

# Solar energy has potential to dominate by 2030

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Professor Andrew Blakers from The Centre for Sustainable Energy Systems at the Australian National University will today report to the Greenhouse 2000 Conference in Melbourne that photovoltaic (PV) solar energy conversion can be cost-competitive with any low-emission electricity generation technology by 2030.

His paper describes how extrapolation of the huge economic and technical gains made by photovoltaics over the last 15 years gives confidence that a dramatic shift in electricity generation technology over the next quarter-century is possible.

Worldwide photovoltaic sales are growing at 40 to 50% per year. Government research & market support for photovoltaics of around

\$400 billion spread over the next 25 years can deliver the technology required to eliminate electricity production as a contributor to climate change. This is a large sum of money - similar to the cost of the Iraq war – but it is dwarfed by the \$23 trillion expected investment in oil exploration out to 2030 or the \$24 trillion investment in PV systems required to generate half of the world’s electricity by 2040.

Professor Blakers will also describe Sliver solar cell technology, which was invented at Arthur's Seat in Edinburgh, Scotland, by Dr Klaus Weber and Professor Blakers in 2000 while attending a conference. Origin Energy, one of the sponsors of the Greenhouse 2000 Conference, is commercialising Sliver technology in Adelaide.

Work at ANU shows that Sliver solar cell technology can achieve electricity costs below retail electricity costs within five years, with the right investment. Explosive growth in sales in the commercial and residential sector will then follow.

Professor Blakers said that Sliver solar cell technology “can go all the way.”

“It’s not difficult to envisage Sliver based technology delivering electricity at a cost that matches wind energy, zero-emission coal and other clean energy technologies. No leap of faith is required; just careful engineering and adaptation of existing techniques from other industries,” he said.

Dr Weber added that it is essential to eliminate carbon dioxide emissions from fossil fuel based electricity generation in order to limit climate change. The cost of doing this with advanced solar technology will be far lower than the pessimistic forecasts advanced by some analysts.

“The key to a clean energy future is the setting of clear and challenging

targets and the provision of reliable, long-term support to the solar industry. The industry will respond and deliver the required technology," Dr Weber said.

Source: Australian National University

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