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2018 Regional Telecommunications Review

A Regional Telecommunications Independent Review Committee (the Committee) is established every three years under Part 9B of the Telecommunications (Consumer Protection and Service Standards) Act 1999 to conduct a review into telecommunications services in regional, rural and remote parts of Australia.

The Committee in 2018 is comprised of Mr Sean Edwards (Chair), Ms Wendy Duncan, Ms Johanna Plante, Ms Robbie Sefton, Ms Kylie Stretton and Mr Paul Weller.

As part of the review, the Committee will consider:

- how regional communities can maximise the economic benefits of digital technologies
- how regional consumers use their broadband services and how they might derive further benefit from it
- the outcomes achieved through the Mobile Black Spot Program, and examine the extent of the existing gaps in mobile coverage in regional Australia.

The Committee will meet face-to-face with communities, business and governments across regional, rural and remote Australia. The Committee will report to the Minister for Regional Communications by 30 September 2018. The Committee’s terms of reference are at Appendix 2.

Have your say

The Committee welcomes submissions from individuals, businesses, peak bodies and other interested organisations.

This issues paper provides an outline of key interest areas and invites submissions that share a range of experiences and perspectives.

There are questions to provide guidance and you can address all of the questions or just those that are relevant to you in your submission. Your comments are also not limited to the questions.

Submissions will be accepted until 5 August 2018 via:

- email to secretariat@rtirc.gov.au
- post: 2018 Regional Telecommunications Review Secretariat
  Department of Communications and the Arts
  GPO Box 2154
  CANBERRA ACT 2601

Visit [www.rtirc.gov.au](http://www.rtirc.gov.au) for more information about the Committee, the review and the consultation process.

Complementary reviews

There are a number of other relevant reviews underway. The Australian Government’s Consumer Safeguards Review, which was launched by the Minister for Communications in April 2018, is due to report by the end of the year. There is also the Joint Standing Committee on the National Broadband Network and ongoing work to develop the Universal Service Guarantee for voice and broadband services. The Regional Telecommunications Review will complement this work and share relevant findings where appropriate.
Introduction

Telecommunications services are vital to participate in modern society. Business, education, health, social and safety activities all rely on connecting with others, and those without functional and reliable telecommunications services risk being left out.

There has been great progress towards ensuring all Australians can access telecommunications services. The rollout of the National Broadband Network (NBN) by NBN Co Limited (nbn) is well-advanced and on track for completion by 2020. Significant investment from mobile carriers and the Government’s Mobile Black Spot Program has improved mobile coverage in regional and remote Australia. People in regional areas have been quick to take up the opportunities provided by these technologies and, as a result, have realised a range of economic and social benefits.

This review aims to gain a better understanding of how regional Australians use telecommunications services. In particular, it is focused on understanding any barriers to using digital technologies faced by people in regional communities and how these can be overcome. With many government, business and retail services now provided online, the Committee wants to better understand the telecommunications landscape for Australians living and working in regional areas, and examine what is needed going forward.

State of the market

While there are still some challenges to connecting with essential government and businesses services in regional Australia, the telecommunications market in Australia has transformed in the past three years. The NBN rollout is progressing faster in the regions than in the cities. These services are either already available or the infrastructure is under construction for 92 percent of all homes and businesses outside major urban areas.

- The NBN regional fixed line rollout is approximately 78 percent complete and 1,096,000 premises able to access services. The NBN fixed wireless rollout is well advanced with over three-quarters of the network complete and more than 233,462 properties connected.
- The NBN Sky Muster satellite service became available in April 2016 throughout Australia and to island territories including Norfolk Island, Christmas Island, Lord Howe Island and Cocos (Keeling) Islands. Sky Muster services are available to over 428,000 premises and more than 88,000 premises have taken up the service to date.

Public and private investment in telecommunications has significantly improved the mobile landscape across regional and remote Australia. The Mobile Black Spot Program is delivering 867 mobile base stations. This investment totals more than $680 million, with contributions from federal, state and local governments and communities. These base stations will provide almost 90,000 square kilometres of new and upgraded handheld mobile phone coverage and over 205,000 square kilometres of new external antenna coverage.
Key areas of interest

How are regional Australians using telecommunications services?

According to the Australian Communications and Media Authority’s Communications Report 2016–17 the volume of data downloaded nationally increased by 43 percent between June 2016 and June 2017 to over 3.1 million terabytes. The mobile handset is now the most frequently used device for accessing the internet. In June 2017, 6.67 million Australian adults had a mobile phone and no fixed line telephone at home.

The Internet of Things is growing rapidly and major telecommunications carriers have committed to trial and roll out new technology. This has the potential to drive significant social and economic impacts.

1. What are the main barriers to people in regional communities increasing their use of digital technologies and possible solutions for overcoming these barriers?

2. How are people in regional communities currently using their broadband service and how might they increase the benefits of using this technology?

Business

Connectivity is a priority in regional areas, which are home to around a quarter of Australia’s small businesses. Regional cities are generating growth and jobs at the same rate as their larger metropolitan counterparts. Regional businesses are using innovative approaches to solve problems every day. One example is Therapy Connect, a business founded in Deniliquin, New South Wales, which operates solely online. It is recognised as a leader in the field of providing online speech and occupational therapy support to children and families. It provides services to over 25 regional areas in Australia and into Asia, all from regional bases in New South Wales and Victoria.

It is crucial to understand the significant contribution regional and remote areas make to the national economy. Regional Australia accounts for around 40 percent of Australia’s economic output and employs one in three Australians. Some of Australia’s most innovative businesses are based in regional areas, largely in the export, agriculture and tourism industries. In fact, 43 cents of every tourist dollar in Australia is spent in the regions — 63 percent of domestic overnight visitors and 36 percent of international visitors travelled beyond capital cities in the year ending June 2017. This highlights the importance of consistent communications infrastructure.

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3. Regional Australia Institute, 2017, Investing In National Growth — Regional City Deals
4. Regional Australia Institute, 2017, Here’s 49 small communities innovating as well as the big cities.
5. Regional Australia Institute, 2015, The economic contribution of regions to Australia’s prosperity, p. 4
6. AusTrade, 2018, Regional Tourism Infrastructure Investment Attraction Strategy 2016–2021
Regional cities have demonstrated they are willing and able to transition to new industries. Research from the Regional Australia Institute shows that service industries such as finance, education, health and professional services are producing more output than traditional industries such as agriculture, mining and manufacturing in regional cities.8

Education and Health

Education is among a range of critical services that nbn has prioritised. The company has identified a range of Public Interest Premises, including schools, Indigenous community organisations, not-for-profit organisations, educational and health facilities and local government offices. nbn can provide additional data allowances for these Public Interest Premises over the Sky Muster service.

Another priority is distance education. There are currently over 725 students using the Sky Muster distance education satellite across regional and remote Australia. This satellite product provides an additional monthly download of 50 gigabytes per student for up to three students at the same site. One of the priorities is to further improve the delivery of education services via Sky Muster with features including multicast video, pooling of data allowances and un-metering of education content for specified websites.

Currently the services are available to distance education and a small number of home-schooled children. Keeping in mind there are limits to the capacity of the Sky Muster service, the Committee is interested in understanding whether there are other students who could benefit from this access.

In the health sector, nbn has partnered with the Royal Flying Doctors Service (RFDS) to provide broadband to 24 bases and 300 remote area clinics across Australia.9 Many of these

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8 The Regional Australia Institute, 2017, Lighting Up our Great Small Cities: Challenging Misconceptions, p. 11
remote clinics previously had little or no internet connectivity and will now receive broadband through the Sky Muster satellites.

The Committee is interested in hearing views about the order-of-magnitude increases in data capability that will be required to provide quality education, health and social services to regional Australians.

3. What data-intensive activities are occurring in regional, rural and remote Australia? What digital technologies are needed for these?

4. How can regional businesses better utilise digital technologies to maximise economic benefits?

Remote Indigenous communities

Access to online services offers enormous opportunities for people in remote communities, including extending education, supporting culture and language and growing business opportunities. On this point, the NBN Sky Muster satellite service will enable remote Indigenous communities to take advantage of the social and economic benefits of the NBN. The satellite service provides broadband internet access with enough capacity for everything from basic web browsing and banking to more advanced services such as e-health and distance education.\(^{10}\)

There are 93 Indigenous community organisations registered as Public Interest Premises. The Northern Territory has the highest number with 45. Many of these organisations use the Public Interest Premises product to offer Wi-Fi in remote Indigenous communities. The Department of the Prime Minister and Cabinet maintain and monitor about 300 Wi-Fi Telephones and 245 Community Payphones in remote Indigenous communities.

However, getting and keeping remote communities connected can be difficult.\(^ {11}\) There are a number of barriers to internet access in remote communities including language barriers, affordability and awareness of what is available. Evidence suggests that a community Wi-Fi model may help to overcome these barriers and increase access to the internet in remote communities.

The 2015 Regional Telecommunications Review Independent Committee (the 2015 Committee) flagged in its report that some isolated Indigenous communities may be better suited to infrastructure that supports mobile connectivity or Wi-Fi, as many Indigenous Australians have bypassed desktop computers, opting instead for portable devices and wireless connectivity.\(^ {12}\) Research from the Swinburne Institute for Social Research supports this. Their case study research of Ali Curung, an Indigenous community 170 km south of Tennant Creek, found there was a strong preference for mobile devices and prepaid billing services to access the internet.\(^ {13}\)

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10 Australian Government, Closing the Gap: Prime Minister’s Report 2018, Department of Prime Minister and Cabinet, p. 95.
12 Regional Telecommunications Independent Review Committee, 2015, Regional Telecommunications Review, p. 34
13 Swinburne Institute for Social Research, Home Internet in Remote Indigenous Communities, June 2015.
The 2017 Australian Digital Inclusion Index Report found that Indigenous Australians have lower digital inclusion than the national average.\(^\text{14}\) While the data collected for this report did not extend to remote Indigenous communities, the Committee is interested in better understanding the experiences of people in these communities. The concept of digital inclusion is based on the premise that everyone should be able to make full use of digital technologies and is measured in the report by three measures: access, affordability, and digital ability.\(^\text{15}\) This report reveals the digital inclusion of Indigenous Australians in non-remote areas is improving at a faster rate than the national average.\(^\text{16}\)

Data from this survey also shows that many Indigenous Australians are much more likely to be mobile-only users compared with the total population, and that they are generally willing to embrace technology, and to go out of their way to learn new things.\(^\text{17}\)

5. What can be done to improve access to and uptake of telecommunications services in remote Indigenous communities?

6. Are there practical examples of how communications services can improve the well-being of people in remote Indigenous communities?

Digital Literacy

The Committee is interested in exploring more broadly digital inclusion and affordability in regional Australia. Despite the progress in communications services in regional Australia, the Australian Digital Inclusion Index of 2017...
found substantial and widening gaps between those who are digitally included and those who are digitally excluded.\textsuperscript{18} In general, Australians with low levels of income, education and employment are significantly less digitally included. While some regional areas are substantially below the national average,\textsuperscript{19} nationally digital access has improved steadily over the past four years.

Cyber safety
As has been well-canvassed in this paper, the internet is a vital tool for education, research, entertainment and social interaction in a modern day society. While this has created exciting opportunities for users and business, it has also brought about many challenges and concerns for regulators, including a lack of control over content on the internet that may lead to increased opportunity for illegal and antisocial activities.

Online safety is a rapidly changing environment that incorporates a number of wide ranging issues. Issues include cyberbullying, pornography, image based abuse, violence against women, violent extremism and child sexual abuse. In 2015, the Government implemented measures to create a safer online environment for Australian children. The key measure was the establishment of the eSafety Commissioner, under the Enhancing Online Safety for Children Act 2015, to help protect Australian children from cyberbullying harm and to take a national leadership role in online safety for children. In December 2015, the functions of the Children’s eSafety Commissioner were expanded to include online safety for persons at risk of family or domestic violence, and in 2017, the functions were further expanded to include online safety for all Australians. The eSafety Commissioner administers the cyberbullying complaints scheme, the take-down regime for prohibited content (including child sexual abuse material) and the image-based abuse portal.

The Committee is interested in how equipped regional people are to manage online safety and security.

7. What skills do people need to get the most from their digital technologies, and where can they learn these skills?

Government investment

National Broadband Network
In addition to providing NBN fixed line broadband services to 2.5 million regional premises, the Government is investing around $2.1 billion in capital expenditure on nbn’s fixed wireless network and approximately $1.9 billion on the Sky Muster satellite service. The fixed wireless rollout is well advanced with over three-quarters of the network complete and more than 233,000 properties connected.

The Sky Muster satellite service has improved access to broadband for many regional and remote Australians. While these satellite services can deliver wholesale speeds of 12/1 Megabits per second (Mbps) or 25/5Mbps, this is not always the experience for everyone.

Actual speeds experienced by end-users can be affected by a range of factors including weather conditions and network configuration. For example, isolated rainfall may affect services in a whole region. After the initial reliability challenges of Sky Muster, the service has stabilised. In October 2017, data allowances were increased and nbn is continuing to look at different ways to improve the satellite service, including plans to introduce new enterprise grade products in early 2019.

Retail service providers have a direct service relationship with customers, and are the connecting factor between nbn and the customer. Consequently, the retail service


providers play a critical role in the provision of NBN services. Retail service providers are the first point of contact for customers to get connected and to resolve complaints. The effectiveness of retail service providers can have a significant impact on the customer’s NBN experience.

The Committee would like to understand how consumers have managed any ongoing issues with their satellite or fixed wireless services and is also interested in finding out who people turn to as trusted sources of information when dealing with issues.

8. Have you had ongoing issues affecting your satellite or fixed wireless broadband service? If so, how have you overcome these issues?

9. If you are in an area with access to the Sky Muster satellite service and you have not taken it up, why not?

Mobile coverage

Expanding mobile coverage has clear economic, social and public safety benefits for people living, working and travelling in regional and remote Australia. However, it is not always commercially viable for service providers to invest in expensive infrastructure in areas with small populations or complex geography. To fill this gap, the Commonwealth and state governments have invested in telecommunications infrastructure to improve mobile coverage across Australia through the Mobile Black Spot Program.

The program promotes new investment to improve mobile coverage in regional and remote Australia. The Commonwealth’s original $160 million commitment for rounds 1 and 2 of the program was complemented by $287 million from the mobile network operators, $141.2 million from state governments and an additional $2.2 million from local governments, businesses and community organisations.

Mobile phone operators and network infrastructure providers were asked to put forward proposals to build new or upgraded mobile base stations to deliver improved coverage. Under rounds 1 and 2 there was a requirement to address black spots identified by the public. The Priority Locations round identified sites pre-announced by the Government. The program used a merit-based competitive selection processes to award funding for all three rounds. Proposals were ranked according to assessment criteria outlined in the Program Guidelines, which included coverage benefits and cost.
The Mobile Black Spot Program is delivering substantial improvements to mobile coverage across Australia and carriers have recently announced large regional mobile investment programs.\(^20\) However, there continues to be strong demand for further investment in mobile coverage, particularly in regional and remote areas. In addition to the strong demand from areas that have no mobile coverage at all, communities that have poor mobile coverage or experience seasonal congestion are seeking network upgrades.

In the absence of a game-changing technology that fundamentally alters the business case for investing in more remote areas of Australia, it appears that co-investment is the main way forward to improve mobile coverage. There is now a better understanding of the costs of co-investing in mobile coverage after three rounds of the Mobile Black Spot Program and the associated or standalone state government initiatives. However, it is not always easy to quantify the benefits of improved mobile coverage as it is an enabler across so many parts of everyday life. The Committee is interested in understanding what indicators, economic or otherwise, could be used to guide future co-investment programs.

10. What economic or social indicators could be used to guide investment to further improve mobile coverage?

Making the most of mobile coverage

As well as infrastructure investments to improve mobile coverage, there are many ways for individuals or businesses to improve their own mobile reception. For example, products such as external antennas, in-building repeaters, or specific mobile phones recommended by the mobile carriers can greatly improve access to coverage in marginal areas. Anecdotally, there seems to be a low level of awareness and understanding of these solutions.

11. Is information readily available regarding how to use devices to improve mobile reception in areas with poor coverage? e.g. information about external antenna equipment?

Alternative and emerging technologies

In addition to major broadband projects such as the NBN, there are commercial fixed wireless providers offering services in many parts of regional Australia. The Wireless Internet Service Provider Association of Australia (WISPAU), an association of 40 wireless service providers, indicates its members provide broadband services to over 200,000 regional Australians. Fixed wireless providers appear to offer a competitively priced alternative to services such as the NBN Sky Muster service. The Committee is interested in the experiences of individuals and businesses who use these services, either as a broadband to the home service or to run their business, i.e. to provide an on-farm Wi-Fi service.

More generally, on-farm Wi-Fi services appear to be increasing in popularity and there are many reported instances of individual farmers investing in innovative approaches to access broadband. With the growing numbers of connected devices that can be used to collect large amounts of data and improve farm productivity, the Committee would appreciate hearing first-hand accounts of the costs and benefits of investing in this type of technology.

As new technologies evolve, competition grows. Providers other than nbn are using medium orbit, geostationary and leased satellites to deliver voice, broadband and Pay TV services. For example, SES Networks, an international satellite company, uses Medium Earth Orbit satellites to service Norfolk Island with high capacity broadband.

Low Earth Orbit satellites have the potential to address some of the issues with the current technology. These satellites have low latency and high capacity broadband. Additionally, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is developing and trialling a next-gen wireless technology called ‘Ngara’. This new ‘beam forming’ wireless technology could reduce the amount of required spectrum and allow for data to be transmitted over greater distances.

Finally, 5G is expected to be an improvement on previous generations of mobile technology by providing faster download speeds, better connectivity and lower latency over mobile networks. Trials of 5G in Australia are already underway with an expected rollout from 2019.21

The Committee is also interested in what work businesses and other organisations are doing to install telecommunications infrastructure and technologies in regional areas, and if there are opportunities for the surrounding communities to benefit.

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In general, competition leads to better outcomes for the end-user. It remains to be seen what opportunities these new technologies will present and the Committee is interested in the experiences and ideas of people using services other than the NBN.

12. What emerging digital services will be of most benefit to regional businesses and what are the data needs of these services?

13. What broadband services are people using other than those available through the NBN?

14. How can more competition be encouraged in the provision of broadband services in regional Australia?

Re-thinking consumer protections and policies

Australia has an open and competitive telecommunications market. The industry is subject to extensive and complex consumer and competition regulation. It operates on a commercial basis and regulation is only applied where there are competition or consumer concerns.

Access to quality, reliable, affordable telecommunications services across Australia continues to be a touchstone of Australian telecommunications policy. Effective communications is vital to social wellbeing and economic prosperity. This is particularly true in regional, rural and remote Australia where access to other services may be limited and distance can be a formidable barrier.

The 2015 Committee found that people in regional Australia were moving away from standard telephone services and towards mobile and internet-based services. In particular, the 2015 Committee noted that the standard telephone service use was of rapidly declining relevance and that regional consumers were moving to mobiles, Voice over Internet Protocol (VoIP) and other social media applications as their primary communication method. As the Mobile Black Spot Program and NBN rollout near completion, this is truer than ever. The relevance of current regulatory frameworks needs to be examined.

A new Universal Service Guarantee

Australia has long had a universal service obligation (USO), which recognises the importance of providing up-to-date telecommunications to regional, rural and remote communities. The USO ensures people across Australia have ready access to fixed voice and payphone services wherever they reside or conduct business. The provision of these services is locked in from 2012 to 2032 under a binding $5.4 billion 20-year contract with Telstra. Under the contract, Telstra receives $230 million per annum to provide telephone services, and $40 million per annum to provide payphone services across Australia. However, consumers are using data and mobile services more and fixed voice and payphone services less. These changes have called into question the relevance of the current USO.

Following the 2015 Regional Telecommunications Review, the Government asked the Productivity Commission to review the future of the USO. In response to the report of the Productivity Commission, the Government indicated in December 2017 it would develop a new Universal Service Guarantee (USG). The USG will modernise the existing USO arrangements by ensuring consumers have access to broadband as well as voice services. The Department of Communications and the Arts is currently developing options for the USG for the Government.
With the rollout of the NBN and the extensive coverage and uptake of mobile services, a key issue in the development of the USG is whether it is still good value for money to fund Telstra to deliver voice and payphone service. Alternatively, would it be better to place greater reliance on alternative networks, potentially freeing up existing USO funding for other purposes? For example, if more consumers could use mobile networks rather than fixed line networks, would there be savings from supplying copper services that could be directed to further investment in mobile services.

While the Department of Communications and the Arts’ work on the USG is a separate process to the 2018 Regional Telecommunications Review, it is of interest to people in regional, rural and remote areas. The Committee is therefore open to hearing community views on the USG and will ensure these are referred to the Government.
Consumer Safeguards Review

The Government is also conducting the Consumer Safeguards Review, which will make recommendations on telecommunications consumer safeguards for post-2020 when the NBN rollout is complete.

The Consumer Safeguards Review is being undertaken in three parts:

- **Redress and complaints handling** – ensuring that consumers have access to an effective redress scheme to handle complaints that provides transparency and holds telecommunications companies accountable for their performance.

- **Reliability of telecommunications services** – ensuring consumers have reliable telecommunications services including reasonable timeframes for connections, fault repairs and appointments and potential compensation or penalties.

- **Choice and fairness in the retail relationship** between the customer and their provider – ensuring consumers are able to make informed choices and are treated fairly in areas such as customer service, contracts, billing, credit and debt management and switching providers.

While the Consumer Safeguards Review is being conducted separately, information from the Regional Telecommunications Review can inform understanding of what is needed for consumer safeguards from a regional perspective. There will be ongoing discussion between the Committee and the Department of Communications and the Arts in regards to the Consumer Safeguards Review. Therefore, the Committee will also consider relevant views from the Consumer Safeguards Review and will endeavour to refer these to Government, particularly if relevant to regional Australians.
Appendix 1 — List of questions

1. What are the main barriers to people in regional communities increasing their use of digital technologies and possible solutions for overcoming these barriers?

2. How are people in regional communities currently using their broadband service and how might they increase the benefits of using this technology?

3. What data-intensive activities are occurring in regional, rural and remote Australia? What digital technologies are needed for these?

4. How can regional businesses better utilise digital technologies to maximise economic benefits?

5. What can be done to improve access to and uptake of telecommunications services in remote Indigenous communities?

6. Are there practical examples of how communications services can improve the well-being of people in remote Indigenous communities?

7. What skills do people need to get the most from their digital technologies, and where can they learn these skills?

8. Have you had ongoing issues affecting your satellite or fixed wireless broadband service? If so, how have you overcome these issues?

9. If you are in an area with access to the Sky Muster satellite service and you have not taken it up, why not?

10. What economic or social indicators could be used to guide investment to further improve mobile coverage?

11. Is information readily available regarding how to use devices to improve mobile reception in areas with poor coverage? E.g. information about external antenna equipment?

12. What emerging digital services will be of most benefit to regional businesses and what are the data needs of these services?

13. What broadband services are people using other than those available through the NBN?

14. How can more competition be encouraged in the provision of broadband services in regional Australia?
Appendix 2 — Terms of Reference

A Regional Telecommunications Independent Review Committee (RTIRC) is established every three years by Part 9B of the Telecommunications (Consumer Protection and Service Standards) Act 1999 (the Act) to conduct reviews into telecommunications services in regional, rural and remote parts of Australia.

1. The Committee must conduct a review of the adequacy of telecommunications services in regional, rural and remote parts of Australia.

2. In determining the adequacy of those services, the Committee must have regard to whether people in regional, rural and remote parts of Australia have equitable access to telecommunications services that are significant to people in those areas and currently available in one or more urban areas.

3. In conducting the review, the Committee must make provision for public consultation, particularly with people in regional, rural and remote parts of Australia.

4. In conducting the review, the Committee is to have regard to:
   - the Government’s policy for the rollout of, and investment in, the National Broadband Network
   - the Government’s commitments to a consumer safeguards review and the Universal Service Guarantee
   - the Government’s policy for the rollout of, and investment in, the Mobile Black Spot Program.

5. Taking into account Term of Reference 4, the Committee is to:
   - consider how to maximise the economic benefits for regional communities through the use of digital technologies
   - consider how regional consumers use their broadband service and how they might derive more benefit from it
   - undertake an analysis of the coverage achieved under the Mobile Black Spot Program and examine the extent of the existing gaps in mobile coverage in regional Australia.

6. The Committee must prepare a report of the review and give it to the Minister for Regional Communications. The report may set out recommendations to the Government.

7. In formulating a recommendation that the Government should take a particular action, the Committee must assess the costs and benefits of that action.