

EQ

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A photograph of a city skyline, likely Perth, Australia, viewed from a rooftop. The foreground is dominated by a grid of solar panels. The background shows various skyscrapers and buildings under a clear blue sky. A semi-transparent dark grey box is overlaid on the image, containing the main title and sub-headers.

Our vision of WA's energy future

Shaping a solar future
Penny Wong brings Living Smart to Perth
Islanding Bremer Bay

Shaping a solar future for Perth

Minister for Energy; Training and Workforce Development Peter Collier launched a major solar energy installation on 8 April at the Central Institute of Technology in East Perth, part of the Perth Solar City program.

Perth Solar City is part of the Federal Government's \$94 million Solar Cities Program and is driven by a consortium led by Western Power, including the Botanic Gardens and Parks Authority, Mojarra, Eastern Metropolitan Regional Council, Prospero Productions, SolaHart, SunPower, and Synergy.

"The project is an excellent example of how all levels of government, businesses and community have come together with initiatives relating to solar energy generation, improved energy efficiency, consumer education and awareness," said the Minister.

"The Liberal-National Government recognises the importance of increasing the use of renewable energy and improving energy efficiency across all sectors of the community.

"This is a key objective of the Strategic Energy Initiative: Energy 2030, which is being developed to provide a co-ordinated plan to meet our energy needs over the next 20 years."

Western Power's Perth Solar City Program Manager Andrew Blaver said: "This project fulfills all of Perth Solar City's objectives: to create projects that engage the community; save power; test solar power systems' interaction with the electricity network and educate the public."

Solar power projects will be delivered over the next four years to communities within Perth's eastern region including Bassendean, Bayswater, Belmont, Kalamunda, Mundaring and City of Swan. Residents are offered free energy advisory services and discounted solar hot water and solar photovoltaic (PV) systems, which allow residents to create and use their own energy.



l to r; Andrew Blaver (Perth Solar City Program Manager, Western Power), Colin Ashton-Graham (Principal Policy Officer Sustainable Households, Department of Transport), Senator the Hon. Penny Wong, Josh Byrne (Gardening Australia), Doug Aberle (Managing Director Western Power)

Penny Wong brings Living Smart to Perth

On 30 April, the Minister for Climate Change, Energy Efficiency and Water, Senator the Hon. Penny Wong, launched the Living Smart program, the next stage of Perth Solar City.

Living Smart, is designed to change the way people manage energy use in their homes.

The program will enable households in Perth's eastern region to reduce greenhouse gas emissions by more than 1000 kg per year.

Living Smart will reduce the carbon footprint of households

across Western Australia, offering information and services to 10,000 households by mid year. Individually tailored information will be delivered to the doorstep of each participating household. 5,000 households will be invited to receive 'eco-coaching' over the telephone where their energy and water bills are analysed and ideas for making savings are discussed. Between August 2010 and May 2011 each home will be 'eco-coached' through their individual programs. Residents will be able to choose which activities best suit them to try and reduce their consumption.

106m

tonnes of greenhouse gases produced by Australian households each year

96,000

kilometres of power lines in Western Power's network

March 22 storm, vital stats:

158,000 homes & businesses affected

7795 network faults

361 drop out fuses tripped

830 wires down

325 poles damaged

4 major substations blacked out

100,000 customers restored within 24 hrs

Freak storm hits network hard

Our vision of WA's energy future

Western Power is optimistic of a rewarding and sustainable energy future for our community.

With the right frameworks, policies and systems in place, Western Australia has the ability to create a truly world class energy sector with improved economic, social and environmental outcomes. This requires a dynamic electricity network in an increasingly dynamic environment with the capacity to adjust to the future needs of the community.

To contribute to future energy policy in Western Australia, Western Power recently delivered its submission to the Minister for Energy; Training and Workforce Development Peter Collier's Energy2030: Strategic Energy Initiative (SEI).

Western Power's vision of WA's energy future sees energy markets as mature, open and self-supporting, with energy prices reflecting the true cost of production. Markets will be kept economically efficient by strong competition amongst primary energy producers and electricity retailers and generators, and by appropriate regulation of transmission and distribution networks.

In addition to market forces playing their part, long term planning for electricity infrastructure



development will be facilitated cooperatively across Government to ensure the optimum sustainable result without stranding existing and future assets.

In our increasingly carbon constrained future, low and zero emissions technologies will contribute a growing proportion of our total electricity generation. Renewable energy sources such as wave, geothermal and biomass will feature strongly alongside viable energy storage solutions. Intermittency issues associated with wind and solar power will also have been resolved.

Most importantly of all, generators, retailers and consumers will be connected via a smart grid - an

enhanced network where the application of information and communications technology improves the efficiency and effectiveness of the transmission, distribution and usage of electricity.

In the smart grid the network changes from a 'one-way street' to a 'highway' where information and electricity flow both ways. This will result in informed and empowered consumers and innovative ways of maximising the value of infrastructure investment.

As part of its SEI submission, Western Power has described what it sees as the critical strategic directions of the electricity industry leading up to 2030.

These directions are;

Improving energy efficiency and conservation;

Adopting a cost reflective electricity pricing policy for Western Australia;

Transitioning to a constrained access network;

Building a framework for 'Generation Park' planning;

Preparing for the transition to electric vehicles;

Developing distributed generation across the SWIS; and

Overcoming the challenges of intermittent generation.

In future editions of EQ, we will look at these issues in more detail as well as other critical challenges that will impact on the long term provision of secure, reliable, competitively priced and cleaner energy for all Western Australians.

For more information on Western Power's submission to the Minister's Strategic Energy Initiative visit westernpower.com.au

965,000

homes & businesses powered by Western Power every day

Global news

China turns to wave power to combat air pollution

China is attempting to tackle the problem of its polluted cities through wave power. Projects to build sea wave power plants are underway in Dong Ping in the province of Guangzhou, Nan San Inland of Zhan Jiang city, and also in the province of Hainan. This will decrease dependency on burning fossil fuels to generate electricity and help manage carbon emissions.

(Source: *worldofrenewables.com*)

20% - 25% of the world's electricity production could be from solar by 2050

Studies presented in Valencia, Spain, by the International Energy Agency have suggested that with the right policy support 20-25% of the world's electricity production could be from solar energy by 2050. Two roadmaps presented by the agency set out the technical, legal, policy, economic and organisational aspects of the advancing development of solar technologies.

(Source: *MarketWatch - Wall Street Journal*)

Carbon-free motoring in Australia

A network of battery-switching stations for electric cars could soon be built across Australia. US company Better Place is currently running a pilot with Tokyo's largest taxi company and has plans to roll-out to Israel and Denmark next year and Canberra in 2012.

(Source: *The Age 27 April*)

Islanding Bremer Bay

The popular tourist spot Bremer Bay switched its electricity supply to local diesel and wind generation during the busy Easter period to minimise the risk of power interruptions.

Each year the south-coast town is flooded by holidaymakers. To alleviate stress on the network, Western Power worked with the community to temporarily take the town off the grid.

Western Power Country Regional Planning Manager Dean Frost said: "Demand for electricity generally increases by 30 per cent during Easter and alternative power sources are the best way to ensure continued electricity supply.

"Normally, Bremer Bay is supplied by a 180km feeder stretching from Albany, meaning the town is vulnerable to power interruptions should there be a fault anywhere along the line.

"An interruption during the peak holiday period could have a major impact on the local economy. We mitigated the risk by 'islanding' the town with local generation. This insulates the town from faults and allows us to regulate voltage during the peak load times.

"Islanding is currently the best solution for Bremer Bay; however, it is not sustainable to island all year round. We have a strategy to provide a permanent solution and are looking at options to improve reliability."

Bremer Bay was islanded from 30 March to 8 April.

People

Mark Barnaba appointed Chair

Mark Barnaba has been appointed Chair of the Western Power Board of Directors, effective 21 April 2010. Mark is co-founder and co-executive Chairman of Azure Capital and sits on the Board of Fortescue Metals Group. Mark is also currently Board Chair at Edge Employment Solutions Pty Ltd, West Coast Eagles Football Club and UWA Business School.



AA3 Program Director appointed

Sally McMahon has been appointed Western Power's Access Arrangement Program Director. Sally will lead the preparation of the submission for the next access arrangement to the Economic Regulation Authority. Sally will be looking to achieve a successful outcome for Western Power and its customers.



Ken Brown wins peak engineering honour

General Manager of System Management **Ken Brown** has been named the National Professional Electrical Engineer of the Year for 2010. Ken is responsible for the management of the SWIS and is respected internationally for his expertise in large electrical system disturbances. Ken received the award from Engineers Australia on 21 May.



Events

- 05 - 07 June 2010** Office of Energy Sustainable Energy Expo, Perth, WA
- 07 - 08 June 2010** Inaugural Australia-India Energy and Minerals Forum, Perth, WA
- 08 - 11 June 2010** Smart Grids Conference, Shanghai, China