



RENEWABLE ENERGY

World leading in remote renewable energy delivery, Australia's Northern Territory is the natural destination of choice for industry conventions.

The Territory's ideal climate, vast resources and the challenges of remote distances have provided a breeding ground for renewable energy technologies. Thanks to its abundance of sunlight year-round, the Northern Territory's biggest renewable energy source is solar power.

The Northern Territory Government has a target of 50 per cent of its electricity from renewable sources by 2030. It has commissioned an expert panel to prepare a **'Roadmap to Renewables' report** to advise government on options and recommendations on how best to achieve the renewable energy target.

In 2016 and 2017, **Darwin International Airport** was awarded an AAA Airport Innovation and Excellence Award for Environmental Management and an Airports Council International Asia Pacific Green Airports Platinum Award for its \$13 million solar farm project. The largest airside photovoltaic system in the world, the airport's solar system will generate 25% of its overall energy needs.

The NT's **Centre for Renewable Energy** is a partnership between Charles Darwin University and the Northern Territory Government. Its research into amorphous silicon solar cells design, fluid mechanics and turbines, biomass production, hydraulic and hydrodynamic modelling and rural development reflects the NT's commitment to driving innovation in this field.

Solar Energy Transformation Program (SETuP) is transforming the way power is delivered to remote communities by incorporating solar power to reduce reliance of diesel. The program involves delivering wide-scale rollout of 10 MW of solar systems across 29 remote Indigenous communities. The first stage of the project is complete with 10 communities receiving a 15% diesel cost savings.

Darwin's **Shoal Bay Renewable Energy Facility** was the first 'waste to energy' facility in a tropical region. It produces electricity from methane gas harvested from landfill to power 1,800 Darwin homes every year. Since it opened, the plant has prevented some 46,000 tonnes of CO₂ per year from entering the atmosphere

Also, private electricity supplier **Rimfire Energy** is building the largest solar-generation array in the Territory through its parent company, Rimfire Group. The \$16million 10MW utility-scale solar PV facility will be built on a 12 hectare site at Batchelor, 100km south of Darwin. It will generate enough power to meet the needs of 1,800 houses.

For 30 years, the Northern Territory has played host to the biennial **World Solar Challenge**, a 3,000 kilometre solar-powered vehicle race from Darwin to Adelaide. The event is an engineering competition which attracts teams from secondary and tertiary institutions from around the world. The vehicles aim to travel the 3,000 kilometre distance between the two cities in the most energy-efficient manner.

Darwin has a wealth of industry professionals only too willing to share their specialist insights and knowledge in this area—renewable energy scientists and researchers, solar photovoltaic and solar PV engineers, biodiesel and clean fuel experts, entrepreneurs and investors.

There are opportunities to network with the leading lights of the Territory's renewable energy industry and scope for technical tours and site visits to research labs, some of the largest solar power stations in the Southern Hemisphere, a solar city and world leading low emissions power facilities.