Department for Business, Energy & Industrial Strategy

Department for Transport

Civil Aviation Authority

UK SPACE AGENCY

CALL FOR EVIDENCE: SPACE INDUSTRY ACT 2018 – GOVERNMENT RESPONSE

A summary of the responses to the call for evidence that was issued on 27 March 2018 in relation to the Space Industry Act 2018 provisions on liability, insurance and charging.

28 May 2019

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A summary of the responses to the call for evidence on the Space Industry Act 2018 provisions on liabilities, insurance and charging.

This summary of responses to the call for evidence can be found on the BEIS and DFT sections of GOV.UK:

https://www.gov.uk/beis

Summary of responses to the call for evidence

Any enquiries regarding this publication should be sent to us at SpaceflightRegulation@ukspaceagency.gov.uk.

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Introduction

A key strand of the Government's Industrial Strategy is for the UK to hold a greater share of the commercial spaceflight market, worth an estimated £25 billion over the next 20 years, by developing safe and competitive commercial spaceflight for small satellite launch and sub-orbital flight from the UK.

The Space Industry Bill was introduced into Parliament in June 2017 and received Royal Assent on 15 March 2018 becoming the Space Industry Act 2018 (SIA). The Act establishes the regulatory framework to enable spaceflight and associated activities to take place from the UK.

Keen to gather industry views to help inform the further development of the framework, the Government published a call for evidence on 27 March 2018 and included questions about liabilities, insurance and charging provisions.

In the call for evidence, the questions relating to **liability** were relevant to those considering engaging in launch activities from the UK. This includes launch for both space and sub-orbital activities. The key issue about which evidence was sought was the impact on launch vehicle operators of holding unlimited liabilities, and the use in contracts of cross waivers of liability for injury or damage arising out of spaceflight activities.

The questions relating to **insurance** were relevant to the new activities to be regulated under the SIA, namely: launch from the UK (space and sub-orbital), the operation of a spaceport and the provision of range control services in the UK. The key issues about which evidence was sought was the cost and availability of third party liability insurance (TPL) assuming an unlimited liability and the methodology for setting the minimum TPL insurance requirement. The call also included questions about other types of insurance that may be required for these new activities and the use of financial securities instead of traditional insurance policies.

Finally, the questions on **charging** were relevant to all of the activities to be regulated under the SIA and those currently regulated under the Outer Space Act 1986 (OSA). These include launch from the UK (space and sub-orbital), procurement of a launch by a UK satellite operator on a UK or overseas launch, the operation of a spaceport in the UK, the provision of range control services in the UK and the operation of a satellite in orbit by a UK entity both from the UK and overseas. The key issues about which evidence was sought were in relation to industry's preferred approach to charging, experience of charging regimes in other countries and information about the expected costs associated with carrying out these spaceflight and associated activities.

As this was a call for evidence, there were no specific policy proposals identified within the document in relation to the areas of liabilities, insurance or charging.

We have produced a high level summary of the key points raised, rather than a detailed summary for each of the questions asked.

The Government is taking the evidence and views of stakeholders into account in developing its regulations and guidance in these areas. We will continue to engage with stakeholders ahead of formal consultation.

Conducting the call for evidence

LaunchUK is Government's spaceflight programme run jointly between the Department for Transport, the UK Space Agency and the Civil Aviation Authority.

The call for evidence was sent to over 500 contacts who had engaged previously with the LaunchUK programme through registering interest or participating in workshops held in April 2017 and around the country in November and December 2017. The list of contacts also included those who had expressed an interest in bidding for grant funding from the UK Government to progress their proposals to establish spaceport and launch activities.

The Government also issued a press notice and content on social media. A number of media outlets included reference to the call for evidence.

There were also a number of high profile events at which the call for evidence was flagged by UK Government participants including the Californian Space Symposium, as well as other meetings with stakeholders. The call was also forwarded to representatives in the devolved administrations and British Overseas Territories and Crown Dependencies.

No workshops were held on the call for evidence. Respondents to the call for evidence were asked whether they wished to participate in future workshops and we will take these responses into account when forming any such groups.

Whilst the call for evidence had been sent to members of the public who had attended previous workshops, there was no further targeted campaign to highlight the call to the general public. This was because of the highly focussed and technical nature of the questions being asked.

A summary of who responded to the call for evidence

The call for evidence sought views and evidence from the widest range of stakeholders, including members of the public.

We received 14 responses to the call for evidence. These were submitted to the spaceflight regulation mailbox. A list of the respondents can be found in Annex A.

A summary of the respondents can be seen below. All of the responses were from organisations with links to the spaceflight industry (e.g. satellite and launch vehicle operators and insurers).

Respondent type	**Number of respondents**
Satellite operators	5
Launch vehicle operators (vertical)	3
Launch vehicle operators (sub-orbital)	1
Insurers	3
Other	2
Total	**14**

A summary of the views expressed

Liabilities

Unlimited liability for launch activities from the UK

Respondents were asked what impact having an unlimited liability to indemnify Government and to indemnify claimants (third parties) would have on launch activities from the UK and how this might affect a UK launch business. Most respondents who replied to these questions said that they wanted to see a limit on liabilities for launch activities from the UK. Most respondents thought that by not having a limit on liabilities, the UK would would be at a disadvantage when competing internationally. This was because other countries have a limit and also due to concerns around availability and/or cost of insurance and lack of clarity for business as to level of potential exposure to liabilities. A number of respondents also thought that the Government should share liability with operators. Having a limit was therefore considered necessary to make the UK more attractive for launch.

Questions were also asked about how such a limit should be set, if Government deemed it appropriate to limit liabilities for launch activities from the UK. Most respondents generally preferred to see some sort of variation in any liability limits applied to reflect risks associated with different types of launch. There were a number of different views as to how the limit could be calculated and applied. Some respondents said they would prefer a set limit for various mission types (for example, by launch vehicle type or by mission classification; standard or non-standard), whilst others thought limits could be set on a case-by-case basis using a Maximum Probable Loss[1] approach as is used in the US or Australia.

Operators thought that both types of liability (i.e. an operator's liability to indemnify Government and an operator's liability to third parties) should be limited.

Cross-waivers

Questions were also asked about conditions within licences that mandate the use of cross waivers of liability in contracts for injury or damage from carrying out licensed activities. Most respondents were familiar with the use and purpose of cross waivers as it is standard practice for launch activities in other countries such as the US and France. One

[1] MPL is an approach that would seek to calculate the amount of potential third-party liability claims that an operator could incur in a realistically probable scenario. The US definition is 'The MPL is a dollar value assessment of government and third-party properties at risk of damage from launch-related activities or conduct.'

respondent thought that the use of cross waivers could threaten small operators with liquidation unless they had insurance.

One respondent stated that it is vital to identify contractually who is liable for each particular type of risk in spaceflight activities from the UK to prevent complex liability claims.

Insurance

Availability and cost of insurance

Questions were asked about the availability and cost of third party liability (TPL) insurance. Seven respondents commented that TPL insurance is unavailable to cover an unlimited liability. This was expressed by both space sector and insurance sector respondents. One respondent noted that insurers have a maximum limit of liability that they could be exposed to and in addition, need to monitor any accumulation that might occur from one event.

There were a few comments that it is possible to secure a set amount of TPL insurance if the launch vehicle has flight heritage and the level of insured risk is known. One respondent said that for newer launch vehicles it might be more difficult to obtain hull / asset insurance, although TPL insurance might still be obtainable. The same respondent thought the first launch from the UK might not be insurable or would be prohibitively expensive to insure for these reasons. Some respondents had noted that cost and availability of insurance had impacted on their operations.

Respondents said that there are a number of factors that influence TPL insurance premiums, including the level of risk, level of cover sought (including whether any excess is applied) and prevailing market conditions. A number of respondents noted that if there is a large claim paid by the market in the future, then this may impact the availability and cost of insurance.

Maximum Probable Loss approach

The call included questions about using an MPL approach as a way of setting the amount of TPL insurance for UK launch (both orbital and sub-orbital). There were mixed views on adopting this approach across the responses to questions in both the insurance and liabilities sections of the call for evidence. Slightly more respondents favoured an MPL approach than not - stating that such an approach is familiar to many operators and the calculations for insurance requirements can be tailored to the individual operation concerned, making insurance more affordable.

One of the objections raised regarding an MPL approach was the additional costs that would be involved in the modelling work by operators. Some respondents instead

preferred a set amount of TPL insurance or alignment with the traffic light system, citing the approach taken to licensing in-orbit operations of satellites under the OSA currently.

Insurance requirements for a spaceport other than TPL insurance

Questions were asked about the types of risks that spaceports would expect to insure against. Respondents identified the following as possible types of cover that might be applicable to spaceports:

- Property damage to ground infrastructure
- Weather damage / natural disasters
- Property damage to aircraft/spacecraft
- Environmental/pollution damage
- Security risks
- Ground handling (and other contractors') risks

Respondents considered that such cover could be obtained through conventional insurance products.

Insurance for a range control service provider other than TPL Insurance

Questions were asked about the types of risks that range control service providers would expect to insure against. There were few responses to these questions. Premises and products liability insurance were two examples cited by one respondent.

Alternative Securities

Questions were asked about the use of alternative financial securities instead of traditional insurance, the types of securities that might be appropriate and whether such securities would be used. Half of the respondents answered questions on securities. Whilst a number of these respondents thought that including provisions in respect of securities was useful, the actual use of such securities was thought to be unlikely, with only one respondent saying that they would be likely do so. One respondent observed that making use of securities favours larger organisations.

One respondent stated that securities would need to be realisable tangible assets, if such an approach were adopted.

Charging

Approach to Charging

Questions were asked in relation to the approach to setting charges under both the SIA and the OSA. The overwhelming preference of those that responded was for a fixed fee

approach to setting charges (often a single fixed fee) to provide greater certainty for applicants. Some respondents did advocate an hourly rate approach, particularly in cases where repeat licences were sought which should see a reduction in costs per licence. One respondent also quoted section 6 of the Government's Managing Public Money document, suggesting that 'the standard approach is that the same charges should apply to all users of a defined category of services.'

There were some concerns that early users of the licensing system could be penalised with higher costs, with a suggestion that costs of the licensing service should be averaged out over a number of years. There were also some concerns that third party costs (where the Government procured external advice) could be excessive, with no input from operators as to whether such advice is needed. Also respondents commented that others may subsequently benefit (both in terms of the third party advice and the regulator's more general increased regulatory experience over time) at the expense of those for whom the advice was sought originally.

Some respondents suggested reviewing whether a fee should be charged at all, citing competitiveness when compared with other regimes - especially the US where there is no fee for obtaining an operator or launch licence. One respondent suggested that the rationale for licensing, in respect of securing the safety of the public, meant that the state should carry the cost, citing the US approach.

What the Government intends to do with the responses

Overview

We are working across Government to develop the detailed regulations and guidance to implement the SIA and are committed to developing these in a transparent manner. We will continue to engage with stakeholders ahead of formal consultation.

Liabilities

The Government has noted the clear concerns expressed regarding the impact of holding unlimited liabilities for launch activities from the UK and the availability of TPL insurance as a result.

As previously highlighted in the call for evidence document itself, launch (both to orbit and sub-orbital) from the UK is a completely new activity and given the risks involved, evidence is required to demonstrate that exercising the power to limit both the launch vehicle operator's liability to third parties and their liability to indemnify Government is necessary. We did not receive a substantive response to the call for evidence to provide the evidence necessary to justify a limit on liabilities for launch activities from the UK.

Therefore, the Government is in the process of commissioning further detailed, robust and independent research to inform a decision as to whether a limit on an operator's liabilities for launch from the UK is justified. We will also examine the level at which a limit, if considered appropriate, should be set. This will take into account the current ongoing work on the methodology for setting the minimum TPL party liability insurance requirement for launch activities from the UK.

If the evidence commissioned does demonstrate that a limit on liabilities is justified, the Government would need to assess any financial, state aid and other legal implications before being able to bring a limit into force in legislation.

Insurance

The Government has noted the views expressed from respondents with regard to availability of TPL insurance and the factors influencing the cost of insurance.

Currently, under the Outer Space Act 1986 (OSA), a licensee is required to demonstrate they hold TPL insurance to a specified minimum amount for the activities licensed under that Act before a licence is issued. The Government's policy will be to continue to require a minimum amount of TPL insurance for activities regulated under the OSA and to also require TPL insurance for the activities to be regulated under the SIA. As already highlighted, as spaceflight and associated activities are risky in nature, it is important that those suffering damage or loss as a consequence can be compensated. Therefore, TPL insurance provides an important resource to meet potential claims.

The UK Space Agency, the Department for Transport and the Civil Aviation Authority are currently working with the Government Actuary's Department to develop a methodology for calculating the amount of potential TPL claims that an operator could incur in a realistically probable scenario. This will be used to set the minimum amount of TPL insurance required by those engaging in launch activities from the UK. This is similar to the MPL calculation used in the US and Australia but will take into account factors specific to the UK (for example, the way in which compensation claims are currently dealt with by UK courts). We will discuss the findings with stakeholders when this work is concluded.

Government is aware that TPL insurance is not available to cover an unlimited liability. Government policy has always been to require a specific amount of TPL insurance as a condition for obtaining a licence under the OSA. Government believes that there is sufficient capacity currently in the market to provide TPL insurance for a specified amount for the types of launch operations proposed from the UK.

In relation to insurance requirements for in-orbit operations (which was not part of the call for evidence), following engagement with industry the updated policy is now in place and can be found here.

The Government has noted the responses in relation to insurance (other than TPL) that may be required for spaceflight and associated activities as well as the responses on the use of securities and will consider this further.

Charging

The Government has noted the views expressed on charging; a clear preference for a fixed fee approach and reduced fees for processes such as licence renewals.

Under the guidance in Managing Public Money (the HM Treasury Guidance on how to handle public funds), the costs of providing services should be fully recovered from the users of the service. Therefore, it is currently proposed that charging schemes under both the SIA and OSA will be based on cost recovery. We are now assessing whether a fixed fee approach could be designed to accommodate the range of regulated activities and the types of operation which might be proposed. This also includes how requests for repeat licences can be handled where less assessment is required than the original licence application.

Contact details

If you have any further questions about this call for evidence, or are interested in joining a working group looking at the issues covered by the call for evidence please contact Steve Plant using the details below:

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Annex A – Stakeholders who responded to the call for evidence

Organisation
Satellite operators
Echostar Satellite Services LLC
OneWeb
Alba Orbital
SES S.A.
Inmarsat Global Limited
Launch vehicle operators (vertical)
Vector Launch Services, Inc
Orbital Express Launch Limited (Orbex)
Lockheed Martin UK
Sub-orbital operators
Blue Origin, LLC
Insurers
Marsh Space Projects
AIG Europe Limited
Global Aerospace Underwriting Managers Limited
Other
Microlaunch Systems Limited
Bryce Space and Technology Limited

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