potential pricing principles, with the decision as to which one best achieves the statutory purpose being left to the Commission.

55 Telecommunications Act, sch 3 cls 5A and 6.

56 Schedule 1 of the Act sets out the basic description of the designated and specified services, while the Part 2 determinations set the precise and detailed terms of supply for designated or specified services.

Chapter 4 Investigation Process

61. Table 1 below sets out the proposed process and key milestones for the investigation.

Table 1 Investigation milestones*

Milestone	Indicative timing
Publish approach paper	22 April 2024
Submissions on approach paper due	22 May 2024
Cross-submissions on approach paper due	07 June 2024
Publish draft report	Q3 2024
Submissions on draft report**	Q4 2024
Cross-submissions on draft report	Q4 2024
Provide final report to the Minister and publish	Q2 2025

* Please note the timeline and proposed steps are indicative only and may be subject to change.
** We will consider whether it would be beneficial to hold a conference and/or public hearing.

62. This paper is seeking feedback on the proposed approach to the Investigation. We will consider all submissions and intend to reflect submissions in the approach (where we deem appropriate) as we undertake the Investigation. In the next publication, our draft report, we will confirm the approach we took including any changes based on submissions.

63. We are mindful of the fibre fixed line access service (FFLAS) deregulation review underway at the same time as the Investigation. Noting the different steps required between these two processes,[57] where appropriate, we will aim to ensure alignment of timing and approach.[58]

[57] The FFLAS review is required to undertake Reasonable Grounds assessment as the first step, whereas this Investigation isn't required to do so (see para 50).

[58] Commerce Commission "Fibre fixed line access service deregulation review under section 210 of the Telecommunications Act" 2023, see https://comcom.govt.nz/__data/assets/pdf_file/0024/336822/Fibre-fixed-line-access-service-deregulation-draft-assessment-framework-December-2023.pdf.

Chapter 5 Economic framework

Previous economic assessments

64. We have previously undertaken numerous Schedule 3 reviews of Schedule 1.[59]

65. These previous reviews shared substantially similar assessment considerations, such as defining the service in question, outlining retail and wholesale alternatives, and considering the extent to which these provided competitive constraints on the regulated service, both now and in the foreseeable future. These assessment considerations are in line with similar international telecommunications market reviews.[60]

66. From our prior experience, and from national and international examples, we propose an economic framework for this Investigation, and as the starting point for future Schedule 3 reviews of Schedule 1.[61]

Generic economic framework

67. The economic framework we propose to apply during this investigation and for future Schedule 3 reviews contains four key steps:

    67.1 **1) Defining the service** – describing the regulated service, including where and how retailers use the service to offer retail services to end-users.

    67.2 **2) Identifying alternatives** – identifying alternative services which act as effective substitutes for the regulated service.

    67.3 **3) Assessing competition** – analysing the extent to which the effective substitutes constrain (via competition) the regulated services in question.

---

59 Several recent examples include National roaming (2023), Mobile termination access service (2020) and Spark's resale voice services (2019).

60 For example, UK Office of Communications "Wholesale Broadband Access Market Review - Final Statement" 2018, see https://www.ofcom.org.uk/__data/assets/pdf_file/0030/116994/statement-wba-review.pdf, Australian Competition and Consumer Commission (ACCC) "Domestic Transmission Capacity Service – Final Report on the review of the declaration for the Domestic Transmission Capacity Service" 2019, see https://www.accc.gov.au/system/files/DTCS%20Declaration%20review%202018%2019%20-%20Final%20Report_0.pdf, ACCC "Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service – Discussion paper" 2023, see https://www.accc.gov.au/system/files/MTC%20-%20combined%20declaration%20inquiries%20-%20discussion%20paper.pdf. The ACCC released the final report on this inquiry in March 2024, see https://www.accc.gov.au/by-industry/regulated-infrastructure/regulatory-projects/public-inquiry-into-the-declaration-of-the-domestic-transmission-capacity-service-fixed-line-services-and-domestic-mobile-terminating-access-service/final-report-dtcs-and-fixed-line-services.

61 This framework reflects the current state of the law and our previous experience with sch 3 reviews. It is designed to provide a baseline starting point for future sch 3 reviews. The framework may need to be adapted for the relevant context and scope, or in light of new developments.

67.4 **4) Understanding change** – understanding the over-arching costs and benefits of potential amendments to legislation, and the overall effect with regard to the purpose statement in the Act.

68. The Act does not prescribe a specific timeframe we need to consider as part of Schedule 3 reviews.

69. Our reviews are forward looking, analysing the effect of potential changes to regulation by comparing a future with the existing regulation (the factual) against the future with potential amendments to regulation (one or more counterfactuals). We do this by considering evidence as to the current state of competition and anticipate, based on relevant evidence, whether this state (alongside any historical changes and trends) can be expected to continue into the future. We then anticipate how this future may be different as a result of potential amendments to Schedule 1.

70. In some cases, this may include comparing the current state of competition with that which existed at the time of the last review of the service(s) in question, and/or when the service(s) was first regulated.[62] What is most appropriate for a specific review will be determined on a review by review basis.[63]

Step 1: Defining the service

71. The first step in the framework is to describe the regulated service and the purpose it serves to the retailer and/or end-user.

72. Doing this involves considering three key elements:

72.1 firstly, how the service is described in existing legislation and regulatory decisions,[64] as this provides guidance on the role the regulated service is intended to play in the market;

72.2 secondly, what the service is used for. There may be multiple uses at different levels of the value chain (ie, wholesale and retail) that are influenced by the service. Recognising that the service was initially regulated due to potential or actual end-user harm, it will be important to consider how services are supplied to end-users using the regulated service; and

72.3 thirdly, the geographic constraints to providing the service (the geographic area(s)), which, alongside step 2 below, informs whether competition analysis

---

62 This approach is often used in cyclical reviews (ie, 5-year intervals) as it allows us to compare the state of competition to that which existed at the previous review, and also if developments we expected are now present.

63 We have previously indicated that we expect sch 3 reviews to be carried out considering the current state of competition compared with either the state of competition as at the last review and/or the state of competition when the service was first regulated. These are two possible options that sch 3 reviews using this framework could consider adopting regarding the timeframe for consideration.

64 Primary legislation is law made by parliament. Secondary legislation is law made by someone other than Parliament, under a power that Parliament has formally delegated in a particular Act of Parliament and that the Act states is secondary legislation.

should be undertaken at a national level, or if a more granular level is more appropriate.

73. Chapter 6 outlines how we plan to apply this step of the framework to the Investigation.

Step 2: Identifying alternatives

74. The next step is to identify alternative services comparable to the defined regulated service. 'Economic substitutes' is the term often used to describe these types of products and services.

75. There are likely to be differences in a range of characteristics between alternative services. The degree and nature of the differences will determine whether they are effective substitutes for the regulated service.

76. The effectiveness of alternatives should be considered having regard to characteristics that are most appropriate to the service in question. As such, these will differ between reviews. Some generic telecommunications characteristics include:

    76.1 geographic availability;

    76.2 technical capability and quality that supports the same or improved retail service provider (RSP) and/or end-user uses; and

    76.3 the recurring and non-recurring prices.

77. Steps one and two are sometimes referred to as defining the market.[65]

78. Chapter 7 outlines how we plan to apply this step of the framework to the Investigation, specifying the characteristics alternative services should meet to be considered effective substitutes to the relevant copper services.

Step 3: Assessing competition

79. The third step involves consideration of the effectiveness of competition from the alternative services. Here we are considering the extent of the effectiveness of the alternative services in constraining the market power of the incumbent's regulated service(s) (in the absence of regulation) via competition.

80. Any such competitive constraint may operate directly (at the level at which the regulated service is supplied) or indirectly (at the downstream level in which services

[65] Defining markets is a distinct step in several review frameworks. However, we deem it most appropriate to combine this with into steps 1 and 2 for ease of understanding. For further information on market definition see Commerce Commission, "Mergers and acquisitions Guidelines" May 2022, Chapter 3 https://comcom.govt.nz/__data/assets/pdf_file/0020/91019/Mergers-and-acquisitions-Guidelines-May-2022.pdf.

are supplied using the regulated service as an input). Both direct and indirect competitive constraints would be considered in this step.

81. For example, for a regulated wholesale service:

    81.1 in terms of direct constraints, we would consider whether there are any alternative wholesale services that a wholesale customer (such as an RSP) could switch to in the event the price of the regulated wholesale service increased;

    81.2 in terms of indirect constraints, wholesale customers that purchase regulated services may be competing in a downstream market against alternative services which are not dependent on the regulated service. The extent to which those alternative services constrain the regulated service (indirectly at the retail level) will also be considered.

82. Consideration of market competitiveness includes analysis of factors such as:

    82.1 market conditions and trends – including the number of competitors, market share, the ability of existing competitors to expand (for example through spare or new capacity), and entry/exit barriers and conditions; and

    82.2 current supplier and end-user behaviour – the extent to which the alternatives identified provide a competitive constraint on the regulated service(s). This could look at the ability to switch to the alternative, considering non-price aspects such as network capacity and adaptability, as well as the complexity and time to switch.

83. Chapter 8 outlines how we plan to apply this step of the framework to the Investigation, outlining the proposed factors for assessing competition in the defined geographic areas.

Step 4: Understanding change

84. Finally, we will assess the over-arching costs and benefits of potential amendments to legislation, comparing the factual (the future state with existing regulation) against the counterfactual (the future state with the potential amendments to regulation), with regard to which best gives effect to the section 18 purpose. For example, we do not necessarily require fully effective competition to justify amendments or de-regulation, as there may be situations where the benefits of regulation are outweighed by the costs.

85. The first step in this process is to identify the different options available (counterfactuals) to compare with the factual (status quo). These include the range of options set out in section 66 of the Act and can include amendments to current regulations, partial or complete deregulation. These could include consideration of different timing options for amendments to Schedule 1.

86. Considerations for this step when assessing the factual and counterfactual can be broad and potentially include:

86.1 our degree of certainty regarding what is likely to happen in the future;

86.2 the potential benefits (direct and indirect);[66]

86.3 the potential costs (direct and indirect);

86.4 possible unintended consequences and asymmetric risk attached to the counterfactual – for example, we may conclude that the detrimental impact of amending or deregulating too early outweighs the detrimental impact of keeping the regulation too long;

86.5 any remaining supply or demand side constraints; and

86.6 any remaining market power and its ability to be exercised.

87. As part of considering these matters, we will consider the impact of any change on efficiency, incentives to innovate, and the risks faced by investors in new telecommunications services.[67]

88. Chapter 9 outlines how we plan to apply this step of the framework to the Investigation and outlines the key considerations proposed to be used when assessing the impact of any possible amendments to Schedule 1.

[66] A direct impact is defined as an impact that can be identified as resulting directly from the implementation or removal/simplification of regulation. Subsequent effects that occur as a result of the direct impacts, including behaviour change, are deemed indirect.

[67] Telecommunications Act 2001, ss 18(2) and (2A).

Chapter 6 Defining the copper services

Purpose

89. This chapter outlines how we propose to apply step 1 of the economic framework to the Investigation by setting out:

    89.1 how the relevant copper services are described;

    89.2 what the services are used for; and

    89.3 the geographic constraints for providing the service.

How the services are described

90. The relevant copper services are described in two places:

    90.1 Schedule 1 of the Act; and

    90.2 the relevant STDs.

91. Relevant excerpts of both sets of service descriptions are set out in Appendix 2.

92. As noted previously, we have split copper fixed line access services into Chorus's unbundled bitstream access (UBA) service and Chorus's unbundled copper low frequency (UCLF) service as they are described in subpart 1 of Part 2 of Schedule 1.

How the services are used

93. The five relevant copper services are wholesale services which allow RSPs to use their own equipment to provide broadband and/or voice services to end-users over Chorus's copper network.

94. There are two services (UBA and UCLF) that connect directly to end-users' premises. The remaining three (UBA Backhaul, UCLL Backhaul and UCLL Co-location) are ancillary services; they support the provision of UBA and UCLF.[68]

95. The RSP and/or end-user uses for each of the relevant copper services are set out in Table 2 below.

[68] The Telecommunications (New Regulatory Framework) Amendment Act 2018 deregulated UCLL and the UCLL backhaul interconnection element of both UCLL backhaul and UCLL co-location to Chorus's UCLL network from 1 January 2020. As such, while the UCLL co-location and UCLL backhaul technical definitions from the Act include a connection with Chorus's UCLL network, in essence, only the connection with Chorus's UCLF service is still regulated and thus in scope of the Investigation.

Table 2 How the relevant copper services are used by RSPs and/or end-users

Service type	RSP and/or end-user use
Chorus's unbundled bitstream access (UBA)	UBA provides end-users (via a service purchased from an RSP) a broadband connection which allows them to watch, listen, play, post, and chat over the internet. Note that different Digital Subscriber Line (DSL) technologies enable different end-user uses: • ADSL is suitable for traditional services like web browsing, email, and basic video streaming, particularly when there is only one person online. • VDSL is more likely to be able to support applications that require more data, such as video conferencing and High Definition (HD) streaming.
Chorus's unbundled copper low frequency (UCLF)	The UCLF service supports end-users (via a service purchased from an RSP) to make and receive voice calls over a landline.
Chorus's unbundled bitstream access backhaul (UBA Backhaul)	UBA Backhaul provides RSPs with a way to transport UBA traffic back to their own network equipment in a different part of the country. RSPs cannot use UBA Backhaul to transport any other traffic other than UBA. Accordingly, UBA Backhaul ceases to be a usable service without UBA.
Chorus's unbundled copper local loop network co-location (UCLL Co-location)	UCLL Co-location provides RSPs with space in Chorus' exchanges to house their own voice equipment to support their landline voice service. RSPs cannot use UCLL Co-location to accommodate any other equipment other than that needed to connect to UCLF. Accordingly, UCLL Co-location ceases to be a usable service without UCLF.
Chorus's unbundled copper local loop network backhaul – telephone exchange to interconnect point (UCLL Backhaul)	UCLL Backhaul provides RSPs with a way to transport UCLF traffic back to their own network equipment in a different part of the country. RSPs cannot use UCLL Backhaul to transport any other traffic other than UCLF. Accordingly, UCLL

Service type	RSP and/or end-user use
	Backhaul ceases to be a usable service without UCLF.

96. As stated previously, UBA Backhaul, UCLL Backhaul and UCLL Co-location are ancillary services for UBA and UCLF. Regulation stipulates that they cannot be used for any purpose other than to support the provision of UBA and UCLF.

97. As such, we propose to focus our investigation on the UBA and UCLF services. We would extend any proposed amendments to UBA and UCLF regulation to the three ancillary services (where applicable for each of the two primary services).

98. From this point on in the paper we focus on the UBA and UCLF services; defining them as services which respectively provide a broadband connection and allow end-users to make and receive voice calls.

The geographic constraints

99. Supply of the relevant copper services by Chorus is regulated outside SFAs.[69, 70] Accordingly, the relevant geographic area for the Investigation is outside of SFAs, or "non-SFAs".

100. Within this broad geographic area, we believe differences in competition for copper based voice and internet services exist, and thus it will be beneficial to consider smaller geographic areas for the basis of the Investigation. This would have the effect of defining different geographic markets for the services described above.

101. Considering smaller geographic areas provides a more accurate structure to consider both effective substitutes and the impact of any possible legislative change on different groups of end-users. It would also guide information requirements and stakeholder engagement across the course of the Investigation.

102. There are a range of possible options we could utilise to define smaller geographic areas, and if thought of on a continuum from narrow to wide, includes options such as:

    102.1 property-by-property;

    102.2 exchange / point of interconnection area level;

    102.3 the number of alternative networks available;

    102.4 population density (for example, grouped into fringe urban, rural and remote);

69 Chorus provides some of these services commercially where it continues to operate its copper network.

70 Telecommunications Act, Part 2AA.

102.5 best available copper based broadband service available (ie, availability of VDSL vs ADSL vs neither (voice only)); or

102.6 the availability of UBA and UCLF.

103. Table 3 below provides further detail on the options.

Table 3 Geographic area definition options

Geographic area definition option	Description
Property level	The most disaggregated level that uses property boundaries (outside of SFAs) as the geographic areas, providing thousands of different areas. This would be the most accurate way to determine whether networks (in particular FWA) and their associated services are available for end-users. However, network and retail level competition (pricing, service quality etc) does not take place at the individual property level.
Chorus exchange level	Splits non-SFAs into geographic areas served by Chorus local exchanges. Were deregulation to lead to decommissioning of copper by Chorus, then exchange-based areas makes sense for network costs. However, alternative networks are not deployed to match or compete with Chorus local exchange areas.
Alternative networks	Splits non-SFAs into geographic areas based on the number of alternative networks present (at each property). This takes an end-user experience perspective and allows for a clean segregation of areas of different competition.
Population density	Splits non-SFAs into broad economic areas based on population density eg, fringe urban, rural, remote. This approach removes any reference to telecommunications infrastructure or services, instead taking a demographic approach to area definition.
VDSL, ADSL and Voice-only	Splits UBA into VDSL and ADSL geographic availability (outside of SFAs) to recognise the different performance and end-user experience

Geographic area definition option	Description
	each of these provide. Voice-only would likewise be a separately defined area. This approach accounts for the current experience end-users have by going beyond the UBA and UCLF option below, to differentiate between the types of copper broadband service received.
UBA and UCLF	Splits non-SFAs into two, one area where UBA (broadband) is available, and one where only UCLF (voice) is available. This recognises the significant difference for end-users with broadband and those without. Alternative technologies are all broadband/VoIP capable, which makes the broadband/voice split for competition analysis moot.

104. A combination of the above options could be used for the Investigation, but we propose to use the number of alternative networks available.

105. We believe this option best reflects the differences in competition we understand exist in the current marketplace for copper-based retail broadband and voice services.

Chapter 7 Identifying alternative services

Purpose

106. This chapter covers how we intend to apply step 2 of the economic framework to the Investigation; identifying alternative retail voice and broadband services and outlining the characteristics we will use to consider whether those alternatives are effective substitutes.

Alternative service characteristics

107. The extent to which alternative voice and broadband services, and associated networks, represent effective substitutes across the geographic areas will depend on a combination of several characteristics including:

    107.1 availability – the physical availability of the alternative service;

    107.2 quality – whether the alternative service supports similar RSP and/or end-user uses; and

    107.3 price – whether the alternative service is similar in terms of price characteristics such as recurring and non-recurring prices.

108. We propose to determine the effectiveness of alternative services as substitutes against the above characteristics with respect to the relevant copper services defined in Chapter 6.[71]

Availability

109. An effective substitute must be available to an end-user (ie, able to be purchased and used) in the same location as the relevant copper services.

110. The geographic availability of alternatives will be assessed using coverage map information. Where possible, we will consider planned availability in the foreseeable future.

Quality

111. An effective substitute must be similar in quality to the available copper service, or the price-quality trade off at least makes them an effective substitute.

112. Quality characteristics include data allowances, speed and latency, with the key comparison being able to perform similar functions (eg, web-browsing, video calling) as with using the copper service.

[71] This will be done on a holistic basis, meaning, for example, poor/lesser performance in one characteristic compared to the relevant copper service(s) is not an automatic disqualifier to being an effective substitute.

Price

113. Price characteristics include installation/set-up costs and ongoing regular costs.

114. The method for setting current wholesale copper prices is set out in Schedule 1 of the Act and are underpinned by the Commission's standard terms price determinations, escalated for CPI inflation. We propose to evaluate the competitive constraint provided by alternative services relative to the current retail prices for copper-based voice and internet services.

115. As outlined above in Chapter 3, depending on whether and how Schedule 1 may be altered, the Commission may then be required to commence the STD review process under Part 2 of the Act.

Chapter 8 Assessing Competition

Purpose

116. This chapter considers how we propose to apply step 3 of the economic framework to the Investigation. This involves assessing the effectiveness of competing services (the effective substitutes) in constraining the regulated services in question across the defined geographic areas.

Competitive constraint considerations

117. While we last reviewed the relevant copper services as part of a wider Schedule 3 review in 2016, the subsequent 2018 Amendment Act updated legislation to allow for the withdrawal of copper under certain circumstances.

118. As such, for competition analysis, we propose to focus primarily on the current and future state of competition, including planned and foreseeable network developments, rather than undertaking a specific comparison to historic levels.[72]

119. We will have regard to the findings of our previous reviews and consider relevant evidence as to competition developments, including changes in technologies, service offerings and end-user preferences, over recent years.[73] This will form the basis for our assumptions as to how competition may be expected to develop over the next three to five years.[74]

120. However, we propose not to undertake an explicit line by line comparison with a previous baseline as, given the nature and purpose of this review,[75] we consider a forward-looking focus to be most appropriate.

121. We intend to consider any changes in competitive constraints that operate at the retail level (indirect competitive constraints) to assess the extent to which competition for voice and broadband services in the retail market relies on access to the relevant copper services.

122. In order to assess competition, we will specifically consider:

    122.1 market conditions – including the number of competitors, market share, and entry/exit barriers and conditions;[76]

---

72 For example, we will consider the recently seen increasing availability and quality of FWA and satellite services, and consider how they currently provide, and could do so in the foreseeable future, competitive constraint.

73 Which may involve trend analysis and extrapolating from historic data to allow us to identify ongoing and potential future developments.

74 This will primarily happen under step 4 of the framework, where we will consider the impact of any amendments to regulation on a counterfactual basis. This is consistent with previous sch 3 reviews.

75 See paras 46 - 49.

76 These include barriers for competitors to access wholesale supply from network operators.

122.2 current supplier and end-user behaviour – the extent to which the alternatives identified provide a competitive constraint on the regulated service(s). This includes the ability to switch to the alternative service, considering non-price aspects such as network capacity and adaptability, as well as the complexity and time to switch.

Market conditions

123. As part of this consideration of competition, we may define specific criteria to be met for competition to be deemed present. For example, this may consider the number of alternative technologies present and/or any vertical integration by providers.

124. Telecommunications markets typically have high barriers to entry and mass-market services require nation-wide coverage, service, and support. While we are aware that New Zealand's largest RSPs offer services within the geographic area of the relevant copper services, there are other operators (localised wireless companies, local fibre companies and global satellite providers) who have vastly different entry and exit costs.

125. A particular consideration for this review, which applies most directly to global satellite providers, is the security of supply. We need to consider their commitment to supply services to New Zealand (to the extent they are identified as alternatives to the regulated services and thus provide a sustained competitive constraint).

Current supplier and end-user behaviour

126. This investigation will consider the ability for end-users to switch to the alternative service. For example, the capacity of the alternative services to continue to provide the quality level required to additional users, including in the scenario where a material proportion of the current users of the copper-based service in that area switch to that service. Capacity may be assessed as the aggregate capacity of other services and networks available in the area.

127. Real-world behaviour is also an important aspect of this investigation, as it validates or brings into question the analysis undertaken previously to identify alternatives to the regulated service. Current and historic levels of switching by copper-based users to the voice and broadband alternatives identified within the defined geographic areas will be key evidence.

128. Building on the characteristics of alternative services identified in Chapter 7, this investigation will consider the price/quality dynamics between the relevant copper services and the effective substitutes. As quality will differ between the offers, the relative price levels will be a key comparison.

Chapter 9 Costs and benefits of amending regulation

Purpose

129. This chapter outlines how we propose to apply step 4 of the economic framework to the Investigation. This involves considering the impacts of amending Schedule 1 in one or more of the ways set out in sections 66 and 67 of the Act.

Comparing the factual and counterfactuals

130. We will assess the impact of any amendments to regulation on a counterfactual basis; we will compare a factual (the future state with the existing regulation) against one or more counterfactuals (the future state with alteration of Schedule 1) and determine which best gives effect to the purpose of section 18 of the Act, including the matters in sections 18(2) and 18(2A).

131. We will first identify the potential options for amending regulation, including the timing of any proposed amendments. We will then consider the costs and benefits of any counterfactuals identified.

132. Key considerations when assessing proposed amendments to Schedule 1 regarding the relevant copper services include:

    132.1 our degree of certainty regarding what is likely to happen in the future;

    132.2 the potential benefits (direct and indirect);

    132.3 the potential costs (direct and indirect);

    132.4 possible unintended consequences and asymmetric risk attached to the counterfactual – for example, we may conclude that the detrimental impact of deregulating too early outweighs the detrimental impact of keeping the regulation too long;

    132.5 any remaining supply or demand side constraints; and

    132.6 any remaining market power and its ability to be exercised.

133. As part of considering these matters, we will consider the impact of any change on efficiency, incentives to innovate, and the risks faced by investors in new telecommunications services.[77]

134. We recognise when considering these factors that the longer-term economic viability of copper services may be relevant, as may be the longer-term viability of alternative services.

[77] Telecommunications Act 2001, ss 18(2) and (2A).

135. In line with previous reviews, the overall assessment of potential costs and benefits will be largely qualitative but will be informed directly by information and evidence.

136. If significant amendments are proposed, we may look to quantify some of the costs and or benefits to better inform and communicate our recommendation.

Chapter 10 Evidence for the Investigation

Purpose

137. This chapter sets out the type of evidence we propose to consider when undertaking the Investigation.

Types of evidence

138. We will consider evidence that enables us to undertake an investigation consistent with our legal framework and proposed economic framework.

139. Understanding exactly where the copper network exists will be a key step in the Investigation. It will inform the approach taken to defining geographic areas, and thus the analysis of competition.

140. As discussed in Chapter 7, evidence relating to identification of alternative services will be used to assist in the Investigation. We will use evidence relating to, for example, copper services, fibre, HFC, wireless broadband (including 4G and 5G), and satellite-based services.

141. We are conscious that the Investigation will take time, and that the telecommunications environment in New Zealand will continue to change while it is being undertaken. We will therefore ensure the most recent information is used where possible throughout the Investigation.

Examples of evidence we are likely to consider

142. We currently collect a range of information, such as for the Rural Connectivity Study (RCS), the Annual Telecommunications Monitoring Report (AMR) and the Measuring Broadband NZ (MBNZ) testing programme, which we propose to use when undertaking the Investigation.

Current copper footprint and recent trends

143. The RCS looks to provide a detailed picture of the rural telecommunications market and is used to inform the rural chapter of the AMR.[78]

144. Information collected through the RCS will be valuable in gaining an understanding of the current copper network in New Zealand and trends over the last few years. This includes:

144.1 broadband availability; and

144.2 copper connection numbers.

[78] The 2022 AMR defined rural areas as areas where fibre is not available (those not covered by UFB). Commerce Commission "2022 Telecommunications Monitoring Report", see page 10 footnote 1.

Availability

145. The physical availability of alternative services will be another key consideration, particularly as we expect the copper network extends beyond that of the alternative services in some places.

146. RCS information will be useful here, including information such as:

146.1 service coverage;[79] and

146.2 the number of providers in each region across the different alternative technologies.

147. Where possible, we will also use information regarding future planned availability.

Capacity

148. Even if alternative services are located in areas where the relevant copper services are being used, the capacity of those services to handle additional use must be considered. We are already seeing stop-sells in place for some alternative services due to capacity constraints meaning end-users are sometimes not able to switch to a specific alternative service.

149. Examples of evidence we plan to use to assess capacity includes:

149.1 the number of stop-sells in place (FWA) and how many potential end-users are affected;

149.2 planned investment in upgrades (capacity upgrade programmes); and

149.3 backhaul analysis (where possible).

Quality

150. Quality features, such as data allowances, speeds, latency and other performance characteristics, will be important in determining whether alternative services are effective substitutes.

151. Our quarterly MBNZ report measures the quality of New Zealand's in-home internet performance across different providers, plans and technologies. The MBNZ report compares key service performance metrics for retail fibre plans, DSL, HFC, FWA, and satellite technologies.

152. We propose to use information from the MBNZ reports. Where possible, we will use the latest quarter's results in our analysis.

[79] Service coverage will utilise network coverage data shared by providers as part of the AMR development process. We are aware, particularly for wireless technologies, that consumers can have differing experiences of service including due to obstructions.

153. Several examples of relevant metrics from the MBNZ report we may use include:

153.1 download speeds;

153.2 upload speeds;

153.3 latency (including latency under load); and

153.4 median hourly disconnection rates.[80]

154. Where available, we will look to use additional metrics such as jitter and packet loss.

Market structure

155. The AMR presents a range of information on market structure, and we will utilise that information for the investigation. Key metrics to be used include:

155.1 type and share of offerings (retail market); and

155.2 the number of connections.

End-user satisfaction and switching

156. The market structure information will be supplemented by end-user switching information to support our assessment of competition in the markets.[81] Key metrics to be used will include:

156.1 end-user satisfaction levels; and

156.2 end-user tenure and switching behaviour.

Price

157. Price is a key consideration for end-users when considering what voice and/or broadband services to purchase. The AMR captures and reports on price metrics across voice and broadband services in New Zealand.

158. Examples of evidence we plan to use to assess price characteristics include:

158.1 upfront/installation costs; and

158.2 ongoing (ie, monthly) costs.

159. We expect we may use additional information and evidence to that described above but believe those listed will form the starting point for our investigation.

---

80 Measured in the MBNZ reports as "A disconnection means that two or more latency measurement packets in a row were lost. Measured as the median of household hourly rates".

81 Our customer satisfaction monitoring survey collects such information currently.

Appendix 1: Matters the Commission may inquire into, and recommend on, under section 66 of the Act

66 Alterations to Part 2 or Part 3 of Schedule 1

(1) The Governor-General may, by Order in Council made on the recommendation of the Minister, amend Part 2, or Part 3, of Schedule 1 by—

(a) adding a telecommunications service to the Part and setting out in relation to that service—

(i) a description of the service; and

(ii) any applicable conditions; and

(iii) a description of the access providers and access seekers; and

(iv) in the case of a service being added to subpart 1 of Part 2, or Part 3, of Schedule 1, a description of—

(A) the applicable access principles; and

(B) the limits (if any) on the applicable access principles; and

(v) in the case of a service being added to subpart 1 of Part 2 of Schedule 1,—

(A) any applicable initial pricing principle; and

(B) the applicable final pricing principle; and

(C) any requirement referred to in section 45 for the applicable final pricing principle; and

(D) any additional matters that must be considered regarding the application of section 18:

(b) omitting a telecommunications service from the Part:

(c) in respect of a service, amending—

(i) the description of the service:

(ii) any applicable conditions:

(iii) the description of access seekers:

(iv) the description of access providers:

(v) the description of the applicable access principles:

(vi) the description of the limits (if any) on the applicable access principles:

(vii) any applicable initial pricing principle and the applicable final pricing principle:

(viii) any requirement referred to in section 45 for the applicable final pricing principle:

(ix) any additional matters that must be considered regarding the application of section 18.

(2) An order under this section is secondary legislation (*see* Part 3 of the Legislation Act 2019 for publication requirements).

Appendix 2: How the relevant copper services are prescribed in legislation and regulation

Service type	Schedule 1 service description	STD service description
Chorus's unbundled bitstream access (UBA)	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 public data network that connects the end-user's building (or, where relevant, the building's distribution frame) to a First Data Switch (FDS) (or equivalent facility), other than a digital subscriber line access multiplexer (DSLAM).	For the purposes of the UBA STD, the UBA Service comprises the Basic UBA Service and the Enhanced UBA Service. The Basic UBA Service provides an Access Seeker with an internet-grade 'best efforts' bitstream service and enables an Access Seeker to offer its end-users DSL enabled services. The Basic UBA Service available under this service description is a DSL enabled service which has a maximum downstream line speed for data traffic sent to the end-user and a maximum upstream line speed for data traffic sent from the end-user. The Basic UBA service (1500 byte packet) will achieve a throughput rate of 99.9% probability of providing to any provisioned end-user a minimum uplink and downlink average throughput of 32kbps during any 15 minute period on demand. The Enhanced UBA Services enable an Access Seeker to offer its end-users simultaneous delivery of internet grade Internet Protocol (IP) traffic and real time grade IP traffic over a single UBA service connection. The Enhanced UBA Services provide connectivity between the External Termination Point at the end-user's premises and the Access Seeker side of the first Ethernet aggregation switch. The Enhanced UBA service (1500 byte packet) will achieve a throughput rate of 99.9% probability of providing to any provisioned end-user a minimum

Service type	Schedule 1 service description	STD service description
		uplink and downlink average throughput of 32kbps during any 15 minute period on demand.
Chorus's unbundled copper low frequency service (UCLF)	A service (and its associated functions, including the associated functions of operational support systems) that enables access to, and interconnection with, the low frequency (being the frequency band between 300 and 3400 Hz) in Chorus's copper local loop network (including any relevant line in Chorus's local telephone exchange or distribution cabinet) that connects the end-user's building (or, where relevant, the building's distribution frame) to the handover point in Chorus's local telephone exchange.	The UCLF Service is an input service which the Access Seeker can use as a building block to provide services to end-users. The Access Seeker can combine the UCLF Service with network transport services offered by Chorus (or with the Access Seeker's own network or wholesale network transport services provided by other providers) and service level functionality to deliver services to end-users. Subject to frequency band limitations, there is no restriction on the type of service or application offered over the MPF by the Access Seeker provided the technology used to deliver the service or application complies with the Interference Management Plan. This may in practice restrict the service or application offered by Access Seekers to End-Users in some circumstances.
Chorus's unbundled bitstream access backhaul (UBA Backhaul)	A service (and its associated functions, including the associated functions of operational support systems) that provides transmission capability (whether the transmission capacity is copper, fibre, or anything else) between the trunk side of a first data (or equivalent facility), other than a DSLAM, that is connected to the end-user's building (or, where relevant, the building's distribution frame) and the access seeker's nearest available point of interconnection (ASNAPOI).	The UBA Backhaul Service is for the purpose of the UBA Service. Transmission capacity is provided as an ethernet connection. The UBA Backhaul Service provides transmission capacity at 50Mbit/s, 100Mbit/s, 200Mbit/s or 1Gbit/s. The Access Seeker must establish an ASNAPOI at a minimum of one POI Site but may establish an ASNAPOI at more than one POI Site. Where an Access Seeker requests the UBA Backhaul Service from a particular FDS, Chorus must provide the UBA Backhaul Service between the FDS Handover Point and the ASNAPOI Handover Point.

Service type	Schedule 1 service description	STD service description
		The Access Seeker, or a third party on behalf of the Access Seeker, must be able to access the UBA Backhaul Service from Chorus at the ASNAPOI by way of a Handover Link. The UBA Backhaul Service is not available for direct resale to End-Users. However, the UBA Backhaul Service may be resold by the Access Seeker to other Access Seekers for transmission capacity for the purposes of the UBA Service. For the avoidance of doubt, this clause is not intended to prevent the Access Seeker from reselling the end-to-end UBA Service to other Access Seekers.
Chorus's unbundled copper local loop network co-location (UCLL Co-location)	A service (and its associated functions, including the associated functions of operational support systems) that provides co-location facilities for an access seeker's equipment, and access to the handover point, at Chorus's local telephone exchange or distribution cabinet (or equivalent facility) for the purposes of providing access to, and interconnection with,— (a) Chorus's unbundled copper local loop network (including any necessary supporting equipment); and (b) Chorus's unbundled copper low frequency service (including any necessary supporting equipment).	The UCLF Co-location Service includes access to and the use of, space in, on, or around Chorus' exchange for the purposes of installing and maintaining the approved Access Seeker's equipment. "Access Seeker's equipment" includes the equipment of any person other than the Access Seeker (including any line) if that equipment is being used to support the provision of backhaul for the Access Seeker. The Access Seeker can combine the UCLF Co-location Service with interconnection and backhaul for the UCLF Service offered by Chorus (or with the Access Seeker's own network or wholesale services provided by other providers) to deliver a service to End-Users. Chorus' ability to provide the UCLF Co-location Service is practically limited in the case of each Chorus Exchange by the physical space available at, within or around that Exchange.

Service type	Schedule 1 service description	STD service description
Chorus's unbundled copper local loop network backhaul – telephone exchange to interconnect point (UCLL Backhaul)	A service (and its associated functions, including the associated functions of operational support systems) that provides transmission capacity in a network (whether the transmission capacity is copper, fibre, or anything else) between the handover point in Chorus's local telephone exchange and the ASNAPOI for the purposes of providing access to, and interconnection with,— (a) Chorus's unbundled copper local loop network (including any necessary supporting equipment); and (b) Chorus's unbundled copper low frequency service (including any necessary supporting equipment).	The UCLF Backhaul Service is for the purpose of providing access to, and interconnection with the UCLF Service. Transmission capacity is provided as an Ethernet connection. The UCLF Backhaul Service provides transmission capacity at 100Mbit/s or 1Gbit/s. The Access Seeker must establish an ASNAPOI at a minimum of one POI Site but may establish an ASNAPOI at more than one POI Site. For the avoidance of doubt, the Access Seeker may be required to establish more than one ASNAPOI in order to receive access to any Link of the UCLF Backhaul Service. The Access Seeker, or a third party on behalf of the Access Seeker, must be able to access the UCLF Backhaul Service from Chorus at the Local Exchange and the ASNAPOI by using a Handover Fibre and, where required, a UCLF Backhaul Connection.