

A Word from your President



Boom Times for the Australian Electricity Industry

During mid February, the EESA national committee met in Sydney. The national committee includes all the state chapter chairs and I find it a wonderful opportunity to take a view on national issues and gain insights into what is happening across all the states.

The common experience from all the states is "work overload". The electricity industry is booming across all the states. Shortages of skilled staff, shortages of electrical hardware and procurement delays are the norm. Many of my large high voltage industrial clients

are experiencing the same problems as they plan and undertake their plant expansions.

"Boom times" seems to be the best way to describe what is happening. The Somerville report of 2004 has been the trigger that has unleashed the largest ever capital works program ever seen by the electricity industry in Australia. A decade of serious underinvestment is now being addressed. The cost is and continues to be very high. Reversing the decade long run down of the industry both in terms of skilled labour and manufacturing capacity to produce cable, transformer switchgear and related products is causing a lot of stress across the country.

As I write this article, I'm working in Kalgoorlie, W.A. and I'm seeing the magnitude of the West Australian minerals boom first hand. I'm told by our chapter chairs that South Australia and Queensland are also seeing the same boom. The other states and territories are also having high levels of load growth.

These are special times for the electricity industry. I am very much an optimist. Enjoy the ride and build your stamina because I think the good times have a long time to run yet.

On a different subject, special thanks to our Queensland chapter chair, Laurie Cleary, and his committee for their detailed planning for the next EESA national conference. Don't forget to put the EESA national conference in your diary, 21 -22 August 2008, Brisbane. Sponsored by Energex, Ergon and Powerlink, the conference is shaping up to be one of the highlights of 2008.

Dr Robert Barr
EESA National President

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News and Issues from around the Industry...

by John Thomson

New NSW Power Stations above 250MW to be declared 'Critical Infrastructure'

On 26 February 2008, the NSW Premier announced that proposals to build new power stations in NSW would be declared "critical infrastructure" as long as they have a capacity in excess of 250MW. The decision will apply to any applications lodged between now and the end of 2012. The main outcome from this initiative is to remove the right of appeal against a Minister's determination under the Environmental Planning and Assessment Act (1979).

Proposal to 'Force' Greater Consideration of Demand Management Options

Submissions have recently closed in response to a Rule Change proposal to the AEMC from the Total Environment Centre (TEC). The Rule proposal seeks to facilitate the increased use of demand management by placing requirements and incentives on supply side participants to investigate and then undertake demand side solutions as the preferred, primary option. The amendments being sought include:

- when planning, network operators must consider DM solutions before network augmentation alternatives so that DM is implemented when it is a more cost effective option than augmentation;
- transmission network owners to publish robust data on upcoming network constraints that are relevant and useful to DM service providers;
- prudency reviews to assess the extent to which transmission network operators have implemented an adequate level of demand management.

This proposal received late support in the form of a letter from the NSW Energy Minister – although this support is somewhat qualified with the inclusion of a cautionary note that "it is important to ensure that the reliability of the national electricity system is in no way compromised".

The Rule Change proposal comes at a time when the AEMC is conducting a number of Reviews – into Congestion Management, a National Transmission Planner, and its own review of Demand Side Participation in the NEM. There is a lot of overlap between these various reviews.

Renewables Gaining Ground

EEnergy Informer (USA) edited by Perry Sioshansi, a popular speaker at EESA Conferences reports that renewable energy technologies, while not strictly carbon free, are enjoying a boom, propelled by strong incentives on one end and pulled by aggressive renewable portfolio standards on the other.

The European Union (EU) has announced the details of its environmental pledge in mid January 2007, which is aimed at cutting EU-wide emissions below 1990 level by 2020, including a mandate to boost the share of energy from renewables to 20% – a tripling from current levels.

General Electric Company (GE) has announced that it will double its investment in renewable energies to \$6 billion by 2010, it's CEO believing that the solar industry has the ability to reduce its manufacturing costs by 50 per cent over the next 5 years. This optimistic assessment is shared in some other quarters with a belief that solar power will cost no more than the average retail electricity prices in some parts of the world within a decade.

EEnergy Informer reports that wind and solar energy are the most promising technologies currently available. In the US alone over 5,000 MW of new wind capacity was added in 2007, bringing total US installed capacity to 16,818 MW, behind world leader Germany with over 20,000 MW.

Effects of Widespread Introduction Compact Fluorescent Lamps

Modern compact fluorescent lamps (CFL) are being heavily promoted as an effective demand side management strategy to reduce energy consumption and/or reduce peak load. The Federal Government has recently announced an intention to ban incandescent globes by the year 2010 and many distributors are actively supplying, and in some case installing, CFLs to customers. While there is no question that CFLs do represent an energy saving there are many other technical issues that need to be explored. The widespread mass installation of CFLs has the potential to raise harmonic levels on

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electricity networks. In addition CFLs create harmonics up to quite high orders meaning that they also have the potential to interfere with ripple injection load control systems.

The Australian Strategic Technology Program (ASTP) recently approved a project with the University of Wollongong to research this issue. The purpose of the proposed study is to characterise the operation of modern CFLs and assess the impact of their widespread mass installation on the electricity network. The true energy savings potential (VA as opposed to W) will be characterised and assessed, as well as the implication of harmonic and power factor effects. These outcomes will be achieved by a combination of laboratory testing and field monitoring. The project will be completed in the first half of 2008. Watch this space for the results.

Environmental Approvals for Future Power Stations to include CO2 Emissions?

Environmental opposition to coal plants in the US was galvanized by a Supreme Court decision in April 2007, which effectively classified CO2 as a pollutant, and therefore subject to regulation under the 1970 Clean Air Act (source: EEnergy Informer). Prior to this, the US Environmental Protection Agency (EPA) claimed it had no jurisdiction to regulate CO2 since it was not officially classified a pollutant.

Since then, a number of environmental groups have sought to fight proposed coal plants based on their CO2 emissions. A precedent-setting case in Kansas in 2007 involved a ruling to deny a permit for a proposed coal-fired plant. At least 15 coal-fired power projects scheduled for construction are nearing the crucial period of obtaining their final approval and permitting process. Environmentalists are doing their best to stop or delay these using similar tactics, but so far with mixed results. Expect these developments to be closely monitored by environmental groups in Australia.

Laptops Gain over PCs

EEnergy Informer (USA) - On a lighter note (no pun intended), laptops have been around since the 1980s but in early years they had limited capabilities, and were heavy and expensive. A popular 1982 model weighed 10kg and cost a fortune. They were considered a second computer, one you took on travel if you absolutely had to. This year, however, American consumers will buy more laptops than desktops. The advent of wireless networks, the increased number of workers needing portable connectivity, and the increasing number of telecommuters have all contributed to the rising popularity of laptops.

AEMC recommends removal of Victorian residential retail price caps

The AEMC has published its Review of the Effectiveness of Competition in Electricity and Gas Retail Markets – Second Final Report. Having found in its First Final Report that competition in both electricity and gas retailing in Victoria is effective, the AEMC is required to provide advice to the MCE and the Victorian Government on ways to phase out retail price regulation. The Second Final Report sets out the AEMC's advice to this effect.

Accordingly, the regulation of standing offer retail prices for residential customers has been recommended to cease from 1 January 2009. The AEMC has made a number of recommendations in the Second Final Report which will facilitate this whilst maintaining and enhancing the existing customer protection framework.

EESA BULLETIN EDITOR RETIRES

EESA bids a fond farewell to Peter Tapp who has been a long serving distinguished member of the EESA NSW Executive and the wise and patient editor of the EESA newsletter for many years. Peter was originally from Country Energy and its forebears but in the last years has carried on with these tasks in his retired capacity. His colleagues on the National and State executives valued his wide industry knowledge and his organising abilities and he will be greatly missed! Peter we wish you well in your future endeavours. Vale!

Bulletin 2, April - May 2008

Please email submissions by 18 April 2008 to our new Bulletin Editor,
Patrick McMullan on pmcmullan@energy.com.au

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EESA National Conference

The 84th Electric Energy Society of Australia conference and exhibition is for the first time being held in Brisbane Queensland. This makes for an excellent opportunity to come to the sunshine state for an EESA conference which will be held at the **Hilton Hotel Brisbane** on **Thursday 21 August to Friday 22 August, 2008**.

As Australia is widely adopting strategies regarding sustainability, emissions offsets and reducing our footprint on the environment, the challenge for our industry is to work as one to be a part of the solution to these challenges. At the same time, the growth in demand for electricity is putting pressure on all aspects of supply and delivery, including ageing networks and the supply of skilled resources, equipment and materials.

The 2008 conference, **Electricity 2008 – Stepping up to the Challenge** is about the many challenges that the industry as a whole faces and the need to commence implementing changes in order to meet these oncoming challenges.

To start with, we are inviting you to submit a paper to be present at the conference. With the theme, Electricity 2008 – Stepping up to the challenge we have developed the following sub-themes to assist in the preparations for paper submissions:

- The Environmental Challenge - Nuclear, Geo-sequestration, Renewables and Energy Efficiency
- The Growth Challenge – Planning, designing and delivering new generation and networks
- The Ageing Challenge – Sustaining safe, reliable networks and generation
- The Skills Challenge – Training, education, development and immigration
- The Safety Challenge – Designing and ensuring safety in meeting our challenges
- The Business Challenge – Strategic implementation of best business practices and engineering technical solutions.

Secondly, sponsorship and exhibition opportunities for the conference are also available.

To register all you need to do is visit the conference website at – www.eesa.iamevents.com.au where you can download the Call for papers application form, Sponsorship and exhibition prospectus and of course the registration form as well registering online. Alternatively, please call the conference managers on 07 3834 3333.

On behalf of the EESA Queensland Chapter, we invite you to be a part of this must attend conference for 2008.

Greg Bartlett, Conference Convenor

General Events

Electrical Energy Evolution

The inaugural **Symposium on Electrical Energy Evolution in China and Australia** is a timely event organised by the CSIRO and the University of Queensland. It will be held during **28th-30th July 2008** at the **Novotel Rockford, Palm Cove, Queensland**, supported by the IEEE and the IET and with sponsorship by Australian and Chinese organisations.

The objectives for this symposium balance science and action:

- Encourage science at the interface between energy networks, markets, and information and communication technologies.
- Identify key barriers in China and Australia to the creation of smart and clean electricity grids.
- Focus on common technical solutions to overcome them.
- Formulate an action plan for technology development, transfer, and adoption in China and Australia.
- Establish a Working Group to refine and promote the action plan and oversee its implementation through networks of influence.
- Achieve high-level media coverage and government visibility of the key issues.

Technical manuscripts will receive a full peer-review process by internationally known experts, and must be submitted by 28th April 2008. Early-bird registration closes on 12th May (for non-authors) and 2nd June (for authors).

More information can be found at the symposium website: www.eeevolution.org