

Wind Prospect / Success Story

SECONDWIND
by Vaisala



Wind Prospect began using Tritons in 2008 to support wind farm developments in Australia. Encouraged by Triton's reliability and growing industry acceptance, Wind Prospect now uses and recommends Triton to reduce uncertainties in wind energy yield predictions worldwide.

Using Triton and SkyServe, global renewable energy consultancy delivers enhanced wind assessment studies to customers worldwide

Wind Prospect uses Triton Sonic Wind Profiler in early stage prospecting, wind resource assessment studies, wind farm design, and project financing.

CUSTOMER PROFILE

Wind Prospect is one of the leading independent renewable energy advisory services in the world and has played a major role in the development of wind energy onshore and offshore internationally. Wind Prospect has been involved in the wind industry since its inception in Europe, and is a major player in the wind energy sector in the UK, Ireland, the United States, Canada, France, Poland, Turkey, China, Australia, and South Africa.

Founded: 1995

Headquarters: UK, with offices in nine other countries

Employees: 220

To learn more: www.windprospect.com



"Triton is the most practical remote sensing system we've seen so far."

Dr. Paul Stangroom
Wind Services Team Manager
Wind Prospect

Wind Prospect uses Triton in:

- Early stage prospecting
- Wind resource assessment
- Wind farm design
- Project financing

Wind Prospect provides engineering services and consulting on wind projects spanning five continents. A recent use of one of the firm's Tritons was on a site in Canada, where it was used to effectively increase the height of an existing 60-meter tower. Bringing in the highly portable Triton remote sensing system, Wind Prospect combined the higher height data with the tower data to reduce shear profile uncertainty and benefit the project's energy predictions.

"The Canadian site was a heavily forested site with complex topography and one 60-meter tube tower already installed," says Dr. Paul Stangroom, who heads up Wind Prospect's Wind Services Team. "We were keen to understand the shear at the site and reduce the uncertainty of our energy estimates."

The firm briefly considered putting up an 80-meter tower to measure at hub height, but "we'd have struggled to get it onto the site," says Stangroom. "We minimized the cost by supplementing the mast with a Triton. By combining

the two data sets, we're looking to reduce the uncertainty in the resource assessment. I'm confident that the addition of the Triton data will result in an easier financing process."

Early-Stage Prospecting

The firm's initial use of the units developed from some encouragement by the system's reliability. Wind Prospect quickly found an ideal application for the Triton. They began deploying the Triton instead of a tube tower to reduce the costs of early-stage prospecting in Australia. Although a more thorough study, complete with traditional masts, would be needed to qualify a site for financing and development, the Triton could be quickly deployed and used to rule out sites where the wind resource was not suitable.

The most significant benefit of using Triton in prospecting was the cost savings. Unlike in other countries where the amount of time it takes to permit a tower drives companies to choose remote sensing for early-stage prospecting, "time wasn't the real driver in Australia — it's all about finding the good wind," notes Stangroom. "The issue is once you've installed a tube tower and decommissioned it, you really don't get to use most of the equipment again."

Confidence in Wind Resource Assessments

Wind Prospect now uses and recommends Triton in their clients' wind resource assessment campaigns around the world. Wind Prospect's standard practice is to deploy a Triton near a tube tower for a short validation study. After a few months, or as long as is needed to prove a strong relationship with the mast data, the company considers the Triton measurements valid. "If the Triton

and the mast match at every height on the mast, I'm confident about using the Triton to measure further up."

High Quality Wind Farm Designs on Large Sites

On large sites, Wind Prospect has developed a methodology of using one or more met masts for a given area of land, and supplementing the mast data with Triton measurements. The highly portable Tritons can be used all around the site to obtain a richer picture of the wind resource and enable higher quality wind farm designs.

Financing Wind Projects

As is well known throughout the wind industry, project financing depends upon data from at least one met tower. Yet investors also value measurements across the full rotor sweep. The higher height data reduces uncertainty and boosts the value of the financing package, adds Stangroom. "I am confident that, on projects where our clients have used Triton to measure the wind resource, they will see fewer uncertainties and improved P90 values. Ultimately, this will result in greater profitability for their development efforts as a whole."

Choosing a Remote Sensing System

On the choice of a remote sensing system, Stangroom says: "We make it a strong point to maintain our independence as a consultancy. However, so far Triton is the most practical remote sensing system we've seen so far. The benefit of the Triton is the low power consumption and the low cost. Triton is simple, it's accurate, it's self-powered — it's ideal."

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Through the combined expertise of Vaisala, a global leader in atmospheric observation, and Second Wind, a global leader in remote sensing technology and data services for the wind energy industry, we offer an integrated suite of wind measurement solutions.

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