RISK MANAGEMENT
LEADERSHIP & ANALYSIS

The logistics of renewable energy

By Paul Houston of Allied World

Each new age brings different and more efficient forms of energy. However, investing in the future brings its own logistics challenges. Complicated may be an understatement.

When most of us think of windmills, an image of a picturesque tower in a quaint town in Holland may come to mind. For centuries, windmills have harnessed the power of wind to pump water, grind grain and seeds, cut timber, produce paper and press oil – basically, anything that needed to be pounded, ground up or mixed.

Today, windmills are a key urban power source. The sleek, modern wind turbines used for electric power generation reach up to 140 metres in height with a blade length of 60 metres and they represent the future of renewable energy.

Renewable energy is no longer considered a niche technology, and countries and energy companies are all embracing clean energy projects of all kinds. It is not just the power of the wind that is being used to change the energy landscape – renewable energy projects are cropping up all over the world. From a solar power project in Vietnam, a solar and wind energy hub in Australia, to hydropower schemes harnessing the power of water in Latin America and Indochina, the global energy transition is well underway.

Project Cargo

The increased focus on renewable energy brings a new set of challenges to the risk management and logistics world. Project Cargo – the term used to describe the national or international transportation of large, heavy, often high-value pieces of equipment to one project site – is an expensive and complex business.

Any investment in renewable energy is an investment in the future, and to use any form of natural power successfully, you need a good site. At this point, logistics becomes key. For example, shipping gigantic wind turbines from factories in India or China to some of the most remote places in the world is a colossal effort. More often than not, a renewable project will usually be located in a remote area. Faced with population booms, increasing urbanisation and stretched power supplies, a well-engineered renewable energy system can be a cost-effective mechanism and significantly improve the quality of life in remote areas.

Building a renewable energy plant requires a huge network that includes manufacturing, distribution, transportation and construction. Everyone is intertwined and connected, and it must work cohesively.

Bigger and Better

All the major parts of wind turbines are getting bigger.

In January, wind turbines were unveiled that were nearly the length of a football pitch. These colossal turbines will not be on the market for three years, but when they are, the 94-metre-long blades promise to boost electricity by up to 30 percent. This illustrates a growth trend in the turbine industry, both in terms of the size of each component, and in the number of projects appearing around the globe.

To create a wind farm, components like these as well as hubs, blades, nacelles and towers that make up the wind turbine can be transported from 30 or more locations. When moving cargos of that size and complexity, sequencing and logistics are essential.

Forward Planning

When a project has been supersized – with the scale of supplies that are being transported increasing significantly – the logistics become even more complex.

Renewable power projects can be located in remote places that require meticulous planning. Route surveys (to ensure adequate turning circles for long blades), assessment of bridges (to ensure

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they are capable of taking the load), organising cranes at site to lift the blades into place are just some of the factors involved in the detailed planning and implementation of a complex operation. Allied World has overseen projects where trees have been cut down, bridges strengthened and electric cables rerouted to allow the equipment to be moved to a site.

A recent article by Allied World (https://www.linkedin.com/feed/update/urn:li:activity:6491870911296303104/) regarding the Stockyard wind farm in Victoria, Australia, provides a great example of the scale of such engineering projects. It demonstrates how Allied World supported the transportation of a wind turbine transformer (in excess of 300 tonnes) from China to Australia.

Allied World Has You Covered

Making light work of your logistics project is achievable if you choose the right provider. Allied World looks at all elements of an energy project to create the correct logistical solution. Our team of underwriters, risk engineers and claims handlers are located in Asia Pacific – helping us to remain close to our partners, clients and renewable energy assets.

Creating wind farms is undoubtedly an immensely complicated task, but with the right logistical planning, even the most challenging project can be successfully delivered.

The bright future predicted for renewable energy is already underway, with wind and solar installations steadily growing since the late 1990s. This energy revolution towards renewables has started on a global scale already, and the next years will continue the momentum towards a greater renewable energy supply that will keep us logisticians busy. We have certainly come a long way since windmills!

ABOUT THE AUTHOR

Paul Houston
Head of Risk Management,
Allied World

Paul Houston has over 30 years of experience in the Risk Management and Insurance industry, working as an underwriter, captive manager, broker and risk manager. Paul brings an expert understanding of the global supply chain industry, having held global roles with DHL and Excel Logistics. Currently based in Singapore, Paul leads a team of over 10 risk engineers and industry specialists, supporting Allied World's construction, property, cargo and casualty lines of business. Paul has lived and worked in the UK, Bermuda, Belgium, Thailand and Singapore. He holds a BA in Risk Management from Glasgow Caledonian University and is a Chartered Insurance Risk Manager.

For more information about Allied World's insurance and reinsurance solutions, please visit www.alliedworldinsurance.com