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INTELLECTUAL PROPERTY CONSIDERATIONS IN THE GROWING RENEWABLE ENERGY DECOMMISSIONING INDUSTRY

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An eye towards sustainability has always been at the forefront of the renewable energy industry, but in many cases, technology was not able to catch up to the good intentions of the industry until recently.

For example, from the outset, wind turbines were designed to be produced with up to 90% recyclable materials. However, at the time, certain components were near impossible to construct using only recyclable materials, while also exhibiting the necessary strength and durability required for effective and robust operation. The most prominent of these components were turbine blades, which required added strength to withstand constant environmental exposure and damage, and motor housings which similarly had to withstand constant vibration from continual motor operation. Historically in both cases, non-recyclable fiberglass or glass reinforced polymers were used in the construction of these components, rendering them difficult to recycle.

Development at the cost of using such materials has overall been successful, with wind turbines typically having a lifespan of up to 25 years. However, as the lives of first-generation wind turbines come to an end, the issue of disposal of these non-recyclable and non-reusable materials begins. Images of "wind turbine graveyards" have circulated over the internet, raising concerns about how future retired turbines will be disposed of. Fortunately, the development of fully recyclable blades that do not require fiberglass or glass reinforced polymers appears to be just around the corner.

Current developments in the renewable energy industry raise many opportunities in the area of intellectual property. For example, in many countries, the strength and structural stability of the decommissioned blades are being utilized to reinforce concrete walls, buildings, bridges, and other structures. On the chemical side, processes to chemically break down turbine blades in order to extract the fiberglass and other reusable materials that can be used for future turbine blades, as well as a myriad of other applications in the automobile, oil, and construction industries are currently being developed. And materials scientists are hard at work trying to develop new ways of constructing future turbine blades to further improve their recyclability and the overall sustainability of the wind turbine industry.

As a larger volume of older generation renewable energy sources such as wind turbines near the end of their lives in the coming years, the need for decommissioning and replacement services will only grow, and competition will surely increase. Proactive planning on the intellectual property front will protect existing companies when these issues come to the forefront, and can also protect bourgeoning companies in this fast-growing sector fighting for market share. With the wide array of technologies involved, companies will benefit by teaming up with Lewis Roca's, patent professionals who

understand the renewable energy industry and the underlying materials and can provide the best strategy on their intellectual property needs.

For more information visit our Renewable Energy End-of-Life Planning page or contact Joshua Chu at jchu@lewisroca.com.

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