Renewable Energy Demonstration Site and Sustainable Technology Trailer for SuniTAFE

Sunraysia Institute of TAFE is very pleased to announce that the construction and assembly of two projects will begin soon.

The Renewable Energy Demonstration Site (REDs) will be built in a central forecourt of the Mildura Campus, featuring two 1.75kw solar array systems and a 2.5kw Wind Turbine.

What makes the site unique is one solar array system will be on a fixed array whilst the other will be on a dual axis system that automatically tracks the sun during the course of the day. The dual axis system will improve performance by an expected 35%. Over the course of a year it is estimated the system will generate 8139 KW of power, feeding back into the campus electrical system.

On most domestic and commercial buildings solar arrays systems are mounted on roofs and are out of sight and therefore out of mind. The exciting thing about this project is the ability for visitors to see closely how the systems are assembled and their functionality.

The site is for demonstration purposes and will become a valuable learning tool as part of the renewable energy learning modules at SuniTAFE; the system is linked into the IT network, so teachers will be able to show the comparative performance in any conditions.

The general public will also be able to see how the system is performing with a public display located in the main campus building and via the internet. It is also intended that community groups and organisations will be encouraged to visit the site for a tour.

The REDs will become a feature of the Mildura campus with the wind turbine standing over 14m from ground level and the dual axis system over 3.5 metres. The foundations for the wind turbine will be poured this weekend and principle construction will take place during the week of the 22nd to 27th when the turbine will be raised. Pouring of the foundations to final construction is estimated to take two and a half weeks and should be finished before Easter.

Site of the Renewable Energy Demonstration Site

The second project is the construction of Sustainable Technology Trailer designed and built in conjunction with the Industry and Energy Department. The trailer will be a travelling show of sustainable technology that can be used in construction or retrofitting of buildings to make them more energy efficient. Featuring a solar array, wind turbine, technology for heating and cooling water as well as for recycling water.

Designed to be self sufficient, two large battery packs will enable the trailer to operate for up to 12 hours with no need for additional power supply.

Whilst the trailer is showcasing technology, it has been designed to be interactive, a weather station and display will enable users to compare the local conditions with the performance of the system. TV screens will show the data so everyone can see. A computer can be used to log on to the internet to access relevant information regarding sustainable technology, a stereo system will play music and can be used for speaking to larger crowds and for the younger generation they will be able to play Nintendo Wii whilst learning where the power is coming from to operate it.

The Sustainable Technology Trailer will be a fantastic way to engage with the community, and it is intended to be used at local and regional events. Regular visits to primary and secondary schools over the next 5 years will be enable SuniTAFE to engage with the students to promote the technology and SuniTAFE as well.

The construction of the trailer is expected to be finished by July.

The projects are being project managed by Alex Cross, Project Officer at the National Centre for Sustainability.

For further details please contact:
Alex Cross
Project Officer
National Centre for Sustainability
across@sunitafe.edu.au
Tel: 03 5022 3748