13 December 2018

SPACE LAUNCHES AND RETURNS ACT 2018

SUBMISSION TO THE PUBLIC CONSULTATION ON THE DRAFT COST RECOVERY IMPLEMENTATION STATEMENT

The Space Industry Association of Australia is a national organisation formed to promote the growth of the Australian space industry. We speak with authority and credibility on behalf of our members on policy and commercial issues connected with the Australian space industry.

The SIAA takes a leading role in advising government on behalf of the space industry. We also provide a forum to promote networking and collaboration among members. Through meetings and events held in various Australian locations, we engage with our members to devise and communicate policies to support the development of the Australian space industry. We actively promote and facilitate commercial, industrial and research opportunities for our members nationally and internationally.

We also harness the skills and expertise of our membership to address issues of common concern to corporations, businesses and individuals involved in, or seeking to become involved in, the benefits of the space sector in Australia and internationally.

The SIAA welcomes the opportunity to provide input into the proposed Cost Recovery regime, and we are pleased to provide this submission on behalf of our members.

Space Industry Association of Australia Limited ACN 613 961 005
contactus@spaceindustry.com.au
www.spaceindustry.com.au

c/- Nova Systems
27-31 London Road
Mile End SA 5031
Australia

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SUMMARY OF KEY POINTS

Reflecting the clear and emphatic opinions of SIAA members potentially affected by this proposal, the Space Industry Association of Australia voices the following major concerns about the Draft Cost Recovery Implementation Statement:

1) A cost recovery fee regime is proposed for adoption before the processes and the expert analyses required in applications for the various licenses/permits have been identified and discussed with industry;
2) The fees are completely open-ended with no incentive to contain costs and no certainty in relation to the magnitude of the fees for which Australian applicants will be responsible;
3) The proposed fees for Australian applicants are being set in isolation, without regard to the fee regimes of Australia's competitors for space launch business, and
4) The proposed cost recovery fee structure will be a major disincentive to the successful establishment of the nascent Australian space launch industry and the Australian Space Agency's mission more generally, with its heavy emphasis on building start-up ventures to grow the Australian space economy.

We note that the Australian Government Cost Recovery Guidelines, on page 6 at paragraph 12, state that "In certain circumstances, cost recovery may also be contrary to intended policy outcomes, such as the provision of community services or industry support."[1] SIAA believes that this paragraph applies to the space industry in Australia, given its current state as an embryonic rather than a fully matured industry.

The SIAA believes that the cost recovery fee regime is inappropriate for Australian space activities because its international competitors generally do not charge these fees. SIAA further submits that any decision on the imposition of fees for licences and permits under the *Space Activities (Launches and Returns) Act 2018* should be postponed until all interested parties, including the Australian Space Agency, have been given an appropriate opportunity to consider whether a cost recovery fee regime is consistent with the Commonwealth Government's stated commitment to 'the development of Australia's space industry to drive investment, create jobs and position Australia as a key participant in the global space economy'.[2]

[1] https://www.finance.gov.au/sites/default/files/australian-government-cost-recovery-guidelines_0.pdf
[2] Australian Government Response to the Review of Australia's Space Industry Capability, May 2018

INTRODUCTION

The Space Industry Association of Australia was established in 1992 to promote and assist the development of a viable and self-sustaining space sector in Australia and to encourage, advocate for and promote education, research and development in space science in Australia. Our members include Australian satellite operators, global aerospace prime contractors, Australian State and Territory Governments, the CSIRO, Australian owned companies, research institutes of Australian universities, scientists, engineers, consultants and young professionals. As the peak space industry body in Australia we have been at the forefront of space policy formulation and debate in this country for over 25 years.

This is the latest in a series of submissions from the SIAA on the topic of reforming the Australian space launch regulatory regime established in the Space Activities Act 1998. Copies of our previous submissions on this subject are available here.

Following the Commonwealth Government's decision to establish the Australian Space Agency charged with developing 'an overarching strategy and investment plan to grow Australia's space industry', we are aware of at least seven companies that are progressing plans for various launch activities in Australia. These include suborbital and orbital launch services from Nhulunbuy in the Northern Territory, from the Eyre Peninsula in South Australia, and from Queensland. A number of companies are also developing their own launch vehicles.

The SIAA has consistently argued that the regulatory framework for Australian space activities should:

1) Establish a constructive and supportive environment to attract and foster investment in Australian space activities
2) Ensure that any obligations imposed on business entities attempting space activities from Australia are clear, unambiguous, workable and free from arbitrary determinations; and
3) Be no more onerous for Australian participants than is the case in other spacefaring nations.

Our primary concern is to ensure that the regulatory scheme is realistic in terms of the operational requirements of space launch for both the operator and the regulator and does not disadvantage Australian participants relative to their international competitors. The SIAA has previously noted that the practical effect of the current legislative reforms will depend in many areas on the detailed drafting and implementation of the subordinate legislation to be known as the 'Rules'. SIAA notes that this Draft Cost Recovery Implementation Statement is the first opportunity that SIAA and the Australian space community have had to comment on elements of the Rules.

We have previously urged the Government to establish an ongoing consultative mechanism with the SIAA and other stakeholders in relation to the operation of the legislation and subordinate instruments, to ensure that problems are identified and addressed. As the peak space industry representative organisation in Australia we have encouraged the Government to consult closely with the SIAA in the drafting of the Rules so that the operational and practical knowledge of space launch and operations held by SIAA members can be taken into account in the Rule making process at an early stage.

1. COMMENTS ON PROVISIONS IN THE DRAFT COST RECOVERY IMPLEMENTATION STATEMENT

In previous submissions regarding reforming the Australian space launch regulatory regime SIAA has highlighted its concern about the level of potential fees to be imposed by the Government for the various licensing steps. SIAA noted that in setting its fee structure, it would be important for the Government to ensure that promising Australian businesses do not decide to relocate overseas due to heavy-handed fees and regulatory structures.[3] Unfortunately SIAA has grave concerns that the proposed fee structure will have precisely that effect.

As set out above, SIAA has four major concerns about this Draft Cost Recovery Implementation Statement:

1) A cost recovery fee regime is proposed for adoption before the processes and the expert analyses required in applications for the various licenses/permits have been identified and discussed with industry
2) The fees are completely open-ended with no incentive to contain costs and no certainty in relation to the magnitude of the fees for which Australian applicants will be responsible
3) The proposed fees for Australian applicants are being set in isolation, without regard to the fee regimes of Australia's competitors for space launch business, and
4) The unanimous view of the companies intending to establish commercial launch operations in Australia is that the proposed cost recovery fee structure will be a major disincentive to the successful establishment of the nascent Australian space launch industry and the Australian Space Agency's mission more generally, with its heavy emphasis on building start-up ventures to grow the Australian space economy.

[3] http://www.spaceindustry.com.au/Documents/siaa_senate_submission_final.pdf

2. COST RECOVERY FEES ESTABLISHED BEFORE REGULATORY OBLIGATIONS

An essential input into an analysis of a cost recovery process is a complete understanding of the activities that need to be conducted in the various licensing processes. Yet the application process and requirements for the applicant for the various licenses have not yet been established. SIAA understood that part of the process of reviewing the space activities legislation was to explore ways to streamline the various requirements and activities in the light of more up to date information and processes as well as trying to find a balance between the need to regulate and the desire to minimise the regulatory burden on Australian companies. A fee structure has been proposed before the potential to streamline the regulatory processes has been fully considered.

We note that the Australian Government Cost Recovery Guidelines state, at page 23, paragraph 56, under the heading "Implementation strategy" that:

'56. The high-level cost recovery model should be supported by a broad implementation strategy. In developing the strategy, entity staff should consider the following:

- **timing**—when should charging commence? Should it be phased in? Has adequate time been allowed for the passage of any legislation and for stakeholder engagement?'

Therefore the SIAA believes that the issue of timing of the development of any fees for Australian space activities needs to be reconsidered and the introduction of any fees should be postponed until all interested parties, including the Australian Space Agency, have been given an appropriate opportunity to consider whether a cost recovery fee regime is consistent with the Commonwealth Government's stated commitment to the development of Australia's space industry.

3. FEES ARE OPEN-ENDED

The Draft CRIS proposes that all fees for any external technical expert support required for the evaluation of applications and regulation of the activities be passed on to the applicant in full under both the Full Cost Recovery model and the Partial Cost Recovery model. SIAA believes that this will be a major impediment for space activities in Australia particularly for emerging launch activities.

The SIAA notes that the figures provided for technical expert review of the various applications in the table on page 9 of the Draft CRIS are estimates only. Again, these estimates have been put forward prior to the full understanding of the process that is required for each application and subsequent regulatory oversight activities. It is unclear what figures have been used to derive these numbers in the absence of an established application and regulatory oversight process.

These proposed technical expert fees are an unknown quantity and are not subject to any upper limit. Additionally, there is no incentive for the Government to minimise these fees, nor for an external technical expert to undertake a review efficiently. An Australian applicant will have no practical way of determining in advance how much it will cost them to obtain a license for space activities in Australia. All they know is that they will need to pay for whatever the Australian Government deems necessary in terms of external advice to assess their application and to regulate their activities. This situation will have a significant negative commercial impact on companies planning to undertake launch activities. The inherent uncertainty and potential open-ended liability in the fee structure is difficult for any company to reconcile in a business case but it is potentially fatal for start-up companies trying to secure investment for new space activities in Australia. Investors need certainty and a fee regime that is uncertain and open-ended is the antithesis of what is required to stimulate new activity in the Australian space sector.

If, contrary to the practice in other jurisdictions (refer to the section entitled 'Comparison of Proposed Fees to Those of International Competitors' below), fees are to be charged, as a minimum SIAA recommends that the Government accept a degree of risk to support the nascent Australian space industry by creating a fixed fee structure that caps the level of technical fees that can be charged. This would create an upper limit on fees and some level of financial certainty for the applicant and their potential investors.

Setting an appropriate cap on potential technical fees will require the application process and ongoing regulatory activities to be established and understood. This is another reason why the establishment of a fee regime should be delayed until the fundamental activities required for the application and regulatory process are established.

4. COMPARISON OF PROPOSED FEES TO THOSE OF INTERNATIONAL COMPETITORS

Space activities serve an international market. The phenomenal growth of commercial space activities in the 21st Century has generated a heightened interest in capturing a part of the growing space business in most developed countries. Indeed, the Australian Space Agency was established to help Australian businesses capture a larger share of this growing market.

SIAA has always stated that the regulatory burden on Australian participants should be no more onerous than those imposed on our international competitors. As a minimum we want a level playing field so that Australian proponents have their best chance of success. Ideally, we would like to see a regime structured in a way that not only encourages Australian ventures to remain in Australia but also attracts foreign ventures to establish themselves in Australia.

We note that the Australian Government Cost Recovery Guidelines, at page 21 paragraph 50, state that

"In developing the policy rationale, staff should:

- determine the impact of cost recovery on government policy outcomes, such as any impacts on international treaties, access to essential community services or access to government data
- analyse the effect on competition, innovation and the financial viability of the directly affected individuals and organisations, including the cumulative effect from other government activities
- consider whether similar activities are undertaken in Australia or overseas and what can be learned from those activities"

In this context it is important to examine the proposed Australian fees in the light of other space-faring jurisdictions that are competing with Australia for space activities. A quick review of the regulatory fees within the limited time available for this submission shows that the proposed Draft CRIS structure is out of step with most other space-faring nations, who do not appear to charge any regulatory fees for their space activities.

In the time available for this public consultation SIAA has briefly investigated the fee structures in the regulatory regimes of the following 15 nations that are both active in space and that have domestic space activities legislation, specifically: Austria, Belgium, Canada, France, Germany, Japan, Kazakhstan, Netherlands, New Zealand, Norway, Russia, Sweden, Ukraine, United Kingdom, and the United States. As far as we are aware none of these 15 countries has fees for launch licences, and any fees are confined to overseas payload permits. SIAA could find evidence of a regulatory regime that charges fees for licence applications in only three of these countries (Austria, Belgium and the UK). Austria charges Euro 6,500 and the UK charges GBP 6,500 for an overseas payload permit and both pass on any technical costs, but the UK does not impose any fee for scientific or educational missions. Belgium does not have a fixed fee but decides what to charge on a case by case basis, including any technical fees. The UK has recently passed legislation for launch activities but the regulatory regime including fees is under review. SIAA could not find any evidence of fees within the legislation or regulations of the remaining 12 countries investigated.

Two of the biggest competitors for Australia in terms of potential locations for space companies and launch activities, the US and New Zealand, **definitely do not charge fees for licenses or permits for space activities.** It is interesting to note that the US does not even require its nationals to obtain an overseas payload permit, it only regulates for activities within the US. The *New Zealand Outer Space and High-altitude Activities Act 2017 (OSHAA)* provides the authority for the New Zealand regulator to establish fees for licenses and permits but the regulator has chosen not to impose fees at this early stage in the development of the New Zealand space industry. A 'Regulatory Impact Statement' compiled

by the NZ Ministry of Business, Innovation and Employment in relation to the OSHAA[4] recommends an approach of prescribing the minimum necessary regulatory requirements at this stage, including no licence fees, noting that "[a] flexible and nimble approach to regulations permits the regime to adapt as our experience and knowledge of the industry grows and to evolve in line with international best practice."

Based on this quick review of other space-faring nations Australia's proposed fee structure would place Australia among the small minority of nations that charge fees for licences and permits for space activities. In particular, under the proposed regime Australian organisations would incur higher fees for operating from Australia than if they were to establish their operations in almost any other jurisdiction, particularly in two of our biggest competitors for space business – New Zealand and the United States.

5. INCOMPATIBILITY OF PROPOSED FEES WITH GROWTH OF A NASCENT INDUSTRY

A goal of the Australian Space Agency is to triple the size of the Australian space industry from $4 billion to $12 billion by 2030.[5] Achieving this goal will require the establishment of new space ventures and companies in Australia to grow the Australian space economy. This means building new businesses and start-up companies, activities where capital expenditure precedes any revenue stream and the money is always tight in the early years. The philosophy of full or even partial cost recovery for regulatory activities is incompatible with the goal of growing a nascent Australia space industry.

The state of the Australian space industry now and for the foreseeable future is such that much of the demand for these licenses and permits will come from the start-up sector. This is particularly true for the activities governed by the proposed licenses and permits where most of the applicants will be from start-up companies or educational/scientific institutions.

Like the industry itself, the Australian Space Agency is nascent. The Agency needs to develop, learn and grow experience of the conditions surrounding applications. If the Agency passes on internal and external costs during this learning phase, then fees will be artificially high for early applicants, who will essentially be funding the learning process of the agency.

A cost recovery fee regime is more suited to a mature industry that provides regular launches to large commercial clients. It is not at all suited to an environment which requires

[4] https://www.mbie.govt.nz/info-services/sectors-industries/space/new-zealand-space-agency/document-image-library/folder-pdf-library/ris-oshaa-2017-regulations.pdf
[5] https://www.minister.industry.gov.au/ministers/cash/media-releases/turnbull-government-launches-australias-first-space-agency

building and growing the industry from a low base with sporadic and irregular applications which is the current situation with space launch activities in Australia and overseas payload permits.

Moreover, the new Australian start-ups must compete in a market where most jurisdictions (including the United States) do not base the fees payable on any cost recovery principles. The level of fees, especially for university departments and not-for-profit research organisations, is an important financial consideration in determining the feasibility of experimental satellite projects.

In terms of the Overseas Payload permit, the large corporate satellite operators welcome the proposed reduction in fees from $10,000 to approximately $6,000 provided that there are no technical fees that will be passed on. But for the other end of the spectrum, the less well funded scientific and educational community, the increase in their fees from $100 to $6,000 could significantly curtail their ability to launch satellites. Previously small scientific/educational projects have been achieved for cash outlays of just over $100,000 for the cost of the parts and the $100 license fee (relying on unpaid labour and donated launch, etc. to complete the project). The proposed $5,979 fee represents a significant increase for these small projects and it is not at all clear whether they could continue under such a proposed fee structure.

SIAA notes that the power under the current Act to set lower fees for approved scientific and education organisations (under section 59 of the previous *Space Activities Act 1998*) has been removed. However, SIAA understands that the Rules may prescribe the circumstances in which the Minister may 'wholly or partly waive a fee that would otherwise be payable' (section 59(6)). We suggest that the proposed Rules should address the circumstances in which the Minister should consider waiving or reducing such fees.

Australia's fledgling launch industry is also significantly challenged by the proposed fee structure. As discussed previously the open-ended technical fees for establishing a facility and obtaining a launch permit are only guesses at this stage and have the greatest risk of exceeding the estimates for these as yet undefined application and ongoing regulatory activities. Australian launch proponents do not know what their application and regulatory processes and hence costs will be based on this fee structure. This makes it difficult to plan, to raise funding and win business particularly when their near competitors do not have similar fees.

Additionally, the concept of cost recovery begins to break down when dealing with low volume, low cost activities. Australian launch proponents will initially be operating at the low-cost end of the launch spectrum targeting the cubesat market. A key competitor will be New Zealand based RocketLab which advertises launches for USD$5 million. To win businesses initially Australian operators will need to undercut the competitors' price hence will need to offer services well below that range to break into this competitive market. For example Australian start-up Gilmour Space Technologies is trying to develop a rocket system

that can meet launch prices of around USD$1 million for suborbital launches and USD$2.5million for launches to Low Earth Orbit[6]. We have calculated that the Australian licence fees will be of the order of US$150,000 per launch (assuming the technical expert fees are as estimated and the facility licence fees are amortised over multiple launches). This demonstrates that the proposed fees for launch licenses and permits can be as high as 15% of the launch price at this low end of the market which is a significant financial burden that the main competitors with the Australian launch industry will not incur. It should also be noted that the proposed fees could be much higher if estimated technical costs prove to be higher than anticipated. It is clear that the proposed fees are highly likely to have a significant impact on the viability of Australian launch businesses, which as previously mentioned, runs counter to the principles of cost recovery outlined in the Australian Government Cost Recovery Guidelines.

Any proposed fee structure should be designed to accommodate the needs of launch vehicle providers who may require several launches whilst they are in the developmental stages. The fee structure should take into account the fact that the development of any commercial service is preceded by a series of test launches which do not generate any revenue. A fee structure that does not factor in the developmental requirements of any launch project has the potential to significantly stifle innovation and growth in the industry and acts as a disincentive.

Australia's natural advantages as a location for the testing of new rocket systems make it highly attractive to international companies, however there is a significant risk that the attractiveness as a potential location for testing of these systems this will be negated by the existence of the proposed cost recovery model.

If the Australian space industry is to triple in size – which was a large part of the rationale for the establishment of the Australian Space Agency – then the industry needs to attract foreign sales and retain more space activity in Australia. Therefore, the cost of launching a payload from Australia (whether the payload operator is Australian or foreign), should not be significantly more than the cost of launching a payload overseas and preferably, should be more attractive than launching a payload overseas. A cost recovery approach that sets the licence application fees at zero, regardless of whether the payload is launched in Australia or overseas, creates a level playing-field – it is neither protectionist in favour of Australia, nor does it discourage launches from Australia.

[6] Based on the low end of the range of prices quoted on the Gilmour Space website See https://www.gspacetech.com/launch-vehicles

6. CONCLUDING COMMENTS

In this submission SIAA has shown that there are some serious concerns that the proposed fee structure will have the effect of significantly curtailing the range of space activities in Australia for both launch of payloads overseas and particularly for launch activities from Australia. SIAA does not believe that a cost recovery model is the right approach for the nascent Australian space industry. Such a fee structure could seriously impede the largely start-up nature of the Australian space sector and hence is incompatible with Australian Space Agency goals of tripling the Australian space sector by 2030.

Our quick analysis of 15 space-faring jurisdictions found no evidence of any launch licence or permit fees in any of these jurisdictions and no fees at all in 80% of those jurisdictions including no fees for two of the Australian space industry's most direct competitors - New Zealand and the United States. SIAA firmly believes that the Government should join with the majority of these space-faring nations and impose no fees on Australian space activities to help level the playing field for Australian organisations.

SIAA is very concerned with the concept and the process of setting any fees for Australian space activities. In summary:

- SIAA has indicated that the cost recovery model does not work well at the low cost, low volume end of the space activity spectrum which is where the early phase of Australian space activity will be concentrated.
- This cost recovery model is incompatible with the goals of rapidly growing the Australian space sector.
- The open-ended and uncapped nature of the proposed technical fees in the licensing process resulting in uncertainty in building a business case and raising funding for start-up companies.
- The fees have been proposed before the activities associated with the fees have been defined.

The view of SIAA, as a result of the observations we have noted above, is that this process is unlikely to produce a beneficial outcome for the industry in Australia. As a minimum, SIAA recommends **a moratorium on fees until the basics of the application process and ongoing regulatory activities are clarified, to ensure that both industry and Government have time to:**

- **sufficiently understand the upcoming nature of activities, and**
- **construct a regulatory regime that will support the Australian space industry in its endeavour to grow rapidly and win international business for Australia.**