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10 October 2018

Committee Secretary
State Development, Natural Resources and
Agricultural Industry Development Committee
Parliament House
George Street
Brisbane Qld 4000
Via email sdnraidc@parliament.qld.gov.au

Dear Secretary,

Inquiry into job creation opportunities in Queensland arising from the establishment of an Australian space industry

Thank you for your invitation to make a submission to this inquiry.

By way of background, I have been working on rocket technologies since 2000 with The University of Queensland, CSIRO, the Defence Science Technology Group, the University of Southern Queensland, Gilmour Space Technologies, amongst others. In that time, I have worked on the manufacture and testing of a number of rocket motors, nosecones and propellant tanks as well as scramjet components and shock tube (hypersonic wind tunnel) nozzles. The design and manufacturing capabilities created by these projects led me to the formation of Teakle Composites, a business which manufactures space hardware but has also applied these technologies to novel drilling and mining equipment for Australia's largest resources businesses. The business has employed up to 18 people and continues to grow.

The recent establishment of the Australian Space Agency has dramatically increased the interest in space activities amongst the scientists, engineers and lay people I have encountered. The reporting I have seen has been uniformly positive. The concurrent spectacular achievements of businesses such as SpaceX and Rocketlab and the establishment of Gilmour Space Technologies in southeast Queensland have added to the interest in this area.

In my view, Queensland has built a competitive advantage in propulsion and space system technologies, much of it with the support of the Queensland government. This includes:

a. The many scramjet rocket flight tests performed over the past 15 years by The University of Queensland and the Defence Science Technology Group. The group behind this has valuable expertise in launch operations and space hardware design and testing;
b. The fibre composites capabilities at Teakle Composites, the University of Southern Queensland, The University of Queensland and others; essential for the design and manufacture of lightweight structures;
c. A solid propellant rocket facility established under the Smart State Research Facilities Program
d. The hybrid rocket propulsion capability developed by Gilmour Space Technologies

I urge the committee to recommend the encouragement and maintenance of these advantages in order to make Queensland the national hub of this area of space vehicle activity.

There are obvious benefits to teaching, training, industry-needed R&D and wider benefits to the state as exemplified by my business. I believe it will ultimately lead to the establishment of a Queensland-based space vehicle manufacturing and launch industry and supply chain, creating up to 500 highly-skilled, high-value jobs over the next decade.

Yours sincerely,

Philip Teakle
Managing Director