

Wind Project Financiers and Developers are Underestimating Risk of Patent Infringement

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Totaro & Associates has completed the second phase of a study which began in December 2010 on the patent landscape of the horizontal-axis, utility-scale wind industry. We have now read and classified over 23,100 global patents and applications, with over 3,200 issued patents in the US alone.

The analysis looks at the breadth of patent claim coverage and the use of that patent protected technology within the industry. Close to 11% of patents in any given country can be classified as high risk patents, or those which have broad claim breadth that covers technology which is being used by at least one other turbine vendor besides the patent holder.

This analysis has provided clarity on the scope of potential patent infringement risks of any turbine topology or drivetrain architecture, regardless of turbine OEM. The OEMs are far and away the largest holders of all these patents and the overwhelming majority, more than 95% of high risk patents are held by the turbine OEMs and key sub-component suppliers. These patent holders are keen to protect their intellectual property rights in the current market climate.

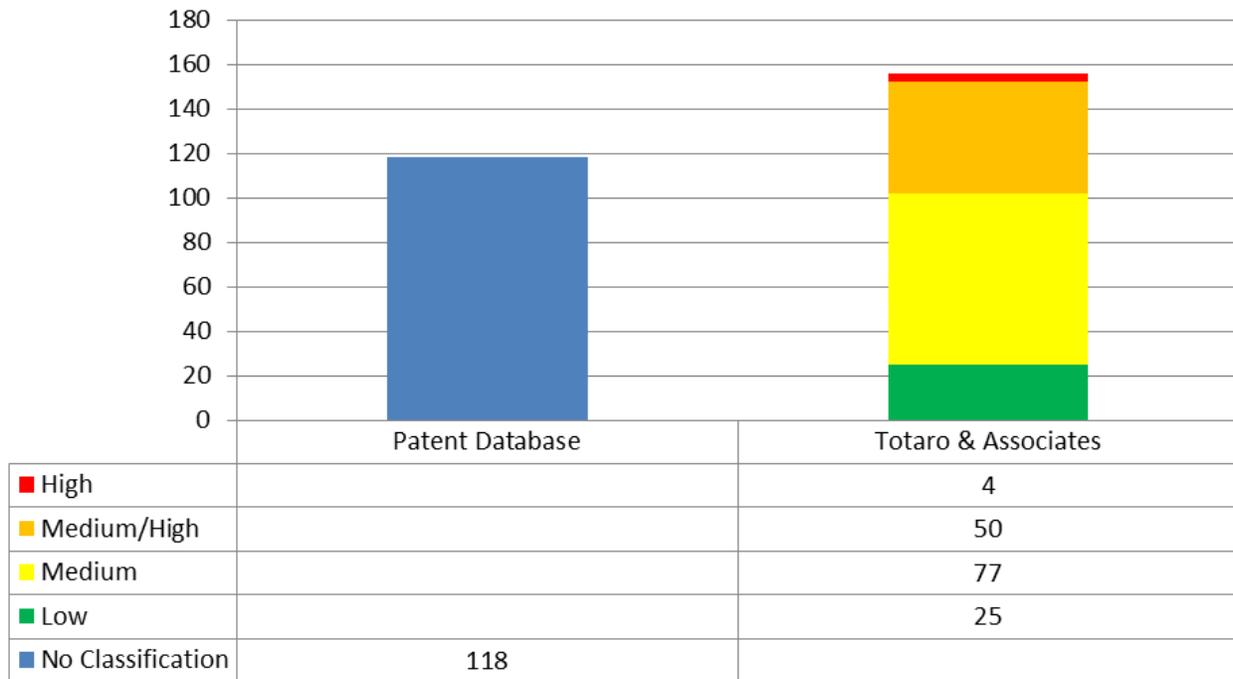
Presently there are some turbine OEMs who are not willing to provide full indemnity to turbine purchasers in the supply agreements, even though the OEMs receive full indemnity from sub-component suppliers when they buy a generator or a blade or even a tower. Vertically integrated OEMs have even more work to do themselves when it comes to ensuring they have freedom to practice, since they retain more liability due to an increased scope of supply.

Proactive companies as well as most of the larger OEMs are willing to allocate resources to evaluate patent infringement risk and undertake mitigation strategies such as licensing or even a freedom to practice analysis prior to product launch. The cost of licensing can be prohibitive to competitive cost of energy, so most of the smaller OEMs and those who do not have a large presence in a given market will not opt to undertake a freedom to practice project.

Patent infringement risk is shared by all, especially in cases where the OEM is not engaging in appropriate risk mitigation activities on their own. Even those who do may only pay attention to the hot button issues at the urging of financiers or outside counsel, especially those patents in active litigation. Hundreds of relevant patents are often missed leaving a veil of ignorance covering a gaping whole.

Patent Infringement Risks for:	
Developers	<ul style="list-style-type: none"> • Patent infringement could shut down a project if willful infringement is taking place. • Mandating certain types of wind turbine or wind farm control strategies such as methods of power factor control, VAR support, even curtailment may create a patent liability issue. • Even if the turbine supplier agrees to defend the developer against claims of patent infringement, the developer can still be sued and share in the liability, not to mention they suffer adverse PR consequences.
Financiers	<ul style="list-style-type: none"> • Cost of licensing may adversely affect project economics. • Re-sale / acquisition of projects can have patent infringement consequences if turbines have been modified beyond OEM specifications or non-OEM spare parts were used.
Service Providers	<ul style="list-style-type: none"> • Patent protection may exist on certain types of components, and second-sourcing without a license is not recommended. • Service and repair techniques such as blade crack remediation and service equipment such as tower climb-assist systems are just some examples of patent protected services technologies. It appears that services organizations are largely ignoring patent infringement risk when conducting field service.
Insurance providers	<ul style="list-style-type: none"> • Risk shifting to patent infringement indemnity insurance providers is not the same as mitigating the risk. Insurers should have the full picture on infringement risks. • Patent infringement risk can be quantified and used to calculate a policy premium. Do not accept risk without third party validation of the freedom to practice evaluation of a turbine supplier.
Turbine OEMs and sub-component suppliers	<ul style="list-style-type: none"> • Regardless of the size of the organization, in-house freedom to practice evaluations by turbine OEMs and sub-component suppliers almost always miss relevant patents.

The cause of the gap lies in the search protocol typically used by most IP professionals. Taking an example of a patent database search in the US for issued patents related to the keywords (“wind turbine” and “power factor control”) nets 118 results. The same search conducted in the Totaro & Associates patent landscape not only yields more comprehensive results with 156, but provides an analysis of patent infringement risk.



The generic keyword based search also turns up numerous false-positive results including:

- US7580777 Modular aircraft control system and method
- US6936947 Turbo generator plant with a high voltage electric generator
- US6894416 Hydro-generator plant

While ignorance of the patent rights of a competitor may avoid treble damages in patent infringement litigation, such ignorance is not the best way to quantify and mitigate risk. It can still create a PR and sales issue if assertion and/or lawsuits arise. Even though it can seem like there are an infinite number of patents out there, the numbers are actually finite, albeit substantial.

During market conditions where revenue from turbine sales is diminishing, everyone needs to be cognizant of the OEMs willingness to make up for those shortfalls by enforcement of intellectual property rights. Developers and financiers need to ask for more in the way of indemnity in a turbine supply agreement, and seek independent verification of patent infringement risks. If insurance is used as a risk mitigation strategy, the providers need to be cognizant of the scope of work performed by the turbine suppliers and the potential shortcomings of those efforts.

It may be a mountain to climb, but the summit can be reached and in this case having a guide can make all the difference.

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