



Australian Government
Department of Communications

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Secretary

Mr Jonathan Coppel
Commissioner
Public Safety Mobile Broadband
Productivity Commission
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Dear Commissioner

COST-BENEFIT ANALYSIS INTO PUBLIC SAFETY MOBILE BROADBAND

The Department of Communications welcomes the Productivity Commission's review into the most efficient, effective and economical way of delivering a public safety mobile broadband (PSMB) capability. The Department makes this submission in response to the Commission's Issues Paper 'Public Safety Mobile Broadband' of April 2015.

The Department provides policy advice to the Australian Government on communication issues, in particular digital technologies and communications services. While the Commission's Issues Paper identifies a wide range of issues of relevance, the Department's submission focuses on issues relating to spectrum allocation and technology developments.

Spectrum policy framework

Spectrum is a scarce and valuable resource that contributes to the economic and social welfare of all Australians. The spectrum management framework is established under the *Radiocommunications Act 1992*, the objects of which include maximising the public benefit through spectrum's efficient allocation and use, making adequate provision for public and community services such as defence, security and emergency services, and promoting Australia's interests in international agreements.

However, the current framework is over 20 years old and since its introduction there has been a proliferation of new digital technologies and communication services resulting in significant changes in the use of spectrum.

The Department has recently reviewed the spectrum management framework and with the benefit of strong stakeholder contribution has concluded that there are substantial deficiencies.

The Spectrum Review Report (the review) was released on 22 May 2015¹. The core elements of the recommendations are:

- replace the current legislative framework with outcomes focussed legislation, that facilitates timely allocations, greater flexibility of use, including through sharing and trading of spectrum, and delivers improved certainty for market participants;
- improve the integrity and consistency of the framework by incorporating the management of broadcasting spectrum and better integrating public sector agencies through the reporting of their spectrum holdings and allowing those agencies to lease, sell or share that spectrum for their own benefit; and
- review spectrum pricing arrangements to make these consistent and transparent in order to support efficient use and to facilitate secondary markets.

The proposed reforms provide for greater use of market mechanisms and, consistent with the Government's deregulation agenda, rationalise the number of licence categories, reform current allocation processes and device supply regulations.

During the course of the review there was discussion on appropriate arrangements for private and public sector entities. In general private and public stakeholders agree with the concept of allocating spectrum to the "highest value use" but some see this as the highest commercial use whilst others see it as the highest social use. All consider spectrum use by their own entity or sector as demonstrably being of high value to the Australian community.

The review recognised that governments will always require the ability to make spectrum available for particular purposes. This may be to ensure consistency with international agreements or to ensure that spectrum is available to support the delivery of specific services. The review also noted the importance of public sector entities having the appropriate incentives and administrative arrangements in place to enable them to efficiently manage spectrum along with other resources.

Efficient management of resources requires governments and public safety agencies to have good information available on the cost and benefits of all alternatives and the ability to benefit from adopting more efficient options. For example, if an agency investing in new technology allows it to access communication services that utilise less spectrum then it should be able to benefit from this efficiency. This will require that all the costs of an investment decision, including the costs of spectrum, are taken into account along with the benefits.

¹ The Department of Communications, Spectrum Review Report,
http://www.communications.gov.au/consultation_and_submissions/spectrum_review

Technology

Each generation of mobile communications technology has and is expected to continue to offer spectral efficiencies, higher data speeds, enhanced security and resilience and new applications. Each upgrade, however, requires significant capital.

Given that technology developments are occurring at a rapid pace, and will continue to do so, any public safety mobile broadband solution should aim to be flexible enough to benefit from the capability improvements available from future technology developments, in terms of network and end-user devices and applications, and similarly should aim to be flexible enough to take advantage of cost reductions.

Dynamic spectrum access and cognitive radio technologies have the potential to enable alternative models for providing public safety agencies with a mobile broadband capability whilst ensuring the necessary prioritisation. For example some network operators and vendors have developed technology that enables them to provide public safety agencies with a mobile broadband capability over existing networks using spectrum quarantined for their exclusive use. In periods of high demand, public safety agencies can access spectrum used by the network operator to provide other services, by receiving priority access over other users.

We suggest that the Productivity Commission should neither favour or disfavour public or private provision. Arrangements for the delivery of a mobile broadband capability should be neutral such that the most efficient and cost-effective model stands on its merit. Recognising the significant upfront and ongoing costs to build, operate and upgrade mobile broadband networks, an important consideration is the extent to which different arrangements leverage investments in network infrastructure, spectrum, services and capability.

A further consideration, given the range of different public safety agencies and jurisdictions, is the extent to which different arrangements promote interoperability and support open technical and performance standards to enable lower transaction costs between the public safety agencies, to maximise the market for the supply of equipment and services and to minimise the cost of supporting non-standard or customised solutions.

International experience

The Department notes that there is a general trend for public safety agencies to move to commercial networks or commercial providers for the provision of a mobile broadband capability to capture substantial savings and increased flexibility.

In 2014, the UK Government invited tenders from commercial providers for the provision of mobile broadband capability for emergency services. The contract requires a commercial provider to enhance its network to provide broadband data services to emergency service agencies and provide emergency services priority access over other users. The UK Government noted that providing priority access to emergency service providers negates the need for a separate and expensive mobile radio spectrum².

² 14 January 2015, UK Government – Home Office announcement, '*Emergency services network contract removed*', <https://www.gov.uk/government/news/emergency-services-network-contract-removed>

The UK Government completed the evaluation of bids in early 2015 stating that the bids from the mobile industry not only 'match the operational requirements set by the emergency services but also offer the prospect of significant cost savings for the taxpayer over the existing system'. The UK Government predicts the new emergency services network will save the emergency services around one billion pounds over the next 15 years³.

Conclusion

We suggest that the Productivity Commission, when advising on the most efficient option for delivering a public safety mobile broadband capability, should:

- consider how frameworks can be put in place to ensure that all costs / benefits are considered and that the agencies benefit from efficiency;
- neither favour or disfavour a solution provided by the public or private sector per se, as the most effective model should stand on its cost / benefit merits; and
- ensure that solutions are flexible enough to take advantage of new technologies.

Yours sincerely

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() June 2015

³ 11 February 2015, UK Government – Home Office announcement '*Significant cost saving for emergency services network contract*', <https://www.gov.uk/government/news/significant-cost-saving-for-emergency-services-network-contract>