

111 Contact Code

Emerging Views paper

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Glossary

Term	Defined
CPE	Consumer Premises Equipment - The equipment installed in a consumer's premises (i.e. home or business) that allows the telecommunication service to be delivered.
FCC	Federal Communication Commission - The main telecommunications regulator in the United States.
Fixed Wireless	A type of wireless broadband data communication which is performed between two fixed locations. This can be delivered by cellular or other radio networks to mains-powered CPE (eg a modem).
MBIE	Ministry of Business Innovation and Employment - The Ministry responsible for developing policy and legislation for telecommunications in New Zealand.
Ofcom	Office of Communications - The regulatory and competition authority for broadcasting, telecommunications and postal industries in the United Kingdom.
ONT	Optical Network Terminal - The device installed at the consumer's premises that terminates an optical fibre connection. The ONT connects to other CPE devices like modems or routers via an ethernet cable.
TSO	The telecommunications service obligations (TSO) are a set of obligations established under the Telecommunications Act to ensure certain telecommunications services are available and affordable. There are two current TSO services; the Deaf Relay Service, and a Local Service Obligation regarding the provision of residential telephone services.
Telecommunication Service Obligation Deeds	The deeds of undertaking agreed between the Crown and a TSO provider that sets out what the TSO provider is required to deliver.
VoIP	Voice over Internet Protocol - Commonly used to provide voice calls over a broadband connection. VoIP is governed by a set of instructions and standards and can be used on a wide range of technologies, including fibre, copper and cellular (mobile and fixed wireless).

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Purpose and structure of this paper

1. As consumers transition away from using traditional copper landlines to new telecommunications technologies, they may be unable to contact emergency services during a power outage at their premises. We are required to prepare a set of rules to ensure that vulnerable consumers with these new technologies retain the ability to call the 111 emergency service.
2. The purpose of this Emerging Views paper (paper) is to seek initial feedback on our proposed approach to establishing the Commission 111 Contact Code (Code).¹
3. This paper has the following sections:
 - 3.1 We first introduce the context for the Code, including the 111 emergency service and the changing nature of telecommunications technologies, and then the Code's purpose and high-level requirements.
 - 3.2 We then outline what we consider to be outside the intended scope of the Code.
 - 3.3 We then outline how we propose to address the high-level requirements of the Code and some preliminary views on approaches for making the Code, including:
 - 3.3.1 who should be considered vulnerable;
 - 3.3.2 which services the Code should apply to;
 - 3.3.3 what might be considered appropriate means to contact 111 in a power failure; and
 - 3.3.4 how long your telecommunications service should allow you to contact 111 during a power failure.
 - 3.4 Appendix A provides the legal framework for the Code and outlines the links between the Code and other current Commission projects on the transition from copper to next generation technologies.
 - 3.5 Appendix B provides a summary of the key consultation questions that we are seeking views on.

Submissions

4. We are seeking responses to the preliminary views and key questions raised throughout this paper and collected in Appendix B.

¹ This paper discharges the requirement under section 239(1)(a) of the Telecommunications Act 2001 (Act) for the Commission to give public notice of the process that will be followed to make the Code.

5. Please make your submission via the [Commission 111 contact code project page²](#) by 5pm on **11 October 2019**. The project page will direct you to a form with instructions on how to upload your submission. Your submission should be provided as an electronic file in an accessible form.
6. The protection of confidential information is something the Commission takes seriously and in order to continue to protect confidential submissions we are trialling a new submission process. This will require you to upload your submission via the form from the project page. The process requires you to provide (if necessary) both a confidential and non-confidential version of your submission and to clearly identify the confidential and non-confidential versions.
7. When including commercially sensitive or confidential information in your submission, we offer the following guidance:
 - 7.1 Please provide a clearly labelled confidential version and public version. We intend to publish all public versions on our website.
 - 7.2 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.
8. If we consider information disclosed in the confidential version to be in the public interest, we will consult with the party that provided the information before any such disclosure is made.

² <https://comcom.govt.nz/regulated-industries/telecommunications/projects/commission-111-contact-code>

Next steps

9. Following submissions on this paper, but prior to commencing work on a draft Code, we intend to hold a key issues workshop with interested parties.
10. Table 1.1 provides an indicative timeline for the development of the Code.

Table 1.1 Indicative timeline for making the Code

Milestone	Indicative date
Submissions due on Emerging Views paper	11 October 2019
Key issues workshop	November 2019
Draft Code published	February 2020
Submissions on the draft Code due³	March 2020
Cross-submissions on the draft Code due	March/April 2020
Possible technical industry workshop	April 2020
Publication of final Code	June 2020

³ As required by section 239(3) of the Act, interested persons are entitled to 30 working days for making submissions on our draft 111 Code.

Context for the Code

11. In this section we outline the context for the Code including the 111 emergency service and the changing nature of telecommunications technologies, and then the Code's high-level requirements under the Telecommunications Act 2001 (Act).

The 111 emergency service

12. Calling 111 is the primary means to request emergency assistance from the Ambulance, Police and Fire and Emergency services.
13. Currently, the 111 emergency service receives around 200,000 phone calls each month, with over 75% of calls now originating from mobile phones.⁴
14. The 111 emergency service supports voice calls from landlines, payphones and mobile phones. Deaf, hearing or speech impaired people can also register for the 111 emergency text service.
15. Calls to the 111 service are free of charge from a payphone, landline and mobile phone and will go through even if the account or device has no credit.
16. 111 calls are answered by an operator service, run by Spark NZ Ltd (Spark), which assesses which service is needed and passes the call through to the appropriate emergency service (Police, Fire and Emergency or Ambulance).

New technologies

17. The New Zealand Government's Ultra-Fast Broadband (UFB) programme is transformational and will see 87% of New Zealand homes and businesses able to connect to fibre networks by the end of 2022. The Government's Rural Broadband Initiative (RBI and RBI2) is also improving broadband connections in rural areas, predominantly using wireless technology. The two programmes are targeting 99.8% of the New Zealand population's homes and businesses being able to connect to high speed broadband by 2025.
18. At the same time, we are seeing commercially funded mobile networks enabling high-capacity fixed wireless broadband in urban areas, and this is likely to continue to grow as the fifth generation of mobile networks (5G) launches over the next few years.
19. All these new technologies can provide broadband and voice services to consumers.
20. In response to these new connectivity options, many New Zealand consumers have been transitioning off their copper-based telephone and broadband services. In the years to come, it is likely that only a small minority of New Zealanders will remain served by a copper telecommunications network.

⁴ MBIE "111 Quarterly Review: August – October 2017" (October 2017) page 2. Available at www.mbie.govt.nz/science-and-technology/it-communications-and-broadband/our-role-in-the-ict-sector/emergency-call-services/

21. However, unlike copper, which is powered from the telephone exchange, fibre and fixed wireless technologies require power from the consumer's premises (ie, home or business). This is because the Customer Premises Equipment (CPE) such as an Optical Network Terminal (ONT) and modem required for fibre and fixed wireless access need mains power to operate. This means that landline voice services provided over these technologies will not work in the event of a power outage, unless they have a battery backup.
22. Accordingly, as consumers transition away from the copper network to next generation technologies, they may be unable to access emergency services during a power outage where they live or work and are therefore potentially vulnerable.
23. The Ministry of Business, Innovation and Employment's (MBIE) review of the Act between 2013 and June 2017 identified this potential vulnerability, and Parliament decided to make amendments to the Act to address access to the 111 emergency service in the event of a power failure.⁵ We are now required to create a Code that protects consumers by imposing obligations on providers of telecommunications services.

High-level requirements of the Code

24. The purpose of the Code is to ensure that:⁶

vulnerable consumers, or persons on their behalf, have reasonable access to an appropriate means to contact the 111 emergency service in the event of a power failure.
25. Section 238 of the Act outlines the requirements of the Code, including that it must:
 - 25.1 specify which telecommunications services it applies to;
 - 25.2 require providers of those services to inform consumers about the options available for vulnerable consumers;
 - 25.3 prescribe a process for a consumer of those services to demonstrate that they are, or will become, a vulnerable consumer;⁷

⁵ Telecommunications (New Regulatory Framework) Amendment Act 2018 (the Amendment Act). An overview of the amendment process is provided at New Zealand Parliament "Telecommunications (New Regulatory Framework) Amendment Bill (2018)" www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/BILL_74818/telecommunications-new-regulatory-framework-amendment (viewed on 13 February 2019).

⁶ The full text of section 238 is provided in Appendix A: Legal framework and links with other copper transition work.

⁷ Section 238(5) defines a vulnerable consumer as a consumer of specified telecommunications services who is at particular risk of requiring the 111 emergency service (for example, due to a known medical condition) and does not have a means for contacting the 111 emergency service that can be operated for the minimum period in the event of a power failure.

- 25.4 require the providers of those services to supply vulnerable consumers, at no cost to the consumers, with an appropriate means for contacting the 111 emergency service; and
- 25.5 the minimum period for which an appropriate means for contacting 111 should operate in the event of a power failure.
26. The Act does not specify whether the Code should focus on residential consumer services or include businesses. Our preliminary view is that the Code should specify an approach which might still cover some small business consumers but would not address issues particular to larger businesses who tend to receive more customised voice services.
27. We must create the Code by no later than 1 January 2022. However, as set out in Table 1.1 above, we are currently aiming to publish the Code in June 2020.
28. The legal framework and relevant sections of the Act are set out in Appendix A.

Outside the scope of the Code

29. Prior to setting out our initial views on how we propose to address the Act's high-level requirements, this section highlights the aspects we view as being outside the intended scope of the Code.

Power failure and network resiliency

30. We consider that *power failure* for the purposes of the Code is restricted to failures that mean the power goes off at a consumer's premises.
31. We consider that the Code's intended scope does not cover power failures that do not affect the consumer's premises, such as power failures to telephone exchanges or similar telecommunication infrastructure. In other words, this is not intended to be a telecommunications network resilience code.
32. It could be argued that section 238(4)(c) of the Act, which enables the 111 Code to contain *any other provisions that are necessary or desirable to achieve the purpose of the Code*, could include provisions to increase the resilience of telecommunications networks outside of consumers premises. However, we do not consider that this is the legislative intent of the 111 Code.
33. We also understand that a procurement process for the Emergency Service Next Generation Critical Communications contract is currently underway, which will improve the resilience of mobile infrastructure for the purpose of emergency services.⁸

⁸ This is set out on the New Zealand police website, <https://www.police.govt.nz/about-us/programmes-and-initiatives/next-generation-critical-communications-ngcc>

Consumer choices

34. The Code is intended to ensure that vulnerable consumers have reasonable access to an appropriate means to contact 111 in the event of a power failure.
35. Certain choices by consumers mean that they may already be unable to contact emergency services in the event of a power failure, despite their (copper) access technology remaining operational.
36. We do not consider that the Code is intended to address situations where consumers make choices which potentially compromise their access to the 111 service in the event of a power failure. We note, for example, that cordless landline phones may not work in the event of a power failure in the consumer's premises, regardless of whether the telecommunications network to which they are connected is copper or fibre.
37. Our preliminary view is that the provider of a copper landline service should not be required to provide an alternative to that service for consumers with cordless phones, because those consumers have been given reasonable access to the copper network and could choose to have a corded phone to protect their ability to contact 111 in the event of a power failure.
38. Voice over Internet Protocol (VoIP) services provided over copper also do not work in the event of power failure in the consumers premises. However, a VoIP service is likely to be what a consumer is provided if they choose to purchase a bundled broadband and landline service. Given that in this situation, a consumer may have a physical connection to a copper landline, but has their landline delivered using a VoIP service, our preliminary view is that the relevant telecommunications provider should have to provide an alternative means of calling 111 in the event of a power failure.
39. In a situation where a consumer has chosen not to take a landline service (such as taking a naked broadband connection, or no connection at all), our preliminary view is that the relevant telecommunications provider should not have to provide an alternative means of calling 111 in the event of a power failure as the consumer has specifically chosen not to have a landline connection.
40. Additionally, we also do not consider that the Code is intended to cover situations where consumers are involved in conscious decisions related to power at their premises, such as those who:
 - 40.1 choose to go 'off grid' (disconnect from mains power supply);
 - 40.2 have deliberate power outages at their home or business, such as shutting power off for renovations; or

- 40.3 are disconnected due to unpaid charges. In this instance the Electricity Authority has published guidelines for power retailers for providing assistance for medically dependent and vulnerable consumers.⁹

Performance of emergency service call handling

41. One of the main components of the emergency calling system is the Initial Call Answering Platform (ICAP) for the first answering of 111 calls. Spark operates the ICAP so emergency calls are first answered at a Spark call centre. Genuine emergency calls are then forwarded to the appropriate emergency service provider (Police, Fire and Emergency, Ambulance).
42. Given the purpose of the Code, and for the avoidance of doubt, we consider that the level of ICAP service provision is outside the scope of the Code.
43. Spark has obligations under the Telecommunication Service Obligation Deed for Local Residential Telephone Service (LRTS) to:
- 43.1 provide a free service for genuine 111 calls for residential customers; and
- 43.2 meet certain service standards in delivering that service, such as answering 85% of 111 calls within 15 seconds.¹⁰
44. The Commission can review and renegotiate any terms of the LRTS deed at any time, and we consider this to be the appropriate mechanism to address any issues with call handling performance, rather than through the Code.¹¹

Table 1.2 Consultation questions

1	Do you agree that the three aspects we have identified should be considered out of the scope of the Code?
2	Are there any other areas that should be out of scope?

⁹ Electricity Authority “Guideline on arrangements to assist vulnerable consumers” Version 2.1 (01 November 2010), and Electricity Authority “Guideline on arrangement to assist medically dependent consumers” Version 2.1 (01 November 2010)

¹⁰ It is worth noting that Spark’s performance against their call answering measures are to be disregarded in the event of force majeure, or an outage to an access network.

¹¹ Telecommunications Service Obligations (TST) Deed for Local Residential Telephone Service, (November 2011), para 18 https://comcom.govt.nz/_data/assets/pdf_file/0024/90492/Spark-TSO-LRTS-Deed-November-2011.PDF

How we propose to address the high-level requirements of the Code

45. Based on the high-level requirements in the Act, we are looking to develop answers to the following key questions:
 - 45.1 Who should be considered a vulnerable consumer?
 - 45.2 What telecommunications services should the Code apply to?
 - 45.3 What are appropriate means for vulnerable consumers, or persons on their behalf, to contact emergency services?
 - 45.4 What is the minimum period during which a service for contacting emergency services must operate in the event of a power failure?
46. This section sets out our proposed approach to answering these questions.
47. In short, we consider that a technology-based approach will best achieve the purpose of the Code. Vulnerability can arise from long-term conditions, as well as in the event of an emergency. We see the Code as addressing the situation where, due to technological change to the provision of voice services (eg, consumers shift from copper to fibre), a power outage in the consumer's premises exacerbates this vulnerability.
48. We have highlighted how the approach shapes our preliminary views on the above key questions, and the consultation questions that arise as a result.

Who should be considered a vulnerable consumer?

49. The 111 service provides access to three emergency services – Ambulance, Police and Fire and Emergency. There is a subset of consumers who, due to specific and often long-term medical conditions, are heavily dependent on the Ambulance service, and are more likely to require the service compared to the rest of the population. These consumers are at risk and vulnerable should they temporarily lose access to the 111 service during a power failure.
50. However, for much of the rest of the population, there is a low level of dependence on any of the emergency services until an unexpected risk presents itself (eg crime, fire, accident or serious injury), at which time the consumer may be as dependent on any one of the emergency services as those consumers with long-term medical conditions identified above. On this basis, we consider that all consumers are potentially vulnerable without access to the 111 service.
51. It is the potential vulnerability of all consumers that has underpinned our assessment of vulnerability below.
52. Our preliminary view is that the obligations in the Code should relate to residential consumer services. This approach may still cover some small or home office based business consumers but would not address issues particular to larger businesses who tend to receive more customised voice services.

A technology-based approach

53. Our proposed approach is to assess potential consumer vulnerability based on the susceptibility to a power failure of the access technology at their premises (e.g. copper, fibre etc). The aim of this approach is to ensure that every consumer in New Zealand has reasonable access to an appropriate means to contact 111 in the event of a power failure.
54. Our proposed approach aims to avoid the complex task of identifying *in advance* specific personal characteristics that might cause a consumer to be “at particular risk of requiring the 111 emergency service” in the event of a power failure.¹² It acknowledges that vulnerability can be caused both by long-term, predictable needs (eg, ongoing medical conditions or disabilities), as well as by short-term, less-predictable factors (eg, accidents).
55. An additional advantage of our proposed approach is that it builds on our expectation that network operators and service providers know which technologies are available at every premise in New Zealand.
56. The Federal Communications Commission (FCC) in the United States opted for a similar technology-based approach assessment of vulnerability in 2015.¹³

An alternative approach

57. We acknowledge that the definition of vulnerable consumer in section 238(5)(a) of the Act could be read as suggesting that we should identify in advance consumers who are *at particular risk of requiring the 111 service* regardless of whether there is a power failure or not. Under this approach, the Code would protect those consumers particularly at risk who do not have appropriate means for contacting 111 in the event of a power failure.
58. This approach to defining vulnerable consumers would require us to consult on the potential conditions that cause a consumer to be at particular risk of requiring the 111 emergency service. This could include specific medical conditions, economic conditions, or those at greater risk of abuse or harm.
59. Ofcom has taken this type of approach when considering consumers’ access to emergency services, although this approach is set out in guidelines to industry rather than a binding code.¹⁴

¹² Section 238(5)(a) of the Act.

¹³ FCC Report and Order: ‘Ensuring continuity of 911 communications’ FCC 15-98 (7 August 2015).

¹⁴ Ofcom ‘Guidelines on the use of battery back-up to protect lifeline services delivered using fibre optic technology’, (19 December 2011), Section 6.

60. We have several concerns with this *condition-based* approach.
- 60.1 This approach would likely lead to a Code that only covers consumers with identified vulnerabilities (eg, medical issues) and would leave much of the population (served by technologies requiring power at the premises) potentially vulnerable, without access to the 111 service during a power outage.
- 60.2 This approach would require a greater level of self-identification for consumers than our proposed approach. Some consumers may not want to identify their vulnerability or give their telecommunications provider access to this information and, as mentioned above, some vulnerability will be very difficult to know in advance.
- 60.3 This approach would require the ongoing maintenance of a comprehensive register of vulnerable consumers. We have concerns about the difficulty of coordinating and maintaining such a register, which would require regular updating as particular vulnerabilities were identified or resolved, as well as appropriate privacy and data protection measures.
- 60.4 This register may require active cooperation across a range of government and non-government agencies to align databases for people who are vulnerable due to medical and non-medical reasons.

Table 1.3 Consultation questions

3	Who should be considered a vulnerable consumer?
4	What alternative approaches to defining consumer vulnerability should we consider and how would they work?
5	Do you agree that consumers who have chosen not to take a landline with their service should not be deemed vulnerable?
6	Should consumers with medical or personal alarms be assessed as vulnerable?
7	Should consumers with a cordless (walk-about) phone be considered vulnerable?

Which telecommunications services should the Code apply to?

61. Our starting point has been to consider the access technologies over which landline services capable of contacting 111 are provided. These are copper, fibre, hybrid fibre-coaxial cable (HFC cable), and fixed wireless. In line with our proposed technology-based approach, we assess these technologies against their susceptibility to loss of access to the 111 service during a power failure at the consumer’s premises.

Copper

62. Our preliminary view is that consumers who rely on copper for their landline voice service will not be classed as vulnerable, unless their landline is provided using a VoIP connection.
63. The copper network will, in the event of most power failures, provide a period of connectivity for landlines, at least until battery backups at the exchanges or street cabinets are exhausted, or generators run out of fuel. This was demonstrated during the Christchurch earthquake in 2011 where most copper landline services remained active despite widespread mains power failures.¹⁵

Fibre, HFC Cable, and Fixed Wireless

64. Our preliminary view is that consumers who rely on fibre, HFC cable or fixed wireless technologies for their landline voice service may be classed as vulnerable, as these technologies (absent CPE battery backup) will not work in the event of a power outage in the consumer's premises.
65. We recognise that the obligations in the Code could be restricted to cover only fibre customers once copper services are withdrawn. However, given that under the Act we can specify the technologies the Code applies to, and the purpose of the Code is to ensure vulnerable consumers can contact 111 in the event of a power failure in their premises, we intend to cover all of the next generation technologies, including VoIP services delivered over copper.
66. The Act also specifies that it is the *provider* of the specified telecommunications services that must supply vulnerable consumers, at no cost to the consumers, with an appropriate means for contacting the 111 emergency service. However, the Act does not define provider in the context of the Code
67. Our preliminary view is that provider means the Retail Service Provider (RSP), rather than Local Fibre Companies (LFCs) or Chorus, as the RSP has a direct relationship with the consumer, whereas Chorus or the LFCs are providing a wholesale product. RSPs are therefore likely to be best placed to inform vulnerable consumers about the options available to them.

¹⁵ American Society of Civil Engineers, Technical Council of Lifeline Earthquake Engineering "Christchurch, New Zealand, Earthquakes of 2011 and 2012 – Lifeline performance" (15 August 2015), Chapter 5

Table 1.4 Consultation questions

8	Which telecommunications services should the Code apply to?
9	What are your views on our approach to defining consumer vulnerability based on the susceptibility to a power failure of the technology at their premises?
10	What are the potential practical issues with choosing to assess vulnerability as we have in our proposed approach?
11	Who should we define as the service providers that will be required to supply vulnerable consumers with an appropriate means for contacting the 111 emergency service?

What are appropriate means for vulnerable consumers to contact emergency services?

68. The Code will require providers to “supply vulnerable consumers, at no cost to the consumers, with an appropriate means for contacting the 111 emergency service that can be operated for the minimum period in the event of a power failure”.¹⁶
69. As set out above, our preliminary view is that consumers who rely on fibre, HFC cable or fixed wireless technologies for their landline voice¹⁷ service may be vulnerable, as these technologies (absent CPE battery backup) will not work in the event of a power outage in the consumers premises.

Mobile technology

70. For these vulnerable consumers, we consider that in most cases a mobile voice and/or text (SMS) connection is likely to provide an appropriate means to contact the 111 emergency service in the event of a power failure.¹⁸
71. The Act specifies *contact*, rather than *call* the 111 emergency service. This means that options such as providing vulnerable consumers with the ability to contact the 111 service via text message could be sufficient. The use of the word *contact* potentially allows a wider range of alternatives (like medical alarms or pagers) to be provided. We note that the 111 emergency service currently also supports texts, although it does require people to register, and is aimed at speech and hearing impaired people.
72. Although mobile phones also require power to operate, if they are charged prior to a power failure at the consumer’s premises, they should provide appropriate means to contact emergency services. Typical smartphones provide up to 150 hours of standby time and approximately 5 hours of calling time.

¹⁶ Section 238(3)(d) of the Telecommunications Act 2001.

¹⁷ Or who are supplied with a VoIP service over a copper connection.

¹⁸ Section 238(1) of the Telecommunications Act 2001.

73. There are approximately 6.4 million mobile connections in New Zealand with network coverage for 97% of the population, and over 75% of 111 calls are from mobile phones.
74. In the cases where a consumer can use a mobile phone, but does not own one, we expect that any Code provision requirement would be very basic, ie, it would not require any internet connectivity or a calling plan or any credit. In fact, it may be desirable if such a phone or device was only capable of making emergency calls, as this would reduce any risk of these devices being used for other purposes or sold between consumers.

Non-mobile alternatives

75. Although mobile networks cover 97% of the population and require only a 2G signal to make an emergency call, some consumers will not have the necessary coverage at their premises to make an emergency call.
76. We are also conscious that there is a small proportion of consumers who cannot, or choose not to, use a mobile phone due to electromagnetic hypersensitivity.¹⁹ We do not consider that a mobile phone would be an appropriate means of contacting 111 in the event of a power failure for these consumers.
77. If a consumer cannot use a mobile phone for medical or coverage reasons, service providers would need to provide those vulnerable consumers with an alternative means for contacting the 111 emergency service.
78. We do not have a preliminary view on what the appropriate alternatives should be, and the Code could provide flexibility by allowing the service providers to decide on what alternatives they offer, providing that all options were guaranteed to operate for the minimum period (discussed below). The Code could also allow for vulnerable consumers to choose the most appropriate means that a service provider should supply them with from a range of options.
79. One alternative could be a battery backup that powers the CPE in the event of a power failure at the consumer's premises. This would mean that a consumer would still be able to make calls over their fibre, cable or fixed wireless voice service.²⁰
80. We note that both Ofcom and the FCC considered that a battery backup was an appropriate alternative.²¹

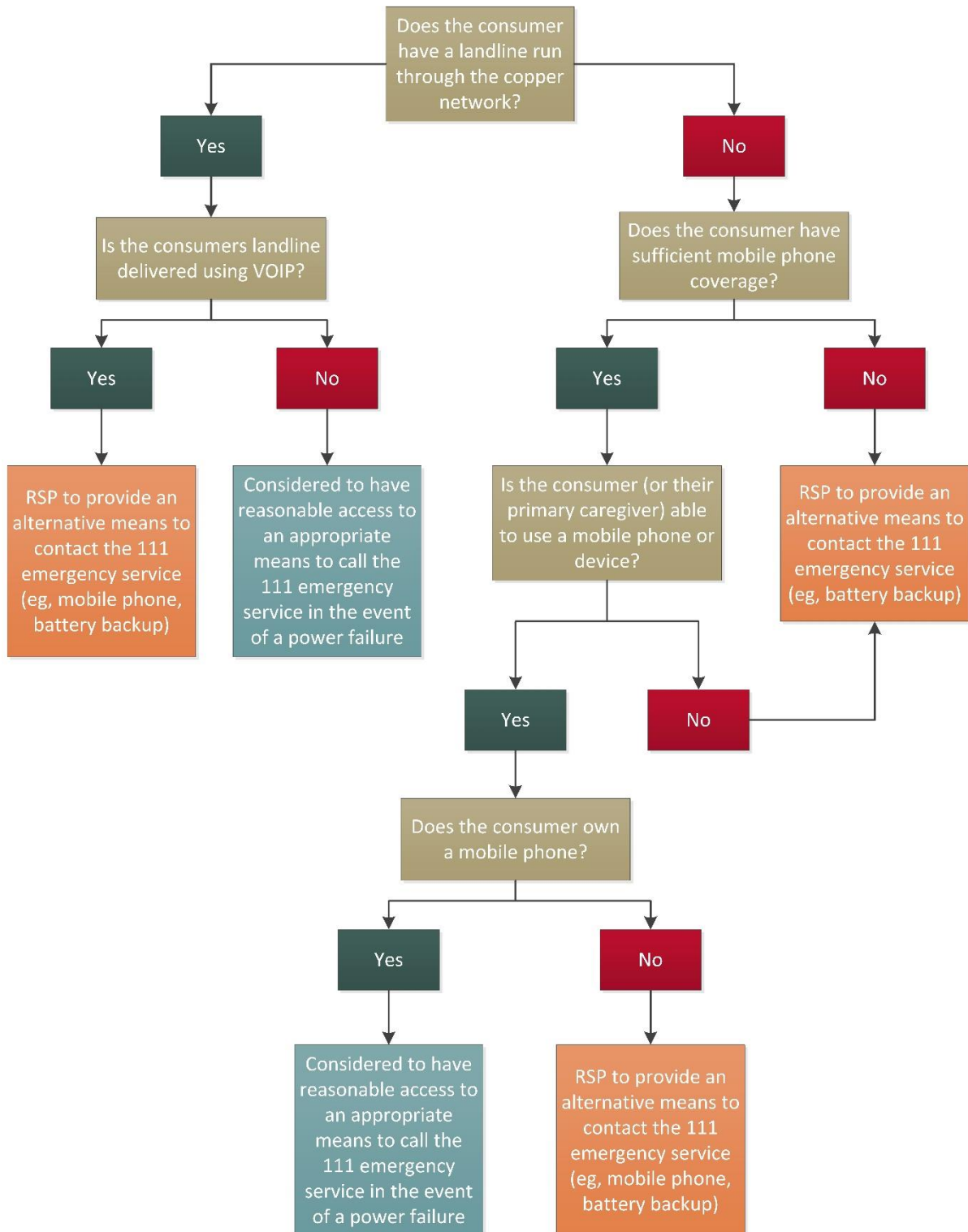
¹⁹ There were submissions on the Telecommunications (New Regulatory Framework) Amendment Bill, including at Select Committee, that cited this condition as a reason not to permit the withdrawal of copper services.

²⁰ As discussed in the scope section of this memo, this would require consumers to take a landline with these services, it would not be possible on a naked broadband plan.

²¹ Ofcom 'Guidelines on the use of battery back-up to protect lifeline services delivered using fibre optic technology', (19 December 2011), Section 6. FCC Report and Order: 'Ensuring continuity of 911 communications' FCC 15-98 (7 August 2015), para 13.

81. Figure 1.1 below provides a flow diagram to illustrate how our preliminary view of assessing vulnerability and appropriate means might work in practice.

Figure 1.1 **Determining a vulnerable consumer and appropriate means using a technology-based approach**



82. The Code requires us to prescribe a process for consumers to demonstrate that they are vulnerable or will become vulnerable.

83. If we were to adopt the alternative approach to defining vulnerability based on medical conditions (for example) as discussed above, a central register of identified vulnerable consumers (to which service providers could refer) would likely need to be created and managed.
84. Given that our proposed technology-access approach could utilise data that already exists, ie, what fixed-line technologies and mobile coverage exists at a premise, a central register may be less necessary or be simpler to create and administer.
85. However, other information (such as when a consumer does not have access to copper; does not have mobile coverage; or cannot use or does not have a mobile phone) may need to be identified and recorded in a register. Such a register could also record what appropriate means to contact 111 has been provided to each vulnerable consumer so that it is clear to a new provider when vulnerable consumers switch.
86. If a vulnerable consumer has a reason for a specific appropriate means to be provided (eg, a battery backup instead of a mobile phone), this could be recorded in a register so that it only needs to be captured once.

Table 1.5 Consultation questions

12	What are the appropriate means for vulnerable consumers, or persons on their behalf, to contact emergency services in the event of a power failure?
13	Is a mobile phone an appropriate means to contact the 111 emergency service in the event of a power failure?
14	How should consumers demonstrate that they do not have access to mobile phone?
15	What happens when a consumer who has been provided with a mobile phone switches provider or technology?
16	What additional stages or questions might be required for our flow diagram to meet the purpose of the 111 Code?
17	How appropriate is a battery backup as a method of providing the means to contact the 111 emergency service in the event of a power failure?
18	What are the practical issues and potential solutions for using battery backups to provide the means to contact the emergency service in the event of a power failure?
19	What other appropriate means, technologies or solutions for contacting the 111 emergency service in the event of a power failure should we consider (eg medical alarms, satellite phones, pagers), and what are the advantages and disadvantages of these?
20	How should service providers identify consumers who do not have access to a mobile phone?

21	Should service providers be given the ability to choose what appropriate means they provide to vulnerable consumers providing they are guaranteed to operate for the minimum period?
22	Should service providers be required to offer consumers a choice of a range of options if they do not have an appropriate means to contact the 111 emergency service?
23	Should a central register be created for vulnerable consumers (or potentially vulnerable consumers) which also records who has received an alternative method to contact the 111 emergency service be created?

What is the minimum period during which a service for contacting emergency services must operate in the event of a power failure?

87. The Code must specify a minimum period for which an appropriate means of contacting 111 emergency services must be able to be operated.²²
88. We consider that it would be unreasonable to require service providers to ensure the alternative means for contacting 111 operate for a minimum period of longer than the network infrastructure is designed to stay on in a power failure. For example, if an average exchange or cell tower has a backup of 8 hours in the event of a power failure, it would likely be unreasonable to require the alternative means to contact 111 to be available for longer than that. One option would be to match the minimum period to the network infrastructure standards.
89. Alternatively, the minimum period could be based on the average length of a power failure in New Zealand, or the experienced duration of power outages during significant national events, such as the Christchurch earthquake, or on other criteria.
90. We are aware that Spark’s home wireless landlines that run over the mobile network were provided with a battery backup designed to last up to 4 hours. We are also aware that Chorus is testing battery backups for its ONTs, although we do not know the length of time the batteries provide backup power.

²² Section 238(3)(e) of the Act.

91. In its 2018 guidelines to the industry, Ofcom stated that a battery backup of a minimum of one hour should always be provided. In contrast, the FCC’s 2015 decision considered that an 8 hour period with a potential upgrade to 24 hours was appropriate.²³

Table 1.6 Consultation questions

24	What is an appropriate minimum period that a service must operate for contacting emergency services in the event of a power failure?
25	Should we base the minimum period on the average network infrastructure resilience in the event of power failure?
26	Should we base the minimum period on the length of an average power outage?
27	Should we base the minimum period on the length of power outages during a significant national event such as the Christchurch earthquakes?
28	What other methods for determining the minimum period should we consider?

²³ Ofcom ‘Protecting access to emergency organisations when there is a power cut at the customer’s premises, (10 October 2018), Annex 1. FCC Report and Order: ‘Ensuring continuity of 911 communications’ FCC 15-98 (7 August 2015), para 13.

Appendix A: Legal framework and links with current Commission projects on the transition from copper to next generation technologies

- A1 The primary provisions for the Code are contained within Part 7 of the Telecommunications Act 2001. Section 9A is also relevant for monitoring, compliance and reporting on the Code.

Definitions

- A2 Section 232 defines certain terms used in Part 7, including the following that is relevant to the Code:

In this Part, unless the context otherwise requires, -
consumer means, in relation to a telecommunications service the end-user of the service...

Scope and requirements of the 111 Code

- A3 Section 238 of the Telecommunications Act 2001 sets out the scope and requirements of for the Code:

- (1) The Commission must make a code for the purpose of ensuring that vulnerable consumers, or persons on their behalf, have reasonable access to an appropriate means to contact the 111 emergency service in the event of a power failure.
- (2) The code must be made before the implementation date.
- (3) The code must-
 - a. specify which telecommunications services it applies to; and
 - b. require the providers of those services to inform consumers about the options available for vulnerable consumers; and
 - c. prescribe a process (or processes) for a consumer of those services, or a person on their behalf, to demonstrate that they—
 - i. are a vulnerable consumer; or
 - ii. will become a vulnerable consumer; and
 - d. require the providers of those services to supply vulnerable consumers, at no cost to the consumers, with an appropriate means for contacting the 111 emergency service that can be operated for the minimum period in the event of a power failure; and
 - e. specify the minimum period for the purposes of paragraph (d).
- (4) The code may do 1 or more of the following:
 - a. specify classes of people that must be considered vulnerable consumers:
 - b. specify appropriate means for vulnerable consumers, or persons on their behalf, to contact emergency services:
 - c. contain any other provisions that are necessary or desirable to achieve the purpose in subsection (1).
- (5) In this section, —

minimum period means the minimum period specified under subsection (3)(e)

specified telecommunications service means a telecommunications service specified in the Commission 111 contact code as a service to which the code applies

vulnerable consumer means a consumer of a specified telecommunications service who—

 - a. is at particular risk of requiring the 111 emergency service (for example, due to a known medical condition); and
 - b. does not have a means for contacting the 111 emergency service that can be operated for the minimum period in the event of a power failure.

Process for making and amending the Code

- A4 Section 239 of the Telecommunications Act 2001 sets out the process that the Commission must follow for making or amending Commission codes:
- (1) In order to make a Commission code, the Commission must—
 - a. give public notice of the process that will be followed to make the code; and
 - b. consult with interested persons; and
 - c. give public notice of a draft code.
 - (2) If the code is a Commission 111 contact code, interested persons includes the following:
 - a. the New Zealand Police;
 - b. Fire and Emergency New Zealand;
 - c. the Director of Civil Defence Emergency Management;
 - d. every provider of an initial call answering point for the 111 emergency service.
 - (3) A person is entitled to make submissions to the Commission not later than 30 working days after the date on which public notice of the draft code is given.
 - (4) The Commission may make the code only if the Commission is satisfied that the draft code meets all the requirements set out in this Part.
 - (5) The Commission may amend or revoke a code if the Commission considers that the code no longer meets all the requirements set out in this Part.
 - (6) The same procedure that applies to making a code in subsections (1) to (4) must be followed to make an amendment or a revocation, with any necessary modifications.
 - (7) The Commission must give public notice of every code that is made and every amendment or revocation of those codes.

Compliance and enforcement with the Code

- A5 Under section 9A of the Act we must:
- A5.1 monitor compliance with the Code; and
 - A5.2 make available reports, summaries, and information about our monitoring of the compliance with the Code.²⁴

Interdependencies between the safeguards for consumers

- A6 The Code is just one part of the amendments made to the Act to protect consumers as much of New Zealand transitions from the copper telephone and broadband network.
- A7 The Commission is required to assess and declare areas in which specified fibre services are available to consumers. The assessment and declaration of specified fibre areas (**SFAs**) is a prerequisite to enabling Chorus Limited (**Chorus**) to withdraw supply of copper fixed-line access services (**copper services**) to end-users within those SFAs.
- A8 Before Chorus is permitted to stop supplying certain copper services in SFAs, it must comply with the consumer protection requirements set out in the copper withdrawal code (**CWC**). The CWC requires the Code to be in force.²⁵

²⁴ In accordance with s 9A(1)(c) and (d) of the Act.

- A9 Given the interdependencies of the new consumer protection provisions introduced in the Act, particularly the Code and the CWC, we intend to closely align the development of the Code with the development of the CWC to:
- A9.1 give effect to the purpose of the Code as soon as possible, reducing potential harm to vulnerable consumers;
 - A9.2 allow interested persons to consider the obligations and conditions in the CWC alongside those in the Code; and
 - A9.3 provide certainty to affected parties as soon as reasonably practicable.
- A10 We have publicly committed to endeavouring to have the Code in place alongside the CWC in mid-2020.
- A11 Further information on the future of phone and broadband and the SFAs, the CWC and the Code can be found on our website.²⁶

²⁵ Clause 1(3)(g) of Schedule 2A of the Act.

²⁶ <https://comcom.govt.nz/regulated-industries/telecommunications/telecommunications-for-consumers/the-future-of-phone-and-broadband>

Appendix B – Summary of consultation questions

1	Do you agree that three aspects we have identified should be considered out of the scope of the Code?
2	Are there any other areas that should be out of scope?
3	Who should be considered a vulnerable consumer?
4	What alternative approaches to defining consumer vulnerability should we consider and how would they work?
5	Do you agree that consumers who have chosen not to take a landline with their service should not be deemed vulnerable?
6	Should consumers with medical or personal alarms be assessed as vulnerable?
7	Should consumers with a cordless (walk-about) phone be considered vulnerable?
8	Which telecommunications services should the Code apply to?
9	What are your views on our approach to defining consumer vulnerability based on the susceptibility to a power failure of the technology at their premises?
10	What are the potential practical issues with choosing to assess vulnerability as we have in our proposed approach?
11	Who should we define as the service providers that will be required to supply vulnerable consumers with an appropriate means for contacting the 111 emergency service?
12	What are the appropriate means for vulnerable consumers, or persons on their behalf, to contact emergency services in the event of a power failure?
13	Is a mobile phone an appropriate means to contact the 111 emergency service in the event of a power failure?
14	How should consumers demonstrate that they do not have access to mobile phone?
15	What happens when a consumer who has been provided with a mobile phone switches provider or technology?
16	What additional stages or questions might be required for our flow diagram to meet the purpose of the 111 Code?
17	How appropriate is a battery backup as a method of providing the means to contact the 111 emergency service in the event of a power failure?

18	What are the practical issues and potential solutions for using battery backups to provide the means to contact the emergency service in the event of a power failure?
19	What other appropriate means, technologies or solutions for contacting the 111 emergency service in the event of a power failure should we consider (eg medical alarms, satellite phones, pagers), and what are the advantages and disadvantages of these?
20	How should service providers identify consumers who do not have access to a mobile phone?
21	Should service providers be given the ability to choose what appropriate means they provide to vulnerable consumers providing they are guaranteed to operate for the minimum period?
22	Should service providers be required to offer consumers a choice of a range of options if they do not have an appropriate means to contact the 111 emergency service?
23	Should a central register be created for vulnerable consumers (or potentially vulnerable consumers) which also records who has received an alternative method to contact the 111 emergency service be created?
24	What is an appropriate minimum period that a service must operate for contacting emergency services in the event of a power failure?
25	Should we base the minimum period on the average network infrastructure resilience in the event of power failure?
26	Should we base the minimum period on the length of an average power outage?
27	Should we base the minimum period on the length of power outages during a significant national event such as the Christchurch earthquakes?
28	What other methods for determining the minimum period should we consider?