CHAPTER 2

Announcements and the decision making process

2.1 This chapter details the announcements regarding spectrum for public safety mobile broadband. It considers the consultation and decision making processes which informed the reservation of spectrum to public safety agencies while the following chapters considers the debates and viewpoints of stakeholders in relation to these decisions.

Council of Australian Governments

2.2 In December 2009, COAG endorsed the National Framework to Improve Government Radiocommunications Interoperability (Framework) for law enforcement and emergency services.[1] Produced by the Natural Disaster Arrangements Working Group in collaboration with the NCCGR, the Framework provides a set of guiding principles and identifies key areas of work to enhance government voice and data radiocommunications interoperability by 2020. Specifically, it aims to achieve a transition of all domestic radiocommunications equipment to interoperable systems, modes and frequencies over a ten-year period from 2010.[2]

2.3 According to the NCCGR, improvements to interoperability arising from the Framework will enable government radiocommunications users to:

- more effectively use their own equipment across jurisdictions thereby enhancing cross-jurisdictional operations and rapid deployment of emergency service personnel;
- improve response to routine public safety incidents such as building fires that may require support from several agencies within a jurisdiction, or during police vehicle pursuits that may necessitate cross-jurisdictional assistance if state borders are crossed;
- seamlessly switch from 'day-to-day' communications to multi-agency and/or cross-jurisdictional communications which are often deployed during emergencies such as natural disasters, catastrophic accidents, large scale incidents, and similar events that may occur without much warning; and

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1 Natural Disaster Arrangements Working Group, *National Framework to Improve Government Radiocommunications Interoperability. Towards a harmonised radiocommunications environment for public protection and disaster relief 2010–2020*, p. 1, http://www.em.gov.au/Fundinginitiatives/NationalEmergencyManagementProjects/NationalEmergencyManagementProjects20102011/Pages/ImplementationofNationalInteroperabilityFrameworkBriefings.aspx (accessed 31 May 2013).

2 Natural Disaster Arrangements Working Group, *National Framework to Improve Government Radiocommunications Interoperability. Towards a harmonised radiocommunications environment for public protection and disaster relief 2010–2020*, p. 5.

- exploit new and emerging technologies that support improved interoperability as a result of a nationally consistent coordinated approach.[3]

2.4 In 2011, COAG endorsed the National Strategy for Disaster Resilience (NSDR) to encapsulate a new resilience-based approach to emergency management. As part of the implementation of the NSDR, a range of initiatives were identified to 'enhance Australia's capacity to withstand and recover from emergencies and natural disasters'. The development of an implementation plan for national public safety mobile broadband (PSMB) capability, to enable emergency services such as police, fire fighters and ambulance to communicate and share information while on the move, was one of the identified initiatives.[4]

2.5 The COAG Standing Council on Police and Emergency Management (SCPEM) is responsible for promoting a coordinated national response to law enforcement and emergency management issues.[5]

Australian Communications and Media Authority reservation of 10 MHz

2.6 In May 2011, the Australian Government announced the possible 'earmarking' of spectrum from the 800 MHz band for potential use by PSAs to build their mobile broadband capability.[6] Then on 29 October 2012, the ACMA announced the allocation of spectrum for a nationally interoperable PSMB capability. Following analysis conducted in conjunction with PSAs through the PSMBSC, the ACMA announced that it would take a multi-layered approach to the provision of spectrum for PSAs on the basis that there is no single-band solution able to meet all the mobile communication requirements of PSAs. The two measures announced on 29 October build on arrangements to expand capability in the 400 MHz band which has been identified for the exclusive use of government, primarily to support national security, law enforcement and emergency services.[7] The two measures included:

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3 National Coordinating Committee for Government Radiocommunications, An Introduction, p. 5, http://nccgr.govspace.gov.au/files/2012/02/NCCGR-A4-Intro1.pdf (accessed 31 May 2013).

4 Council of Australian Governments, *National Security and Community Safety*, http://www.coag.gov.au/national_security_and_community_safety (accessed 31 May 2013).

5 Standing Council on Police and Emergency Management, Terms of Reference, http://www.ag.gov.au/EmergencyManagement/Documents/SCPEMtermsofreference.pdf (accessed 31 May 2013).

6 The Hon Robert McClelland MP and Senator the Hon Stephen Conroy, Discussions on national broadband for public and emergency services, *Joint Media Release*, 10 May 2011, http://www.minister.dbcde.gov.au/media/media_releases/2011/177 (accessed 28 May 2013).

7 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 2, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013); Australian Communications and Media Authority, Spectrum for public safety radiocommunications, 29 October 2012, http://www.acma.gov.au/WEB/STANDARD/pc=PC_600085 (accessed 28 May 2013).

- 10 MHz of spectrum in the 800 MHz band as a 2 x 5 MHz paired assignment; and
- 50 MHz of spectrum from the 4.9 gigahertz (GHz) frequency band.[8]

2.7 The ACMA noted that the provision of 10 MHz of spectrum from the 800 MHz and 50 MHz in the 4.9 GHz bands would facilitate the deployment of 'high-speed, nationally interoperable mobile broadband networks by public safety agencies'.[9] The ACMA's Chairman, Mr Chris Chapman stated that:

> The measures announced today will meet two specific needs identified by Australia's public safety agencies—the need for wide-ranging 4G coverage, together with very high capacity, short range coverage for specific incidents and in high demand areas.[10]

2.8 The allocations and the multi-layered approach announced on 29 October 2012 are detailed in the following section.

10 MHz spectrum from the 800 MHz band

2.9 The ACMA announced that 10 MHz of spectrum (2 x 5 MHz) from the 800 MHz band would be provided for a PSMB cellular 4G data capability. This band supports 4G (LTE) systems and technologies which is a standard for wireless communication of high-speed data for mobile phones and data terminals. For this reason, it is considered to be 'beach front' spectrum by carriers and PSAs alike.[11]

2.10 The Department of Broadband, Communications and the Digital Economy (DBCDE) noted in December 2012 that the frequency range proposed to be earmarked for allocation to PSMB was a portion of the 805–820 MHz paired with a portion from 850–870 MHz.[12] The 805–820 MHz portion band will be freed up result of the switchover from analogue to digital television transmission. The allocation of

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8 Australian Communications and Media Authority, The ACMA to deliver a multi-layered spectrum solution to support public safety mobile broadband capability, *ACMA media release* 81/2012 – 29 October 2012, http://www.acma.gov.au/theACMA/the-acma-to-deliver-a-multi-layered-spectrum-solution (accessed 29 May 2013); ACMA,

9 Australian Communications and Media Authority, Spectrum for public safety radiocommunications, *Media Release*, 29 October 2012, http://www.acma.gov.au/WEB/STANDARD/pc=PC_600087 (accessed 28 May 2013).

10 Australian Communications and Media Authority, Spectrum for public safety radiocommunications, *Media Release*, 29 October 2012, http://www.acma.gov.au/WEB/STANDARD/pc=PC_600087 (accessed 28 May 2013).

11 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 2, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

12 Department of Broadband, Communications and the Digital Economy, *Fact sheet 3: Public safety mobile broadband capability 700 MHz v 800 MHz—Suitability for Australian public safety use*, December 2012, http://www.dbcde.gov.au/broadband/public_safety_mobile_broadband_steering_committee (accessed 7 June 2013).

spectrum from the 800 MHz band for PSAs is expected to be made available in 2015 at the same time as spectrum in the 700 MHz band.[13]

2.11 The precise frequencies to be provided from within the 800 MHz band will be determined in the context of the ACMA's full review of the 803–960 MHz band. The review of the 803–960 MHz band commenced in May 2011 and two discussion papers were released by the ACMA as part of a consultation process. The first paper was released in May 2011.[14] The second discussion paper was released in December 2012 with the consultation process on the discussion paper closing in February 2013.[15]

Provision of 50 MHz spectrum in the 4.9 GHz band

2.12 The ACMA also announced the provision of 50 MHz of spectrum from the 4.9 GHz band (4940–4990 MHz frequency range) for PSAs. According to the ACMA, this spectrum is recognised internationally as a public protection and disaster relief band by the International Telecommunication Union.[16]

2.13 The ACMA stated that the 4.9 GHz band is capable of extremely high capacity, short range, deployable data and video communications (including supplementary capacity for the PSMB network in areas of very high demand).[17] It is intended that this will support applications such as WiFi-based local area networks (LANs), sensor (including video) linking and data offload to absorb high localised capacity demand in a PSMB network.[18] The ACMA considered this to be one way in which the 50 MHz from the 4.9 GHz band would be useful in providing a

13 Department of Broadband, Communications and the Digital Economy, *Fact sheet 2: Public safety mobile broadband capability—process overview*, December 2012, http://www.dbcde.gov.au/broadband/public_safety_mobile_broadband_steering_committee (accessed 7 June 2013).

14 A separate consultation was undertaken in relation to expiring licences. ACMA, *Expiring spectrum licences—technical framework for the 800 MHz band*, June 2012.

15 Australian Communications and Media Authority, Review of the 803–960 MHz Band, http://165.191.2.20/WEB/STANDARD/pc=PC_312463 (accessed 6 June 2013); Australian Communications and Media Authority, The 803–960 MHz band—exploring options for future change, IFC 47/2012, March 2013, http://165.191.2.20/WEB/STANDARD/pc=PC_600124 (accessed 6 June 2013).

16 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 2, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

17 Australian Communications and Media Authority, 'The ACMA to deliver a multi-layered spectrum solution to support public safety mobile broadband capability', *Media Release*, 81/2012 – 29 October 2012, http://www.acma.gov.au/theACMA/the-acma-to-deliver-a-multi-layered-spectrum-solution (accessed 5 June 2013).

18 Australian Communications and Media Authority, *The 803–960 MHz band–exploring options for future change*, Discussion paper, December 2012, p. 42, http://www.acma.gov.au/webwr/_assets/main/lib550052/ifc47_2012-803-960mhz_band.pdf (accessed 6 June 2013).

supplementary, localised capability where and when it is needed.[19] It stated that the 4.9 GHz spectrum could be used, therefore, to provide spill-over capacity where major events cause a spike in traffic.[20]

2.14 Under the ACMA proposal, a class licencing arrangement would be applied in the 4.9 GHz band to allow PSAs to use the band on a non-exclusive basis without the need for individual device licences. According to the ACMA, a class licencing arrangement would provide significant flexibility in deployment during emergency response and disaster recovery activities. It would also allow PSAs to access spectrum to facilitate their activities without administrative overheads.[21]

Multi-layered approach

2.15 The ACMA Chairman, Mr Chris Chapman asserted that the complementary combination of spectrum in the different bands will provide PSAs with an opportunity and effective outcome as it will provide both 'coverage and penetration'. He noted that the allocation of spectrum:

> …provides PSAs in Australia with an extraordinary opportunity to do great things in the public interest with spectrum that provides coverage, flexibility, scalability… it'll drive interoperability, it gives them capacity for data, video and voice. And it's within a harmonised framework.[22]

2.16 The ACMA has also noted that the intention is to ensure that the PSMB network will be available within a wide coverage area and, where there is no coverage, responders' devices will be able to connect to commercial mobile

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19 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, current ACMA initiatives and decisions*, October 2012, p. 12, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

20 Australian Communications and Media Authority, *The 803–960 MHz band–exploring options for future change*, Discussion paper, December 2012, p. 43, http://www.acma.gov.au/webwr/_assets/main/lib550052/ifc47_2012-803-960mhz_band.pdf (accessed 6 June 2013).

21 Australian Communications and Media Authority, *Proposed class licence in the 4.9 GHz band for public safety agencies*, Consultation Paper, October 2012, p. 2, http://www.acma.gov.au/webwr/_assets/main/lib550039/ifc43-2012-public_safety-use-4.9ghz_band.pdf (accessed 6 June 2013); 'Proposed class licence in 4.9 GHz band: public safety agencies, Issue for comment 43/2012, http://www.acma.gov.au/theACMA/Consultations/Consultations/Current/submissions-to-proposed-class-licence-in-4-9-ghz-band---public-safety-agencies (accessed 6 June 2013).

22 Mr Chris Chapman, ACMA, 'ACMA chair: 60 MHz emergency services spectrum package "almost unique" globally', *Communications Day*, 29 October 2012, http://www.commsday.com/latest-news/acma-chair-60mhz-emergency-services-%E2%80%A8spectrum-package-almost-unique-globally (accessed 5 June 2013).

networks.[23] Coverage in relation to the three layers of the model were described as follows:

- Wide-area narrowband voice and data using land-mobile topology, predominantly employing the 400 MHz band in Australia.
- Wide-area broadband data using cellular topology (PSMB), potentially using the 800 MHz band and supported by business agreements with commercial carriers in Australia, with supplementary, on-demand coverage and capacity provided by additional deployable base stations.
- Short-range high-capacity data in deployable hotspots, using the 4.9 GHz band in Australia. While propagation distances in the 4.9 GHz band are much shorter than in the 400 and 800 MHz bands, there is much more spectrum available (50 MHz) for public safety use.[24]

Spectrum offer to public safety agencies

2.17 On the same day as the ACMA announcement of 29 October 2012, the Attorney-General, the Hon Nicola Roxon MP, and the Minister for Broadband, Communications and the Digital Economy, Senator the Hon Stephen Conroy affirmed that the ACMA spectrum allocations for a PSMB network followed a request by the Australian Government to the ACMA for dedicated emergency services spectrum.[25]

2.18 The ministerial joint media release further noted that:

> The government's offer to the states of the spectrum will be at a negotiated price and conditional on a number of factors, including:
>
> - the capability being nationally interoperable;
> - the States and Territories funding all costs associated with designing, building, equipping, maintaining and operating the capability; and
> - an agreement to provide reasonable access to State and Territory networks by relevant Commonwealth agencies.[26]

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23 Australian Communications and Media Authority, *The 803–960 MHz band—exploring options for future change*, Discussion paper, December 2012, p. 42, http://www.acma.gov.au/webwr/_assets/main/lib550052/ifc47_2012-803-960mhz_band.pdf (accessed 6 June 2013).

24 Australian Communications and Media Authority, *The 803–960 MHz band—exploring options for future change*, Discussion paper, December 2012, p. 43, http://www.acma.gov.au/webwr/_assets/main/lib550052/ifc47_2012-803-960mhz_band.pdf (accessed 6 June 2013).

25 The Hon Nicola Roxon MP and Senator the Hon Stephen Conroy, Spectrum for public Safety Agencies, *Joint Media Release*, 29 October 2012, http://www.minister.dbcde.gov.au/media/media_releases/2012/169 (accessed 29 May 2013).

26 The Hon Nicola Roxon MP and Senator the Hon Stephen Conroy, Spectrum for public Safety Agencies, *Joint Media Release*, 29 October 2012, http://www.minister.dbcde.gov.au/media/media_releases/2012/169 (accessed 29 May 2013).

ACMA's decision making process on spectrum for PSMB

2.19 The factors that influenced the ACMA's decision to provide 10 MHz of spectrum for PSMB included:

- evidence before, and work of, the PSMBSC including the UXC Consulting report and the proposed National Implementation Plan;
- the need for provisions to help meet PSA's data demand over and above the anticipated day-to-day and pre-planned scenarios including:
    - additional use of commercial networks for non-mission critical traffic;
    - as needed deployments of mobile base stations, or 'cells on wheels' (COWs) to absorb additional local demand;
    - use of the 4.9 GHz band to enable deployment of high capacity, localised 'hot spots' for data offload, video transfer and incident area networks, among other applications; and
    - specific provisions under the Radiocommunications Act that could, if enacted, enable access to additional spectrum by responders in extreme circumstances;
- economic factors including capex/opex versus spectrum costs; and
- constraining and mitigating technical factors, including demand growth, headroom requirements and efficiency gains to be leveraged as part of the evolutionary growth of the technology (as per 3GPP standards).[27]

2.20 The ACMA emphasised that during the PSMBSC process, it was recognised that no amount of spectrum used by a conventional cellular network was likely to satisfy a localised, short-notice spike in demand that might result from a major incident such as a terrorist attack in a central business district or major urban centre. Furthermore, the ACMA argued that it would be highly economically inefficient to try and dimension spectrum provisions around what might be 'once-in-a-generation' events.[28] The ACMA asserted that one of the key purposes of the spectrum being made available in the 4.9 GHz band will be to enable high data rates in localised hot spots such as around an incident site. According to the ACMA, this band will 'complement the proposed PSMB capability by providing on-demand capacity over and above that afforded by the fixed PSMB network'. Furthermore, the ACMA argued, there is an established market for public safety equipment operating in this band.[29]

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27 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 14.

28 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 14.

29 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 14

2.21 At the same time, the ACMA also highlighted the ongoing challenge before it to:

> …make adequate spectrum available for PSAs to carry out their duties effectively, while optimising the benefit of the spectrum as a whole to the community. This requires balancing a range of economic and public interest (including public safety) drivers to deliver solutions that best serve the community as a whole.[30]

Public Safety Mobile Broadband Steering Committee

2.22 The PSMBSC was established on 30 May 2011 to consider the potential for 800 MHz to be used for emergency services broadband application.[31] The steering committee's role is detailed in its terms of reference:

> 1 Provide a report to Commonwealth, State and Territory Ministers and to the Standing Council for Police and Emergency Management (SCPEM) on the most effective and efficient way for Australia's public safety agencies to obtain a reliable and robust mobile broadband capability that meets their operational requirements and the potential for allocation of radio-frequency in this regard, and
>
> 2 Work with the Australian Communications and Media Authority (ACMA) as part of its review of the 805 MHz to 890 MHz frequency range (the 800 MHz band), to identify a suitable amount of spectrum necessary to meet foreseeable operational needs.[32]

2.23 The membership of the PSMBSC comprises senior officials from agencies and departments including the Attorney-General's Department (AGD), DBCDE, ACMA, and the Australia New Zealand Policing Advisory Agency (ANZPAA). Other members include the:

- Australasian Fire and Emergency Service Authorities Council;
- Council of Ambulance Authorities;
- Law Enforcement and Security Radio Spectrum Committee;
- National Coordinating Committee for Government Radiocommunications;
- National Counter-Terrorism Committee;

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30 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, current ACMA initiatives and decisions*, October 2012, p. 3, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

31 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 1, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

32 Public Safety Mobile Broadband Steering Committee, Terms of Reference, 30 May 2011, p. 1, http://www.nationalsecurity.gov.au/www/agd/rwpattach.nsf/VAP/(8AB0BDE05570AAD0EF9C283AA8F533E3)~1Public+Safety+Mobile+Broadband+Steering+Committee+.pdf/$file/1Public+Safety+Mobile+Broadband+Steering+Committee+.pdf (accessed 18 July 2013).

- National Emergency Management Committee; and
- SCPEM Policing Senior Officers Group.

2.24 The first phase of the PSMBSC's work was to identify the amount of spectrum needed to meet PSA's long-term data demand in the 800 MHz band. To inform this process, Gibson Quai-AAS Consulting (now UXC Consulting) was commissioned to undertake the study in consultation with PSAs and Commonwealth agencies. While the report is publicly available, some content including different recommendations on the required spectrum quanta have been redacted.[33] To assist the PSMBSC in its deliberations, the DBCDE also commissioned a report from the Institute for a Broadband-Enabled Society on the broadband communication avenues available to public safety agencies. The report was released in December 2012.[34]

2.25 The PSMBSC developed a draft National Implementation Plan which details the intentions of the jurisdictions regarding what type of capability (including infrastructure and coverage aspects) they intend to deliver. The PSMBSC itself is responsible for operating the network.[35] The draft National Implementation Plan and PSMBSC report were provided to the SCPEM on 10 October 2012 for consideration at its 23 November 2012 meeting.[36] The plan considers the most effective way for PSAs to obtain a nationally interoperable PSMB capability.[37]

2.26 The PSMBSC is expected to provide its report on the establishment of a nationally interoperable PSMB network to the COAG through the SCPEM in 2013.[38]

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33 Gibson Quai-AAS Consulting, *Public Safety Mobile Broadband 700 MHz DD & 800 MHZ PSMB Band Comparison, Final Report*, April 2012, www.acma.gov.au/webwr/_assets/main/.../foi_log_18-docs_19d-19e.pdf (accessed 30 May 2013).

34 Institute for a Broadband-Enabled Society, *Broadband Communications Options for Public Safety Agencies*, December 2012, http://www.dbcde.gov.au/__data/assets/pdf_file/0014/161501/Broadband-Communications-Options-for-Public-Safety-Agencies.pdf (accessed 30 May 2013).

35 Australian Communications and Media Authority, *Spectrum for public safety radiocommunications, Current ACMA initiatives and decisions*, October 2012, p. 10, http://www.acma.gov.au/webwr/radcomm/frequency_planning/radiofrequency_planning_topics/docs/spectrum_for_public_safety.pdf (accessed 29 May 2013).

36 Attorney-General's Department, Public Safety Mobile Broadband: Report to SCPEM and National Implementation Plan, 10 October 2012, http://www.acma.gov.au/webwr/_assets/main/lib550099/foi_log_18-docs_18-19c.pdf (accessed 30 May 2013).

37 Department of Broadband, Communications and the Digital Economy, *Submission 14*, p. 1.

38 Department of Broadband, Communications and the Digital Economy, 'Public Safety Mobile Broadband Steering Committee', 22 February 2013, http://www.dbcde.gov.au/broadband/public_safety_mobile_broadband_steering_committee (accessed 29 May 2013).

Standing Council on Police and Emergency Management

2.27 The SCPEM met on 23 November 2012. However, the communique in relation to the meeting has not been made public.[39] According to the DBCDE, the SCPEM endorsed the draft National Implementation Plan and PSMBSC report.

2.28 The SCPEM also requested that the PSMBSC continue its work in three areas, namely:

- jurisdictions provide any additional evidence on the adequacy of the 10 MHz reservation in the 800 MHz band;
- how an 'overflow' capability can be assured when the PSMB capability is not available; and
- next steps to agree the design and implementation of the network.[40]

Digital dividend auction

2.29 On 1 November 2011, the Australian Government announced that two blocks of spectrum in the 700 MHz band (digital dividend) and two blocks of spectrum in the 2.5 GHz bands would be reallocated by issuing spectrum licences after TV broadcasters shut off analogue broadcasts at the end of 2014.[41] The ACMA organised an auction of spectrum in both bands where telecommunications companies could each purchase no more than 2 x 25 MHz (50 MHz in total) of 700 MHz spectrum.[42]

2.30 In relation to PSAs and the 700 MHz band, Access Economics noted in a September 2010 report that if PSAs were to seek an allocation in that band, it had been recommended that they seek 10 + 10 MHz to ensure adequate capacity.[43] Access Economics stated that the 700 MHz band frequency range was:

> …well suited to Long-Term Evolution (LTE) technologies that will enable high-speed broadband applications, and the emerging use of LTE technology on the 700 MHz band internationally means there may be some equipment synergies. In addition, a PSA network at 700 MHz would be

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39 Standing Council on Police and Emergency Management, 23 November 2012, Communique, http://www.ag.gov.au/EmergencyManagement/Pages/StandingCouncilonPoliceandEmergencyManagementMeetingDatesandCommuniques.aspx (accessed 30 May 2013).

40 Department of Broadband, Communications and the Digital Economy, *Submission 14*, p. 2.

41 Department of Broadband, Communications and the Digital Economy, Digital dividend process, http://www.archive.dbcde.gov.au/2013/may/digital_dividend (accessed 30 May 2013).

42 Australian Communications and Media Authority, *Digital Dividend auction—results*, 7 May 2013, http://engage.acma.gov.au/digitaldividend/digital-dividend-auction-results/ (accessed 30 May 2013).

43 Access Economics, *Radiofrequency Spectrum Options for Public Safety Agencies*, September 2010, p. 17, http://www.ag.gov.au/RightsAndProtections/FOI/Documents/Access%20Economics%20Report%20dated%2010%20September%202010%20entitled%20Radiofrequency%20Spectrum%20Options%20for%20Public%20Safety%20Agencies.pdf (accessed 15 July 2013).

> able to leverage substantially off the existing 450 MHz infrastructure, for which infrastructure was built with site overlap.
>
> However, the appropriateness of the digital dividend for LTE technology means that it is expected to be an in-demand band when the auction takes place.[44]

2.31 The auction commenced on 23 April 2013 and three bidders, Optus Mobile, Telstra and TPG Internet secured spectrum in the auction, resulting in total revenues of $1.96 billion. This was less than half the amount which was expected to be raised at the auction ($4 billion). Four companies initially applied to participate in the auction, however, Vodafone Hutchison Australia withdrew before the auction.[45]

2.32 The auction reflected a less than expected desire by telecommunications companies for 700 MHz with 2 x 15 MHz or 30 MHz spectrum in total left unsold (sections 733–748 MHz and 788–803 MH).[46] The unallocated 30 MHz of spectrum has a 3GPP standard which enables LTE to operate in it.[47]

2.33 The Minister, Senator the Hon Stephen Conroy stated that the 30 MHz (or 15 MHz paired) of the 700 MHz unsold spectrum was worth 'in the order of $1 billion' and that the government intended to return it to the market within two or three years.[48] The expectation of some stakeholders was that the unsold spectrum would be made available when Australia's television services switch to digital services by 2015.[49]

2.34 In evidence to the committee, the ACMA noted that while the unsold spectrum is currently unallocated, it does not have the ability to allocate it. At the same time, Mrs Maureen Cahill, General Manager, Communications Infrastructure

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44 Access Economics, *Radiofrequency Spectrum Options for Public Safety Agencies*, September 2010, p. 17.

45 Adam Bender, 'Optus satisfied with spectrum winnings in Digital Dividend auction', *Computerworld*, 15 May 2013, http://www.techworld.com.au/article/461886/optus_satisfied_spectrum_winnings_digital_dividend_auction/ (accessed 5 June 2013); Josh Taylor, 'Telstra, Optus, TPG win 4G spectrum for AU$2 billion', *ZDNet*, 7 May 2013, http://www.zdnet.com/au/telstra-optus-tpg-win-4g-spectrum-for-au2-billion-7000014961/ (accessed 6 June 2013).

46 ACMA, Digital dividend auction–results', *ACMA media release–27/2013*–7 May 2013, http://www.beta.acma.gov.au/Industry/Spectrum/Digital-Dividend-700MHz-and-25Gz-Auction/Reallocation/digital-dividend-auction-results (accessed 5 June 2013); Mr Jeff MacKenzie, 'Digital Dividend Auction Results', *Jands*, 7 May 2013, http://www.jands.com.au/support/product_support/audio_technical_materials/wireless_spectrum/digital_dividend_auction_results (accessed 5 June 2013).

47 Dr Andrew Kerans, ACMA, *Committee Hansard*, 24 June 2013, p. 18.

48 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Digital Dividend Auction Results, *Media Release*, 7 May 2013, http://www.minister.dbcde.gov.au/media/media_releases/2013/069 (accessed 5 June 2013); David Crowe, 'Counting on spectrum sale despite flop', *The Australian*, 15 May 2013, http://www.theaustralian.com.au/national-affairs/treasury/counting-on-spectrum-sale-despite-flop/story-fnhi8df6-1226642539099 (accessed 5 June 2013).

49 Police Federation of Australia, *Submission 2*, p. 3.

Division of ACMA, stated that domestic mobile broadband growth suggests that it will need to deliver to the Australian market at least an additional 300 MHz of spectrum by 2020 in addition to what is currently on the marketplace.[50]

Unsold spectrum

2.35 The lack of take-up of the remaining 30 MHz of spectrum in the 700 MHz band marked a new phase in the debate regarding the appropriate allocation of spectrum for PSMB. It opened up the possibility for PSAs to occupy a block of spectrum in the 700 MHz band. State and territory governments noted in their evidence to the committee that their understanding was that PSAs were offered spectrum in the 800 MHz band for reasons including the commercial value of the 700 MHz band and the assumption that there would be no 700 MHz spectrum available following the auction.[51] Therefore, the documentation and work undertaken by emergency services focused on the 800 MHz spectrum band as it was understood that the 700 MHz spectrum would be sold at auction and therefore 'off the table'.[52]

2.36 Over the past three years, a number of states and territories, law enforcement agencies, as well as the PFA have stated their position that PSAs require a minimum of 20 MHz (10 + 10 MHz) on a number of occasions.[53] Emergency service agencies have consistently raised the need for a dedicated broadband spectrum particularly as their data requirements continue to increase with technological advances.[54] In February 2010, the LESRSC noted that:

> Considering US experience, public safety and emergency services may require at least 10+10 MHz spectrum from the 700 MHz band, the 850 MHz band or the 900 MHz band to establish their mobile broadband communications networks to support Government uses.[55]

2.37 In July 2012, the Premiers of NSW, Victoria, Queensland and Western Australia wrote to the Prime Minister requesting an allocation of an absolute minimum 20 MHz (10 + 10 MHz).[56] In February 2013, in order to facilitate further consideration of the states' requirement for additional spectrum, a joint submission of

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50 Mrs Maureen Cahill, ACMA, *Committee Hansard*, 24 June 2013, p. 12.

51 Western Australian Government, *Submission 4*, p. 3.

52 Mr Jim Hewitt, National Coordinating Committee for Government Radiocommunications, *Committee Hansard*, 24 June 2013, p. 37.

53 NSW Police Force, *Submission 17*, p. 1.

54 Evidence from emergency service organisations to Senate Environment and Communications References Committee, *The capacity of communications networks and emergency warning systems to deal with emergencies and natural disasters*, November 2011, p. 19.

55 Law Enforcement and Security Radio Spectrum Committee, LESRSC Response to Digital Dividend Green Paper January 2010, 25 February 2010, p. 3, http://www.dbcde.gov.au/__data/assets/pdf_file/0010/127369/Law_Enforcement_and_Security_Radio_Spectrum_Committee_-_PUBLIC_VERSION.pdf (accessed 3 June 2013).

56 Western Australian Government, *Submission 4*, p. 1; Western Australian Government, *Submission 4*, Attachment 1, p. 1.

the governments of the ACT, NSW, Queensland, South Australia, Tasmania, Victoria and Western Australia was made to the SCPEM and ACMA. Endorsed by the Police and Emergency Services Ministers in all states and territories through SCPEM in April 2013 and noted by the COAG the same month, the joint submission identified three primary concerns with the ACMA announcement which are considered in this report.[57] The PFA has also consistently advocated for 20 MHz since June 2010.[58]

2.38 The position upheld by law enforcement agencies and various jurisdictions that the ACMA 'set aside evidence of the operational requirements of law enforcement agencies in preference for a multi-layered spectrum solution' is central to this inquiry.[59]

ACMA considerations and final decision

2.39 As part of finalising a decision regarding allocation of PSMB, the ACMA informed the committee that it was currently reviewing the evidence contained in the joint state and territory submission which raised concerns about the allocation of only 10 MHz. The ACMA is also awaiting the overflow capability report which the Overflow Capabilities Sub-Group is due to produce.[60]

2.40 In November 2012, when it addressed the steering committee, the ACMA indicated that it would consider further evidence provided to it. As noted, the governments of WA, ACT, NSW, Queensland, South Australia, and Tasmania responded in February 2013, providing additional evidence by way of a joint submission the ACMA and the SCPEM. [61]

2.41 The ACMA emphasised that the decision making process that it is engaged in is 'evidence-based' and that it would review the material brought before it.[62] However, the ACMA was unable to determine when a final decision regarding an allocation of spectrum for PSMB would be made.[63] Mr Chis Cheah, Authority Member of the ACMA, noted that a final determination would be made 'as soon as possible after receipt of the overflow capability work' which will be provided 'later this year'.[64]

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57 Western Australian Government, *Submission 4*, Attachment 2, p. 4.

58 Police Federation of Australia, *Submission 2*, pp 1 & 3.

59 NSW Police Force, *Submission 17*, p. 1.

60 Mr Chris Cheah, ACMA, *Committee Hansard*, 24 June 2013, p. 20.

61 Joint States and Territories Submission to the Standing Council on Police and Emergency Management and the Australian Communications and Media Authority, Further Evidence from Jurisdictions, February 2013 cited as Western Australian Government, *Submission 4*, Attachment 2, p. 4.

62 Mr Chris Cheah, ACMA, *Committee Hansard*, 24 June 2013, p. 16.

63 Mr Chris Cheah, ACMA, *Committee Hansard*, 24 June 2013, p. 20.

64 Mr Chris Cheah, ACMA, *Committee Hansard*, 24 June 2013, p. 20.

Draft Ministerial Directions – 700 MHz band

2.42 On 24 June 2013, the Minister for Broadband, Communications and the Digital Economy, Senator the Hon Stephen Conroy, released two draft Ministerial Directions for public consultation.[65]

2.43 The purpose of the Australian Communications and Media Authority (Spectrum Allocation – Timing and Post-Auction Review) Direction No. 1 of 2013 is to direct the ACMA to report to the Minister by 1 September 2014 on the appropriate procedures for the allocation of the unsold 700 MHz spectrum, having regard to:

- the prices achieved for spectrum licences allocated as a result of the digital dividend auction; and
- prevailing market circumstances that may have an impact on the value of the spectrum.

2.44 The purpose of the Radiocommunications (Spectrum Access Charges – 700 MHz Band) Direction No. 1 of 2013 is to direct the ACMA that in any pricing determination the ACMA makes for the unsold 700 MHz spectrum under subsection 294(1) of the Radiocommunications Act, the ACMA must fix the spectrum access charges at no less than $1.36/MHz/pop.

2.45 Public consultation opened the day that the Ministerial Directions were issued with submissions due by 19 July 2013.[66]

65 Department of Broadband, Communications and the Digital Economy, '700 MHz Band – Draft Ministerial Directions release for public consultation', 25 June 2013, http://www.dbcde.gov.au/consultation_and_submissions/draft_ministerial_directions_to_the_acma_on_700_mhz_band (accessed 25 June 2013).

66 Department of Broadband, Communications and the Digital Economy, '700 MHz Band – Draft Ministerial Directions release for public consultation', 25 June 2013.