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Economics Legislation Committee
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Canberra ACT 2600

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Submission to the Space Activities Amendment (Launches and Returns) Bill 2018 [Provisions] Inquiry

Thank you for the opportunity to make a submission to Space Activities Amendment (Launches and Returns) Bill 2018 [Provisions] Inquiry.

The Adelaide Law School has developed significant expertise in the interpretation, application and development of space law in recent years through the Research Unit on Military Law and Ethics (RUMLAE), an academic unit that combines unique strengths in military, international and technology law to explore the the law of armed conflict and the manner in which law applies to military contexts (including outer space). The Adelaide Law School also has significant strengths in the related area of commercial space law, with a number of academic members of staff actively working with government and industry in the area. This involves hands-on engagement with operators, small companies and start-ups both in Australia and internationally to determine the impact of domestic space law on commercial operations. This is combined with international law more broadly to provide well-rounded analyses of the major legal issues effecting space related enterprises.

The Adelaide Law School and RUMLAE have made submissions to both the *Review of the Space Activity Act* and the *Review of Australia's Space Industry Capability*. The Adelaide Law School believes that the Australian space industry is capable of generating significant benefits to the Australian economy, however it is currently poised at a crucial moment and any changes to the legislative environment at this time will either promote the industry to a world leading position or supress and stifle it like the developing space industry in the late 1990s and early 2000s.

Researchers at the Adelaide Law School have recently engaged in a research project with the broad focus of exploring the regulatory pressures that Australian commercial space companies face. This has included consultation with a broad array of space industry elements including rocket operators, satellite manufacturers, component manufacturers, potential launch facility operators, and legal professionals who have experience with the space industry. This has involved both Australian based companies and international stakeholders.

The Adelaide Law School has also engaged in comparative analyses of the legislative regimes of other nations who have a stake in the commercial space law industry, including consideration of the Belgian, Indian, New Zealand, United States and United Kingdoms' legislative regimes.

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The majority of the comments on the Space Activities Amendment (Launches and Returns) Bill 2018 in this submission will therefore be based on the preliminary findings of that study into commercial pressures on Australian based commercial space companies.

Space Activities Act Review

There has already been an extensive number of reviews into the space sector in recent years. One of the most significant of these was the *Review of the Space Activities Act* that took place between 2016 and 2017.

The final reports were delivered in 2017 and depicted a sad sight; that the space industry generally rejects the *Space Activities Act 1998* (Cth). This was coupled with the suggestion that significant revisions were required to bring the regime into modern era. The *Space Capabilities Review* followed and indicated that there is a substantial burgeoning space industry in Australia with a mix of start-ups and established technology companies trying to take advantage of the international demand for commercial space assets and services. This Review further identified the significant benefit to Australia which could result from a vibrant space industry.

The current *Space Activities Act* can be classified as a general failure. No company has launched from Australia since its implementation, with the only example of local activity being the 2010 return of the Japanese *Hayabusa* spacecraft and the occasional overseas satellite launch. The tenor of that Act reflects a very narrow and specific view of Australia's role in a space industry, as a launch provider and little more. The sentiment from the 2016-17 review of the *Space Activities Act* was clear; the industry wants wholesale reform before it believes it is capable of true growth. It also needs recognition of the full spectrum and diversity of space related enterprises. Australian entrepreneurs range from launch providers, to satellite providers to full scale service provision, not something currently provided in the Act.

This was recognised in the March 2017 Department of Innovation, Industry and Science (DIIS) *Legislative Proposals Paper* where it was stated that there are a significant number of areas where the *Space Activities Act* could be reformed, with the ultimate statement that DIIS aimed to introduce a new Act.[1]

Global Context

During the period between the announcement of the *Space Activities Act Review* in December of 2016 and the release of the Space Activities Amendment (Launches and Returns) Bill 2018, there has been a significant volume reform in the area of domestic space law internationally.

New Zealand introduced the *Outer Space and High-altitude Activities Act 2017* (NZ), the United Kingdom released its draft Spaceflight Bill and promptly replaced it with the now implemented *Space Industry Act 2018* (UK), and in the United States, the current administration is proposing significant amendments to their authorisation regime to streamline to protect and promote commercial activity, while making significant headway with the re-establishment of the National Space Council. Further, the US has continued to extend the operation of its commercial space-enabling regulations.

Space Activities Amendment (Launches and Returns) Bill 2018

The amendments before the Parliament do address a number of concerns that were raised in the reviews conducted. These successes include;

a. the reduction of the maximum insurance imposition to AUD$100,000,000.00. This makes Australia a more cost-effective jurisdiction for commercial launch operations. The current AUD$750,000,000.00 maximum requirement is both excessive and outdated and many domestic operators will be delighted to see its reduction;
b. the conversion of the 'Space Licence' to a 'Facility Licence' clarifies the position of a domestic launch facility operator, making the legislation significantly more accessible for operators. This change also aligns the Australian legislation to match that of New

[1] Department of Industry, Innovation and Science, 'Reform of the Space Activities Act 1998 and associated framework' (Legislative Proposals Paper, 24 March 2017) <https://industry.gov.au/industry/IndustrySectors/space/Documents/Legislative-Proposals-Paper.pdf> 30.

Zealand and the United Kingdom where a distinct 'facility licence' is used; a clear adoption of what can be considered international best practice;

c. the inclusion of a reference to debris mitigation brings the legislation into the 21st century, where consideration of the space environment is essential. The inclusion of references to debris mitigation is appearing as standard practice in modern legislative regimes;
d. the recognition of aircraft as valid launch platforms; and
e. the inclusion of an additional licence that recognises the needs of those operators that may not necessarily intend to reach space, ensuring the continued viability as a rocket test facility.

Despite these highlights, it is disappointing the observe that the majority of the Act is unaltered. The *Space Activities Act 1998* was heavily criticised for being overly burdensome and lacking clarity. Despite this, a clause-by-clause review of the amendment and the Act demonstrates that there has only been the deletion of one 'pre-licence' legislative requirements; the need to be a corporation.[2]

The review and amendment periods were an opportunity for the significant changes and innovation that Australian based operators were seeking. Domestically, with no substantive change to the Launch Licence, there has been no clarification of the position of a payload owner, with them likely to need to fulfil the same requirements as a rocket operator before they are granted a licence. A large majority of the complaints about the *Space Activities Act*, as recognised in the 2017 Submission Analysis Report and Legislative Proposals Paper, remain.

The Overseas Launch Certificate (to become the Overseas Payload Permit) is currently the most patronised element of the Act. The changes proposed to this section primarily relate to a change of name. There are no substantive changes to the licence conditions or granting requirements beyond the need to have a debris mitigation strategy. This presents a number of complications. Currently, there are number of Australian based companies developing rocket technology that would allow them to launch either from Australia or overseas locations (some even from the High Seas). If an Australian company were to launch overseas, they would need to seek an Australian licence to launch their *rocket* overseas (or on them). The amendments, as it stands, would require these operators to see an Overseas *Payload* Permit for the launch of a rocket, an unconventional arrangement.

Opportunity for True Reform?

As stated above, the implementation of a revised Act is an opportunity to modernise the Australian regulatory environment and adopt new practices that would further promote commercial enterprise while learning from those other nations who have had success in this domain.

The amendments fail to recognise modern motifs related to domestic space legislation design. The New Zealand, when developing their legislation, recognised that an operator needs clarity and simplicity to promote commercial certainty. The *Outer Space and High-altitude Activities Act 2017* (NZ) contemplates both domestic and overseas *launch* and *payload* permits, a position that makes it extremely clear about what a satellite operator or rocket operator requires in any particular situation. When looking to design their legislation, the New Zealand government considered the *Space Activities Act,* recognising it as an example of failure, before designing their own instrument with significant industry and public consultation.

The *Space Activities Act*, and the amendment still only consider launch. As noted above, launch is not the only part of the space industry (and may in fact not be the predominant aspect of a revitalised Australian space industry). Many modern legislative instruments contemplate the continuing operation of payloads and space objects, the current Act and the proposed amendments do not. As a party to the *Outer Space Treaty* and *Liability Convention* the Commonwealth of Australia remains liable for the activities of non-Government actors well after the 30-day liability period that the current Act and the amendment contemplate. This leaves the nation liable for the activities of Australian entities in orbit.

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[2] See *Space Activities Act 1998* (Cth) ss 18(aa), 26(3)(b).

A developing area of practice is on-orbit regulation, a mechanism of ensuring that entities in the space domain consider the international obligations of a country, regard others in the space domain and ensure that Australia remains a good global citizen. This can be addressed in regulations or the terms that are imposed in licences. For this to be effective, there needs to be ability to impose conditions 'for the continuing operation of a space object.' This would need to be coupled with an appropriate enforcement mechanism. The United Kingdom's *Outer Space Act 1986* and *Space Industry Act 2018* both include the ability for the relevant Minister to issue directions to space object operators to ensure compliance with licence conditions and international obligations of the United Kingdom.[3] This is supplemented by the ability to obtain a warrant to do 'anything necessary to secure compliance' with international obligations of the state and licence conditions.[4] There are similar provisions in the Belgian space law and the United States Commercial Code that allow for the search and seizure of space objects and launch related facilities where there is risk to the public, international obligations and licence terms. At present, there is no equivalent in the *Space Activities Act* or this amendment.

When considering objects and purpose of our current *Space Activities Act* and the future amendments it is concerning that explicit promotion of a space industry is not present. The United States, in Chapter 509 of the US Commercial Code clearly state that purpose of their legislation is to 'promote economic growth and entrepreneurial activity' and to 'encourage the Unites States private sector'.[5] This is echoed in the New Zealand Act, indicating that its implementation is to 'facilitate the development of a space industry'.[6] Contrastingly, the Australian Act currently adopts a 'regulation is the purpose' approach based in international obligations and safety. Although this cannot be faulted from an international law and licencing perspective, it fails to recognise the importance of promoting the industry the enactment is to regulate. The amendment does seek to address the approach to the legislation; with the proposed s 3(b) recognising a balance between risk mitigation and industry promotion. Although this recognises the importance of promoting industry, it still leverages it against the risk factors that are present. A clearer statement of purposive intent that is not leveraged against risk factors should be included so as to recognise that promoting and encouraging the space industry is essential to its long-term success.

Concluding Remarks

This amendment process is an opportunity to further promote a burgeoning space industry in Australia. The *Space Activities Act*, in both its current form and as it would be after the proposed amendments are integrated, does not adopt a modern approach to domestic space law that would promote commercial activity in a modern and controlled manner. The amendments do improve on some aspects of the existing act; reducing the insurance cost burden, introducing a degree of environmental protection and removing the need for a space licence by introducing a facility licence. It does not however go as far in this aim as legislation such as the comparative UK, US and New Zealand legislation.

This amendment should be heavily revised so as to ensure that it accepts and adopts the recommendations from the previous review of the Act. There are a significant number of recommendations as to the clarity of the primary legislation and the complexity of application process that were included in the *Review of the Space Activities Act*. The amendments as they stand do not address these concerns; these amendments – in the most part – only see sections renamed and definitions slightly varied. This amendment process is an opportunity for Australia to re-establish itself as an innovative nation at the forefront of commercial space law.

Further, there is a concern that much of the important detail of the regulation under the Act remains to be dealt with in the Rules. This inevitably leaves lingering uncertainty regarding what the reforms may actually look like in practice. One concern may be how the obligations regarding debris mitigation will actually be determined and articulated. It would be desirable to have greater insights into some of this very important detail. Whilst we acknowledge the significant importance of debris mitigation to the future of a viable uses of space, it certainly would need to be nothing more onerous than accepted in international industry standard. We would also support the need for urgent development of such Rules as they represent the

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[3] *Outer Space Act 1986* (UK) s 8.
[4] *Outer Space Act 1986* (UK) s 9.
[5] *Commercial and Space Launch Activities* 509 USC §50901(b) (2015)
[6] *Outer Space and High-altitude Activities Act* 2017 (NZ) s 3(a)

essential detail of the new regime and delay in their implementation represents yet another delay for the Australian space industry which has been awaiting reform for several years.

In addition, it would also be reassuring to include the establishment and role of the Australian Space Agency in legislation and we welcome the opportunity to contribute to the development of such legislation in due course.

Thank you for your consideration of this submission. We welcome any correspondence in relation to the content of this submission.

Yours sincerely

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