

Article Information

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Intellectual Property and Wind Energy

Private industry and governments continue to invest in wind power generation as one of the leading forms of renewable energy. The wind energy sector, therefore, finds itself at the forefront of the global initiative of moving towards sustainable energy sources. Consequently, the importance of regulating intellectual property (IP) rights within the industry has become increasingly relevant in Australia.

IP in Australia

Australian legislation and common law makes it possible to hold exclusive rights over IP, regulating its use and facilitating technology transfer. IP rights are held in intangible property created from human intellect and/or creativity including rights in designs, patents, trade marks, copyright and trade secrets.

IP in the Wind Energy Sector

IP rights play a vital role in protecting ownership, and promoting the ongoing innovation within the wind energy sector. Commercialising innovation is made possible through trade marks, registered patents, registered designs, and unregistrable IP that subsists in trade secrets and copyright.

In 2019 it was identified that since 1995 the wind industry had suffered more than \$5.2 billion in commercial losses associated with avoidable IP risks.^[1] IP holds particular importance due to the nature of the large scale construction and maintenance required, in which there is frequent engagement of contractors and the exchange of confidential information. This occurs at various stages, including the design, engineering, procurement, civil works, turbine installation and maintenance cycles. Consequently, the effective management of IP rights is crucial within the wind energy sector.

Patents

What are patents?

Patents protect inventions which are novel and inventive by providing a government-granted right to exclude others from making, using and selling a claimed invention for a period of generally 20 years.^[2] Patents are concerned with how things operate, often without particular regard to how they look. To be patentable, the invention must include an 'inventive step', being a step which has never been publicly done before in the world, and which would not have been obvious to a person who is skilled in the relevant art. Following registration, replication of a similar invention without authorisation may constitute infringement, which can be enforced in court.^[3] As such, patents are a valuable source of IP which provide a monopoly right of exploitation for 20 years which can then be licenced to others.^[4]

An application for a patent must be lodged with the Patent Office before the subject of the application is used or exhibited publicly.

Patents in the wind energy sector:

Patents play a central role in protecting rights in the wind industry, making up approximately 25% of all renewable energy-related patent applications. The exponential expansion within Australia has resulted in the industry becoming

overcrowded. To maintain a competitive edge, companies are required to produce new, more effective means of producing wind energy.[5] Australia consequently continues to innovate to create turbines with improved aerodynamic efficiency and power generation. The largest turbines in Australia currently stand at 230 metres at Dulacca Wind Farm, however, a new turbine is now under construction at MacIntyre Wind Farm which will become the largest in Australia at 285 metres.[6] This continuous growth and innovation displays the necessity of assessing whether any inventions may be patentable.

The components of the wind turbine itself are highly patented and have been the subject of considerable international patent litigation.[7] A UK High Court case in 2021 between General Electric (GE) and Siemens Gamesa Renewable Energy (SGRE) reiterated the importance of diligent patent registration in which SGRE claimed patent infringement regarding the use of bearings in rotor hubs for offshore wind turbines; to which GE counterclaimed for invalidity.[8] The judge invalidated SGRE's patent for obviousness over the prior art and, consequently, no infringement by GE was found.[9]

Design

What are registered designs?

In contrast to patents, registered designs protect the way a thing looks, without particular regard to how it operates.[10] To register a design, the product must be new and distinctive when compared with other designs in the world.[11] An application to register a design must be made prior to product manufacturing commencing in Australia and prior to publication and sale, or offer of sale, anywhere in the world.[12] Registration of a design grants the owner a monopoly over it for a duration of 10 years.[13]

Designs in the wind energy sector:

Registered designs are particularly relevant in the wind energy sector when differentiating products from those of competitors. The registration of designs of visually distinguishable turbine components, such as generators, rotor blades and towers, have been commonly utilised in international jurisdictions where many manufacturers are trying to enter the market with a distinguishable, superior product.

While designs can be registered without regard to how the subject of the design operates, often it is the very configuration of the design which achieves a desired result, so registering that design can result in a valuable monopoly right over the desired result itself.

Trade Marks

What are registered Trade Marks?

Trade marks are 'badges of origin', used to distinguish goods or services from others in a similar industry.[14] These may include brand or product names, logos, tag lines, aspects of packaging, shapes, colours, sounds or scents.[15] Once registered, the owner has a monopoly to use that mark in relation to the goods or services of registration,[16] creating a right that can also be sold, licenced or transferred.[17]

Unregistered trade marks are also protected under the Australian Consumer Law or the common law tort of passing off. Despite this, registration remains important as it assists with enforcement proceedings, negating the high hurdle of proving reputation or whether consumers have actually been misled. Registered trade marks are also publicly available on the Register, which assists to deter others from using or applying for similar trade marks relating to similar goods or services.

Trade Marks in the wind energy sector:

Trade marks assist in building brand recognition and trust with clients by differentiating goods and services from others in the competitive industry.[18] Market leaders in wind energy in Australia have registered several trade marks; including Vestas Australian Wind Technology, SGRE, GE, Nordex Group and Acciona Energy. Trade marks are used in the wind energy sector as badges of quality, reliability and reputation. The prevention of trade mark replication is important to ensure that others do not illegitimately benefit from the reputation of longstanding companies within the industry.[19]

Copyright

What is copyright?

Copyright is an unregistered right which subsists in original subject matter that is reduced to material form.[20] This subject matter may include reports, specifications, instructions, descriptions, contract precedents, software source code, logos, diagrams, drawings, videos and website or social media content.[21] The owner of the copyright has exclusive rights to copy, reproduce, adapt or publish the subject matter for the 70 years after the death of the creator.[22]

Copyright in the wind energy sector:

In the absence of a contrary agreement, ownership of copyright in subject matter vests in its creator, unless that creator was acting the course of employment, in which case copyright is owned by the employer.^[23] If the creator was an independent contractor rather than an employee, the creator will own the copyright subsisting in the material created.^[24] This is of particular relevance to the wind industry as contractors are utilised often for a variety of roles so it is essential companies are adequately safeguarding their IP when publishing material, particularly in emerging or innovative areas within the industry. It is therefore important to document any agreement about who will own copyright in subject matter. After subject matter has been created copyright ownership can only be assigned in writing.

Trade Secrets

What are trade secrets?

Trade secrets are protected through the unregistrable IP rights associated with confidentiality under common law and contracts.^[25] To attract protection, information must be confidential, and the recipient must be aware of the confidentiality and that they are, when receiving the information, expected to keep it secret. The party conveying the information is also required put measures in place to maintain it.^[26] This is often achieved through a confidentiality agreement between the owner and receiving party, as well as taking positive steps to limit others from freely accessing it.^[27]

Trade secrets in the wind energy sector:

Trade secrets may be conveyed in numerous ways, including through commercial information, models, maps, software, legal or financial information, and communications. Valuable “know how”, being the way things are done, is often retained in people’s heads and may or may not form part of trade secrets.

Trade secrets in the wind energy sector include various practices such as proprietary manufacturing processes and operational, construction or maintenance techniques. This information is to be safeguarded to prevent competitors from replicating processes which provide companies with a competitive edge.

Conclusion

Safeguarding IP rights places companies in the wind energy sector in a competitive position by protecting technological and operational advancement, and reputational interests. Failure to adequately protect IP presents considerable risks which could be detrimental to business success. It is, therefore, essential that companies identify IP risks and evaluate their designs, processes, materials and branding in order to recognise ways they can implement better protection for their IP.

Piper Alderman has a nationally recognised IP practice which has significant experience in identifying IP risks, registering IP, and enforcing IP rights in all Australian jurisdictions.

[1] Michelle Froese, ‘Wind industry has lost billion to IP infringements and trade secret theft, finds IntelStor’, Windpower Engineering & Development (Research Article, 23 April 2019); Roberto Hernández-Chea, Nancy Pratheeba, Bocken Vimalnath, Frank Tietze, and Elisabeth Eppinger, ‘Integrating intellectual property and sustainable business models: The SBM-IP canvas’, Sustainability, 12, no. 21 (2020), 8871.

[2] Patents Act 1990 (Cth) s 13.

[3] Ibid s 120.

[4] Ibid s 67.

[5] 1414 Degrees Ltd v Climate Change Technologies Pty Ltd [2018] APO 28 (Delegate Kraeffft, 1 May 2018).

[6] Con Doolan, ‘Taller, faster, better, stronger. Wind towers are only getting bigger’, UNSW Sydney Newsroom (Research Article, 19 July 2019); Engineers Australia, ‘Australia’s largest wind turbines added to evolving energy grid in Queensland’, Engineers Australia (Research Article, 5 May 2023); NS Energy, ‘MacIntyre Wind Farm Precinct, Queensland’, NS Energy (Article, 2023).

[7] ABB Schweiz AG [2019] APO 27 (7 June 2019); Siemens Gamesa Renewable Energy A/S v GE Energy (UK) Limited [2022] EWHC 3034 (Pat).

[8] Siemens Gamesa Renewable Energy A/S v GE Energy (UK) Limited [2022] EWHC 3034 (Pat); Patents Act 1990 (Cth) s 14.

[9] Siemens Gamesa Renewable Energy A/S v GE Energy (UK) Limited [2022] EWHC 3034 (Pat).

[10] Designs Act 2003 (Cth) s 7 & 21.

[11] Ibid s 15.

[\[12\]](#) Ibid.

[\[13\]](#) Ibid, s 10 & 46.

[\[14\]](#) Trade Marks Act 1995 (Cth) s 17; *Campomar Sociedad, Limitada v Nike International Ltd* (2000) 202 CLR 45 at 65; E & J Gallo Winery v Lion Nathan Australia Pty Ltd (2010) 241 CLR 144 at [51].

[\[15\]](#) Trade Marks Act 1995 (Cth) s 19, 27 & 41.

[\[16\]](#) Ibid s 26.

[\[17\]](#) Ibid s 26, 106 & 120.

[\[18\]](#) Ibid s 17.

[\[19\]](#) See, for example, *Simec Zen Energy Pty Ltd v Zen Exosystems IP Pty Ltd* [2021] ATMO 108 (27 September 2021).

[\[20\]](#) Copyright Act 1968 (Cth) s 10(1) & 22(1); *Victoria Park Racing and Recreation Grounds Co Ltd v Taylor* (1937) CLR 479.

[\[21\]](#) Copyright Act 1968 (Cth) s 10(1) & 22(1).

[\[22\]](#) Ibid s 33.

[\[23\]](#) Copyright Act 1968 (Cth) s 35.

[\[24\]](#) Ibid s 17 & 35.

[\[25\]](#) *International Scientific Communications Inc v Pattison* [1979] FSR 429; *Coco v AN Clark (Engineers) Ltd* [1968] RPC 41 at 47.

[\[26\]](#) *Coco v AN Clark (Engineers) Ltd* [1968] RPC 41 at 47; *Ansell Rubber Co Pty Ltd v Allied Rubber Industries Pty Ltd* [1967] VR 7.

[\[27\]](#) Ibid.