



Sustainable energy industry support centre

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CRICOS Provider 00121B

Solar hot water system development, testing and rating facilities

Testing and rating of flat plate and evacuated-tube solar systems

The centre's accredited test facilities, including the outdoor Solar Collector Testing Facility are located at the University of South Australia's Mawson Lakes Campus. The testing facility is designed to test flat plate and evacuated-tube solar collectors to AS/NZS 2535.1:2007 for the thermal performance and other aspects, including incidence angle modifiers and pressure drop tests. Expert witnessing of all tests described in the Appendices of AS/NZS 2712:2007 are offered by the Centre, thus providing a reputable source of objective validation to a number of government organisations.

The existing testing facility and capability is continuously being upgraded to improve the efficiency and quality of testing outcomes. The other significant aspect of the current upgrades to the testing facility involves the development of testing facilities capable of conducting tests for determination of a tank heat loss from raised elements as per AS/NZS4692.1:2005 and the following tests specified in AS/NZS 2712:2007:

- stagnation test for collectors and integral collector and container,
- test for protection against freezing,
- impact resistance test,
- test for water ingress and retention in collectors,
- no-load system performance test and
- test method for solar energy transmittance.

The above mentioned upgrades will provide a more comprehensive service to manufacturers and suppliers of solar hot water systems. We expect to be able to offer our extended range of testing capabilities to AS/NZS 2712:2007 by September 2008.

Heat pump hot water system testing

The Sustainable Energy Industry Support Centre also tests heat pump hot water systems in our balanced calorimeter room test facility.

TRNSYS modeling services

TRNSYS modeling services for both auditing purposes to government organisations and energy savings calculations as per AS4234 / REC calculation services to manufacturers and importers of solar hot water systems are offered by the Sustainable Energy Industry Support Centre.

Research and development

The centre also provides R & D activities in support of the solar thermal industry to improve the performance and reduce the costs of existing components and systems. Specific examples of research and new product development currently being carried out at the Sustainable Energy Industry Support Centre include the development of a solar powered dehumidification/cooling system and a combined solar hot water, space heating and cooling system.

The University of South Australia currently offers a graduate certificate program in energy management and provides opportunities for research education to both local and international students. More short courses and training opportunities for solar hot water industry practitioners will be developed to ensure the growth of human capacity to support an expanding industry.

For further information on our testing and facility capabilities please contact

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For further information please visit our website <http://www.unisa.edu.au/sec/> or contact the Administrative Officer, Elizabeth Csavas (elizabeth.csavas@unisa.edu.au) or telephone 8302 5624



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