

BRAINFOOD SERIES 2010

“Nuclear – Solar Energies: Facts and Fictions Demystified”

Wednesday, 8 September 2010

6.00 pm – 8:00pm

CLB6

UNSW Kensington Campus

Some of the enormous challenges with energy and electricity generation are:

- More than one-quarter of World's population has no access to electricity
- Our reliance on fossil fuels will eventually have to diminish
- A carbon constraint sustainable development is inevitable
- Electricity demand is likely to continue to soar and transportation loads are likely to change profile as more electric vehicles would soon rely on electricity grids
- Multi-billion dollar smart grid investments worldwide present tremendous opportunities but still with complex issues that need to be resolved
- Solar Photovoltaic technologies have made significant progress and are moving to large scale systems
- Nuclear energy is seen by many nations as a way to energy security and immediate reduction to electricity generated carbon emissions

UNSW has been playing a key role on energy research for decades. Recently, UNSW established Australia's first multi-disciplinary multi-Faculty university wide Centre for Energy Research and Policy Analysis, to be housed by early 2012 in the \$125 million Tyree Energy Technologies Building and will continue to lead developments and provide solutions to industry and the community through multi-disciplinary energy research that incorporates in a holistic way ideas from: technology and engineering, sciences, social sciences, market, business and economics, law, policy and regulation.

Join us as in the events of the 2010 BrainFood Series as together with our panel of experts we will:

- demystify facts from fiction for both solar and nuclear energy technologies
- highlight the merits and limitations of these energy sources
- debate their role to Australia's energy mix of the future
- share your contributions and address your questions and concerns

Facilitator:

Professor Vassilios G. Agelidis

Vassilios G. Agelidis is Professor and Director, of the Centre for Energy Research and Policy Analysis (CERPA) at the University of New South Wales. Prior to this appointment, he was Director of the Centre of Excellence in Power Engineering; Director of the Electrical and Information Engineering Foundation and Professor holding the prestigious Energy Australia Chair in Power Engineering at the University of Sydney. Vassilios provided the vision, designed and established the Sir William Tyree Laboratory in Power Engineering and the ABB Technology Centre at the University of Sydney.



Vassilios has held other distinguished positions at the Murdoch University, Perth and the University of Glasgow, Scotland.

Vassilios leads research in the areas of smart grid, renewable energy sources and their conversion and integration with the electricity grid, advanced power transmission technologies with voltage-source converters, power electronic control of electrical systems and inverter based grid interfaces for power quality and energy storage.

Speaker:

Dr Mark Diesendorf

Mark Diesendorf is Deputy Director of the Institute of Environmental Studies at UNSW. Previously, at various times, he was a principal research scientist in CSIRO, professor of Environmental Science and Founding Director of the Institute for Sustainable Futures at UTS, and Director of Sustainability Centre Pty Ltd. In a voluntary capacity, he has been president of the original Australasian Wind Energy Association and President of the Australia New Zealand Society for Ecological Economics. He has published widely on renewable energy and energy policy. His latest books are "Greenhouse Solutions with Renewable Energy" (2007) and "Climate Action" (2009); both published by UNSW Press.



Speaker:

Professor Barry W Brook

Barry Brook is a leading environmental scientist, holding the *Sir Hubert Wilkins Chair of Climate Change*, at the University of Adelaide's Environment Institute. He has published three books, over 150 referred scientific papers and regularly writes popular articles for the media. Professor Brook has received a number of distinguished awards for his research excellence (including the Australian Academy of Science *Fenner Medal*). His focus is on climate change, computational and statistical modelling, systems analysis for sustainable energy, and synergies between human impacts on the biosphere. He runs a popular climate science and energy options blogs <http://bravenewclimate.com>



Barry Brook takes an active leadership role in the communication of the science of global change to government, industry and the community. It is his belief that presenting hard-won technical scientific evidence to a broad audience in an intelligible way is the surest path to provoking meaningful societal change towards long-term sustainability.