



Centre for Energy and
Environmental Markets

The value of residential PV electricity generation in the Australian National Electricity Market

Marc Pop

Wednesday 16 March 2005, 4-5pm

Room G3, Electrical Engineering Building, UNSW

This work evaluates the potential value of photovoltaic (PV) systems to residential customers in Australia, as well as their potential value to retailers - in particular, could PV contribute to coping with increasingly peaky demand in the residential sector. The research makes use of actual PV system performance data and NEM prices over a full year. For the value to residential customers, various continuous, time-of-use and "green" tariff structures in NSW, SA and VIC have been analysed. Results indicate that with TOU metering for a residential customer in NSW, savings of up to 35% of the electricity bill are possible through a combination of installing a 1kW PV system and opting for the most favourable tariff.

For the value to retailers, NEM data for NSW and SA has been analysed, in order to identify the coincidence of PV output with periods of high NEM demand and consequent high wholesale electricity prices. Results indicate that patterns in the different states vary. In NSW, peak loads and regional prices are occurring mainly in summer, whereas high price events in SA have occurred mainly during the winter. The work includes an evaluation of the potential value of west-facing PV setups.

Speaker: Marc Pop is a visiting student from Germany, and has been working (professional practicum program) on this project at CEEM since October 2004 with Muriel Watt, Hugh Outhred and Iain MacGill.

This seminar program is hosted by the Centre for Energy and Environmental Markets (CEEM) and Centre for Photovoltaic Engineering at UNSW. Information about these Centres is available at and www.pv.unsw.edu.au.

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