

IPH Group Patent Box Consultation Submission

IPH Limited ACN 169 015 838



About our submission

IPH is the leading IP services group in the Asia Pacific with five IP firms in Australia employing the largest number of IP professionals in the country. Our firms have deep expertise across all industries and sectors and IPH has compiled this submission with the input from a number of medical, biotech and cleantech practice leaders from our firms.

We welcome the opportunity to contribute to the Government's consideration of the patent box design.

Overview

IPH considers the introduction of a patent box scheme a welcome addition to the establishment of a dynamic innovation ecosystem that encourages and increases the domestic commercialisation of innovation. Patent filings, our innovation output, have been on the decline over the last 10 years and across industry and the private sector there is genuine support and increasingly urgent demand to have Australia address this issue.

While patent boxes can be used as a lever, as overseas experiences have demonstrated, economic benefit can be marginal at best – at worst negative. Success will hinge on the nature of the tax incentive, the scope of the scheme and how it is adapted to Australian market conditions.

For most inventors, the path to profitability for any innovation is a long one, often between 10-to-15 years, particularly in heavily science-dependent areas such as medical technologies, biotechnologies and cleantech where scientific advances are badly needed, such as battery storage, energy distribution and desalination. In most cases, the patent journey alone can be four to five years. This suggests we will not see the full impact of the proposed patent scheme until 2026 at the earliest and therefore it is vital we take learnings from the 20 countries who have gone before us to design a scheme that works in conjunction with other innovation levers if we wish it to deliver material impact.

IPH recommends the following considerations for the future design of the scheme.

- **Industries to be included for maximum benefit:** Successful patent box schemes abroad have been those that targeted patent heavy industries. In 2017/2018 in the UK, manufacturing was the number one user of the patent box, a six times greater user than science related businesses who were 6th and last on the list¹. The scheme would garner far greater support from industry if the scope included a broader range of industries – particularly those where there are major social, economic or security advantages to be achieved from innovation, such as the generation of employment through domestic manufacturing capacity, or the maintenance of self-sufficiency in critical industries, like agriculture.
- **R&D limitations and support:** We support linking the tax incentive to R&D spend. However, used as a lever in isolation this may not be enough to overcome domestic R&D limitations and other significant financial barriers to undertaking R&D which may outweigh the tax benefit. For example, in the biotech industry, Australia lacks certain capabilities including those necessary to perform larger scale toxicology studies and large-scale clinical trials. To stipulate that all R&D must be done in Australia (as opposed to a substantial portion) will limit access to the patent box for a number of Australian companies.

The patent box needs to go hand in hand with targeted R&D support as part of a comprehensive innovation policy and strategy that includes infrastructure development and regulatory relief. Existing initiatives like the R&D tax incentive, Export Market Development Grant Scheme and the Modern Manufacturing Initiative are helpful but more needs to be done to enable end to end R&D in Australia.

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/921792/2020_Patent_Box_Publication_-_accessible.pdf



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- **Market limitations:** Similarly, there are Australian innovators in the medical and biotech industry who, to be profitable, need to be able to export not only their products, but also the underlying technologies because of the limitations of the size of the Australian market. These companies will be excluded from this current patent box regime yet potentially would be significant contributors to domestic R&D and commercialisation. We recommend that such Australian companies be considered as part of future scheme extensions and broader strategies to incentivise greater domestic innovation.

Q1. What features of patent boxes in other jurisdictions are most significant and important for designing the Australian patent box to support the medical and biotechnology sectors?

- **Europe’s qualifying assets inclusions:** Most European patent box regulatory regimes include as ‘qualifying IP assets’ not only patents, but also software copyrights. In the proposed scheme, this would be particularly useful to the burgeoning medtech (e.g. wearables) and personalised medicine space. Likewise, if the patent box regime is extended to other industries, such as agriculture, it would be desirable to include plant variety rights as qualifying IP assets, particularly as plant breeding may assist in the mitigation of damage from climate change through greater drought resistance, for example.
- **UK’s modified nexus approach:** A clear link should be required between R&D spend and eligibility, but not necessarily a requirement that all R&D (as opposed to a substantial portion) of R&D takes place in Australia. The requirement of a substantial part, rather than all, is particularly important given the extensive international collaboration that occurs in medical and biotechnology sectors, particularly among universities and research institutions, from which many start-ups emerge.
- **UK’s 6-year profit carry-over:** This would allow the patent box tax rate to apply for up to six years of profits pending the granting of a patent.
- **UK’s opt-in approach:** This would allow the patent box tax rate to apply to companies when it can best financially support their growth.

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

Often but not necessarily. Anecdotally, a proportion of medical and biotechnology companies, Australian owned, file first and sometimes only offshore, most notably in the USA because of access to business and scientific resources, capital and clinical trial expertise. The medical device and pharmaceutical industry have previously utilised the Innovation Patent for breadth and depth of protection and for coverage of innovation arising from product design characteristics.

3. In instances where an invention is patented in other jurisdictions but not in Australia, is there a way of judging whether the scope of claims in these patents would be substantially similar to the scope of claims in a standard patent that would have been granted in Australia?

There is an existing reciprocal framework available via the IP5 PPH Patent Prosecution Highway pilot program utilised by Europe, US, Japan, Korea and China. Under this framework, a patent applicant who has received a ruling that at least one claim in an application is patentable – can have their corresponding application fast tracked.

The IP5 Offices together handle about 80 per cent of the world’s patent applications and 95% of all work carried out under the Patent Cooperation Treaty (PCT). Thus, IP5 would represent an excellent starting list of countries, perhaps with the addition of some other ‘substantive examination’ countries such as Canada, Singapore and New Zealand.



There is also much work carried out on identifying patent families by the OECD, EPO and WIPO. A patent family consists of similar applications filed in different countries on the basis of the same priority application.

While these are good starting positions, we do need to acknowledge that different countries may have slightly different approaches reflecting their laws and how, for example, their case law has developed.

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

Firstly, we recommend the development of a universal and thorough patent classification framework. The International Patent Classification (IPC) system is globally used and understood by patent users and is regularly updated. The Cooperative Patent Classification (CPC)² system is an extension of the IPC jointly managed by the European Patent Office and the United States Patent and Trademark Office. It was designed to be a common, internationally compatible classification system, used by both offices, and could be utilised in Australia with the patent office signing up to the CPC system. It includes a mechanism for tagging new technological developments including cross-sectional developments. Patent classification systems are necessarily granular and the hierarchy in for example in the IPC is at least five layers deep. Care must be taken to ensure that aspects of any patent classification system adopted are not at such a granular level as to be too complex or impenetrable to users of, or advisors to participants in, the scheme which will include the patent-unfamiliar.

This system can be quite complex with its multi-class classifications. It isn't industry specific so can be very broad. One alternative option could be the introduction of ANZSIC³ or BIC⁴ codes, however, these are not sufficiently STEM oriented as to sufficiently distinguish between industry sectors if the government remains committed to allowing access to the scheme only in certain sectors.

5 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?

An approach based on eligibility through either the technical classification of the invention or the commercial application of the invention would best ensure that all relevant applications in the medical and biotechnology sectors are included in the patent box.

Definitions need to be broad to accommodate the range of companies that are not classically 'medical' such as a future Cochlear or ResMed.

6. What sort of business own patented inventions relating to low emissions technologies and would introducing a tax concession through a patent box support the clean technology industry?

Businesses spanning the entire enterprise spectrum file for patent protection within the clean technology ("cleantech") space: start-ups, small to medium sized enterprises, universities and other public research bodies (eg. CSIRO), domestic public and private companies, through to multinational corporations. The cleantech industry is not constrained within any one type of entity. Rather, it is the combination of each of these entities, working alone or in strategic collaboration, that defines Australia's cleantech industry.

² <https://www.cooperativepatentclassification.org/index>

³ [https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1292.0Search12006%20\(Revision%202.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1292.0Search12006%20(Revision%202.0))

⁴ [03-2017 Business-industry-codes.pdf \(ato.gov.au\)](https://www.ato.gov.au/ato/content/03-2017-Business-industry-codes.pdf)



7. Do patents play a strong commercial role in the clean technology energy sector, or are other strategies for using IP more important (such as being first to market)?

Patents play a strong, dominant, role in the cleantech sector. Alternative commercial strategies such as trade secrets and/or being first to market are significant for technologies that are difficult to reverse-engineer or short-lived – but in general, neither is especially true of cleantech. Many clean technologies have protracted lifecycles (often to offset the capital investment in construction, for example a wind farm) and the teaching provided in a patent specification can be an invaluable springboard to innovators seeking the next generation of the respective clean technologies. Market exclusivity over the term of a patent is significantly preferable than any first to market or trade secret advantage when it comes to most clean technologies.

Government procurement is also important in encouraging local industrial and commercial development. It has been used extensively by many countries, while still respecting relevant international trade rules.

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

Aside from access to people, facilities and capital, one of the defining factors as to the location of cleantech R&D is access to the local environment itself. For instance, solar is better suited to the Northern Territory than Tasmania; wind power is better utilised in Victoria than in Queensland; anything mining-related is well suited to Western Australia; tidal is best utilised in Western Australia. Ease of access to the local environment – that is the location the R&D either draws from, or else aims to remediate, is a distinct competitive advantage to any cleantech commencing R&D.

Finally, investment is a significant a factor. To date, there has not been a lot of venture capital investment in Australia for cleantech. We can learn from our experience with biotech in this scenario. While Australia produces world leading ideas and scientists, lack of early investment means that biotech R&D facilities are located mainly overseas. Likewise, many fine cleantech R&D is currently ceded overseas. Accordingly, a strong and vibrant local cleantech industry is heavily reliant upon access to capital.

9. How would the clean technology sector best be defined for the purposes of a patent box?

A common problem encountered by many national Patent Offices which have sought to introduce accelerated examination pathways for clean technologies has been a standardised, clear definition of ‘cleantech’. As a result, cleantech has been interpreted somewhat broadly and subjectively.

We support leveraging the definition and framework utilised by the World Intellectual Property Organisation (WIPO) and the Intellectual Property Classification Committee of Experts.

WIPO’s favoured definition of cleantech (used interchangeably with “greentech”) defines Environmentally Sound Technologies (ESTs) in Chapter 34 of Agenda 21 (The United Nations Program of Action from Rio, 1992). This defines clean technologies are those that “protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual waste in a more acceptable manner than the technologies for which they were substitutes’.

The Intellectual Property Classification (IPC) Green Inventory, developed by the IPC Committee of Experts, lists patent information relating to ESTs as defined above. It is important to note that these definitions mean that such technologies can appear widely across the IPC in numerous technical fields including; alternative energy production, transportation, energy conservation, waste management, agriculture/forestry, administrative, regulatory or design aspects, nuclear power generation.



10. 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?

Clean technologies are a clear example of a patent providing ancillary public benefit and we believe that this, of itself, justifies including cleantech within the proposed patent box. We believe a patent box would be an effective means of supporting the Australian cleantech sector. The alternative levers are less advantageous from an IP perspective such as compulsory licensing, a notional non-commercial use exemption to infringement, a lower inventive step threshold, increasing the patent term for cleantech inventions, expedited examination and improvements in technology transfer while having merit, would have less impact.

While the patent box is a critical factor in growth of this sector it should be one tool used in conjunction with others. The patent box offers relief for companies navigating an invention from market introduction to growth but other stages of an invention's lifecycle need to be supported and could include:

- R&D tax incentives or incentives via the government agencies (i.e. Australian Renewable Energy Agency (AREAN) and/or the Clean Energy Finance Corporation, NHMRC and ARC) for inventors to bring their idea to patent ready
- Infrastructure grants to subsequently support the cleantech company during scale-up.





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