THE SPACE RACE: REGULATORY REQUIREMENTS FOR SPACE LAUNCH AND TRANSMISSION IN AUSTRALIA

On 8 September 2021, the Australian Space Agency (**the ASA**) gave the go-ahead for the first commercial rocket launch to take place in Australia. Southern Launch's Whalers Way Orbital Launch Complex was chosen to be the launch pad for a Taiwanese company's two-staged suborbital hybrid rocket. This approval for Australia's first commercial rocket launch comes as Australia seeks to increase its presence within the global space economy, as well as encourage greater investment in domestic capabilities and industry.

OVERVIEW OF THE AUSTRALIAN COMMERCIAL SPACE LANDSCAPE

The Australian Department of Industry, Science, Energy and Resources defines the Australian space sector as a "set of space-related activities along the space value chain and is part of the broader space economy". This definition has drawn on the current OECD definition for the space economy being "the full range of activities and the use of resources that create and provide value and benefits to human beings in the course of exploring, understanding, managing and utilising space…"

In 2018, the Australian Space Agency (**the ASA)** was created as the Commonwealth entity responsible for coordinating civil space matters across government, providing advice on civil space policy, and supporting the growth and transformation of the space sector. The ASA sits within the federal Industry, Science, Energy and Resources portfolio and its goal is to triple the size of the Australian space economy from $4 billion AUD to $12 billion AUD by 2030 targeting 20,000 new jobs. Additionally, the Australian Government is investing $700 million AUD in the civil space sector including investing $32.3 million AUD in spaceports and launch sites across Australia as well as $32.5 million AUD to procure and provide spaceflights to get Australian technology into space.

AUSTRALIAN REGULATORY APPROVAL FOR LAUNCH AND TRANSMISSION

The Australian outer space landscape is regulated by two key instruments. The *Space (Launch and Returns) Act 2018* (**the Launch and Returns Act**) provides the system for the regulation of space activities in Australia, specifically establishing a regime for the licencing and permitting of space activities and a liability regime to allocate liability to operators. The Launch and Returns Act was designed to help lower barriers to entry for new players in the Australian space industry and is regulated by the ASA and largely covers the launch and return of an object as well as the launch facility itself.

Key issues

- The *Space (Launch and Returns) Act 2018* amended the *Space Activities Act 1998* to assist in lowering the barriers of entry to the Australian launch sector, by simplifying certain procedure, reducing insurance requirements and recognising new space technologies
- The Australian space sector is set to grow from $4 billion AUD to $12 billion AUD by 2030 due to a major increase in Government spending
- Australian and foreign satellite operators need to be mindful of their obligations under the *Radiocommunications Act 1992* and the strict licencing regime regulated by the Australian Communications and Media Authority

In relation to satellites, the *Radiocommunications Act 1992* along with the *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020* (together the **Radiocommunications Acts**) provides the system for the regulation of the transmitting and receiving of communications from Satellites in space to Australia. This system provides a strict licencing regime for both Australian and foreign entities and is regulated by the Australian Communications and Media Authority (**ACMA**).

Australia has also ratified all five international space treaties and owes obligations under these including to ensure the non-appropriation of outer space by any one country; freedom of exploration; liability for damage caused by space objects; the safety and rescue of spacecraft and astronauts; and the prevention of harmful interference with space activities and the environment.

KEY REQUIREMENTS FOR LAUNCH

The Launch and Returns Act was enacted to update the pre-existing framework under the *Space Activities Act 1998* to consider the evolution of space activities by adapting the framework to cover new technologies such as high-power rockets, launches from aircraft in flight and simplifying processes to encourage greater commercial participation. A licence or permit is required to conduct space activities in Australia, or from overseas as an Australian national.

For launch and return within Australia, including the use of a high power rocket, the applicant will need to prove technical competence to conduct the launch and return, meet the insurance/financial requirements for launch and return, reduce the risk of substantial harm to public safety to as low as reasonably practicable, not include a nuclear weapon or any other WMD (unless approved by the Minister) in the launch, and there must be no countering interest of international relations or national security to deny launch. These requirements apply across launch and return permits, high power rocket permits, and overseas payload permits. In relation to a licence to run a launch facility, the applicant must prove the above as well as obtain all necessary environmental approvals under Australian law, provide an adequate environmental plan for the construction and operation of the launch facility, and provide sufficiency of funding to construct and operate the launch facility. The insurance requirement for participation in space activities (previously a minimum of $750 million AUD or the maximum probable loss that could be suffered by a third party from launch) has been reduced to $100 million AUD. Importantly, the Launch and Return Act imposes liability consequences on operators for any damage which is caused by space objects on Earth, to aircraft in flight or in outer space. Varying levels of liability are imposed where the damage occurs on Earth or in air or if damage occurs in outer space. The Australian Government has also announced that fees for launch applications will no longer be required as part of the broader regulatory reform to encourage greater participation in the space sector.[1]

Currently the ASA has approved four launch sites across Australia. These include Southern Launch's Whalers Way Orbital Launch Complex and Koonibba Test Range in South Australia, the Equatorial Launch Australia Arnhem Space Centre in the Northern Territory and the Gilmour Space Technologies Abbot Point site in Queensland.

[1] https://www.industry.gov.au/news/keeping-australias-space-sector-soaring

RELEVANT REQUIREMENTS FOR TRANSMISSION

Communication with satellites relies on the electromagnetic spectrum (**spectrum**) between ground stations on Earth and transponders on artificial satellites in space. In Australia, national spectrum use is regulated by ACMA who is the statutory body that approves licences to operate radiocommunications devices that transmit signals to and from Australia.

To transmit or receive signal from a satellite to or from Australia, a filing must be made to the International Telecommunications Union (**ITU**) for international frequency coordination approvals in accordance with the ITU radio regulations, and a radiocommunications link must be authorised by a relevant licence issued by ACMA. The ITU can only receive filings from administrative bodies within State parties, so an applicant must be represented by a state government to seek regulatory approval by the ITU. The filing and coordination process with the ITU in Australia is conducted by ACMA. Currently the application fee through ACMA is $35,956 for a new satellite operator.

In relation to licences to operate satellites, ACMA has four different types of licences that govern satellite use. A space licence is issued to an operator of one or more space stations to communicate with an earth station via a downlink. This can include foreign satellites that communicate with earth stations in Australia. To receive communications from an earth station via an uplink, the operator of the space station will need to apply for a space receive licence. An earth licence is issued to an operator of one or more earth stations to communicate with a space station via an uplink. This can include Australian and foreign satellites. To receive communications from a space station via a downlink, the operator of the earth station will need to apply for an earth receive licence.

To date, ACMA has approved 163 space licences, 135 space receive licences, and 809 earth receive licences (sourced from the ACMA Register of Radiocommunications Licences).

The assessment criteria that ACMA applies in consideration of an application for a new satellite operator includes consistency of the proposed satellite system with all relevant Australian radiocommunications policies and legislative instruments in effect at the time that the system becomes operational; incorporation in Australia under the *Corporations Act 2001*, carrying on business in Australia and having management staff in Australia; operational control of the satellite system from within Australia; demonstration of technical and financial competency; and provision of substantive Australian benefit.

Importantly, Article 44 of the ITU Constitution requires ACMA as the Australian government representative handing the administration in this area, to limit the number of frequencies and spectrum used to the minimum essential to provide necessary services, as radio frequency, spectrum and associated orbits are “limited natural resources” which must be used rationally, efficiently and economically. The onus is on the satellite operator, however, to take all reasonable steps to ensure that harmful interference is not caused by the operation of its satellite system.

ACMA has also made a determination (the *Radiocommunications (Foreign Space Objects) Determination 2014*) that extends the application of the Radiocommunications Acts to space objects owned, controlled or operated by foreign businesses listed in the determination. To date, there are 32 foreign entities named within Schedule 1 of the determination. More recently on 12 May 2022, ACMA made the *Radiocommunications (Foreign Space Objects)*

Amendment Determination 2022 (No.1) which included applications from 6 overseas entities seeking to transmit to Australia from satellites in low earth orbit. The majority of the entities seek to operate or utilise a constellation of satellites to transmit broadband and IoT services to Australian consumers and inclusion of the foreign entities in the determination is a prerequisite to apply for licences to do so.

COMMENT – WINNING THE SPACE RACE

In any emerging sector, there is always a first mover advantage. The launch of large global broadband satellite internet constellations will be no different.

As more homegrown and foreign entities look to Australia for more launch projects as well as satellite network offerings, it will be necessary to obtain the applicable licenses and comply with the growing myriad of regulatory requirements. As this client briefing has demonstrated this involves compliance with both domestic instruments but also international treaties. It is therefore business critical that future operators in this sector obtain relevant regulatory advice to facilitate the necessary licences to grow their satellite networks not only in Australia but also any jurisdiction in which they intend to transmit.

CONTACTS

Dr Sam Luttrell
Partner

T +61 8 9262 5564
E Sam.Luttrell
@cliffordchance.com

Nathan Eastwood
Counsel

T + 61 2 8922 8042
E Nathan.Eastwood
@cliffordchance.com

Julia Dreosti
Counsel

T +61 2 8922 8025
E Julia.Dreosti
@cliffordchance.com

Adriana Abu Abara
Associate

T +61 2 8922 8595
E Adriana.Abuabara
@cliffordchance.com

Henry Garing
Graduate Lawyer

T +61 2 8922 8000
E Henry.Garing
@cliffordchance.com