International Aerospace Law & Policy Group

Australia's Air and Space Lawyers

Our ref: Adv

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Secretary of the Joint Standing Committee on Treaties
Parliament House
CANBERRA ACT 2600

BY ONLINE SUBMISSION:
https://www.aph.gov.au/Parliamentary_Business/Committees/OnlineSubmission

Dear Secretary,

Submission on Agreement of Technology Safeguards between United States and Australia

1. International Aerospace Law & Policy Group (**IALPG**) is an Australian-based global law practice and business advisory specialising in, *inter alia*, aerospace licensing, export controls and civil and strategic space policy.

2. IALPG welcomes the opportunity to make this submission regarding the Committee's referral of the Agreement between the Government of Australia and the Government of the United States of America on Technology Safeguards Associated with United States Participation in Space Launches from Australia (**TSA**).

3. This submission seeks to assist the Committee in its reporting on the matters arising from the TSA in respect to the National Interest Analysis, proposed treaty actions and explanatory statements.

4. In particular, this submission focuses on the objectives of the TSA as identified in the National Interest Statement, to what extent the TSA is likely to give effect to these objectives and considers possible unintended consequences arising due to the TSA.

5. This submission ultimately recommends:

a. in addition to the benefits arising from the TSA, Parliament must consider the unintended consequences of the TSA which will likely fall upon Australian non-government space actors;

b. the Committee's report make clear that upon ratification of the TSA, any amendments to the *Space (Launches and Returns) Act 2018* (**Launches and Returns Act**) and export control regulations must demonstrate a consideration of stakeholder feedback upon comprehensive consultation ahead of making any such changes. Such feedback must also be considered by the government offices administering these laws; and

c. the Committee should seek to address how matters such as Controlled Areas and Segregated Areas will impact traditional custodians of Australian territory, how the Commonwealth can seek further information under article III.7 of the TSA, the differences in security protection measures generally between the United States and the Commonwealth, the nature of the overseeing entity under article III.4 and how integrated technology is managed under the TSA.

6. This submission does not analyse specific provisions of the TSA but, rather, addresses what impact the TSA as a whole are likely to have in Australia.

7. Accordingly, the submission begins by confirming the rationale and objectives of the TSA which, by doing so, places context before exploring the TSA's likely implications, positive and adverse, upon Australian space actors. The submission then addresses why the Committee should emphasise in its report the significance that implementation of the TSA obligations by Australia should be made only after comprehensive consultation with stakeholders.

Context of the TSA and background to this submission

8. In the last ten or so years, actors in Australia's industry and research domains have increased their capabilities to carry out novel and cost-effective space launch operations. These domestic capabilities are complemented with Australia's inherent conditions which make it an appealing location for space launches to occur, which include:

a. suitable weather for year-round launches

b. access to polar, sun-synchronous and equatorial orbits

c. relatively limited ground, air and maritime activity and

d. the political stability of the state.

9. Although the United States is home to the world's largest space launch industry, without a TSA, Australian space actors are effectively prevented from engaging with United States space actors. This is most evident in the form of the export control barriers deterring United States launch vehicle operators from coming to Australia to carry out their launch operations. This is despite the increasing demand in the United States market for space launches to occur outside of the United States.

10. As confirmed by the 2021 report following the Parliamentary Inquiry into Australia's Space Capability (**The Now Frontier**),[1] Australia requires a TSA with the United States to ensure Australian actors will handle technology of the United States in accordance with the United States' non-proliferation policy, United States export control laws and the Missile Technology Control Regime. These United States obligations create a very restrictive regulatory environment for those seeking to conduct a launch from Australia using a United States. This is in contrast to non-US foreign launch vehicles seeking to be operated from within Australia, or within a nation in Asia or Europe.

11. The **National Interest Analysis** on the TSA provides further clarification on this aim to address United States obligations. The TSA makes clear it establishes a framework to protect launch vehicles, spacecraft and related equipment and technical data of the United States which is associated with the launch from or return to Australia.[2]

12. The United States has executed technology safeguard agreements with at least the following nations:

a. United Kingdom;

b. New Zealand;

c. India;

d. the Russian Federation; and

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[1] National Interest Analysis [2024] ATNIA 3 with attachment on consultation, page 5.

[2] See, e.g. TSA, paras 2, 4, 7 and 9.

e. Brazil.

13. Accordingly, in the absence of Australian parliament ratifying the TSA, Australian government and non-governmental space actors, including business, universities and research organisations, are impeded from engaging space actors from the world's largest space export market, the United States. This is all the while governments and non-government actors of the other nations are free to address that demand in the United States. This means those nations can compete in the world's largest space launch market with Australia having significantly restricted access that same market.

14. We note the purpose of a technology safeguards agreement with the United States, in general sense, should be consistent with facilitating, or streamlining, the export control processes relating to United States-originated technology being transferred to a foreign state for the purposes of space launches (and returns).

15. The TSA and National Interest Analysis leave open questions, one of which being the matter of an Australian entity having an associated entity registered in the United States and how that entity will be treated under the TSA. The TSA does, however, make clear that 'US Participants' for the purpose of the TSA includes Australian citizens who are contractors, subcontractors, employees or agents of the United States government or of a person who is both a "US Person" and a "US Licensee". Notwithstanding, Australian space actors would benefit should the Commonwealth and the United States Government make clear a designation of when certain persons who are involved an Australian space enterprise (e.g. a launch facility operator) are an agent of the United States Government for certain purposes.

16. Another question left open by the TSA and the National Interest Analysis concerns the nature of the side agreements which specify the nature of how the Commonwealth will implement its obligations under the TSA. While paragraph 22 of the National Interest Analysis notes Australia and the United States must enter into such agreements, and article III.1 of the TSA requires this, neither details the extent of authority which the Commonwealth departments or statutory authorities will exercise under such side agreements.

17. Regarding exports in a broader sense, paragraph 34 of the National Interest Analysis notes the TSA, at article V.1, does not extend to sharing of "US space technology". This terminology, "US space technology" is distinct to the TSA's meaning of "US Launch Vehicle", "US Spacecraft" and "US Related Equipment". However, such sharing of "US space" in this general sense, that

is technology which does not fall under the scope of "US Launch Vehicle", "US Spacecraft" and "US Related Equipment", will still be subject to US export control laws. In other words, space-related, technology other than that which comes under the jurisdiction of the TSA may still be prohibited without US government approval should it fall under the jurisdiction of US export control laws.

18. While recognising the TSA does not alleviate United States or Australian obligations under United States export controls, the framework(s) of the TSA should not add to the administrative burden faced either by Australian space actors or United States space actors considering to carry out or engage in launches or returns from Australia concerning United States launch vehicles.

19. In this respect, appropriate implementation of the TSA is vital to ensuring no unnecessary barriers are placed upon Australian and United States space actors who will be operating under the jurisdiction of the TSA. These barriers could come in two forms. First, through the adverse impacts arising from the TSA's obligations and, second, by way of administering Australia's domestic legislation to fulfil Australia's obligations under the TSA.

The National Interest Analysis and Australian Space Actors

The objectives of the TSA

20. The National Interest Analysis states:[3]

> *[t]he TSA contributes to Australia's national interest by opening up new commercial opportunities for Australia's space launch sector. In turn, this will help grow a strong and sustainable space launch sector that can meet the growing domestic and international demand for space launch. The TSA will also strengthen our long and meaningful relationship with the United States on space by helping our close partner manager space launch capacity constraints in spaceports in the continental United States and by providing a responsible and reliable foundation for the United States to access space from Australia.*

21. IALPG supports the stated objectives of "opening up new commercial opportunities for Australia's space launch sector "and "providing a responsible and reliable foundation for the United States to access space from Australia" (**NIA objectives**).

[3] page 3.

22. The NIA objectives are consistent with the Australian Space Agency, an agency responsible to the Minister for Industry Science and Technology, stating the TSA "will allow [United States] space technology like rockets and satellites to be launched from Australia. It will make Australia more attractive as a global launch hub – supporting growth across [Australia's] entire supply chain".[4]

23. This submission considers the extent to which the TSA's provisions are likely to achieve the NIA objectives and what unintended consequences of those provisions may be.

Distinguishing between various kinds of Australian space actors

24. The National Interest Analysis makes clear no regulatory impact statement or analysis is required. However, IALPG respectfully suggests the Committee emphasise in its report the significance of considering the potential adverse impact the TSA will have to certain industries.

25. While IALPG does not suggest the TSA provisions be amended or its ratification be withheld, we do suggest Parliament, when ratifying the TSA, must demonstrate its awareness of, or at least having had consideration as to, the possible unintended consequences the TSA will place upon *certain* areas of Australian industry.

26. The distinctions between "launch services providers", "launch vehicle operators" and "launch vehicle developers" are significant in the context of the TSA's impact on various Australian space actors.

27. Space actors engaging in operations which assist a rocket to lift-off or return to the earth are referred to as **launch services providers**. Those who develop or operate space ports and launch sites, referred to in Australian law as "launch facilities", are a typical example of a type launch service provider.

28. In Australia launch services providers include:

a. Southern Launch, which operates the Whalers Way Orbital Launch Complex and the Koonibba Test Range in South Australia;[5] and

[4] < https://www.space.gov.au/technology-safeguards-agreement-facts >.

[5] < https://www.southernlaunch.space/ >.

b. Equatorial Launch Australia, operating the Arnhem Space Centre in the Northern Territory.[6]

29. The space actors which operate the rocket, or launch vehicle, itself are typically known in the global space market as launch providers. For ease of reference, this submission uses the term **launch vehicle operator**. Gilmour Space Technologies is an example of an Australian launch vehicle operator, headquartered in Queensland [7]

30. Launch vehicle operators in "NewSpace", that is contemporary non-governmental-driven space endeavours, are typically also **launch vehicle developers**, which may develop motors, components or entire launch vehicles that they intend to also operate. Gilmour Space Technologies fits this category as it is developing and will itself operate the Eris launch vehicle.

31. While launch services providers can develop and operate a launch vehicle, as is the case of Southern Launch, and launch vehicle operators can operate a launch facility, as is the case of Gilmour Space Technologies, the primary area of business is what distinguishes one kind of actor from another. Categorising Australian space actors in this way allows a clearer illustration of how the TSA's impact varies depending on in what primary area of business that space actor is engaged.

32. The space actors with a primary business area of launch services provision are the most obvious beneficiaries of the TSA not least as they will have an expanded customer base for launch vehicles which can potentially be launched from Australia. As outlined above, that expanded customer base comes by way of facilitated entry to the world's largest space launch market, the United States.

33. For instance, launch facility operators, such Southern Launch and Equatorial Launch Australia, will likely be able to, with a great deal more ease, engage United States launch vehicle operators to launch from their Australian launch facilities. Accordingly, the TSA, by providing a pathway through the United States' technology controls, enables United States launch vehicle operators to consider Australia as a destination to launch those rockets and,

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[6] < https://ela.space/ >.

[7] < https://www.gspace.com/ >.

by consequence, brings Australian facility operators into the United States market to compete with the facility operators and other launch services providers in the United States market.

Advantages of the TSA

34. A likely advantage of the TSA to Australian industry actors generally will be the potential increase in satellite operators seeking Australia as a destination to launch.

35. Satellite operators are the customers of launch vehicle operators. They have a demand for a rocket to take their satellite into space. This demand has been increasing for over a decade and is expected to continue increasing throughout the next several decades.

36. As the TSA increases the likelihood that more launch vehicle operators will conduct their activities from Australia, satellite operators will have more choice of who they engage to launch their satellite into space when considering Australia as a launch destination.

37. Better enabling United States launch vehicle operators to enter the Australian market and launch their rockets from Australian territory, then, makes Australia a more competitive destination for the ever-increasing demand faced by satellite operators for reliable and affordable launches. Beyond this immediate advantage the TSA enables is an increased chance that satellite and launch vehicle-related supply chains and other upstream services, as well as spin-off operations, will be established in Australia and engage domestic labour to support those operations.

38. This increased incentive for satellite operators to move business to Australia is by way of satellite operators preferring to secure their supply chains and establish their manufacturing operations in close proximity to areas where launch service provision is available, as this reduces costs, time and logistical and legal complications.

39. Moreover, as the launch vehicle operators of the United States currently carry the majority of Australian-operated satellites into space, the TSA allows domestic satellite operators to launch their satellites from Australia, and, thus, incentives keeping supply chains and manufacturing operations in Australian industries.

40. It is through the increased incentives for foreign and domestic satellite operators to integrate in Australia industry which, in IALPG's submission, best represents the TSA's benefit to Australia.

41. A related impact is that the TSA will likely make it easier for satellites operators of the United States to launch from Australia. This is due to an incentive for United States satellite operators to partner with United States launch vehicle operators, the latter who take care of the export control issues for them. This also increases competition on Australian launch vehicle operators who miss out because it will be easier for the United States satellite operator to get an export permit if they use a United States launch vehicle operator (as to which see below). Australian space actors who are launch services providers, such as the launch facility operators, are still benefited through this likely impact of the TSA.

42. In summary, by facilitating United States launch vehicle operators, the TSA encourages satellite operators to carry out activities their activities in Australia. It is in this sense that the TSA is able to better integrate Australian industry, research organisations and universities into the global market of space activities.

43. Notwithstanding the likely benefit to Australia generally, Parliament when considering ratification of the TSA, must have regard to the adverse consequences which some Australian space actors, or other non-governmental actors Australia, may experience precisely because of the TSA's provisions. The increased competition upon Australian launch providers and launch vehicle developers is one example, and is explained below.

Likely Adverse Impacts of the TSA

44. Such benefits are arguably easier to foresee than the possible adverse impacts the TSA may bring about. One adverse consequence of the TSA may come upon launch vehicle operators and the developers of launch vehicles. For instance, before the TSA, Gilmour Space Technologies did not face any real competition from United States launch vehicle operators.

45. No TSA means the restricted measures of the United States technology regulations enabled Australian launch vehicle developers and launch vehicle operators to enjoy a restricted market. For the inherent advantages of Australia as a launch destination mentioned above, there is great interest for satellite operators around the world (as well as in Australia) to launch from Australia, providing that the launch market is sustainable. Such satellite operators looking at Australia, however, would *not* be able to consider using a United States launch vehicle operator. Thus, Australian launch vehicle operators, and Australian launch vehicle developers, could benefit from their domestic and international customer bases, i.e. satellite operators, having a restricted choice in launch vehicle operators.

46. This likely disadvantage which the TSA will place upon Australian launch vehicle operators and launch vehicle developers is not addressed in the National Interest Analysis. Moreover, this disadvantage is not entirely consistent with the NIA objectives. As such, IALPG suggests the Committee make this disadvantage apparent in its report, not least as it may not be obvious to members of Parliament if they are to refer only to the TSA provisions and the National Interest Analysis.

47. Furthermore, this disadvantage should be considered by government beyond the ratification process. Upon implementation of the TSA, it will be vital to not let United States launch vehicle operators or United States launch vehicle developers obtain political or other government-originated privilege which would *greater* disadvantage domestic launch vehicle operators and launch vehicle developers than is already likely to be placed upon them through the current drafting of the TSA.

48. For instance, any form of support or facilitation of United States launch vehicle operators by the Commonwealth must be simultaneously offered to domestic space actors. It is also important to not let the United States actors operating in Australia to obtain a larger voice, or be more effective with larger voice, than the domestic actors when it comes to law reform, lobbying, policy consultation or grant applications.

Implementation of Australia's TSA obligations and questions raised by the TSA

Importance of considered consultation generally

49. The National Interest Analysis makes clear no regulatory impact statement or analysis is required for the TSA's obligations to come into effect. Not least for the reason above, the TSA will likely bring about unintended consequences which impede certain Australian space actors. As such IALPG recommends the Committee's report encourage Parliament to consider such adverse unintended consequences, and not only the benefits.

50. The National Interest Analysis notes the following frameworks will be used to regulate Australia's obligations under the TSA:

a. Launches and Returns Act; and

b. Australia's defence export control laws.

51. IALPG recommend that, upon ratification of the TSA, the Government begin the consultation process seeking feedback from stakeholders on the appropriate regulatory mechanisms

which, while still giving effect to the obligations under the TSA, will not impose unnecessary burdens on otherwise lawful actors in Australia's space sector.

52. Such feedback should be by way of in-person and online briefings and workshops as well as calls for written submissions. Response to the feedback obtained during the consultation process should be made available prior to any amendments being made to the regulatory frameworks.

Controlled Areas, Segregated Areas, launch facility operators and Indigenous Australians

53. One example demonstrating why such consultations, and having considered the feedback during the consultations, is necessary come by way of the TSA's obligations relating to "Controlled Areas" and "Segregated Areas". These obligations require certain areas of Australia territory to be limited to certain peoples and allows US personnel on an uninterrupted basis to enter that territory.

54. Australian launch service providers such as Equatorial Launch Australia and Southern Launch have worked closely with Australia's traditional custodians of the lands to ensure those areas are respected and that those peoples are involved in relevant decision-making processes related to the use of those areas.

55. Without considering feedback from stakeholders such as Australian launch facility operators and traditional custodians, the Commonwealth's enforcement of the TSA obligations concerning Controlled Areas and Segregated Areas could undermine these arrangements and result in counterproductive treatment of the traditional custodians in respect to their connection with their land.

Information as to the purpose and outcomes of each US Spacecraft

56. Article III.7 of the TSA states the United States Government shall provide the Commonwealth with a written statement as the purpose and the outcomes of each US Spacecraft and associate Launch Activities. This is intended to be with sufficient information to enable the Commonwealth to make a determination on whether to approve an activity governed by the Launches and Returns Act.

57. IALPG suggests the Committee's report consider how the side agreements, and any reforms made to the domestic legislative frameworks, will allow for the Commonwealth to request further information related to the US Spacecraft and associated Launch Activities should the

information, in fact, be insufficient for the Commonwealth to make a determination on an activity controlled by the Space Launches and Returns Act.

58. For instance, should the Commonwealth not receive sufficient information it may be compelled to refuse an application made, or an activity otherwise controlled, under the Launches and Returns Act. Rather than refusing an activity under the Launches and Returns Act on the basis of insufficient information from the United States, the Commonwealth (and by extension Australian space actors) should have confidence that any requests made by the Commonwealth to the United States for further information under article III.7 will be considered in good faith by the United States government.

Difference in the measures taken to protect security between the United States and Australia

59. Another matter which the Committee may seek to address in its report concerns the relatively robust approach in United States law, policy and culture to defence of property and other security matters. For example, United States law, policy and culture supports the use of lethal force in defence of property, whereas that would not generally be lawful in Australia. Furthermore, a 'no retreat' approach is reflected in law, policy and culture in many United States jurisdictions, whereas Australians are expected to consider retreat as an alternative to the use of lethal force. Security arrangements in respect of Controlled Areas and Segregated Areas should be based on guidance and direction on Australian law, policy and culture, especially in respect of defence of property. The risk of an excessive use of force by United States-engaged security personnel or contractors may be significant enough to warrant insistence by the Committee for guidance and direction on how force is used, for the security of such Controlled Areas and Segregated Areas.

60. This security issue is relevant to the implementation of the Commonwealth's obligations under the TSA insofar as Parliament and the administrators of the legal frameworks will need to consider the rights of domestic actors in such situations, which ideally will be reflected in the domestic legal frameworks to give certainty to Australian space actors.

Appointment and powers of overseeing entity

61. A further example raising the question of implementation and considered stakeholder feedback concerns article III.4 of the TSA. This obligation requires the Commonwealth to appoint an entity to oversee the exchange of US Technical Data.

62. There is a lack of detail on the eligibility criteria and the powers associated with such a role. Before reforming any domestic legal frameworks, the Commonwealth will need to make clear what such criteria and powers are and allow stakeholders to provide comment. Failing to do so introduces uncertainty on Australian space actors.

Considerations on integrated technology

63. An area calling for proactivity from the Commonwealth regarding the implementation of its obligations under the TSA involves circumstances where there are seemingly two originating locations in the creation of intellectual property. Such a situation could arise where the United States technology under the TSA's jurisdiction integrates elements of Australian-originated technology, or vice versa. An example is an Australian entity which designs and develops the technology a spacecraft which is assembled in the United States and then exported to Australia.

64. Some level of integration is unavoidable. The operator of a US Launch Vehicle will need to know some essential information about the satellite that vehicles is going to carry. Moreover, such information will, in most cases, need to be integrated with the launch facility from where the launch is taking place.

65. Similarly, the operators of a US Spacecraft planned to be carried by an Australian launch vehicle from Australia will need to be privy to certain information about that Australian launch vehicle, and possibly also about the Australian launch services provider. The TSA does not provide information the technology transfer from Australia will be managed in those situations.

Concluding remarks

66. While opening up Australian launch developers and launch vehicle operators to the competition from the world's largest space market, the TSA may not strictly achieve the NIA objectives in every sense. However, by incentivizing satellite operators to come to Australia, it is likely the TSA will likely meet the standard set in its Preamble.

67. The TSA's Preamble acknowledges the Australian Government's intention to enable Australia's "private sector to grow the commercial uses of outer space in a peaceful, safe and sustainable manner". By incentivising satellite operators to come to Australia, the TSA allows the government to realise this intention, notwithstanding the adverse effects which are likely to fall upon certain types of Australian space actors.

68. This emphasis in the TSA Preamble of "commercial uses" of space is appropriate. This phrasing allows focus upon the Australian end beneficiaries of satellite-derived services, and not only concentrating on the Australian space actor themselves. The TSA in this sense sets a wider ambition.

69. Commercial uses of space form a wide field but are ultimately possible through satellite services. Increased satellite operations in and from Australia not only benefits those who take new opportunities in satellite supply chains and upstream space services. Australian industry and research organisations outside of the space domain will also benefit from any increased access to bespoke or cheaper downstream applications of satellite services which assist operations in various Australian sectors including agriculture, logistics, advanced manufacturing, disaster response and environmental management.

70. The TSA's direct effect of a likely increase in launch providers operating in Australia means the indirect effect of providing satellite operators with a greater incentive to come to Australia. The commercial uses of space which derive from space services means the TSA benefits ultimately go beyond launch services providers.

71. IALPG suggest the Committee's report:

a. clearly identify the likely advantage the TSA will have on Australian space actors who are launch service providers and domestic satellite operators as well as on the users of satellite-derived services while also clearly identify the disadvantage the TSA will likely place upon Australian space actors who are launch vehicle operators and launch vehicle developers;

b. make clear that the implementation of the TSA will require the Australian frameworks to undergo necessary updates, and those updates must not proceed until feedback from comprehensive consultations have been considered by the administrators of the frameworks, and by those changing the frameworks, with the ultimate aim to place the least amount of burden on Australian space actors as necessary for Australia to meet its obligations under the TSA; and

c. consider gaps and questions left open by the TSA and the National Interest Analysis, such as:

i. how the implementation of Controlled Area and Segregate Area obligations will be consistent with traditional custodians of Australian territory and not interfere with the voluntary arrangements made between those custodians and Australian space actors;

ii. how the Commonwealth can obtain further information from the United States should the information provided under article III.7 be insufficient;

iii. how the different measures taken to protect security taken by the United States and Australia can be identified and guidance be provided to both United States and Australian actors operating under the TSA's jurisdiction;

iv. the nature of appointment and the extent of the powers of the entity appointed to oversee exchange pursuant to article III.4; and

v. how technology transfer will be managed in circumstances where technologies are integrated using technology originating from both the United States and Australia.

Please do not hesitate to contact us on the details below should you have any questions or require a verbal briefing on our submission.

Yours sincerely

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