



MINISTRY OF TRANSPORT & REGULATORY AFFAIRS

MINISTERIAL STATEMENT

SUBJECT: Space Industry

8 December 2017

Mr Speaker and Honourable Members, I recently participated in a series of meetings in Washington DC which focused on the space industry and space-oriented businesses, and explored the opportunities that exist for Bermuda to increase its involvement in this global industry.

Mr Speaker, the satellite industry is thriving. It continues to grow and evolve, generating more than two hundred and sixty billion dollars (\$260,000,000,000) in revenue in 2016. This is spread between satellite manufacturing, the launch sector, satellite services such as telecommunications and earth observation, and ground equipment. Bermuda's role in this industry is small at present but, in line with the Government's commitment to diversify our economy and seek out new opportunities, these meetings afforded us a chance to renew our relationships with existing partners and introduce ourselves to prospective new associates.

In terms of Bermuda's current activities in the space arena, Members are reminded that the Government negotiated the extension of the UK's Outer Space Act to Bermuda some years ago. This enables us to grant licences to Bermuda companies to conduct activities in outer space, thereby establishing Bermuda as a filing administration for satellite operators. This is an ongoing service Bermuda provides.

In parallel, our robust insurance sector is developing products specifically tailored to satellite operators and other providers of space services.

More particularly, though, we worked hard to ensure that Bermuda's 96.2 degrees West Longitude orbital slot was put to use. Currently, Bermuda's first and only live satellite network, BermudaSat-1, operates from that slot as a joint venture between SES and EchoStar. Their company, Satellite Ventures (Bermuda) Limited (SVBL), has a fifteen (15) year Orbital Resource Use Agreement with the Government.

Additionally, Bermuda's geographical location means that our partnership with the National Aeronautics and Space Administration (NASA), in which we host tracking stations, continues. This is a relationship that dates back to the days of the Mercury programme and, more recently, was endorsed by an agreement signed in 2012 between the Government and NASA's Wallops Flight Facility in Virginia. The agreement provides for NASA's mobile tracking station to be located at Cooper's Island where it provides tracking, telemetry, meteorological, optical and command and control services to space flight vehicles.

Mr Speaker, against that background of current space business and activities, and with our industry consultants, Access Partnership, over the course of 4 and 5 December 2017, we met with GEOshare, SES and EchoStar, the Federal Communications Commission (FCC), the Satellite Industry Association, OneWeb, Space Partnership International, Asia Broadcast Satellite and NASA.

Meetings with SVBL partners, SES and EchoStar, and, also, with NASA, enabled us to reaffirm Bermuda's appreciation for and ongoing commitment to these relationships.

With SES and EchoStar we stressed that the monetization of BermudaSat-1 is a priority for our Government.

We can report that our partners have indicated they are taking proactive steps to commercialize the network. EchoStar informed us they plan to de-orbit EchoStar-6, the aging satellite currently in our orbital slot, in the first quarter of next year, and potentially replace it with a different satellite that is better able to serve future customers and generate revenue. SES stated they are engaging in discussions with commercial partners in the aeronautical and maritime markets, where consumer demand for satellite services is projected to be high. This means not only that BermudaSat-1 could provide service to markets with high revenue potential but, also, that the FCC moratorium on Direct Broadcast Satellite applications is no longer a serious impediment to the network's commercialization.

We came away from the meeting with SES and EchoStar encouraged about the future of Bermuda's satellite network but mindful of the need for further progress. Given the work underway to potentially refresh the space asset in our orbital slot and identify prospective commercial partners in high growth markets, we remain optimistic in the plans to monetize BermudaSat-1. Going forward, the Government

will continue to drive SES and EchoStar hard to do more with our asset and return more of our investment of time and effort.

Mr Speaker, our meeting with NASA was reassuring also. With the existing agreement recently extended, the shared benefits associated with the mobile tracking station at Cooper's Island will carry on. NASA benefits from being able to offer the full complement of range assets for expendable launch vehicle operations and Bermuda has access to data collected at the station to track shoreline erosion. Additionally, NASA welcomes schools' engagement with range personnel as part of an educational programme designed to increase awareness of the environment and reinforce STEM in the classroom.

On the education front, there are further possibilities for Bermuda to explore with NASA such as its International Internship programme, NASA I², where students compete to work alongside researchers on NASA-related projects. This is a unique chance to engage in 'real world' space study at one of NASA's nine (9) field centres or the Jet Propulsion Lab. It is targeted at university level students who are not US citizens. I intend to ensure Bermuda becomes a participating country so that our students can take advantage of the programme.

Mr Speaker, taking the two days of meetings as a whole, I was able to identify strands in the space industry business where Bermuda could consider becoming more involved.

There are new trends and space activities being explored now that require some regulatory framework. We discussed the deployment of

new technologies such as the launch and operation of small satellites, high altitude platform stations and non-geostationary orbit satellites. We debated, also, new business applications such as on-orbit satellite servicing, special purpose entities, condominium-style satellites (“condo-sats”), broadband connectivity expansion and earth observation advanced analytics. That discourse revealed a business option for Bermuda whereby we contemplate developing and marketing a one-stop shop regulatory package.

Bermuda is already a hub of international business, and the potential synergy with our vibrant property and casualty insurance sector presents further exciting possibilities for the island.

Mr Speaker, one thing is clear: the space industry and space-oriented businesses are evolving rapidly. Being at the forefront of this industry requires both agility and tenacity. With this in mind, the Government will consider creating a working group of satellite operators with Bermuda interests for the purpose of identifying policy issues of mutual concern and developing unified positions. The Government would consult with the group on these issues and advocate on their behalf in various policy venues, most particularly through the UK to the International Telecommunication Union. This would be a group that is consulted on any new space regulatory package.

Further, it may be wise to think about attending a key industry conference such as that of the Inter-American Telecommunication Commission or the Space Foundation to broaden our knowledge base.

Alternatively, the FCC brought to our attention the US Technical Training Institute, which offers courses on regulatory best practice that range from one hour one-on-ones to two week intensives. I must acknowledge it will be key to build our internal capacity to achieve our space industry aspirations and goals.

On a final positive note, **Mr Speaker**, I would draw Members' attention to Space Partnership International which, I am delighted to announce, is the newest space business to select Bermuda as a filing administration. It was a delight to meet with, and learn more about, this new Bermuda partner and the work that it does in packaging space projects.

Mr Speaker, going forward, we aim to deepen our existing relationships with space-oriented organisations and develop new partnerships. The space industry presents real economic opportunities for forward-thinking, business-friendly jurisdictions. As such, we should strive to become one of the most enabling economic jurisdictions for space-oriented businesses in the world. This series of meetings demonstrated that our efforts can provide immediate and long-term benefits to Bermuda businesses, and we will build on our current efforts going forward.

Thank you, **Mr Speaker**.