IAM

Critical IP issues surrounding the energy transition

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A host of questions are arising about the intellectual property rights attached to energy transition projects because of enormous investments in the space and the cutting-edge technologies that follow.

Energy transition projects attracted roughly $1.7 trillion in investments worldwide in 2023, according to recent International Energy Agency estimates. The 2023 United Nations Climate Change Conference (COP28) recently closed with an agreement to signal "**the beginning of the end**" of the fossil fuel era, underpinned by deep emissions cuts and scaled-up finance for climate action.

The hopes of the energy transition rest, in part, on cutting-edge technology, and for that reason, new laws and regulations are greatly incentivising investments in energy transition projects.

This article explores some of the IP issues that companies should consider to better prepare for the inevitable challenges ahead.

Government incentives

In recent years, the global community has taken major steps in enacting climate change legislation, reflecting an urgency to address environmental challenges. Policymakers are generally motivating actors to change using "carrots", such as financial incentives, rather than "sticks", such as mandates with penalties.

In the United States, the **Inflation Reduction Act** (IRA), signed into law in August 2022, is clear about its goal: reducing greenhouse gas emissions. It incentivises US companies to innovate by offering tax and other financial incentives to US businesses and households to invest in reducing emissions, confirming that innovation is at the core of climate change policy. The companies taking the carrots will inevitably seek to protect their investments in the future.

On 6 June 2023, the US Patent and Trademark Office announced it was expanding its **Climate Change Mitigation Pilot Program**, which expedites the examination of patent applications for innovations designed to mitigate climate change. The USPTO also announced an **awards programme for energy transition patents**, with winners receiving "acceleration certificates" to further expedite USPTO proceedings. The same is happening worldwide—the European Patent Office focused its **2023 inventor awards** on energy transition technologies.

Energy patent boom

There is evidence that this type of government activity in energy policy is successful in inducing energy patents, and further, that government-funded patents are more cited than patents from other institutions. Recent regulation is no exception: more than 1,300 patents for hydrogen-related technologies were issued in 2023, incentivised by a **US Department of Energy-backed demand-side initiative** of up to a billion dollars.

Private investment is increasing as well—a **recent report from the International Energy Agency** found that "more than 80% of later-stage investment in hydrogen startups [went] to companies which had already filed a patent application, indicating the importance of patenting … in this area". Investment in hydrogen continues to grow steadily and is shifting away from fossil-fuel-based production and towards low-emission methods of production like electrolysis.

It is clear that this type of shift will result in an area ripe for future patents.

This increase in patenting new technologies comes with a host of potential IP enforcement issues down the road. As companies strive to stay ahead in the race for sustainable solutions, those with patents will seek to protect their investments by enforcing their IP rights. Those that fall behind may be forced to either pay royalties or face infringement lawsuits. This will happen upon the effective dates of standards and mandates which will incentivise the use of new technologies, such as emission-reduction regulations and the **US Securities and Exchange Commission's proposed rules** on climate-related disclosures.

With **hundreds of billions of dollars already invested** in energy transition projects in the US since the enactment of the Inflation Reduction Act, early stakes are being set. While many energy projects are in their infancy, it is clear that large-scale investment has followed the legislation, and will continue to follow new regulations promised in the wake of COP28. It is also clear that additional regulations will follow the energy transition technology being created because of the increased investment.

Those that develop early solutions may create technologies pivotal to obtaining the incentives packaged with future regulations, positioning them to lead the energy transition.

Thus, it is important for companies to take steps early to protect themselves, as it will only become more difficult and costly to do so in the future. A comprehensive understanding of the risks is the first step towards effective protection. Companies should implement strategies to monitor their technology space and stay informed about new patents, potential infringement issues, and changes in the energy transition landscape.

IP-portfolio strategy

As part of being proactive, companies should actively build their own IP portfolios using all available incentives. Patent practitioners who understand technologies of the energy transition and are well-versed in the government incentives and private investment created by energy transition regulations are critical to this endeavour.

The first-to-file system in the US rewards those who get their energy innovations in front of the USPTO quickly, and the office is upping the ante by accelerating review of those energy applications. Companies rewarded with energy transition patents may benefit greatly from the wealth of incoming energy regulations, especially if their technology is useful or essential for meeting the goals of the financial incentives on offer.

To this end, new companies are being created to take advantage of increases in energy investment, and existing companies are dedicating significant resources to pursue those incentives.

In addition to innovating and filing for patents, companies must also consider opportunities to acquire patents and licences strategically that strengthen their position in the growing clean energy market.

Patent enforcement

As an essential adjunct to that, companies need to enforce the IP portfolios they build, whether through licensing efforts or active litigation. There is no question that patent litigation is expensive and time consuming. However, there is also no doubt that the cost of failing to enforce existing IP rights resulting in lost opportunities is even more costly.

Allowing other companies to piggyback off R&D rather than spending their own development money:

- leads to inefficiencies and inequities in the market;
- encourages companies to use what others have developed without fear of consequence; and
- essentially wastes the R&D money spent in the first place.

By contrast, the robust threat of enforcement leads to competitors more thoughtfully adopting technology solutions, because patent litigation will be expensive and time consuming for them as well, with the added caveat that they may be enjoined from their activities or forced to pay damages if they have infringed a valid patent.

Freedom-to-operate

One of the steps companies can take to safeguard themselves is conducting thorough patent searches prior to committing significant resources to a particular technology solution. Before innovating or implementing a new clean energy technology, it is important to identify the existing patents and pending patent applications that may be relevant. Identifying existing IP early in the process is essential for being able to make informed decisions about the viability of the project as well as to negotiate better deals on potential licences, agreements, and business collaborations. In addition, early identification of relevant IP could lead to engineering or design changes to avoid potential infringement. It is also crucial to determine how to defend, should a competitor seek to enforce an invalid patent or to claim infringement where it does not exist.

Often, knowing what the threat is and being prepared to confront it at an early stage can dramatically reduce uncertainty and costs, and provide substantial leverage if negotiations are required.

As public policy and investment capital continue to coalesce around the worldwide goal of reducing greenhouse gas emissions, IP lawyers will continue to be pressed into service to help the developers of cutting-edge energy technology build and protect their valuable IP rights. Companies will be well served by deploying IP counsel at all stages of the innovation continuum.

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