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**Government of
South Australia**

In reply please quote

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Response to Public Safety Mobile Broadband Issues Paper

Dear Commissioner,

The South Australian (SA) Government welcomes the Productivity Commission's consultation paper on 'first principles' analysis for better public safety communications capabilities and issues.

The SA Government makes this submission in response to the Commission's Issues Paper "Public Safety Mobile Broadband" of April 2015. This response has been prepared in consultation with SA's Public Safety Agencies, administrators and users of government radio communications and incorporates the views of the SA Police, Country Fire Service, State Emergency Services, SA Metropolitan Fire Service, SA Fire and Emergency Services Commission, Attorney Generals Department, Department of Health (SA Ambulance Service), Department of Planning, Transport and Infrastructure, Department of Treasury and Finance and Department of the Premier and Cabinet.

In preparation of this submission, SA has reviewed the National Public Safety Telecommunications Council report "Defining Public Safety Grade Systems and Facilities" final report dated 22 May 2014. It is recommended that the Productivity Commission also reviews this work as part of their review into Public Safety Mobile Broadband (PSMB). In addition, SA has found the submission from the Centre for Disaster Management and Public Safety at the University of Melbourne to be a worthy contribution to the Issues Paper.

South Australia's current Public Safety Agencies communication arrangements

The majority of South Australia's (SA) emergency communications needs are provided by the South Australian Government Radio Network (SAGRN) and commercial carriers. The SAGRN is recognised as one of the largest and most effective public safety radio networks in the world because of its coverage, over 226,000 km² and 96 per cent of the State's population.

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SA has made significant investment in public safety communications, including a \$154.5 million upgrade of the SAGRN that is currently underway. It has 20,000 active users across 22 agencies. The emergency communications services it provides need to be available to its users at least 99.99 per cent of the time, 24 hours a day, 7 days a week, 365 days a year. The SAGRN is designed and operated to recognised Public Safety standards of availability and resilience that are typically not met by commercial carrier services.

The network is centrally managed and controlled by the SA Government through a service provider. In times of emergency network load/congestion is managed via established processes and authority to ensure emergency services have priority. It is a standalone narrow band network developed solely for emergency communications. An important feature of the SAGRN is that it enables full communications interoperability between all agencies managing, responding to and/or supporting emergencies.

In addition to the SAGRN, all agencies have a degree of data mobility and are utilising mobile devices both in and off the field. Whilst the degree to which agencies are utilising mobility devices and mobile broadband varies there is an agreement that this will increase in the future across all agencies. It can be expected that the uptake by agencies of mobility devices and technology will mimic that of the wider community.

Agencies have individual commercial arrangements in place with private mobile network operators. This does not provide any of the agencies with priority use nor are there any specific Service Level Agreements (SLAs) in place outside of that which would be provided to any commercial entity.

South Australia's preferred approach for a PSMB

The SA Government believes the SAGRN infrastructure could be leveraged to complement PSMB services. A hybrid arrangement which allows users to roam between commercial networks and the SAGRN may provide the most effective and economically viable outcome for SA. While it is likely that high population density areas will always have commercial mobile broadband coverage, there needs to be recognition that this may not always be the case in remote and rural areas of some jurisdictions, including SA.

The notion that a PSMB could in the future provide both voice and data services creates significant risks and a potential single point of failure which would need to be addressed through heightened levels of resilience and redundancy.

When transitioning to a new system, agencies should be able take up the PSMB at a pace that meets their needs and as appropriate technology, services and funding becomes available. The PSMB should not restrict the technology that can be brought to the network. Agencies should not be tied to a particular technology or device upgrade cycle, to do so would likely impact the affordability of the PSMB, with the potential to reduce the uptake.

SA strongly believes that there is a need to develop uniformity across jurisdictions with regard to the baseline for mission critical requirements. Agencies must be able to clearly identify what is vital for them to continue to operate and provide business as usual services to the community should PSMB services become congested or disrupted. This baseline information will contribute to the flexibility and scalability of a

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PSMB. It will also provide an important guide to determining what fall-back arrangements need to be put in place to complement the use of and potential reliance on a PSMB.

As a state with a smaller population base SA seeks assurance that the design and construction of a PSMB network, including the arrangements supporting it, are not focussed on high density areas, such as those on the eastern seaboard, as any emergency situation requires resourcing without preference. In the event, the PSMB includes some form of load sharing across a national network there will need to be safe guards and protocols in place to ensure that non-impacted areas and non PSA service providers do not lose their communication channels and can continue to conduct business as usual activities away from the area in crisis.

The SA Government also seeks assurance that the communication needs and requirements of the broader community are not adversely impacted in times of emergency.

It is SA's opinion that any PSMB model will require the following features:

- Availability - including priority access and network to nominated users
- Resilience - to natural events/human intervention
- Security - physical and logical including encryption
- Coverage - primarily based on population density
- Capacity - scalable allowing for progressive take up
- People managing the services and the location of the data/content will need to be Australian based and held onshore
- Accessibility - should not require proprietary devices. Eg. consumer grade tablets/smart phones should be able to access the system/spectrum
- Flexibility - in the system to allow for any new technology to be incorporated
- Priority - there needs to be balance with the needs and safety of the wider community and their reliance on data to gain access to key information that may contribute to their safety

The reliability and resilience of a PSMB are considered critical to the systems usability and ultimate success. For clear definitions of reliability and resilience please refer to the paper '*Defining Public Safety Grade Systems and Facilities*', pp 23-27.

Other considerations

If a national PSMB network or service is established, SA believes that a national body should be created to develop and establish a governance framework that provides oversight and direction for future PSMB strategies, agreements and SLAs. This may require legislation covering the rights and obligations of PSMB users and providers. However this body should not provide direct governance of state based PSMB requirements and services, or impose such items as upgrade cycles, technology restrictions and usage levels.

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The development of a PSMB should consider the future needs of our PSA's, including, but not limited to:

- Streaming video
- Facial recognition
- Sensor technology
- Wearable technology
- Transmission of spatially enabled information
- Device agnostic (capability to use any device on PSMB)
- Automatic resource location (vehicles and people)
- Electronic fingerprint matching
- Access and storage of highly secured information

From a financial perspective, SA agrees that the network costs identified in the Issues Paper are relevant in estimating the network costs of deployment options for delivering PSMB. While noting the Commission's focus on economic costs, the identification and affordability of the direct financial costs associated with each option (and associated spectrum) is a critical consideration for jurisdictions. Consideration should also be given to the likely consequential cost to jurisdictions to equip for and transition to using a PSMB.

SA believes that the management of allocated spectrum should be undertaken by the governance body considering the individual needs of all jurisdictions and Australia as a whole and should be made available at no cost on the basis of public good.

SA considers that the most cost effective and sustainable PSMB would leverage from existing national and state based infrastructure and services including establishing linkages to the National Broadband Network.

The location of any data centres associated with the PSMB should be carefully considered to ensure a robust and reliable state and national PSMB network with fall back provisions in neighbouring jurisdictions.

In closing, on the understanding that the requirements described in this submission will be reflected on the outcome, SA supports the development of a nationwide PSMB and looks forward to working with other jurisdictions to progress this initiative.

Yours sincerely

Rick Seaman
DIRECTOR, OFFICE FOR DIGITAL GOVERNMENT

19 / 8 / 2015