



# Remote Precision

Cape Survey Ltd. reduces time and costs with easy remote access of Trimble CenterPoint® RTX correction service to survey a windfarm site in South Africa.

South Africa Relies on Trimble RTX Correction Service to Efficiently Launch Clean Energy Initiative.



# Challenge

Energy developers are tapping rich resources for wind and solar energy in the northern reaches of the Republic of South Africa. With renewable energy in South Africa producing roughly 1,700 megawatts of electricity in 2015, the government set a goal for increasing that number to 6,000 megawatts by 2020.

In the province of Northern Cape, Cape Survey Ltd. was selected to plan the Khobab Wind Farm, and determine the location for 61 large wind turbines capable of powering 120,000 homes. The Khobab remote location makes it difficult to achieve the required accuracy and ties to South Africa's reference system using traditional survey techniques. The team's RTK range has limited access and they frequently need to create new control points and move the RTK reference stations to cover the 25km x 30km site. Each move takes at least an hour out of their already busy schedule. The nearest GNSS reference station is more than 100 kilometers away, and there is no connection to cellular service.



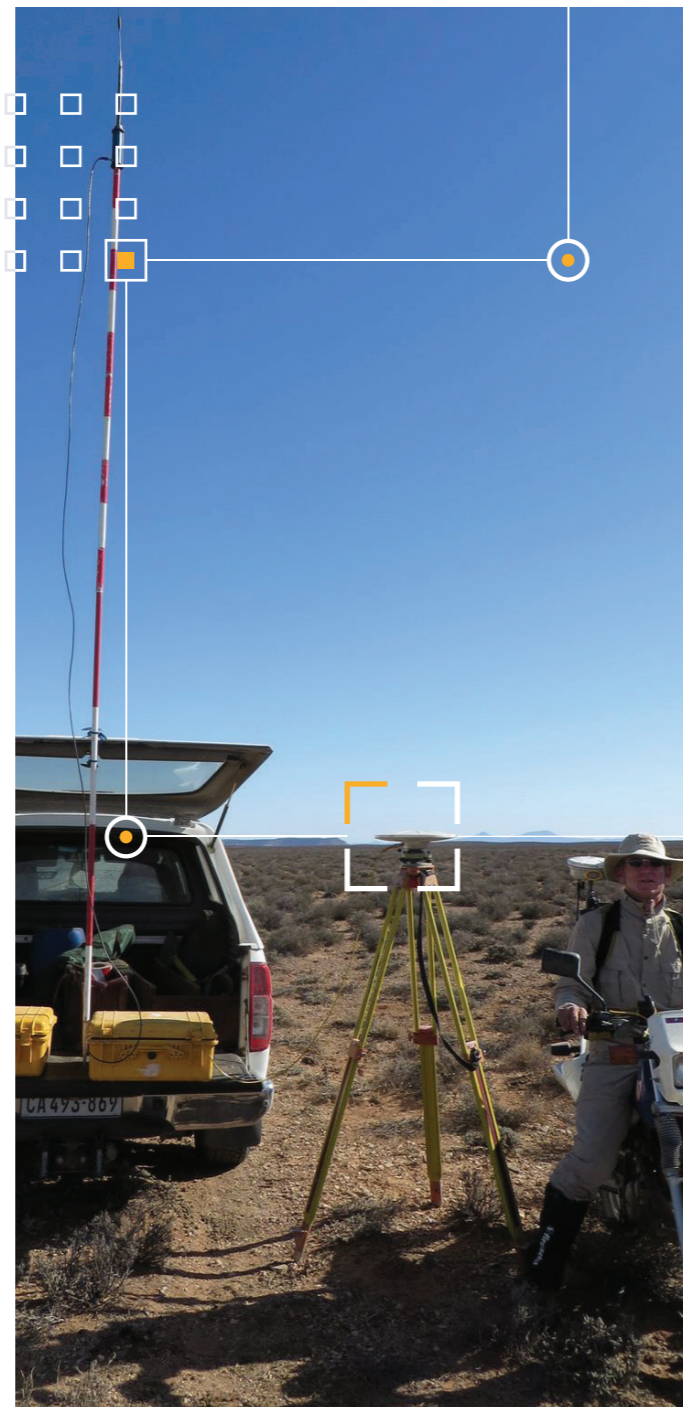
# Solution

Equipped with a Trimble R2™ GNSS receiver and a subscription to Trimble CenterPoint® RTX positioning service, the Cape Survey crew can access real-time precise positioning information without a need for RTK base stations or cellular connection to the internet.

Using the Trimble R2 along with a Trimble TSC3™ controller using Trimble Access® software, the crew initialized their survey, and began collecting points. They checked the 2014 control points with good results and used the points to calibrate precisely to the project grid. By working without ties to an RTK base, they were able to move freely—as fast as the deep sand and rutted roads allowed.



Khobab Wind Farm, South Africa



# Results

Cape Survey Ltd. cut their time on-site by two-thirds, while consistently achieving around 20 mm accuracy, consistently exceeding the project requirements. Trimble CenterPoint RTX solution initializes in minutes, and is usually completed while driving to the first point. Once converged, the satellite-delivered service is seamlessly accessed as the team moves around the site. With unparalleled accuracy, Trimble CenterPoint RTX real time corrections provide Cape Survey crews with precise data without the need to carry RTK base stations when working in remote areas.

*“The value of the system is clear. On just this one job we’ve more than paid for the year’s subscription to RTX.”*

*– Ian Thompson, Surveyor, Cape Survey Ltd*





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