MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Regulatory Impact Statement

Initial decisions on post-2020 fixed line communications regulatory framework

New Zealand Government

Agency Disclosure Statement

1 This Regulatory Impact Statement (**RIS**) has been prepared by the Ministry of Business, Innovation and Employment.

2 It provides an analysis of initial options to establish a suitable regulatory framework for ultra-fast broadband (**UFB**) fixed line services from 2020, at which time the current contractual arrangements will cease. It also analyses options for copper services, which are already price regulated.

3 Under section 157AA of the Telecommunications Act 2001 (the **Telecommunications Act**), the Minister for Communications must consider whether the existing regulatory framework in the Telecommunications Act is the most effective means to meet certain criteria.

4 An initial, broad consultation has already occurred on these issues. This document is an interim step to set out the Regulatory Impact Analysis behind the narrowing of options ahead of a second round of public consultation. A final RIS is expected to accompany a final recommendation to Cabinet.

5 The analysis is based largely on qualitative rather than quantitative analysis. This is because:

- the future state under the status quo cannot be measured with certainty (for example, it is unclear if, when and how regulation of UFB services would occur under the status quo); and
- there is limited quantitative data available for some of these issues.

6 More evidence is required before the preferred options can be finalised into concrete regulatory change. A further consultation process is planned.

7 The information and responses received through the initial consultation process strongly support the analysis in this document.

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Background

1 The communications sector is a key enabler of economic growth. The Government's goal is to support a vibrant communications environment that provides high quality and affordable services for all New Zealanders, and enables our economy to grow, innovate and compete in a dynamic global environment.

2 Under section 157AA of the Telecommunications Act 2001 (the **Telecommunications Act**), the Minister for Communications (the **Minister**) must commence a review of the regulatory framework (the **Review**) by 30 September 2016, and use best endeavours to complete the Review by 31 March 2019.

3 The Minister released a discussion document *Regulating Communications for the Future* in September 2015 (the **Discussion Document**)[1]. The Discussion Document contained the substantive elements of a Regulatory Impact Analysis. 43 submissions were received in response to the Discussion Document. Submissions are available online[2].

4 Submitters (UFB suppliers, other network owners, retail service providers (**RSP**s) and user groups) supported a case for change from the status quo. All the options contemplated in this Regulatory Impact Statement (**RIS**) were canvassed in the Discussion Document, and no new options emerged in submissions.

5 The Regulatory Impact Analysis for the Review is in two phases:

- this RIS analyses proposals to narrow the full set of options to an initial policy direction, in preparation for a second round of consultation; and
- a second RIS will accompany a final detailed policy recommendation to Cabinet.

Status quo and problem definition

Status quo

6 The Telecommunications Act sets out the underlying regulatory framework for communications markets in New Zealand. It establishes a sector-specific access and pricing regime for regulated communications services. The framework is monitored and enforced by the Commerce Commission (the **Commission**).

7 In 2011, Telecom New Zealand Limited was structurally separated into Telecom (now Spark, an RSP) and Chorus. Chorus is a wholesale-only fixed line network operator, managing both the existing copper fixed line network which serves most of New Zealand, and rolling out the bulk of the UFB network build. The UFB network is also being built and operated by Enable Networks in Christchurch, Ultra-Fast Fibre in the central North Island, and Northpower in Northland (**Local Fibre Companies** or **LFC**s). We refer to Chorus and LFCs collectively in this document as **UFB suppliers**. The following table summarises the UFB arrangements:

[1] Available at www.mbie.govt.nz/telcoreview.
[2] Ibid.

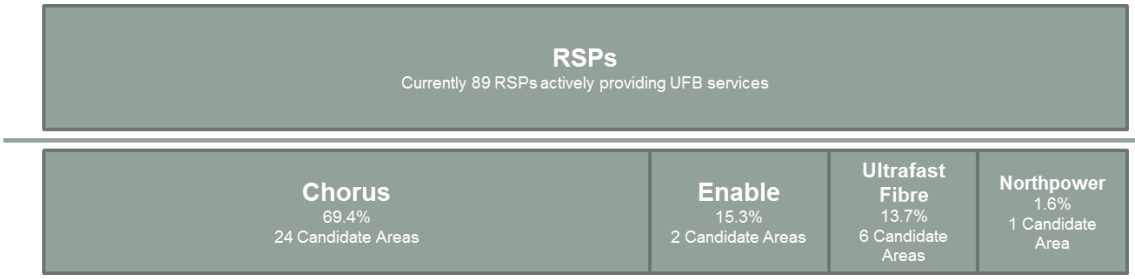

Table 1: Summary of UFB arrangements

8 Copper services are already regulated. The two core regulated copper broadband wholesale services offered by Chorus are the Unbundled Copper Local Loop (**UCLL**) service and the Unbundled Bitstream Access (**UBA**) service. These services underpin the vast majority of copper services in New Zealand. A regulated price for these services was set in late 2015 by the Commission using the TSLRIC pricing methodology, and will be reset in 2020 under the status quo.

9 We refer to copper and UFB services collectively in this RIS as **fixed line services**.

10 Wholesale price caps for core UFB services are set by contract between the UFB suppliers and Crown Fibre Holdings (**CFH**) and will expire on 31 December 2019. Under the status quo, wholesale prices for UFB services beyond this date will be set on commercial terms, with the Commission able to investigate and recommend introducing regulation at any time under Schedule 3 of the Telecommunications Act. The exact pricing methodology for those regulated UFB services would not be known until the Commission makes its final recommendation, and the Minister makes a final decision on that recommendation pursuant to current processes in the Telecommunications Act.

Why do we need sector-specific regulation of fixed line services?

11 If fixed line services are subject to effective competition, we could expect to see efficient prices and innovation develop in wholesale and retail markets without the need for regulation.

12 However, our view is that fixed line services are not likely to be subject to effective competition, and so sector-specific regulation will continue to be necessary:

- officials have considered (and consulted on) whether UFB suppliers are likely to be subject to competitive pressure for fixed line services after 2020. Our view, and the view of all submitters (including Chorus) is that Chorus probably will not be subject to sufficient pressure to constrain its fixed line pricing. While the case is less clear for LFCs (as they argue they currently compete to an extent with copper services), the LFCs are still likely to face limited competition, as fibre becomes the preferred technology for broadband access;
- the UFB network has natural monopoly characteristics. It has very high barriers to entry (requiring significant sunk investment up front), and we do not expect total bypass or overbuild of the UFB network by another fixed network to occur given the capability of the UFB network to meet needs for the foreseeable future. Competing infrastructure on the scale of the UFB would not be economically efficient;
- the copper network also has natural monopoly characteristics and there is likely to be a continuing need for copper services to be regulated, until such time as the Commission investigates and recommends de-regulation under the Telecommunications Act; and

- there are some 'pockets' of competition against UFB services, but these are unlikely to be sufficient to act as a competitive constraint on the UFB network as a whole, including future wholesale pricing of UFB services. We do not expect mobile networks to be complete substitutes for fixed networks in their core business of broadband access by 2020. Despite expected advancements in technology, mobile data services are still likely to provide a less consistent service, and remain more expensive than equivalent fixed line services. Other forms of wireless services may provide some competition, and copper services may compete against UFB services in LFC areas. There will also be unbundling of the UFB network. However, overall we do not expect these services to constrain UFB pricing post-2020.

13 While structural separation has reduced incentives to inhibit or delay competition in retail markets, it has not removed the incentives or ability for Chorus and LFCs to charge monopoly access prices for fixed line services.

14 Therefore, for fixed line network markets including the UFB market, we believe there will be a continuing need for sector-specific regulation in the form of an access and pricing regime. This position was supported by all submitters including the UFB suppliers themselves.

15 More generally, we have concluded that removing sector-specific regulation for the communications sector is not a feasible option because New Zealand's reliance on generic competition law for communications services (instead of a regulatory access regime) prior to 2001 was ineffective.[3] Telecommunications networks can have natural monopoly characteristics and the ability to charge monopoly prices in the absence of regulation. It is widely agreed by network owners, access seekers, and user groups alike that a sector-specific regulatory framework is still necessary.

Issues addressed in this RIS

16 This RIS addresses four issues:

1) *Fixed line regulatory framework* – whether there should be change from the status quo by introducing a new regulatory framework for fixed line services, to apply from 1 January 2020;

2) *Legislative vehicle* – what is the appropriate legislative vehicle to implement the new fixed line regulatory framework;

3) *Whether to retain the obligation to 'unbundle' the point-to-multipoint parts of the UFB network after 2020* – whether the existing obligation on UFB suppliers to provide 'unbundled' services on the point-to-multipoint (mass market) parts of the UFB network from 1 January 2020 should be retained or not; and

4) *Treatment of broadcasting transmission infrastructure* – whether broadcasting transmission infrastructure should be subject to sector-specific regulation in the same manner as telecommunications infrastructure.

[3] The Ministerial Inquiry into Telecommunications reported in 2000 that "given the unique characteristics of the electronic communications sector … the Inquiry's view is that New Zealand's existing regulatory regime [generic competition law] is, and will continue for the foreseeable future, to be inadequate to meet the Government's objective … The Inquiry considers that, consistent with the view held by most other countries, industry-regulation is warranted. Such regulation must, however, be tailored to meet New Zealand's particular needs, having regard to its size and to its commercial environment." (*Ministerial Inquiry into Telecommunications – Final Report*, 27 September 2000).

Issue one: Fixed line services regulatory framework

17 The first issue is whether the Government should make a change from the status quo by introducing a change to the regulatory settings for fixed line services, to apply after 1 January 2020.

18 The Telecommunications Act requires the Review to be carried out prior to 2020, on the basis that there would be a need to consider wider aspects of the fixed line regulatory framework after the 2011 structural separation of Telecom and Chorus had 'bedded in', and the UFB rollout was well underway.

19 The Discussion Document identified several key areas in which the communications market is evolving beyond the original focus of the regulatory framework in the Telecommunications Act:

- following structural separation, many of the problems the Telecommunications Act was designed to solve have now been resolved – discrimination between RSPs is now less of a problem than restricting the potential for monopoly profits;
- the current regulatory framework is based on the 'ladder of investment' theory, which sets an explicit goal of promoting infrastructure competition in the fixed line market. Post-2020, and after the completion of the UFB build, that goal will no longer be relevant; and
- there is a need for continued investment in communications networks to meet the growing needs of consumers and businesses, and to meet the Government's ambitious broadband targets.

Uncertainty from copper pricing processes

20 There has been uncertainty in the operation of the current framework. There have been challenges in the implementation of wholesale regulated pricing for copper services (UCLL and UBA), and in providing clarity about how the framework deals with investment and innovation.

21 The setting of copper prices has been an ongoing source of debate, with a lengthy process under the current framework involving benchmarking against international services, and then full cost modelling based on a hypothetical network, and further uncertainty as to whether these prices will be backdated. Considerable industry resources have been invested in lengthy regulatory pricing proceedings. Submitters to the Discussion Document were generally unhappy with the level of uncertainty under the current framework.

22 The uncertainty driven by the copper price-setting process for UCLL and UBA has driven concerns that sector-specific regulation in New Zealand seems to produce jarring outcomes quite frequently—particularly in the communications sector. This may be a source of competitive disadvantage, potentially raising New Zealand's cost of capital.

23 The inability to recover funds sunk into constructing infrastructure makes investment an inherently risky activity. This risk cannot be avoided, but it can be valued. Greater risk (from unclear consumer demand, regulatory change, technological change, construction delays or other factors), adds to the capital needed to build and fund infrastructure. Limiting regulatory risk is therefore essential if policy is intended to encourage efficient investment for the long term benefit of end consumers.

UFB pricing methodology uncertainty

24 Following consultation, officials have determined that it is widely accepted that UFB

services will likely become price regulated at some point in the future. In this context, the value of deferring consideration of key aspects of the regulatory framework for UFB services is significantly reduced.

25 Indeed, deferring this consideration will result in significant regulatory uncertainty. Under the status quo, it is uncertain what regulatory pricing methodology would apply to regulated UFB services if and when they become regulated in the future. The choice of methodology will have a significant impact on the businesses of UFB suppliers, retail service providers (**RSP**s) and on prices paid by end users for UFB services.

26 Uncertainty as to what regulatory framework would apply to regulated UFB services will likely result in UFB suppliers and RSPs delaying post-2020 investments until they are satisfied they will receive a reasonable return on their investments. This problem presents a significant risk to the prospect of future private sector broadband investment (without Government support) and consequently, the Government's broadband aspirations. It would delay opportunities to realise the economic and social benefits from fast broadband.

27 This problem was raised in the Discussion Document and was acknowledged by virtually all submitters.

28 There was widespread support for the Government to take steps now to resolve this uncertainty. There was also widespread support for change to the framework for copper services to be consistent with any new framework for UFB services.

Issue two: Legislative vehicle

29 The second issue is that, if the Government decides to address the problem in issue one by defining the regulatory framework for fixed line services post-2020, then the appropriate legislative vehicle to implement changes to the fixed line regulatory framework will need to be determined.

30 The framework could be set out in Part 4 of the Commerce Act 1986 (the **Commerce Act**) or in the Telecommunications Act. While in theory it could be included in any legislation, these Acts are the most appropriate options to consider given that they deal with economic and access regulation.

31 While there may be some merit in having the new framework included in Part 4 of the Commerce Act for consistency reasons, this would result in the overall framework for telecommunications being split across two pieces of legislation, and so there is a case to include the fixed line regulatory framework within the existing Telecommunications Act.

Issue three: Whether the current obligation to unbundle the point-to-multipoint parts of the UFB network from 1 January 2020 should be retained

32 The third issue is that there is a need to decide whether the current obligation to 'unbundle' the point-to-multipoint parts of the UFB network (which primarily serve the residential market) from 1 January 2020 should be retained[4].

33 'Unbundling' refers to the requirement on UFB suppliers to provide access to 'layer 1' wholesale services on the UFB network. 'Layer 1' is the basic infrastructure layer (for UFB this is 'dark fibre', being access to the raw fibre cable that has been deployed as part of the UFB programme, enabling an RSP to install their own equipment onto the cable and thereby develop their own UFB services, having greater control over the specifications of the particular service).

34 In submissions to the Discussion Document, UFB suppliers have argued that the obligation should be removed, while many RSPs have argued that it should be retained. There is contention and disagreement amongst stakeholders as to the value and the costs involved in fibre 'unbundling'.

Issue four: Treatment of broadcasting transmission infrastructure

35 The fourth issue is whether to remove the existing exemption for 'broadcasting' in the Telecommunications Act[5]. As part of the Review, consideration was given to whether this exemption should be removed, which would mean that broadcasting services delivered on traditional broadcasting networks (for example Kordia's digital terrestrial network and Optus's satellite network) would be subject to sector-specific regulation in the same way as telecommunications services. In the absence of sector-specific regulation, traditional broadcasting networks are subject to generic competition law in the Commerce Act.

36 Technology developments have resulted in consumers changing the way they receive audio-visual and audio programming (i.e. television and radio-like services). This programming is now conveyed using a range of satellite, digital terrestrial, broadband or mobile networks, and received by a range of devices, including television sets, personal computers and smartphones. The growth of broadband and mobile networks has also enabled consumers to increasingly use on-demand or time-delayed (i.e. catch-up) services.

37 We sought comments on this matter in the Discussion Document, and subsequently consulted directly with both broadcasting network owners and access seekers. Stakeholders generally indicated that technology developments have increased competition for the delivery of broadcasting services, and so traditional broadcasting

[4] The current obligation is contained in Chorus and LFCs' UFB 'open access deeds of undertaking', and requires the UFB suppliers to start providing a layer 1 dark fibre service on the point-to-multipoint parts of the UFB network from 1 January 2020. The obligation is in clause 6.2 of the deeds. There is also an obligation to design and build the UFB network in such a way to enable the provision of this layer 1 service on an 'equivalence of inputs' basis (clause 6.1, and also contained in each UFB partner's contract with Crown Fibre Holdings for the build of the UFB network).

[5] The definition of "telecommunication" in section 5 of the Telecommunications Act excludes "any conveyance that constitutes broadcasting" from the regulatory framework in the Act (with some minor exceptions relating to maintenance of networks). This exemption only applies to the conveyance of broadcasting services. Infrastructure that is able to convey both telecommunications and broadcasting services (for example, cable networks) is subject to the Act in respect of telecommunications services.

networks face more competition. Broadcasters of television-like services are growing their on-demand and time-delayed service offerings and have a choice of transmission networks (indeed end users are now more focussed on services than the underlying technology delivering them, given its proliferation). Consequently, we consider that there is no clear problem with broadcast delivery services that requires sector-specific regulation at this time.

38 Accordingly, we consider that the status quo is sufficient and there is no compelling case for change. We do not propose any change to the broadcasting exemption (and as such this issue is not analysed further in this RIS).

Regulatory Impact Analysis

Objectives

Wider policy objectives

39 The Government's long-term goal is to support a vibrant communications environment that provides high quality and affordable services for all New Zealanders at competitive prices, and to sectors critical for growth, and enables our economy to grow, innovate and compete in a dynamic global environment.

40 To achieve this:

- high quality fixed and mobile broadband connectivity at competitive prices should be readily available to all New Zealanders, and to sectors critical for growth (for example, business, education, health and government). By 2025, the Government's vision would see:
    - 99 per cent of New Zealanders able to access broadband at peak speeds of at least 50 Mbps; and
    - the remaining one per cent able to access at least 10 Mbps.
- players in the communications environment should be able to innovate, invest and compete, without being tied down by out of date regulatory approaches;
- business and the broader economy should be able to take advantage of the opportunities provided by high speed connectivity to expand and compete in new markets; and
- key communications infrastructure and networks should be reliable, secure and resilient.

41 These are long-term outcomes. To support these, any new regulatory framework for UFB services should be in place before 2020 in order to resolve the regulatory uncertainty that would arise if not addressed.

Objectives and criteria for this analysis

42 This RIS adopts separate objectives for each issue, given the differing nature of the issues that are being analysed and the current stage of policy development. All objectives are consistent with the long-term outcomes listed above; the requirements for the Review in section 157AA of the Telecommunications Act; and The Treasury's principles for best practice regulation.

Objectives for issue one (fixed line regulatory framework)

43 The objectives for issue one are derived from the Government's long-term vision for the sector, and reflect the Government's desire for predictability and stability in communications regulation:

Criteria	Description
Promoting stability and predictability in the regulatory framework for fixed line services	• Regulatory framework promotes stability of outcomes (for example the risk of price shocks for suppliers and end users is minimised) • Price signals enable businesses to make reliable business decisions • Regulatory framework promotes predictable outcomes
Promoting efficient investment	• Provides sufficient regulatory stability, transparency, and certainty to enable businesses to make efficient long-term investments that benefit end users • Promotes the legitimate commercial interests of access providers and access seekers by allowing regulated entities to make a fair return on efficient investments
Promoting the long term benefit of end users	• Regulatory framework should promote the long term benefit of end users
Promoting innovation	• Promoting innovation in new fixed line service offerings over time • UFB suppliers are incentivised to develop new products and services that meet end user needs over time

Objectives for issue two (legislative vehicle)

44 The objectives for issue two are derived from general administrative law principles:

Criteria	Description
Administrative efficiency, workability and flexibility	• Promotes administrative efficiency • Promotes workability by dealing with common matters in a common legislative and regulatory framework • Promotes flexibility by ensuring legislation can be amended and adapt to different future situations
Ensuring any changes are limited to the communications sector	• Regulatory uncertainty is not increased for other regulated sectors under Part 4 of the Commerce Act 1986
Promoting regulatory predictability	• Promoting predictability and certainty in the regulatory framework (noting the trade-off with flexibility above)

Objectives for issue three (whether to retain the 'unbundling' obligation)

45 The objectives for issue three are derived from the Government's long-term vision for the sector:

Criteria	Description
Promoting ongoing innovation in UFB services	• UFB suppliers are incentivised to innovate and develop new products and services that meet end user needs over time
Promoting competition for UFB services	• Promoting competition in the wholesale market for UFB services
Promoting efficiency in the delivery of UFB services	• Promoting an efficient framework for the delivery of UFB services

Options and impact analysis

Analysis of options against the criteria

46 In this section, a set of tables sets out the net impact of each option, based on the combined assessment of each option against the criteria.

47 For each issue, a table sets out the options for each issue ranked against the criteria. The tables also identify the net impact of each option.

Issue one: Fixed line regulatory framework

Scope of options

Removing regulation is not feasible

48 As discussed earlier in this RIS, removing sector-specific regulation for fixed line services is not a feasible option.

Options for regulatory framework for fixed line services

49 The current regulatory framework for communications is a bespoke regime developed in 2001 which is predicated on promoting competition for the long-term benefit of end-users.

50 The main alternative to the current framework is that which is used to regulate traditional utilities (a **utility-style framework**). A utility-style framework is typically based on a form of the 'building blocks' regulated pricing methodology (**BBM**), and is predicated on emulating the positive outcomes of competition given that regulated utilities rarely face substantial levels of competition.

51 A utility-style framework would usually incorporate the following features:

a) 'price–quality regulation: regulation of revenues and the quality of services provided by regulated suppliers. Regulated revenues are usually set using the BBM approach. BBM is used for price-quality regulation under Part 4 of the Commerce Act, and for fixed line telecommunications regulation in Australia;

b) 'default' and 'customised' or 'individual' price-quality paths for regulated suppliers;

c) a process for the regulator to develop and implement 'input methodologies', which determine the various inputs into the calculation of regulated prices and promote regulatory certainty over time; and

d) information disclosure: requirements providing for disclosure of financial and other cost and revenue-related information by regulated entities (this may be in addition to, or as an alternative to, price-quality regulation).

52 The core of a utility-style framework is the BBM pricing methodology, however in New Zealand, utility-style regulation also involves the other features in (b)-(d) above.

53 The other feasible option for the fixed line pricing methodology is the Total Service Long Run Incremental Cost (**TSLRIC**) methodology, which is currently used for regulated copper services. TSLRIC is a pricing methodology where individual service prices are calculated on a replacement-cost basis, reflecting the theoretical costs that would be incurred by a hypothetical efficient operator building a new network.

54 Other pricing methodologies such as 'bill and keep' and 'retail minus' would not be suitable for fixed line services[6].

55 The preliminary view set out in the Discussion Document was that fixed line UFB services now more closely resemble traditional utilities in that they are unlikely to be replicated in the foreseeable future and therefore are unlikely to face competition that would constrain their pricing, and so should become subject to utility-style regulation.

56 It will be desirable for all of Chorus' regulated services (i.e. copper and UFB services) to be subject to the same regulatory framework. This principle is consistent with the general utility-style approach which focuses on overall revenues of the regulated entity (as well as being simpler and more consistent). Adopting one methodology for fixed line services also acknowledges the practical reality that the networks share a significant proportion of assets and costs, and that end users are focused on services and not technology. We expect that this approach would be widely supported. All submissions that touched on pricing methodologies supported a shift to BBM for UFB services. Fewer submitters commented on copper services, but those that did supported a move to BBM for copper services as well, and emphasised the importance of taking a consistent approach for both copper and UFB services.

57 Price-quality regulation may be implemented from 2020, or could remain as a backstop to be triggered in the case of market failure or if another intervention test is satisfied (as is the approach under the current regulatory framework in the Telecommunications Act). We have not reached a view on the timing of implementation. We propose to consult further on this decision.

Option one: Status quo

58 Under this option, the Government would do nothing and wholesale prices for UFB services would be priced commercially following expiry of the current contracts with Government at the end of 2019. Given the natural monopoly characteristics of UFB networks, at some point after 2020 it is likely that the Commission would carry out an investigation into regulation of UFB services, and as part of this it would make a recommendation on the pricing methodology for regulated wholesale UFB services. This

[6] This is because 'bill and keep' is only appropriate for interconnection services (where traffic is exchanged on a roughly equal basis between two networks) and 'retail minus' relies on a discount from retail prices, which is not appropriate for wholesale-only businesses.

recommendation would be subject to the final decision of the Minister at the time. It is unknown what pricing methodology the Commission would recommend for UFB services.

59 Copper services would remain regulated under the TSLRIC methodology, with a price reset due to occur in 2020. The process for this price reset is not clear in the Telecommunications Act.

Benefits

60 It could be argued that the independent regulator (rather than the Government) is best placed to recommend how fibre services should be regulated in future.

Costs

61 Uncertainty as to the pricing methodology that will apply to UFB services will likely result in UFB suppliers and RSPs delaying post-2020 investments until they are satisfied that they will receive a reasonable return on their investments. This presents a significant risk to the prospect of future private broadband investment without Government support.

62 It is possible the Commission would recommend the pricing methodology for UFB services should be TSLRIC. However, it is widely agreed that there is unlikely to be a competing fixed line network built by access seekers or any other party in the foreseeable future, so TSLRIC is not an appropriate methodology for fixed line services. The goal of TSLRIC, to promote infrastructure competition, is not relevant for UFB services. This was widely agreed in submissions.

63 There has been regulatory uncertainty under the status quo TSLRIC methodology for copper services. This would most likely continue.

Option two – Prescribe TSLRIC in current framework

64 Under this option, the Government would specify in the Telecommunications Act that the TSLRIC pricing methodology should apply to the regulation of UFB services. The regulatory framework would otherwise not be changed – copper services would remain regulated under TSLRIC as well.

Benefits

65 By valuing sunk assets on a forward-looking basis and utilising modern technology, TSLRIC in theory sets efficient entry and exit incentives. Access seekers will only build new networks when they can do so at a lower cost than what a hypothetical network owner would deploy.

66 The risk of having different pricing methodologies under option one would be avoided.

Costs

67 As noted above, it is widely agreed that there is unlikely to be a competing fixed line network built by access seekers or any other party in the foreseeable future, so TSLRIC is not an appropriate methodology for fixed line services.

68 The abstract nature of TSLRIC modelling generates significant practical challenges, is inherently contentious, and requires considerable industry resources to be applied each

regulatory period[7].

69 TSLRIC does not provide long-term certainty on future prices, as wholesale prices will increase or decrease as technology costs change, despite the fact the underlying network is actually a sunk cost. This uncertainty and potential for volatile pricing will chill investment.

Option three – Prescribe BBM in current framework

70 Under this option, the Government would specify in the Telecommunications Act that the BBM pricing methodology should apply to the regulation of fixed line services (both copper and UFB services). The regulatory framework would otherwise not be changed.

Benefits

71 The benefits of BBM as a basis for regulated fixed line pricing were set out in the Discussion Document, and were widely supported by submitters. The key advantages when BBM is implemented are:

- fixed line suppliers will have incentives to continue to invest and innovate because a prudent and efficiently-made investment under a BBM framework will generate a reasonable rate of return. Reduced volatility in regulated fixed line prices will also improve investment and innovation incentives for RSPs, to the benefit of end users;
- given its application under Part 4 of the Commerce Act, BBM is more widely understood than TSLRIC and is likely, over time, to lead to a less contentious and less costly regulatory process; and
- the availability of verifiable information about the actual build costs associated with the UFB network provides a good basis for establishing a BBM price for UFB services based on actual costs.

Costs

72 Introducing the BBM methodology (but no other regulatory tools and processes that make up the utility-style framework) would not be as effective as introducing that methodology with the other elements of the utility-style framework. This is a downside of this option.

73 In theory, BBM prices could promote over-investment as they are largely based on the access provider's actual costs rather than the hypothetical 'efficient cost'. In a utility-style framework, this can be addressed through the regulator's role in pre-approving only *efficient* expenditure and investments. However it is unclear whether that mechanism could be implemented within the current framework.

74 Regulated asset valuation under BBM can be unaffected if a new technology emerges that is significantly cheaper to roll out, which may mean prices would be higher than under a replacement cost model (like TSLRIC). However, if that were the case we would expect that competition from that new technology would result in de-regulation.

75 BBM often requires a higher level of intrusion by the regulator into the business affairs of the regulated supplier (with accompanying compliance costs). This is not expected to be

[7] At the Commerce Select Committee's annual review of the Commerce Commission on 11 February 2016, the Commission said that the TSLRIC model was the most complex and extensive economic model the Commission had ever been tasked with creating.

significantly different than costs already associated with current TSLRIC processes and existing information disclosure requirements.

76 Finally, depending on the form of implementation, BBM can involve revenue or prices being based on forecast demand, with commensurate risks to either the regulated supplier or consumers if the forecasts are incorrect. This risk can be addressed in the design of the framework.

Option four – Implement utility-style framework with BBM

77 Under this option, the Government would implement a utility-style framework with BBM as the pricing methodology for fixed line services (both copper and UFB services).

Benefits

78 The benefits of the BBM methodology are set out above.

79 A utility-style regime is increasingly relevant to, and appropriate for, fixed line networks. Fixed line providers (similar to electricity lines and other utilities in New Zealand) are structurally separated, wholesale-only, and offer services in markets with limited competition. Fixed line services (particularly UFB services) will increasingly be seen as 'essential' utility-like services.

80 Having input methodologies developed under the framework would provide regulated suppliers and RSPs with a transparent and predictable picture of how regulated assets will be treated, and allow the Commission to step in to set prices for regulated services quickly when needed.

81 A robust information disclosure regime would provide standardised and transparent evidence of the actual and forecast performance of the regulated supplier. It would ensure that sufficient information is available to interested parties to assess whether regulatory objectives are being met. Chorus and LFCs are already subject to a utility-style information disclosure regime for their UFB businesses. This regime could be continued with some adjustments, and so we do not expect a significant increased burden on network owners.

82 A utility-style framework is likely to be more widely understood, including by investors in common capital markets, than a bespoke framework for communications as we have at present.

Costs

83 The costs of the BBM methodology are set out above.

84 In the case of fixed line services, there are some pockets of competition from (for example) the Hybrid-Coaxial Fibre network operated by Vodafone and competing CBD fibre networks. This is not traditionally the case in monopoly utility markets, and so raises the question whether this feature of the UFB market would cause problems under a new framework. However, as noted in the Discussion Document, there is not likely to be enough competition to constrain fixed line pricing, and if competition does develop then de-regulation can be considered.

Key

85 The key for the table is below.

Key:	
✓✓	Significant improvement relative to the status quo

✓	Improvement relative to the status quo
–	No change relative to status quo
✘	Deterioration relative to the status quo
✘✘	Significant deterioration relative to the status quo

Issue 1: Fixed line regulatory framework	Promoting stability and predictability in the regulatory framework for fixed line services	Promoting efficient investment	Promoting the long term benefit of end users	Promoting innovation	Net impact
Option one: Status quo	Likely to generate substantial ongoing uncertainty rather than stability or predictability	Investment incentives likely to be significantly undermined by uncertainty about pricing model	Focus of current framework is on long term benefit of end users, but uncertainty experienced under it has resulted in some retail price volatility	Uncertainty about what pricing methodology would apply; likely to chill incentive to innovate	Network owners and RSPs likely to delay post-2020 investments until uncertainty resolved. Would negatively impact investment and development of innovative services, and delay economic and social benefits from fast broadband
Option two: Prescribe TSLRIC in current framework	× TSLRIC methodology in current framework has generated considerable uncertainty, and likely to be similar outcome if applied to UFB services	× Investment incentives undermined by inherent uncertainty of TSLRIC model and continual revaluation[8], and lack of consideration of actual costs incurred/investments made	× End users likely to continue experiencing short term price volatility and potential for long term underinvestment, so not likely to promote long term benefit of end users	× In theory, TSLRIC promotes innovation by using modern equivalent asset as benchmark. However, experience has shown that innovation incentives are undermined by inherent uncertainty of TSLRIC model and continual revaluation	Inherent uncertainty and volatility of TSLRIC, combined with fact it does not reflect actual costs, would lead to negative outcomes for end users and a likely repeat of the problems already encountered with copper pricing Lack of certainty will delay investment, innovation, economic/social benefits Not appropriate to encourage 'build/buy' when overbuild is unlikely to occur, so TSLRIC not appropriate for UFB services

[8] For example, in its submission to the Commerce Commission on the UCLL and UBA pricing reviews dated 12 August 2015, Black Crane Capital, a Hong Kong-based investment firm noted its estimate that Chorus currently trades on an effective EV/EBITDA multiple of around 7 times, whereas typically regulated infrastructure assets trade on EV/EBITDA multiples of 10-12 times (this is the historical average for New Zealand electricity lines companies). It says this discount is clear evidence of the effect of regulatory uncertainty on Chorus' cost of capital – it is almost twice as high as it should be.

Issue 1: Fixed line regulatory framework	Promoting stability and predictability in the regulatory framework for fixed line services	Promoting efficient investment	Promoting the long term benefit of end users	Promoting innovation	Net impact
Option three: Prescribe BBM in current framework	– Current framework unlikely to support stability and predictability. BBM may assist with predictability, but without other tools (for example input methodologies) will not be fully effective	✓ Network owners have a reasonable expectation for return on efficient investment under BBM; but without input methodologies these benefits limited by some uncertainty	✓ BBM likely to promote efficient investment for long term benefit of end users, but benefits limited by lack of associated features in framework	– BBM doesn't overtly encourage innovation without some additional mechanisms	Better outcomes overall but prescribing BBM in current framework would not achieve all possible benefits Network owners can receive a reasonable rate of return. Positive impact for end-users from increased investment and innovation
Option four: Implement utility-style framework with BBM	✓✓ Utility-style framework with BBM likely to best promote stability and predictability	✓✓ Network owners have a reasonable expectation for return on efficient investment. Input methodologies provide transparency on how assets and investments are treated, and ongoing certainty. Utility-style regime familiar to investors	✓✓ BBM and utility-style framework likely to promote efficient investment for long term benefit of end users	✓ Utility-style framework can support ongoing innovation by regulated suppliers (e.g. incremental rolling incentive scheme for Transpower)	Best overall outcome. Network owners can receive a reasonable rate of return. Impact of change likely mitigated by long-term benefits of simpler regulatory process, and similarities to utility regimes Positive impact for end-users from increased investment and innovation. Opportunities to realise the economic and social benefits from fast broadband

Conclusion and recommendation

86 The preferred option is to prescribe a utility-style regulatory framework with a BBM pricing methodology for fixed line services, in legislation (**Option four**).

87 Utility-style regulation based on BBM is considered best practice around the world for regulated infrastructure sectors, and is appropriate for fixed line services after 2020 for several reasons:

- in the long term this framework is likely to result in efficient investment that benefits end users, given that returns are based on actual costs as opposed to hypothetical costs of a hypothetical new entrant. Incentives are also better aligned with end users and total welfare;
- this form of regulation is focussed on constraining monopoly pricing rather than promoting competition, which is now a more appropriate objective for the regulatory framework following structural separation and the roll-out of the UFB network;
- the utility-style framework can include tools such as 'input methodologies' which enable the regulator to determine key input parameters, rules and procedures for regulated suppliers ahead of time, and which provide a clear basis for predictable regulation over time; and
- when the rules and procedures are established, this form of regulation is widely regarded to be more stable and predictable, while protecting end users from monopoly pricing risks.

88 A move to BBM had overwhelming support amongst submitters to the Discussion Document: all submitters who commented on fixed line pricing supported a move to a BBM framework for UFB services, and only one submitter disagreed that the Government should set the methodology in legislation (rather than leaving it to a later recommendation following an investigation). The majority of submitters also supported a move to BBM for copper services for consistency reasons.

Issue two: Legislative vehicle

Scope of options

89 The current regulatory framework in the Telecommunications Act governs fixed line services, including UFB services; however regulation has not been imposed on UFB services to date. Rather, current UFB service pricing for core products is capped in contracts between UFB suppliers and Crown Fibre Holdings. These contracts will expire at the end of 2019.

90 Contracts, undertakings or some other regulatory instrument could be utilised in the implementation of a new regulatory framework for fixed line services. For example, such an instrument could be utilised with legislative backing and some form of 'sign off' from the Commission under the legislative framework.

91 The options discussed here are limited to the two most appropriate possible primary sources of legislation. The particular regulatory instrument to be utilised for detailed implementation will be discussed in a later RIS.

92 We think it is preferable to resolve the issue of the appropriate legislative vehicle now because, as the Review progresses, there is a risk of introducing regulatory uncertainty to the sectors already regulated under Part 4 of the Commerce Act.

Option one (status quo): Telecommunications Act 2001

93 Under the status quo, the new regulatory framework for fixed line services would be set out in the Telecommunications Act.

94 For example, the provisions would be set out in a new Part to the Telecommunications Act (and incorporated into existing provisions to the extent possible and appropriate).

Benefits

95 This would be consistent because the Telecommunications Act regulates the remainder of the communications sector (for example mobile services), and although the new provisions would incorporate 'utility-style' regulation they would remain within the existing legislation.

Costs

96 There is a risk that, by creating a new part of the Telecommunications Act for the fixed line regulatory framework, regulatory uncertainty is increased and stakeholders (such as investors) do not develop confidence in the new framework. Put another way, the potential benefits of including the framework within Part 4 of the Commerce Act (which is known and understood by investors) may be foregone.

Option two: Commerce Act 1986

97 Under this option, the new regulatory framework for fixed line services would be set out in Part 4 of the Commerce Act.

98 For example, the provisions would be set out in a new Subpart to Part 4.

99 Part 4 contains the regulatory framework for other regulated utilities in New Zealand such as electricity lines companies, gas distribution networks, airports and the national electricity grid operator.

Benefits

100 This option would mean taking a consistent approach to that taken with regulation of other utilities, and would mean that Part 4 contains all the regulatory provisions for 'utility-style' regulation. This approach may have optical benefits because stakeholders may take comfort from the existing, established approach to regulating utilities under Part 4.

Costs

101 The main cost is that the overall regulatory framework for telecommunications services would be split across two pieces of primary legislation. This would create complexity and may reduce the flexibility of the regime.

102 There is a risk that introducing the fixed line regulatory framework into the Commerce Act would result in stakeholders, the Commission and/or the Courts taking a different interpretation of aspects of the existing regulatory frameworks for electricity lines, gas pipelines and/or Transpower, based on inferences from the fact the Government has included UFB services in the legislation. In other words, inclusion of the fixed line regulatory framework may negatively affect existing precedent and regulatory certainty for other sectors regulated under Part 4 of the Commerce Act.

Key

103 The key for the table is below.

Key:	
✓✓	Significant improvement relative to the status quo
✓	Improvement relative to the status quo
–	No change relative to status quo
✘	Deterioration relative to the status quo
✘✘	Significant deterioration relative to the status quo

Issue 2: **Legislative vehicle**	**Administrative efficiency, workability and flexibility**	**Ensuring any changes are limited to the communications sector**	**Promoting regulatory predictability**	**Net impact**
Option one (status quo) Telecommunications Act	It is efficient to keep the regulatory frameworks for a given sector in one piece of legislation. Also workability and flexibility benefits	There would be no chance of contagion or affecting existing precedent or regulatory certainty under this option	Over time it is likely that industry-specific rules and procedures will develop with benefit of experience and past decisions in telecommunications sector, promoting predictability	Net impact likely to be positive
Option two Commerce Act	× It would be administratively complex to have some parts of the communications sector (such as mobile) regulated under the Telecommunications Act and other parts (UFB) regulated under another piece of legislation	× Risk of contagion and negatively affecting existing precedent and regulatory certainty for Part 4 sectors	× Some risk of inappropriately tailored Part 4 precedent being applied to fixed line services	Negative on all criteria and so net impact would be a deterioration relative to the status quo

Conclusion and recommendation

104 The preferred option is to include the new regulatory framework in the Telecommunications Act (**Option one**).

105 While there may be some optical benefits in including the fixed line regulatory framework in Part 4 of the Commerce Act, our assessment is that many of the actual benefits that stakeholders perceive to accrue from Part 4 could be gained by replicating the Part 4 provisions as closely as possible within the Telecommunications Act.

106 From an efficiency and workability perspective the benefits of this option significantly outweigh any downside.

107 Finally, there is a risk of negatively affecting existing Part 4 precedent and regulatory certainty (and/or introducing inappropriate precedent to fixed line services regulation) that would be avoided by inclusion in the Telecommunications Act.

Issue three: Whether to retain the obligation to 'unbundle' the point-to-multipoint parts of the UFB network after 2020

Option one (status quo): Retain the obligation

108 Under this option, the current obligation to 'unbundle' the point-to-multipoint parts of the UFB network from 1 January 2020 would be retained.

Benefits

109 Unbundling is traditionally said to deliver the following benefits:

- *promoting competition* – unbundling can enable RSPs to provide differentiated retail services which support a wider range of retail products, thereby promoting competition. It can also, in theory, drive price competition because an RSP may be able to provide its own services at lower cost than the network owner; and
- *promoting innovation* – the pressure of RSPs seeking to unbundle creates an incentive on the network owner to innovate and invest in their own new wholesale service offerings, enabling RSPs to deliver innovative new services at the retail level.

110 Many of these benefits are based on the experience of unbundling copper fixed line networks. In the context of fibre networks such as the UFB, some have argued that the benefits are reduced because:

- fibre networks are inherently more capable than copper networks, and provide significantly greater functionality and capacity, so there is less need for the type of innovation traditionally aimed for with copper unbundling; and
- the UFB suppliers are structurally separated, wholesale-only providers and so there is less need for the competitive pressure from unbundling to drive ongoing innovation. The argument is that the UFB suppliers have greater incentives to innovate, compared with vertically-integrated operators to whom unbundling has traditionally been applied.

Costs

111 The UFB suppliers have argued that the obligation could lead to negative outcomes, on the basis that:

- unbundling would undermine the UFB suppliers' ability to provide a range of differentiated layer 2 services, and in particular a basic entry-level broadband service at an affordable price. They argue that, over time, unbundling will erode the value of layer 2 services and lead to a 'flattening' of the product set; and
- there are high costs and operational complexity driven by fibre unbundling. Particularly when end users switch between RSPs, there could be significant costs and delays involved which would ultimately be borne by end users.

112 Another potential cost of unbundling is that it may reduce competition at the retail level if the costs involved mean that only large scale RSPs are in a position to unbundle, and smaller RSPs are limited to the offerings provided by the UFB partner. However, officials assess this as an unlikely outcome. It would require the larger RSPs to unbundle on a very large scale across the main cities, which is unlikely to occur based on the copper unbundling experience in New Zealand (where unbundling has typically focussed on high-value areas only).

Option two: Remove the obligation

113 Under this option, the obligation would be removed. UFB suppliers would continue to provide wholesale layer 2 services as well as layer 1 services on the point-to-point parts of the UFB network (as they do today), however they would not be required to offer layer 1 services on the point-to-multipoint parts of the UFB network after 2020.

Benefits

114 Removing the obligation may address the concerns of UFB suppliers. In particular, the risks associated with a 'flattening' of the spectrum of layer 2 services would be completely avoided.

115 The costs and potential complexity and delays involved in unbundling would also be avoided.

116 The risk of a reduction in retail competition due to dominance by larger RSPs would be avoided, though as noted earlier this is unlikely to be a material risk anyway.

Costs

117 The costs of removing the obligation could be significant.

118 We would lose an important mechanism to put pressure on UFB suppliers to continue innovating over time. This could risk a lack of innovation compared to the status quo, which would in turn limit competition at the retail level, and reduce the benefits that could otherwise be gained from the UFB network.

119 The potential benefits of having some competition emerge at layer 2 of the UFB network (arising from unbundling) would be foregone, with potential downstream competitive effects at the retail level.

120 Finally, the opportunity to gain the benefits of unbundling would be foregone. If the existing obligation were now to be removed, then to re-impose it later would be very difficult.

Key

121 The key for the table is below.

Key:	
✓✓	Significant improvement relative to the status quo
✓	Improvement relative to the status quo
–	No change relative to status quo
✘	Deterioration relative to the status quo
✘✘	Significant deterioration relative to the status quo

Issue 3: **Whether to retain the obligation to unbundle the P2MP parts of the UFB network**	**Promoting ongoing innovation in UFB services**	**Promoting competition for UFB services**	**Promoting efficiency in the delivery of UFB services**	**Net impact**
Option one (status quo) Retain obligation	Would provide a robust mechanism to ensure there is pressure on UFB suppliers to continue innovating over time	Ongoing innovation will support retail competition. Small risk that retail competition reduced if a large RSP unbundles on a wide scale	If unbundling occurs on a large scale, there may be reduced efficiencies for delivery of UFB services (particularly for end users switching between RSPs for UFB services)	Net impact on balance positive due to the competitive pressure on UFB suppliers to continue innovating. Some risk of inefficiency, but this is likely to be outweighed by innovation benefits
Option two Remove obligation	✗✗ This would forego the main tool for promoting innovation over time. Other tools would be needed	✗ If innovation does not occur as much as it would under status quo, then not likely to support promoting competition	✓ Potential inefficiencies would be avoided	Net impact likely to be a deterioration relative to the status quo

Conclusion and recommendation

122 The preferred option is to retain the current obligation (**Option one**).

123 Officials' thinking is that the competition benefits of retaining the unbundling obligation outweigh the potential risks, and these risks can be managed within the regulatory framework.

124 Importantly, even if there is cost and complexity driven by unbundling (leading to potential inefficiencies) then we think the market will resolve that itself. In other words, it will be voluntary for RSPs to take up unbundled services, and if they do and subsequently incur costs and complexity then they will have the choice to revert back to the UFB suppliers' layer 2 services. The retail market is currently competitive, so competition should limit any potentially negative outcomes.

Consultation

125 The Discussion Document was released on 8 September 2015. It contained the substantive elements of a Regulatory Impact Analysis. The document raised a range of issues, presented the pros and cons of the issues and in some cases offered preliminary views. Public consultation on the Discussion Document ran for seven weeks. The document contained 39 specific questions for submitters on the communications regulatory environment, now and post-2020. It also welcomed views on other issues relating to communications regulation.

126 43 submissions were received from a range of submitters including network owners, retail service providers, user groups and iwi organisations, individuals, broadcasters, and other parties connected to the communications sector.

127 The following government agencies were consulted on the Discussion Document and the Cabinet paper associated with this RIS: The Treasury, the Ministry of Culture and Heritage and Te Puni Kokiri. The Commerce Commission and Crown Fibre Holdings were also consulted. The Department of Prime Minister and Cabinet was informed.

Summary of key feedback from public consultation

128 As a whole, submitters supported the Government's long-term vision for communications markets and regulatory principles. They generally agreed that the current framework for UFB services is no longer likely to be fit for purpose.

129 The only submitter that took a slightly different stance was Spark, which argued that "the simplest way to deliver a certain and stable regulatory framework is to minimise changes to the legislation underpinning it. For that reason, we do not support any of the more fundamental changes to our regulatory framework considered in the discussion paper". Having said that, Spark still agreed that the Government should set out now how fibre will be regulated in the post 2020 period (which would be a change from the status quo), that BBM is suitable for UFB services, and is open to copper changing to BBM.

130 Overall, submissions demonstrated widespread agreement for change and support for the proposed model:

- all submissions which stated a preference for a fixed line pricing model supported a move to a utility-style framework with BBM for UFB services;

- there was a clear preference for aligning the pricing methodologies for UFB and copper services – with a consensus that, if UFB services were regulated under BBM, copper services should also be regulated under BBM;
- with only one exception, submitters also supported the Government legislating to specify that BBM should eventually apply to UFB services, rather than leave the decision to the Commission; and
- no submitters favoured the use of another pricing methodology (such as TSLRIC) for fibre, or the removal of a regulatory backstop altogether.

131 A number of submitters were cautious about a move to BBM and consider the detailed design and manner of implementation is critical. For this reason, we intend to undertake a second round of consultation as part of the design phase.

132 Although there was a high level of support for a BBM regime to eventually apply to both UFB and copper services, there was divergence on when this should occur and whether the industry should first be encouraged to reach commercial agreements on wholesale prices. Government will present both models for detailed feedback in the design phase before making a final decision.

133 Industry submitters were divided on whether a BBM regime should be enacted under the Telecommunications Act or Part 4 of the Commerce Act, but on balance, more submitters favoured using the Telecommunications Act. Importantly, advice from the Commerce Commission and MBIE's internal competition advisors favours using the Telecommunications Act.

134 Following the public consultation, a more detailed options analysis was undertaken in consultation with key stakeholders and relevant government agencies, resulting in this RIS.

Implementation

135 The recommendations will form the basis for public announcements on the high-level direction for the telecommunications review.

136 Following announcements the next steps are expected to be as follows:

Next step	**Implications for further Regulatory Impact Analysis**
Consultation on Options Paper	There will be another discussion document released for consultation. The purpose of this further consultation will be to gather more detailed views from stakeholders on a range of implementation issues, in order to inform the final policy position
Cabinet decision on final policy decisions	Will be accompanied by a final RIS that analyses costs/benefits of the final policy package, including all implementation detail. It will include a detailed Regulatory Impact Analysis and details on monitoring arrangements

137 There are no substantial immediate risks in this implementation given that what is being proposed next is a further round of public consultation.

Monitoring, evaluation and review

138 A further RIS following final policy decisions will contain detail on the approach to monitoring, evaluation and review.

139 No specific monitoring or evaluation is proposed at this stage.