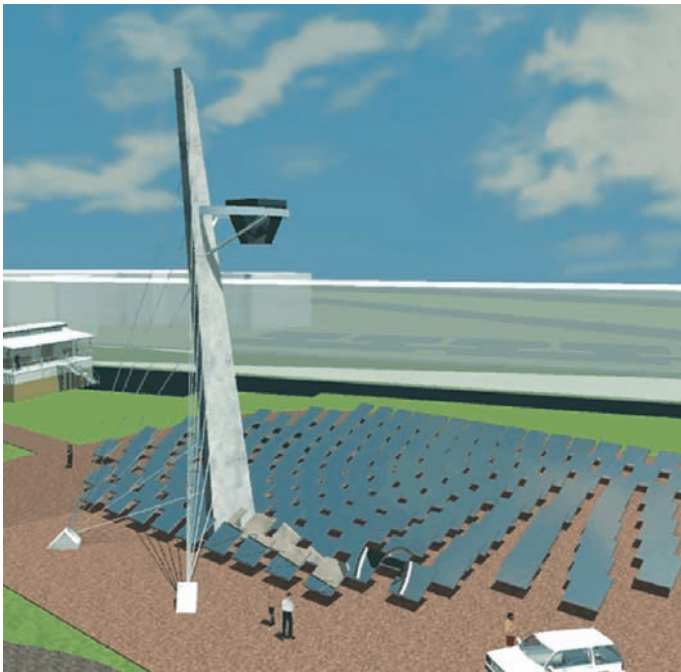


# Sun-power technology centre underway



An architectural impression of the high concentration tower solar array planned for the NSETC. CSIRO Energy Technology

Construction of CSIRO's \$1.5 million National Solar Energy Technology Centre (NSETC) is underway at its Newcastle Energy facility, where the latest solar thermal technologies will be showcased and involved in CSIRO's ongoing collaborative research into efficient, low emission energy generation.

The NSETC will be the only

multi-collector facility of its type in Australia and home to the largest high concentration solar array in the Southern Hemisphere. At peak operation it will generate enough electricity to power more than 100 homes.

The Centre comprises three main elements: a high concentration tower solar array that

uses 200 mirrors to generate more than 500 kW of energy and peak temperatures of over 1000°C; a linear concentrator solar array that heats a fluid to temperatures of around 250°C to power a small turbine generator; and a control room that houses communications and control systems, and serves as an elevated viewing platform.

The NSETC is an advance on CSIRO Energy Technology's initial solar dish facility at Lucas Heights, developed between 1998 and 2000, and will be a more efficient and flexible system. CSIRO project engineers worked with Australian technology company Solar Heat and Power Ltd. to design the special mirror array and control apparatus. All components of the new facility are manufactured in Australia.

CSIRO Engineer and NSETC Project Manager, Wes Stein, says the centre will be integral to the progress of solar renewable energy research around the world.

'CSIRO is very keen to use the NSETC to promote collaboration through shared use of the facility by Australian and international researchers,' he explained.

**The NSETC will be the only multi-collector facility of its type in Australia and home to the largest high concentration solar array in the Southern Hemisphere.**

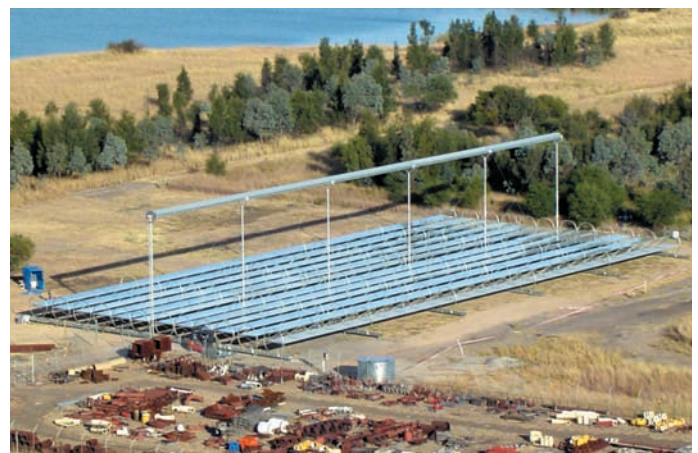
Collaborations are expected with European research partners on solar hydrogen research, sponsored by the European Union under the science and technology research arrangements of the 2002–2006 6th Framework Agreement in bi-lateral trade. Contracts of partnership are also currently being drawn up with the Australian National University, the University of Sydney, and Solar Heat and Power Ltd.

'Solar energy is the world's largest energy resource and the NSETC will enable us to conduct research that sets us on the road to the ultimate objective of renewable-based energy supplies,' says Stein.

**Contact:** Wes Stein, CSIRO Energy Technology, (02) 4960 6094, wes.stein@csiro.au



The NSETC array will be built adjacent to CSIRO's Energy Technology Centre in Newcastle, as shown. CSIRO Energy Technology



Solar Heat and Power Ltd's expertise with solar technology facilities, such as their flat mirror array at Liddell, NSW (above), aided CSIRO's development of the NSETC. Solar Heat and Power Ltd