

**COMSTAC REPORT IN RESPONSE TO THE REQUEST FOR  
INFORMATION IN THE  
COMMERCIAL SPACE TRANSPORTATION COMPETITIVENESS ACT OF  
2000 ON THE  
LIABILITY RISK-SHARING REGIME FOR COMMERCIAL SPACE  
TRANSPORTATION ACTIVITIES**

**OCTOBER 18, 2001**

**I. INTRODUCTION**

In accordance with the Commercial Space Transportation Competitiveness Act of 2000<sup>1</sup> (the "Space Competitiveness Act"), the Federal Aviation Administration's ("FAA") Office of the Associate Administrator for Commercial Space Transportation ("AST") has been charged with the preparation of a comprehensive report to Congress concerning the appropriateness and adequacy of the U.S. Government's role in the current risk allocation regime for commercial space transportation activities. In addition to public meetings and on-line public forums on the Internet to solicit views and information from the public, as well as interested federal agencies, the AST has asked Livingston L. Holder, Jr., Chairman of the Commercial Space Transportation Advisory Committee ("COMSTAC"), to provide the advice and recommendations of COMSTAC to help facilitate the development and preparation of this congressionally mandated report.<sup>2</sup> In turn, Mr. Holder has asked John Vinter, Chairman of the COMSTAC Risk Management Working Group ("RMWG") to collect the views of the RMWG's membership, which includes representatives of the commercial space industry as well as the insurance community, on the report elements delineated by Congress in the Space Competitiveness Act. The following represents the RMWG's formal report to the COMSTAC on this issue.

**A. BACKGROUND**

Before 1984, the U.S. Government was the sole provider of space launch services in the United States. Since that time, the Government has encouraged the privatization of commercial launch services by, among other things, adopting a comprehensive financial responsibility and risk allocation regime. Specifically, in 1988, Congress amended the Commercial Space Launch Act ("CSLA")<sup>3</sup> to provide for a liability risk-sharing regime for commercial space transportation activities comprised of (1) a demonstration of financial responsibility by the commercial launch services provider, usually through the purchase of liability insurance that protects not only private launch participants, but also the U.S. Government, its contractors, subcontractors, and personnel, (2) cross-waivers of liability among launch participants, and (3) a promise by the U.S.

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<sup>1</sup> Pub. L. No. 106-405 (Nov. 1, 2000).

<sup>2</sup> Letter from Patricia Grace Smith, Associate Administrator for Commercial Space Transportation, Federal Aviation Administration, to Livingston L. Holder, Jr., Manager, Space & Launch Segment Resource 21, The Boeing Company 1 (January 10, 2001).

<sup>3</sup> 49 U.S.C. §§ 70101-21.

Government to pay successful third party claims in amounts up to \$1.5 billion above the insurance requirement, subject to congressional appropriations.

The CSLA amendments established specific insurance and financial responsibility guidelines that a commercial launch provider was required to meet before the FAA would grant a license to perform launch services.<sup>4</sup> Under § 70112 of the CSLA, the launch services provider is required to obtain appropriate liability insurance or demonstrate the financial ability to compensate third party claims for damage arising from the performance of the launch services. The liability insurance is required to cover all participants involved in the launch or reentry service, including the United States Government, against third party claims. The FAA calculates the required amount of insurance per launch service based on an analysis of maximum probable loss to third parties and third-party property, up to a statutory limit of \$500 million.<sup>5</sup> The cost of the insurance is determined by a variety of factors such as, the amount of insurance required under the policy, the licensee's (*i.e.*, the named insured's) experience as a launch services provider and the experience of the other private party launch participants covered as additional insureds. Market factors affecting the cost and availability of such insurance include the number of launches packaged under an insurance placement, the experience and track record of the launch industry as a whole, insurance market capitalization, reinsurance availability and affordability and experiences in other lines of insurance. Although policy terms and conditions generally follow market standards, they must, at a minimum, meet FAA standards.<sup>6</sup>

In addition to third party liability insurance, the FAA also requires a reciprocal waiver of claims among the U.S. Government, the commercial launch services provider (*i.e.*, the licensee) and its contractors, subcontractors and customers involved in the launch or reentry services, as well as the customer's contractors and subcontractors.<sup>7</sup> All parties involved in the launch agree to be responsible for whatever property damage or loss each sustains.<sup>8</sup> The requirement of comprehensive insurance to cover all participants, as well as the inter-participant cross-waivers of claims, ensures reduced launch costs by significantly limiting the threat of litigation and its associated costs among participants in the licensed activity.<sup>9</sup>

The cornerstone of the CSLA's three-pronged risk allocation regime is what is popularly referred to as the indemnification provision. To protect U.S. commercial launch services providers from potentially limitless third party damages, CSLA § 70113 provides for a commitment on the part of the U.S. Government, subject to congressional appropriations, to pay successful third party claims up to \$1.5 billion (plus additional amounts necessary to reflect inflation occurring after January 1, 1989) in excess of the launch provider's liability insurance.<sup>10</sup> Thus, while the U.S. Government is potentially liable for damages to third parties that are in

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<sup>4</sup> See 49 U.S.C. § 70112(a).

<sup>5</sup> See *id.*

<sup>6</sup> 14 C.F.R. § 440.13.

<sup>7</sup> See 49 U.S.C. § 70112(b).

<sup>8</sup> With respect to the U.S. Government, the waiver applies only to the extent that claims are in excess of any private insurance that the licensee has procured for the U.S. Government's benefit. 49 U.S.C. § 70112(b)(2).

<sup>9</sup> See FAA Notice of Public Meeting, 66 Fed. 15,522 (March 19, 2001) available at <http://ast.faa.gov>.

<sup>10</sup> 49 U.S.C. § 70113.

excess of the FAA-determined insurance requirement but less than \$1.5 billion above that amount, the launch services provider is liable for third party damages up to the insurance amount required by the FAA and anything in excess of the Government's \$1.5 billion limit.

## B. EXTENSION OF THE INDEMNIFICATION PROVISION

As stated above, the most important element of the CSLA's risk allocation regime is the indemnification provision. Not only does it ensure the competitiveness of U.S. commercial launch services providers in the global marketplace for reasons discussed below, it protects them from irreparable financial harm in the unlikely event that third party claims arising from licensed launch activities exceed the amount of insurance required under a launch license.

Originally set to expire in 1993, the indemnification provision has been extended by Congress on several occasions. With the passage of the Space Competitiveness Act, FAA-licensed operators are ensured of indemnification under statutorily prescribed procedures through December 31, 2004.<sup>11</sup>

In addition to extending the indemnification provision, Congress, through the Space Competitiveness Act, directed the Secretary of Transportation to conduct a comprehensive and multi-faceted study of the liability risk-sharing regime applicable to U.S. commercial space transportation.<sup>12</sup> Under delegated authority, the FAA's AST is responsible for soliciting comments and information from the public as well as interested federal agencies to incorporate into a final report.<sup>13</sup>

The final report is to address the appropriateness and effectiveness of the current risk-sharing regime, and the need to continue or modify laws governing liability risk-sharing for commercial launches and reentries beyond the December 31, 2004 sunset date.<sup>14</sup> More specifically, the Space Competitiveness Act mandates that the report address the following seven issues:<sup>15</sup>

- A. Analyze the adequacy, propriety and effectiveness of, and the need for, the current liability risk-sharing regime in the United States for commercial space transportation;
- B. Examine the current liability and liability risk-sharing regimes in other countries with space transportation capabilities;
- C. Examine the appropriateness of deeming all space transportation activities to be "ultrahazardous activities" for which a strict liability standard may be applied and which liability regime should attach to space transportation activities, whether ultrahazardous activities or not;

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<sup>11</sup> Commercial Space Transportation Competitiveness Act of 2000, Pub. L. No. 106-405; *see also* FAA Notice of Public Meeting, 66 Fed. 15,520 (March 19, 2001).

<sup>12</sup> *See id.*

<sup>13</sup> *See id.*

<sup>14</sup> *See* FAA Notice of Public Meeting, 66 Fed. 15,521 (March 19, 2001).

<sup>15</sup> Pub. L. No. 106-405, § 7 (Nov. 1, 2000).

- D. Examine the effect of relevant international treaties on the Federal Government's liability for commercial space launches and how the current domestic liability risk-sharing regime meets or exceeds the requirements of those treaties;
- E. Examine the appropriateness, as commercial reusable launch vehicles enter service and demonstrate improved safety and reliability, of evolving the commercial space transportation liability regime towards the approach of the airline liability regime;
- F. Examine the need for changes to the Federal Government's indemnification policy to accommodate the risks associated with commercial spaceport operations; and
- G. Recommend appropriate modifications to the commercial space transportation liability regime and the actions required to accomplish those modifications.

The final report is not limited to the aforementioned topics, but the principal purpose of the report is to provide an understanding of the factual and legal bases for continuing or modifying the indemnification and statutory risk-sharing program.<sup>16</sup> As such and as appropriate, each of the above-stated areas of analysis is addressed in turn.

## II. REPORT REQUIREMENTS

### A. ANALYSIS OF CURRENT LIABILITY AND RISK-SHARING REGIME

The current risk allocation regime has numerous benefits, not only to the domestic commercial launch services industry, but also to the U.S. Government. Not only does the current regime sustain and enhance competitiveness, it also ensures financial responsibility and financial security, and is vital to the national security of the United States.

#### 1. *The Current Regime Enables U.S. Commercial Launch Services Providers to Compete Globally*

For those in the industry, the current risk allocation regime provides reduced risk and increased competitiveness in the global launch services market. First, the indemnification provision creates a level playing field that enables U.S. launch services providers to compete effectively with their non-U.S. counterparts. The European consortium, Arianespace, the U.S. launch services industry's most formidable competitor, offers its customers full indemnification by the French Government, and other participating European governments, for third party liability that exceeds required insurance of 400 million French francs or approximately USD \$60 million. Other countries in the commercial launch services market also have risk-sharing regimes in place that are either comparable to or better than what is available under the CSLA. Because of the highly competitive nature of the industry, customers of commercial launch services have come to expect the availability of a risk allocation regime where the government having jurisdiction over the launch services provider will pay successful claims that exceed third party liability insurance. Customers demand a stable and comprehensive risk allocation plan that will respond to third party claims in excess of insurance, and launch services providers that cannot offer this type of protection will be competitively disadvantaged.

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<sup>16</sup> See FAA Notice of Public Meeting, 66 Fed. 15,522 (March 19, 2001).

In addition, the CSLA-required third party liability insurance protects not only the launch licensee but also the licensee's customers, contractors, subcontractors, and suppliers, enabling U.S. launch providers to attract and maintain domestic and international customers. This system allows for all private party launch participants to be protected under one insurance policy, with a single limit and single defense so that each party is relieved of defending and settling multiple claims against multiple parties. As mentioned earlier, the threat of litigation is significantly reduced by the requirement of cross-waivers of liability under CSLA § 70112(b). Costs to the participants in the launch activity also decrease due to the savings associated with securing a single policy covering all parties for third party liability. This reduction in overall costs associated with launch activities improves the competitiveness of U.S. launch providers. Moreover, the U.S. Government's promise of indemnification increases the affordability of third party liability insurance as it allows the sum insured to be set at an affordable level, and alleviates customer concerns about unlimited liability and litigation. Such customer concerns, which are significant, are based on the view that, in the U.S., the potential for litigation is very high.

2. *The Current Regime Ensures Financial Responsibility and Security for Industry and Government*

Not only does the current risk allocation regime enable U.S. launch providers to compete in the global marketplace, it also ensures the financial responsibility and enables a significant level of financial security of both the commercial launch services providers and the U.S. Government. It allows U.S. commercial launch services providers to operate with the knowledge that their liability, in the unlikely event of a catastrophe, will be shared, and that the insurance they carry to cover claims arising from such an event is in an amount established by the U.S. Government based on a careful maximum probable loss analysis. This arrangement is vital both to the launch providers and the U.S. Government in light of the fact that the companies that offer commercial launch services are the same companies that are the leaders of the U.S. defense industry. If these companies were open to unlimited liability, they would be subject to the possibility of economic ruin given that potential third party damages from an accident could exceed the launch provider's resources. Such an environment would at best, have a chilling effect on how or whether the major launch services providers pursue a commercial business and at worst, completely exclude from the industry both established and smaller companies that otherwise would introduce to the marketplace new and innovative concepts of space transportation.

The current risk allocation scheme benefits the U.S. Government by extending to it, its contractors, subcontractors and personnel, private insurance coverage at no cost, in amounts established by the U.S. Government, and authorizes the U.S. Government to use this private insurance to pay claims against it arising under private law and public international law. As a participant in launches and reentries at federal ranges and as a signatory to multilateral treaties governing space activities, the United States is liable for damage or loss to third parties arising from its space activities or the space activities of its nationals. However, with the current risk-sharing regime in place, the maximum probable amount of the Government's treaty-based financial responsibility for damages from commercial launch activities are covered by the third-party liability insurance required from the commercial launch provider, at no cost to the U.S.

Government or U.S. taxpayers. Also under this regime, U.S. Government employees are treated as third parties, as well as Government launch participants, which allows them to make claims for damages in case of injury or loss, while also being covered by the licensee's third party liability insurance.

It also must be emphasized that thus far, the current regime has cost the American taxpayer nothing. There has never been a claim filed against the CSLA indemnification provision.

### 3. *The Current Regime Protects the National Security of the United States and Encourages Innovation*

The CSLA's risk allocation regime indirectly, yet quite significantly, strengthens the national security of the United States. As previously noted, U.S. commercial launch services providers and their contractors and subcontractors represent the majority of the U.S. national defense industry. When they are not launching commercial satellites or providing components, systems and services to those who launch the satellites, they are responsible for U.S. civil and military payloads, including critical national security spacecraft. If these companies were subjected to unlimited liability from third party damages arising from commercial launch activities in the absence of U.S. Government indemnification, these leaders of the defense industry would run the risk of financial ruin with every launch. Consequently, a launch catastrophe resulting in significant third party losses would compromise not only the companies involved in the launch activity, but also U.S. national security, foreign policy and economic interests. If private companies were forced out of the commercial launch business because of unmanageable risks, the entire national capability for space launch would return wholly to the U.S. Government, thereby defeating the fundamental purpose of the CSLA, to encourage commercialization of the space launch industry.

There are societal benefits of the current risk allocation regime as well. The commercial space industry generates thousands of highly-skilled, high technology jobs, employs hundreds of thousands of people and produces critical, cutting-edge hardware and technology. It enables countless important opportunities for advances in many critical areas including communications, medicine, education, weather prediction, navigation and environmental protection. The regime also allows the U.S. Government customer, and therefore the U.S. taxpayer, to benefit from the efficiencies developed through the launch providers' commercial business activities. For example, because of the existence and conduct of commercial launch services, the U.S. Government benefits from overhead allocations. Costs charged by subcontractors also are controlled, in part, due to extension of the CSLA's indemnification provision to them whenever they are engaged in licensed launch activities. Therefore, absent the CSLA's comprehensive risk allocation regime, U.S. jobs could be lost, innovation stifled and costs to the taxpayer increased.

The CSLA helps both the commercial launch operator, by establishing a foundation that supports and encourages the business of performing launch services, and the U.S. Government customer, by providing it reliable and affordable access to space. With the current risk allocation regime in place, U.S. national security interests are furthered because the CSLA creates an environment conducive to sustaining scientific, engineering and technical resources critical to

our country's ability to develop safer, more efficient and more cost-effective means of assuring access to space. For the reasons stated above, it is clear that this risk allocation regime is vital to the country in that it provides solid support for the U.S. defense industrial base.

#### 4. *Effect of Eliminating the Current Risk Allocation Scheme*

If the CSLA's risk allocation regime were no longer available, U.S. launch services providers either would: (a) assume a higher level of risk with each launch; (b) cease to be involved in the commercial launch business; or (c) procure third party liability insurance to replace the amount of coverage that would have been available under the existing indemnification provision. Option (a) would be objectionable to the launch services providers' shareholders, who could deem the assumption of potentially unlimited risk as irresponsible and a breach of a company's decision-makers' duty to the shareholders. Option (b) would be contrary to U.S. Government policy and the CSLA both of which call for the promotion and encouragement of a commercial launch industry. While option (c) might seem to be a reasonable alternative, it is, in fact, unacceptable because it is economically unfeasible and its availability is untested and cannot be guaranteed.

The additional costs associated with having to procure higher amounts of third party liability insurance would increase the price of U.S. launch services, thereby undermining U.S. companies' competitiveness. Moreover, the availability of third party liability insurance in amounts to compensate for the absence of the CSLA's indemnification provision cannot be guaranteed and is likely to be affected by external events. The third party liability insurance market's resiliency has yet to be tested by losses from any commercial launches.

The increased insurance costs that would result from the elimination of U.S. Government indemnification would prove extremely difficult for established launch services providers to manage, would put them at a competitive disadvantage in the global launch services marketplace and ultimately may drive them from the marketplace entirely. Young, start-up launch companies likely would be precluded from entering the industry at all. In summary, both the more established and newer companies that comprise the U.S. commercial space transportation industry would be negatively affected, if not crippled, by the significant hurdles that would be created in the absence of U.S. Government indemnification.

#### B. COMPARISON TO RISK-SHARING REGIMES OF OTHER COUNTRIES

In comparing the U.S. risk allocation regime to that of foreign countries, it should be clear that elimination of the indemnification provision would result in a severe competitive disadvantage to U.S. commercial launch providers.

The most significant competitor of U.S. commercial launch services providers is Europe's Arianespace. Arianespace offers its customers a risk-sharing plan with similar, yet more generous coverage than that available under the CSLA, including:

1. Required inter-party waivers of liability similar to that under the CSLA, covering both property and persons involved in launch activities;
2. A minimum level of required third party liability insurance that protects Arianespace, its customers and their contractors, subcontractors and suppliers against claims of third parties for bodily injury or property damage at no cost to the customer (set at 400 million French francs or USD \$60 million); and
3. Unlimited and unqualified indemnification by the French government for third party liability that exceeds the required insurance.

The fact that the indemnification offered by the French and other European governments, unlike that offered by the U.S. Government, is an unqualified financial commitment demonstrates the European governments' unambiguous support of its launch services provider. This risk allocation regime, which has no monetary cap, is not subject to appropriations and carries with it no expiration date, is extremely helpful to Arianespace and attractive to its customers.

China, Russia, Japan and Australia also have established domestic space laws, regulations or policies that address risk allocation in commercial launch activities. Each of these countries' regimes are comparable to or better than what is available in the U.S. The China Great Wall Industry Corporation, which operates the Long March launch vehicle, offers its customers third party liability insurance in the amount of USD \$100 million and full indemnification by the People's Republic of China for claims in excess of the liability insurance. Russia's Khrunichev Enterprise provides its customers up to USD \$300 million of third party liability insurance and indemnifies claims in excess of insurance. Japan provides full indemnification for claims that exceed the insurance requirements of USD \$64 million. Under Australia's Space Activities Act, any claims in excess of the required insurance amount are paid by the government.

All of the above-mentioned countries have risk allocation regimes that are comparable to or more favorable than that which is offered under U.S. law. An inability on the part of U.S. commercial space launch providers to extend to their customers at least what currently is available under the CSLA would severely compromise their ability to compete in the global marketplace, and jeopardize the economic viability of U.S. commercial launch services.

### C. SPACE TRANSPORTATION ACTIVITIES AS ULTRAHAZARDOUS

Industries that are deemed to be ultrahazardous in nature are subject to a strict liability standard upon which liability is based on the dangerous and risky nature of the activity rather than the lack of care on the part of the actor conducting the activity. Under special provisions, contractors that engage in ultrahazardous or unusually hazardous activities for the U.S. Government may receive assurances of Government indemnification above the limit of insurance that is available at a reasonable cost.<sup>17</sup>

Members of the RMWG believe that it is neither necessary nor appropriate to deem all space transportation activities as ultrahazardous. The CSLA's indemnification provision is responsive to U.S. commercial launch services providers' needs, subject to the recommendations

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<sup>17</sup> See FAA Notice of Public Meeting, 66 Fed. 15,523 (March 19, 2001).



for improvement set forth later in this report as required under the Space Competitiveness Act.

D. EFFECT OF INTERNATIONAL TREATIES ON THE U.S. GOVERNMENT'S LIABILITY FOR COMMERCIAL SPACE LAUNCHES

As a signatory to the Convention on International Liability for Damage Caused by Space Objects ("Liability Convention"),<sup>18</sup> the United States accepts liability for certain damages when it launches or procures the launch of a space object, or when the launch takes place from U.S. territory or a U.S. facility, *i.e.*, when it is a "launching state."<sup>19</sup> When it is a launching state, the United States is absolutely liable for damage caused by its space objects on the surface of the Earth or to aircraft in flight.<sup>20</sup> This would include injury or damage arising from an FAA-licensed launch. If, however, damage involving a space object occurs in outer space, then liability is fault-based and the U.S. Government is liable only if the damage is due to the fault of the Government or persons for whom the Government is responsible.<sup>21</sup> If the damage caused is to nationals of the launching state or to foreign nationals participating in the launch activities of the launching state, then no liability for such damage is ascribed under the Liability Convention.<sup>22</sup>

Furthermore, the United States, as a party to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies ("Outer Space Treaty"), bears international responsibility for activities in outer space carried on by non-governmental entities.<sup>23</sup> The United States is required to authorize and continue supervision of such activities.

Consistent with the obligations under the aforementioned international treaties, the United States, through the CSLA, supervises the launch and reentry activities of its nationals. Through the implementation of the CSLA, not only does the U.S. Government meet its obligations under international treaties, but it does so with minimal risk to the U.S. taxpayer. This is because the FAA, the federal agency that licenses and regulates U.S. space launch operators, determines the amount of risk that the U.S. Government is willing to assume with respect to each licensed launch service. By requiring a commercial launch services provider to obtain third party liability insurance in an amount established by the FAA pursuant to a maximum probable loss analysis, the FAA ensures that the U.S. Government is protected by private insurance against the maximum probable value of third party claims arising from any one launch mission at no cost to the U.S. taxpayer. Claims in excess of such private insurance, which the FAA on behalf of the U.S. Government has deemed are not probable, would be paid directly by the U.S. Government. This two-tiered approach enables the U.S. Government to

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<sup>18</sup> Convention on International Liability for Damage Caused by Space Objects, entered into force October 9, 1973, 24 UST 2389, TIAS 7762.

<sup>19</sup> Liability Convention at Article I.

<sup>20</sup> Liability Convention at Article II.

<sup>21</sup> Liability Convention at Article III.

<sup>22</sup> Liability Convention at Article VII.

<sup>23</sup> Treaty on Principles governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, entered into force October 10, 1967, 18 UST 2410, TIAS 6347, at Article VI.

meet its obligations under international law with minimal risk to the U.S. taxpayer.

E. APPROPRIATENESS OF AIRLINE LIABILITY REGIME TO COMMERCIAL SPACE TRANSPORTATION

As commercial reusable launch vehicles (“RLVs”) enter service and demonstrate improved safety and reliability, the issue of whether the current liability risk-sharing regime for space launch and reentry vehicle operations should be transformed to resemble the liability scheme of the commercial airline industry needs to be addressed. Clearly, there are similarities between the operation of airplanes and conceptual RLVs. Conventional aircraft operate on a global basis, in multiple airports and with largely unrestricted flight corridors. Future RLVs are intended to have multiple launch and landing sites and a broad range of flight azimuths. Similar to the FAA requirement of liability insurance for commercial launch providers, the Department of Transportation’s economic regulations require U.S. and non-U.S. air carriers to have liability insurance coverage in certain minimum amounts.<sup>24</sup> However, the airline liability regime has no provision for government indemnification of commercially operated civil aircraft for third party liability above the required insurance amount.<sup>25</sup>

Privately funded airline liability insurance, moreover, is made possible by the sheer size of the industry and the consequent predictability and distribution of risk. The U.S. airline industry generates almost \$273B per year<sup>26</sup> with over 11 million departures per year<sup>27</sup>. Such an industry is capable of self-financing its complete insurance requirements. The most optimistic RLV flight rates, on the other hand, forecast approximately one launch per week making it impossible for the industry to finance its entire insurance requirements and still remain competitive. In summary, despite the similarities, there are fundamental differences between the operation of civil airplanes and RLVs. Though the application of an aviation-style insurance regime may be possible in the future as RLV flight rates reach sustained higher levels, removal of the current indemnification regime at this time would severely disrupt the formation of this industry.

In regard to expendable launch vehicles (“ELVs”), ELVs and commercial airplanes share few similarities, either with respect to operation or risk profile. Therefore, it is inappropriate and premature at this time to consider replacing or modifying the current space launch risk allocation regime to look like a risk management plan that is designed to address the needs of the commercial airline industry.

F. INDEMNIFICATION FOR COMMERCIAL SPACEPORT OPERATIONS

Under the CSLA’s liability risk-sharing regime, non-federal launch site and reentry site operators are covered as additional insureds under the launch licensee’s third party liability insurance if their site is used to support that licensed launch or reentry. As contractors to the licensees, these “spaceports” are not only extended the benefits of insurance by the licensee but

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<sup>24</sup> See FAA Notice of Public Meeting, 66 Fed. 15,523 (March 19, 2001).

<sup>25</sup> See *id.*

<sup>26</sup> Air Transport Association, *Airline Economic Impact*, available at <http://www.air-transport.org>.

<sup>27</sup> National Transportation Safety Board web page, available at <http://www.ntsb.gov>.

also are eligible for U.S. Government indemnification if third party claims arising from the licensed launch activity exceed the required FAA insurance amount. A spaceport's activities that are separate from licensed launch or reentry activities, however, are not eligible for U.S. Government indemnification and must be covered by insurance or other financial protection. In other words, the CSLA's risk allocation regime has been determined by the FAA not to apply to launch site operations that are unrelated to licensed launch activities.

Current users of the spaceports (*i.e.*, licensed launch operators) find application of the existing statutory scheme to licensed launch site and reentry site operators to be adequate and appropriate. As noted by the FAA, this view is based on the belief that only operations directly related to the launch and reentry mission require government risk-sharing and indemnification.<sup>28</sup> Moreover, as the U.S. Government would bear no liability under international space law in the event of third party injury or loss arising from ground operations at a launch or reentry site, there is no need for the U.S. Government to take any special risk management measures in this regard. Lastly, given the availability and relatively reasonable cost of comprehensive general liability insurance to cover ground activities, a strong argument can be made that application of the current risk allocation model to non-federal launch site and reentry site operators is sufficient.

However, at least one launch site operator believes that the FAA's current interpretation of the CSLA's risk allocation scheme, which precludes the possibility of U.S. Government indemnification for launch site and reentry site operators even though they are licensed by the FAA, is wrong. The Spaceport Florida Authority ("SFA"), a state government organization licensed by the FAA as a launch site operator, takes issue with the FAA's decision not to establish insurance requirements for such operators. The SFA contends that U.S. Government indemnification is required for licensed launch site operators as well as licensed launch operators because both types of licensees conduct hazardous activities for which insurance may not be reasonably available. Therefore, the SFA would like the FAA to extend to it the full benefits of the CSLA's risk allocation regime, including establishing a requisite amount of insurance and the promise to pay claims in excess of such insurance, subject to appropriations.

#### G. RECOMMENDATIONS FOR MODIFYING THE CURRENT LIABILITY REGIME

Members of the RMWG carefully considered the congressional request for recommendations for appropriate modifications to the commercial space transportation liability regime and the actions required to accomplish those modifications. In doing so, members were reminded that the competitive environment that gave rise to this regime in the 1980s has not subsided, but intensified. Today, the fierce competition facing this U.S. industry that is critical to the national defense is punctuated by the waning of what already are extremely thin profit margins. Therefore, it is vital to ensure that modifications to the current regime, if any, do not disrupt the relatively level playing field with respect to risk allocation that is achieved by the current regime. Alternatives such as relying more on the aviation insurance market for significantly higher levels of liability coverage, employing alternative institutional structures, such as risk pooling or establishment of a "group captive" or a trust fund, or allowing tax

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<sup>28</sup> *See id.*

credits<sup>29</sup> to defray, in part, the cost of securing larger amounts of insurance capacity, are mechanisms which neither individually nor in sum would respond to the core concerns that the existing risk allocation regime was carefully designed to address – economic viability and competitiveness.

As stated earlier, the launch industry may not be able to maintain its viability, let alone its competitiveness, if it is forced to depend on the insurance market for higher levels of liability coverage absent the current risk allocation regime. The available liability insurance market's primary application is to the aviation industry, both manufacturers and carriers, and from time to time its full capacity is severely taxed. It is a market whose limited capacity is subject to fluctuation due to a broad range of natural and unnatural disasters. It is a market that has been severely affected by the horrific events of September 11. It is a market whose capacity cannot be guaranteed, particularly in its application to the relatively small but high risk launch industry. To require an industry that is essential to a variety of U.S. interests to depend on an unpredictable insurance market to protect it against potentially incalculable losses could result in irreparable harm to that industry and the attendant national interests.

The suggestion of pooling risk is not new and is useful for certain industries. Its applicability to the commercial space launch services industry was raised and debated prior to enactment of the CSLA's 1988 amendments, which provided for the current risk allocation regime, including the indemnification provision. A 1988 report entitled "Insurance and the Commercial Space Launch Industry," prepared by the Congressional Research Service ("CRS Report") at the request of the Senate Committee on Commerce, Science and Transportation, explored the issue of pooling in a commercial launch context. The CRS Report noted (at the time the report was drafted) that:

[t]he U.S. launch services industry consists of only three large companies and several small companies, and the latter would probably be limited in their capability to contribute to a self-insurance pool. Three companies are undoubtedly insufficient to create a pool over the short term, the time period during which the guarantee of third party coverage is needed. Another possibility is that all of the subcontractors participating in the launch industry could contribute to the pool. The subcontractors would, however, pass the cost of contributing to a pool along to the launch company.<sup>30</sup>

In light of the foregoing factors, the CRS Report succinctly concluded that "[i]mposition of payment into a pool could increase costs and make the [launch] companies less competitive."<sup>31</sup> Strikingly, the factors that applied in 1988 apply today. In fact, today's situation is somewhat more severe. Only two large companies and one small company comprise the U.S. commercial launch services industry. It is these companies that today face dwindling profit

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<sup>29</sup> See Transcript of Public Meeting, April 25, 2001 (FAA 2001-9119-7), 151-82, available for review at the FAA Building, Room 331, AST-100.

<sup>30</sup> *Insurance and the U.S. Commercial Space Launch Industry*, 100<sup>th</sup> Cong., 2d Sess., 19, Committee on Commerce, Science and Transportation, S. Print 100-112 (July 1988).

<sup>31</sup> *Id.*

margins and increasingly tough competition in the world market. New U.S. entrants, primarily RLV companies, are in great need of basic funding and, even more than their established counterparts, are in no position whatsoever to contribute money to a risk pooling scheme. The analysis performed in 1988 yielded the appropriate conclusion then. It remains the appropriate conclusion now.

The notions of trust funds or tax credits also are not responsive to the industry's need to offer its customers a risk allocation regime that is comparable to those offered by their non-U.S. competitors. Consequently, such approaches would not necessarily enhance the competitiveness of the U.S. commercial launch services industry. To the contrary, if these options were employed to replace the existing risk allocation regime, they likely would impair the industry's competitive position. More specifically, the establishment of a meaningful trust fund, which would require significant financial participation from the very few participants in the U.S. launch industry, would create the same financial difficulties as the risk pooling scheme. Tax credits, which might be useful tools for further supporting and encouraging this critical industry could be of value in reducing the economic burden of excess insurance costs, but they are not a substitute for a carefully crafted risk sharing regime comprised of privately procured insurance, the amount of which is based on a precisely defined MPL amount and the promise of the U.S. Government to pay claims in excess of that amount.

In summary, the main objective of the 1988 amendments to the CSLA, which established the current risk allocation regime, was to ensure the competitiveness of the emerging U.S. commercial launch industry. Since then, the competition for customers among commercial launch services providers has increased and shows no signs of abating. In comparing the various risk allocation schemes of countries participating in the commercial launch industry, U.S. companies receive less government support and bear a greater financial responsibility than their non-U.S. competitors. To eliminate the U.S. Government indemnification provision, the cornerstone of the current CSLA liability risk-sharing regime, would be a potentially fatal blow to the industry and ultimately result in increased costs to the U.S. Government and the American taxpayer.

The primary weakness in the current risk allocation regime is the unpredictability created by the CSLA indemnification provision's expiration date. It is the industry's recommendation that the CSLA be amended to (1) delete the sunset provision, the preferred option, or (2) extend application of the indemnification provision for no less than a 10-year period.

The importance of the elimination of the expiration date to the competitiveness of the U.S. launch industry cannot be overstated. The CSLA sunset provision handicaps U.S. launch services providers with a competitive disadvantage that is exploited by non-U.S. competitors with more comprehensive government-supported risk allocation regimes. Because most customers enter into their launch services contracts two to four years before their launch date, they demand a high level of predictability for risk management costs at the time the contract is executed. Doubt as to the availability of government indemnification or the possibility of relying on the fluctuating commercial insurance market ensures a lack of confidence in U.S. launch services providers on the part of their potential customers. An environment of unreliability and unpredictability with respect to risk management will severely impair U.S. commercial launch

services providers' ability to market their services to both domestic and international customers.

The RMWG members submit that the risk allocation regime, featuring the indemnification provision, was the best option for the U.S. Government, the U.S. taxpayer and the U.S. commercial launch services industry in 1988 and remains the best option today and for the foreseeable future. The only modification we deem appropriate is, ideally, elimination of the sunset provision or extension of the indemnification provision for no less than a 10-year period.

### **III. CONCLUSION**

The RMWG strongly and respectfully requests that the COMSTAC request the Secretary of Transportation to support this report and submit to Congress a proposal to amend the CSLA by deleting the sunset provision or, alternatively, extending application of the indemnification authority for an additional period of ten years.