



MEDIA RELEASE

Class A Weather Stations Raise the Bar on Solar Resource Monitoring in the Northern Territory

A Territory Government grant has seen three weather stations specialising in solar resource monitoring installed under a renewable energy research and development (R&D) funding program, making data available to the public on a free, open-access basis.

The Northern Territory Solar Resource (NTSR) Project was delivered by remote-area technical services firm, Ekistica, under contract to the not-for-profit, indigenous-controlled Centre for Appropriate Technology (CfAT) and is a unique and important project that drew together partners and collaborators from local Territory and Australian businesses and organisations.

The NTSR Project leverages the Desert Knowledge Australia Solar Centre (DKASC - an internationally recognised solar demonstration facility solar operating since 2008), by transforming its online site into a knowledge hub for not just solar performance data, but high-resolution weather data, including global and tilted-plane irradiance and the less common direct normal (beam) irradiance, as well as wind speed, temperature, rainfall and humidity data.

Designed as Class A stations according to international standard IEC 61724-1, data from the NTSR Project is sampled at 1-second intervals, averaged into 5-second blocks, and available to access in a range of forms. This high-resolution, long-term data of climate parameters chosen specially for their relevance to renewable energy research and development, provides a foundation for the renewables industry and developers to scope new projects, encouraging investment in the Territory and supporting the Territory Government's target of 50% renewable energy by 2030. Of particular importance is its immense value in applying 'ground-truthing' to satellite data models used by analysts and developers in the solar industry. Reliable ground-based weather stations allow other, less accurate, secondary or 'synthetic' data sources such as satellite models to be validated, enabling the solar resource models used in the industry to be refined for greater accuracy, especially to remote locations.

The weather stations are installed in Darwin, Katherine and Alice Springs, with a fourth in Tennant Creek to be launched soon, representing the four key climatic zones (latitudinal bands) of the Territory, as well as areas of potential renewable energy development given their proximity to population and growth centres.

Site selection for each weather station involved collaborating with a range of local stakeholders in each region and identifying organisations who were willing and able to voluntarily land to the stations and support their ongoing operation. These were: Desert Knowledge Australia (Alice Springs); Haileybury Rendall School (Darwin); Katherine Research Station (Katherine); and Juno Learning Centre (Tennant Creek). All of these organisations have potential synergies between the data produced by the weather stations and their own research and educational endeavours which they plan to pursue.

The NTSR Project is just one more instance of the Territory drawing on its own internal and collaborative resources to initiate and deliver projects of precedence in Australia, combining creative and technical approaches into outputs of high public and private value.

Funding support from the Northern Territory Government and Intyalheme Centre for Future Energy (Desert Knowledge Australia) is acknowledged, with project management services by Ekistica.

For more information about the weather stations and to download data from the NTSR Project, including detailed technical specifications through additional metadata files, visit www.dkasolarcentre.com.au/NTSR-Project.

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Weather stations of the Northern Territory Solar Resource (NTSR) Project installed at (clockwise from top left) Darwin, Katherine, Alice Springs and Tennant Creek, representing the four key climatic bands of the Territory