Senate Standing Committee on Economics – References Committee Public Hearing:

Australia's manufacturing industry

Response to questions on notice

Question 1

Your submission has suggested that a government funded Research Translation Fund could perform a catalysing and commercialising boost for science and technology and have suggested modelling this on Canada's Strategic Innovation Fund. Could you expand on that proposal, and to the extent possible, a view on the quantum of funding that might be provided by the Commonwealth for such a body to make it comparable with similar bodies abroad?

Research Translation Fund

Australia currently has several federal programs that provide ***indirect*** support to researchers and entrepreneurs, but these are not sufficient to help researchers and industry cross the innovation 'valley of death' between breakthrough research and profitable products. ***Direct*** support in the form of a new Research Translation Fund is needed to bridge this gap.

Science & Technology Australia has proposed a Research Translation Fund to drive more 'nearly there' stage projects along the Technology Readiness Level (TRL) and associated Manufacturing Readiness levels to clear the latter-stage hurdles of development. Investments from such a fund would enable collaboration by industry and research institutions to advance the concept to the point where private sector investment can be sought. This would boost the creation of high-value and/or value-added products and technologies that return commercial benefits to Australia. The proposed fund would play a role similar to the Medical Research Future Fund, which supports translation and

commercialisation of medical research and complements the National Health and Medical Research Council grants for medical research[1].

An urgent need for both investment capital and skills development

While highlighting the need for a vehicle to invest in propelling more research further along the development pathway, Science & Technology Australia has also called for an initiative to train a new generation of 'bench-to-boardroom scientists' and 'connectors of commercialisation'.

STA has proposed to train 2000 top researchers Australia-wide for specialist roles to propel the translation of promising technologies and liaise between industry and university research. Through our unique membership structure and vast network across the science and technology sectors, Science & Technology Australia connects all the disparate parts of the research system currently seeking to do parts of this work in isolated silos.

Drawing together this effort would provide the crucial skills needed for Australia to truly 'level up' in our performance on research translation and commercialisation. An investment in skills is essential to match an investment in capital to bridge the 'valley of death' on the road to research commercialisation at scale. This intentional investment in people and teams will deliver a wave of innovations to existing businesses and grow the 'billion dollar unicorns' that have the capacity to invigorate entire national economies.

Quantum of investment

Science & Technology Australia has consistently advocated for a Research Translation Fund to be established with a minimum investment of AUD$2.4 billion over the initial four-year forward estimates period. With modest overheads, this would enable around $600 million to be distributed annually, which is in line with the disbursements from the MRFF. We consider this to be the minimum level of funding required to truly start to 'shift the dial' on Australia's performance in research translation and commercialisation. Investment in people and technology commercialisation at this scale will enable a return on investment within the funding window. This will create a legacy of an entrepreneurial culture shift for the entire sector.

Another option for a Research Translation Fund would be to endow a Research Translation Future Fund – or Science Future Fund. This would be similar in structure to the MRFF capital investment fund, but with application to science beyond medical research. The benefits of such an approach would be to create a stable and long-term funding resource. However, this model would mean resources would not immediately be available to propel Australia's urgent needs to strengthen the country's economic recovery and sovereign manufacturing capability. An ideal solution is to endow a Research Translation Future Fund, coupled with additional funding available in the first years.

Within either a budget allocation fund or future fund model, there are several potential approaches to the fund's disbursements, each with different implications for the nature and amount of government investment.

[1] The MRFF is an investment fund, established in 2015. The government made successive injections of capital into the fund until a target balance of $20 billion was reached in 2020. This capital is invested, and the interest earned on the fund is made available to targeted grant rounds. The latest disbursement was around $600 million a year ($597 million in 2020).

Direct investments

This is the most straightforward model, and as noted, a $2.4 billion investment by the Australian Government over the forward estimates period would allow for annual investment rounds of around $600 million a year. Individual project funding would be tailored according to project need and maturity. Amounts could range from seed funding amounts of around $50,000 to $1–3 million for larger scale (3–5 year) projects.

Low-interest or interest-free loans

The Government could provide loans to projects at an advanced stage of readiness that require capital to achieve commercialisation. These loans would be low-interest or interest-free, to be paid back over a specified term that is manageable within the project context. Funding from the Government could be supplemented (or matched) by funding from other sources including potentially from an industry partner.

Interest-free loans, repayable contingent on success

Loans could also be made to projects at an advanced stage of readiness, and only be paid back through royalties or profits from a successful commercialisation process. Funding from the Government would need to be supplemented (or matched) by funding from other sources. Ventures that are ultimately successful could be required to repay the loan at a set rate, based on earnings from royalties and company profits. The Israel Innovation Authority's R&D Fund follows this model. It follows the same principles as the HECS / FEE–HELP system of income-contingent loans for higher education.

Ideally, a Research Translation Fund would **offer a mix of direct investments and loans, depending on the project readiness level and needs**. There would be projects in earlier stages where a loan would not be appropriate, as the project may be too early in its development cycle to attract private venture capital, and would benefit from a direct grant.

There are some features that would ideally be consistent across all models:

Technology Readiness Level of 5 or above

Current Australian Research Council grant schemes fund projects with TRL between 0 and 4, and not beyond. This means funding options stop right at the point where technologies have progressed beyond proof of concept, are showing considerable promise in field trials and have reached the need to address scalability – at TRLs of 5 or above. Furthermore, these existing schemes assess projects for their scientific merit and not for their commercial viability. Investing in projects at TRL5 and above would mirror the way the MRFF, with its focus on applied research, works in concert with the NHMRC funding for basic research.

Target research to benefit Australia's sovereign capacity

To maximise the Research Translation Fund's effectiveness, the criteria could target research that seeks to produce new goods or services, or make fundamental improvements to the way an industry operates. For example, it could be a new battery technology, a device that measures the sugar content of sugarcane before harvest, or a new software system that shortens the farm-to-plate time for food and agriculture production. These types of innovations would enable a return on investment through increased productivity, increased commodity quality and access to premium markets.

Flexibility to fund research aligned with Australia's Science Research Priorities as well as emerging urgent research

A proportion (e.g. 75%) of the Research Translation Fund could specifically fund projects that align with Australia's Science Research Priorities. This would encourage both the research sector and industry to focus their efforts on national priorities set by the Australian Government.

The remaining proportion (e.g. 25%) could be used to address immediate challenges that may not be covered by the Science Research Priorities. This would be similar to the MRFF – which has the inbuilt flexibility to be deployed to urgent emerging research questions, e.g. research into the health risks of smoke inhalation during the Black Summer bushfires.

Flexibility of rolling application process

It is critical that the scheme operates on commercial terms and timelines. Rather than having a single application round per year, there would be a funding round in each financial year quarter, which would better align with industry partner needs. Most importantly, there must be certainty of application decision timelines and regular communication throughout the year. Projects could be assessed by expert panels formed to align with eight of the Science and Research Priorities (the ninth priority is health, which falls under the remit of the MRFF).

Comparisons with other advanced economies

To assist the committee, we offer a brief overview of how the Canadian and Israeli Government support their innovation ecosystems. Common to both countries is the variety of funding streams/programs to provide appropriate support for research commercialisation at various stages. We also provide an example of an Australian state-based initiative.

Canada's Strategic Innovation Fund

The Strategic Innovation Fund (SIF) supports large-scale, transformative and collaborative projects that promote the long-term competitiveness of Canadian industries, clean growth, and strategic technological advantage.

There are several streams of funding:

- Streams 1–3 are open to Canadian companies and focus on R&D to accelerate technology transfer and commercialisation, and supporting growth and expansion of Canadian industry.
- Streams 4–5 are open to consortia/collaborations/networks led by a Canadian company, and include a Canadian university, college, research institute or not-for-profit entity. Stream 4 is based on periodic competitive calls for proposals, based on government priorities. Stream 5 is open on a continuous basis, and the lead applicant must be a company.

Funding provided under the SIF is generally of a significant scale – it is expected to cover between 10 and 50% of project costs, with a minimum of CAD10 million (AUD11 million), for projects of at least CAD20 million (AUD22 million) in total. Applicants are required to match SIF funding with funding from other sources.

The different streams of funding support projects at various stages of technology readiness and investment potential:

- Stream 1: R&D projects that will accelerate technology transfer and commercialization of innovative products, processes and services.
- Stream 2: Projects that facilitate the growth and expansion of firms in Canada.
- Stream 3: Projects that attract and retain large scale investments to Canada.

- Stream 4: Projects that advance industrial research, development and technology demonstration through collaboration between academia, non-profit organizations and the private sector.
- Stream 5: large-scale national ecosystems through high impact collaborations between small, medium and large corporations, academic and research institutions, and not-for-profit organisations to support Canadian innovation ecosystems.

For Streams 1–3, SIF funding must be repaid, over a period of 15 years. Stream 4 funding is non-repayable.

Israel Innovation Authority

Israel boasts an extremely strong innovation and research commercialisation ecosystem, which is strongly supported through the Israel Innovation Authority's broad suite of government initiatives. These include programs to support industry to engage in R&D, funding to support collaborations between academia and industry, and several programs supporting global engagement in innovation and research commercialisation. Details of key programs are below.

Promoting Applied Research in Academia

The Promoting Applied Research in Academia program supports applied research in academia and provides funding for projects that are at a 'commercialisation-ready' stage. Funding allows connections between academia and industry, at low risk to the industry partner. Funding can be provided to a single entity or a consortium of up to three research institute partners, with or without a corporation, and funding varies accordingly. Projects are funded at a rate of 75–85%, up to a total of NIS770,000 (AUD340,000) per year (for a consortium of three research institutes). Funding rates and total amounts are slightly higher for consortiums working with an industry partner. Funding is exempt from repayment from royalties.

Knowledge Commercialization Fund

The Knowledge Commercialization Fund provides funding to companies to develop new products through a partnership with a research institute – the grants are not awarded to the academic partner, but to the company. Funding is in the form of non-repayable grants of up to 66% of project costs, up to a total of NIS 3.4 million (AUD1.5 million) for a period of up to 24 months.

R&D Fund

The R&D Fund is available to corporations at different stages of maturity from all industrial sectors, to assist them develop or upgrade products and technologies. The fund provides financial support of 20–50% of the project costs. Recipients undertake to repay the funding received through money earned from royalty payments, but this is only required if the project is successfully commercialised.

Victorian Breakthrough Fund

To address the funding gap for commercialisation efforts in Australia, and in Victoria specifically, the State Government has launched the Breakthrough Victoria fund.

The $2 billion investment fund aims to leverage investments from venture capital partners to support long-term and strategic deep technology investments. This includes investment in development, field trials, manufacturing, and where applicable, clinical trials.

The Breakthrough Victoria fund intends to invest at four different funding levels:

- Up to $2 million for early-stage and platform technologies
- Up to $10 million for validated technology and market, to support growth
- Up to $25 million focussed on infrastructure and manufacturing projects

- Up to $30 million in established companies to catalyse their growth and new regional strategies

The Breakthrough Victoria fund is primarily equity investments and seeks to address different stages of the technology pipeline, including specialised manufacturing capabilities.

Question 2

2. Your submission has suggested that the Australian Government should cover the salaries of PhD interns working in industry to overcome initial industry hesitance to take on PhD interns, and have suggested that this will immediately bolster connections between industry and academia while promoting innovation. Several other submissions to this inquiry have highlighted the need to bolster these connections, so I was hoping that you might expand on this proposal for the Committee, and, if possible, share any details about comparable schemes in other countries where this approach is taken?

The benefits to PhD students of gaining industry experience to complement their academic research expertise are significant. Businesses across the breadth of Australia's industry sector also stand to benefit from tapping into the Australia's PhD talent pool.

We acknowledge the steps the Australian Government has already taken to increase the number of PhD students undertaking an industry internship, through a targeted weighting of Research Training Program (RTP) funding. However, we advocate that additional funding, to be provided directly to the participating student/university and business partner, rather than reallocation of the existing RTP funding to provide an incentive for universities to support PhD internships would facilitate a more transformative outcome.

The Australian Government provided funding for the National Research Internships Program from 2017–2021, which enabled engagement between 35 universities and 337 industry partners[2]. However, this funding was not renewed in the 2021–22 Budget. Creating a robust internship program requires a long-term commitment. There are issues of administration and workplace culture in both academia and industry that must be addressed so that participation in an PhD internship becomes a seamless part of the PhD process. This will take time, which must be acknowledged with a long-term funding commitment to properly establish program momentum.

We also strongly encourage any PhD internship programs to allow for flexibility in internship duration and timing, according to both the student's and industry partner's needs.

Mitacs Accelerate

Canada provides a good example of a successful model for PhD internships. These are facilitated by Mitacs, a national not-for-profit organisation in Canada that delivers a range of research and training programs.

The Mitacs Accelerate internship program has run since 2003, and has supported more than 30,000 internships to PhD students and postdoctoral researchers. Interns are provided with a minimum stipend of CAD10,000 for a four-month internship. The program is funded with a mix of government funding and partner contributions, from both universities and industry. In 2020–21, The Canadian Government department of Innovation, Science and Economic Development provided CAD105

[2] https://amsi.org.au/wp-content/uploads/2021/08/rtp_submission_amsi_final.pdf

million for the Accelerate program, leveraging CAD137.7 million in contributions from other project partners[3].

This illustrates the potential for stable government funding to support a long-term, successful and transformative program that enables effective engagement between research and industry. Government funding would ensure the program builds sufficient momentum to reach a position where funding can be leveraged from industry partners, and would help overcome the initial barriers to industry participation of cost and resourcing.

Industry PhD programs

Another way to deepen industry engagement at the PhD training level is through industry PhD programs, where a student's entire PhD program is integrated with an industry project or objective. These programs, generally funded through standard PhD funding arrangements, have been successful and should be encouraged.

An alternative funding option is for the PhD candidate to be funded through the commercial partner – the student enrols in a PhD program with a university partner, but receives a tax-free scholarship from the industry partner. This essentially makes the PhD student an industry employee. This system provides clarity on intellectual property and commercialisation arrangements, and clear expectations for the student, academic team, and industry partner.

Question 3

3. Your submission was supportive of the proposed Patent Box initiative announced in the 2021 May Budget but has suggested that this initiative also be extended to clean energy technologies. Could you expand upon how you would see that working, and do you think there are other areas where this initiative could be extended into?

The STA Patent Box Policy Design submission is provided as an appendix to these answers to questions on notice.

Question 4

4. Your submission was supportive of a funding boost to create extra 'industry broker' staff positions at the NCRIS facilities whose role is to reach out to industries, including manufacturing, and encourage them to engage with facilities like ANSTO and the Australian National Fabrication Facility. In your view, how would you rate the current level of collaboration between the manufacturing sector and our centres of excellence, and what do you see as the primary benefit to be found from investing in these industry broker positions?

As mentioned in our submission, there are some NCRIS facilities that already support elements of Australia's manufacturing industry – ANSTO (produces irradiated silicone critical to power-grid manufacturing) and the Australian National Fabrication Facility (ANFF) lowers the threshold for SMEs to undertake novel and specialist manufacturing practices.

The technology and innovation sector are moving so swiftly that it is very challenging for SMEs to identify solutions on their own. The 'industry broker' role would be a dedicated outreach and engagement position, with a focus on proactive engagement with industry, including manufacturing, to both understand their needs and demonstrate how NCRIS facilities can support various industry

[3] https://www.mitacs.ca/sites/default/files/uploads/page/ised_annual_report_2020-21.pdf

goals. This would include critical capability assessments and 'matchmaker' duties to accelerate industries' journey through the search phase, to deliverables in the field.

Indeed, the ANFF has recently advertised a 'client liaison' position, along the lines of the suggested 'industry broker' role. This illustrates the value of such a role. Additional funding should be provided to NCRIS facilities to support the creation of these roles across the network. This would ensure that existing budgets, which are maximised to support research and optimal facility outputs, need not be compromised to accommodate this role.

Appendix to Question 3

STA Submission – Patent Box Policy Design

Patent Box Policy Design

16 August 2021

To the Treasury,

Thank you for the opportunity to offer feedback on the design of the patent box as outlined in the Patent Box discussion paper on policy design.

Science & Technology Australia broadly supports the introduction of a patent box in Australia for the biomedical and clean energy sectors.

STA recognises the importance of creating an innovation ecosystem that supports the translation of Australia's research into new and novel products.

The patent box will align Australia with similar economies which already have such policies in place. Together with a Research Translation Fund, and the Research & Development Tax Incentive a patent box will be an important pillar in Australia's research translation system.

STA's response to the patent box design paper is based on the questions asked.

STA makes the following recommendations on the design and implementation of the patent box:

- Apply the patent box to inventions with a patent priority date from July 1, 2016;
- Peg the concessional tax rate at 60% of the average corporate tax rate in Australia to create a stable investment setting into the future;
- Include technologies filed under the patent cooperation treaty for the first five years of the patent box as well as the Australian general patent;
- Use a patent-level test rather than an income streaming test to target the medical and biotechnology sector;
- Carefully consider how biomedical AI might be included; and
- Expand the patent box swiftly to clean energy technologies amid the urgent challenges of climate change.

We would welcome the opportunity to discuss our recommendations further.

Yours sincerely,

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Priority date

STA strongly urges the Australian Government to set a 'priority date' of 1 July 2016 and onwards for inventions covered by the patent box scheme. This would ensure highly valuable medical and biological technology patented in Australia in the past five years is manufactured here - and not lost offshore.

The proposal in the policy design paper to set a priority date from 11 May 2021 onwards risks seeing medical and biological technology either commercialised overseas or not pursued at all.

Commercialisation of a product in the biomedical technology sector typically takes 3-5 years. These timeframes are often even longer for implantable medical technologies. This means any technology patented but not fully commercialised in that timeframe risks being manufactured overseas unless the patent box creates the incentive to continue the activity onshore. STA is concerned that limiting the coverage of the patent box to patents filed after 11 May 2021 will result in a shorter revenue lifetime for a company with patents already filed.

Moving the priority date to include patents from the past 5 years (to apply from July 01, 2016) would make patented, but uncommercialised technology, viable to be manufactured in Australia.

Extending the coverage of the patent box to include patents from the last five years would also boost short-term benefits to the Australian economy. Given the time it typically takes to commercialise biomedical technology, the Treasury's proposed priority date of May 2021 would be unlikely to deliver strong economic returns until several years into the future. Delivering a stronger short-term boon from the patent box will be key to Australia's urgent goals to strengthen supply chain security and build momentum for further global investment.

STA recommends: Apply the patent box to inventions with a patent priority date from July 1, 2016.

Concessional rate

STA agrees the patent box concessional tax rate of 17% is optimal under the current tax system.

There is a broader ongoing policy debate in Australia about the right level for the corporate tax rate - and an ongoing global discussion on a minimum international corporate tax rate. Given the potential for the wider Australian general corporate tax rate to change in the future, it would be prudent to build long-term surety into the patent box to strengthen investor confidence.

Rather than setting a flat concessional tax rate of 17%, STA proposes the Government peg the patent box concessional rate to the prevailing corporate tax rate. Given there are currently two Australian company tax rates depending on the size of a business (25% and 30%), it would be prudent to peg the patent box concession to 60% of the average prevailing corporate tax rates. This would set the current concessional tax rate to approximately 17% currently, but also signal strongly to industry that the patent box concession will always be valuable regardless of changing corporate tax rates. This will support long-term investment.

STA recommends: Peg the concessional tax rate at 60% of the average corporate tax rate in Australia to create a stable investment setting into the future.

Are patents applied for by medical and biotechnology companies with domestic R&D operations generally Australian standard patents?

Generally, Australian companies file patents under the Patent Cooperation Treaty. This allows protection in multiple regions rather than just in Australia. In the past, there has been limited encouragement for companies to manufacture their products in Australia so local-only patents were of less use.

The implementation of the patent box in Australia will be a much stronger incentive to manufacture, source materials and develop technology onshore. This may lead to more Australian standard patents becoming the primary focus for technologies covered by the patent box.

However, biomedical technologies take up to 5 years to commercialise. We need to maximise benefits for Australia and encourage companies with current patents to manufacture their technologies onshore. To that end, appropriate technologies patented under the Patent Cooperation Treaty (with priority date after July 1, 2016) should also be included for the first 5 years of the patent box.

STA Recommends: Include technologies filed under the patent cooperation treaty for the first five years of the patent box as well as the Australian general patent.

What is the best approach to provide certainty around access to the regime for the medical and biotechnology sectors?

A patent-level test based on primary use or classification would deliver the greatest level of certainty for the sector. A patent-level test means the tax concession is only applied to the patented products or applications which fall within the definitions of the biological and medical technologies or applications.

A patent-level test would also help to ensure patents are filed in a strategic way and prevent patent hoarding/slicing. It would do this by making the patent box only valuable to companies who make use of the patents.

STA is concerned with the proposed income streaming approach to the patent box. Income streaming creates too much ambiguity in a company's finances. It would also make tax reporting more complex for both the company and the Australian Government. It has the potential to create a lot of ambiguity around eligible items - an ambiguity challenge that has beset the Research and Development Tax Incentive over many years.

STA Recommends: Use a patent-level test rather than an income streaming test to target the medical and biotechnology sector.

What are the core concepts/applications that need to be covered by any definition of the medical and biotechnology sectors for the purpose of defining access to the patent box?

Any definition of the medical and biotechnology sectors would have to include:

- Screening, diagnostic, and treatment tools;
- Imaging and sensing technologies;
- Drug, pharmaceutical, and vaccine discovery and development; and
- Digital health integrated technologies.

These applications would be key priorities, but this is not an exhaustive list.

One important consideration in defining the medical and biotechnology sector for the patent box is the emerging deployment of Artificial Intelligence (AI) in medtech or biotech. This area is less clear than the other applications outlined above.

As it currently stands, the applications of Artificial Intelligence can be protected in Australia's patent system. A recent High Court ruling also established that technologies resulting solely from Artificial Intelligence are also able to be protected. What is not currently protected is the code of the Artificial Intelligence itself. This grey area needs to be considered in the design process to protect the intellectual property of Australian software development.

STA recommends: Carefully consider how biomedical AI might be included.

Businesses that would benefit from low emissions tech inclusion

Australia has been a world leader in developing low emissions technologies for decades - including in solar, batteries, and optics (mirrors). However, we have yet to capitalise on opportunities to manufacture these technologies onshore. STA strongly encourages the Australian Government to include clean energy technologies in the patent box scheme. This would be a clever strategic move by the Australian Government amid the growing drive across the global community to transition to a net zero emissions future as swiftly as possible. Adding clean energy technologies to the patent box can build a strong stream of Australian export income from Australian-made clean energy products.

STA recommends: Expand the patent box swiftly to clean energy technologies amid the urgent challenges of climate change.

What sort of businesses own patented inventions relating to low emissions technologies, and would introducing a tax concession through a patent box support the clean technology energy sector?

STA considers the low emissions technology sector includes:

- Renewable energy;
- Battery technologies;
- Printing companies for low-cost manufacture;
- Optics manufacturers for glasses and mirrors;
- Energy and grid management devices; and
- Supercapacitor technologies including materials and devices.

Each of these fields should be included in an expansion of the patent box to low emissions technologies, while noting there may also be other fields that should be covered.

What factors drive decisions about the location of clean technology R&D?

One of the driving forces in decisions on where to locate clean technology R&D is the location of founders and investors. Investors and founders are readily available in Australia, however, there has been a lack of incentives historically to ensure they focus on Australia.

Australia has a deep well of scientific talent that could be turned into company founders with the right training, networks, and opportunities. STA has proposed Australia train a new generation of "bench-to-boardroom scientists". There is a prime opportunity here to encourage investors to buy into the low-emission technology companies created by such "bench-to-boardroom scientists" and develop a much bigger cohort of Australian-focused founders.

Australia's research-intensive university sector produces world-leading research that has strong urgent potential for stronger translation and commercialisation. This is the focus of the Australian Government's current work to shift the dial on university research commercialisation. An ability to translate technology into products in close proximity to the inventors is appealing to investors and companies.

Investors can also drive decisions on location - with major investors often more willing to buy into local innovations and products. A patent box will help encourage a greater Australian focus for investors as manufacturing will be significantly more likely to occur onshore.

Would a patent box be an effective way of supporting the clean technology sector? Are there other options available to encourage growth in this sector?

A patent box would be a powerful driver of growth in Australia's clean energy technology sector. Many innovative ideas are produced in Australia, and often result in companies founded here. At the moment, there is limited incentive for them to keep their business in Australia and to manufacture in Australia.

A patent box would ensure local clean energy technology companies stay in Australia - boosting investment in local manufacturing, translation, and commercialisation. It would strengthen the development of advanced manufacturing here - and boost the sovereign capability of Australia's manufacturing, biomedical, and clean energy technology sectors.

Adding clean energy technologies to the patent box could be complemented by other policies. One is to invest in the skills, training, and commercialisation networks of a new generation of "bench to boardroom scientists". Providing skills to a scientific workforce that takes the technologies they have developed and turn them into commercialisable clean energy technology solutions has a dual benefit. First, it maximises the returns to Australia of research on the cusp of commercialisation and creates a new generation of Australian company founders. STA has proposed this approach in our submission to the Government's public consultation on university research commercialisation.

A further complementary measure to turbo-charge the development of Australia's clean energy technology would be to significantly boost research translation funding. Complementary measures through the patent box and a new Research Translation and Commercialisation Fund would turbo-charge clean energy technology growth in Australia to make us a global power in clean energy technology. This would generate vast economic returns to Australia and to our national tax base.