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ENERGY QUARTERLY | AUGUST 2011

The future is electric

Family wins \$50,000 home eco-makeover

Western Power connects Collgar

Mapping tool makes planning more transparent



CONNECTING PEOPLE WITH ENERGY

Family wins \$50,000 home eco-makeover

One lucky Perth family will be showcasing excellence in energy efficiency after winning a Perth Solar City \$50,000 Home Eco-Makeover competition.

A 2.38 kW premium SunPower solar photovoltaic (PV) system is the first of a suite of energy efficient modifications that will be undertaken at the house.

The entire makeover will provide many cost saving benefits for the family and showcase what is possible by way of making sustainable lifestyle choices.

Other aspects of the \$50,000 home makeover which the family won, include:

- a fully installed smart meter and in-home display from Western Power
- a Solahart hot water system
- a tailored energy coaching service from Living Smart
- a lighting and water efficiency retrofit
- roof insulation and whirly birds
- curtains and pelmets
- native garden makeover
- rainwater tank

“The smart meter and in-home display will enable the family to see exactly how much energy they are using and generating at any given time” said Perth Solar City Manager Andrew Blaver.

“This technology combination, delivered by Western Power, is believed to be the first of its kind in the world,” he added.

Perth Solar City’s Eco House will be used to display best practice in energy efficiency and sustainable living with the first home open scheduled for 11 September 2011.

Western Power is the lead consortium member for Perth Solar City, part of the Australian Government’s \$94 million Solar Cities program.

On the cover: The Roberts family of High Wycombe, winners of the Perth Solar City Home Eco-Makeover. *Photo courtesy Perth Solar City.*

\$193 million

allocated to Western Power for transmission works programs in the 2011/12 State budget

\$115 million

allocated towards pole and related asset replacement and reinforcement during 2011/12



Photo courtesy Collgar Wind Farm Pty Ltd.

Western Power connects Collgar

A significant milestone for renewable energy in WA occurred in May when Western Power connected the Collgar Wind Farm to the Western Power Network.

“The Collgar Wind Farm was successfully completed three months ahead of schedule and on budget, which was testament to the collaborative and cooperative involvement from all those involved in this major project,” said Western Power Managing Director Doug Aberle.

“It demonstrates our commitment to enabling sustainable, renewable energy sources to benefit consumers and contribute to WA’s greenhouse gas reductions,” Mr Aberle said.

The Collgar Wind Farm is one of the largest renewable energy projects to be undertaken in Western Australia and is forecast to generate and deliver, on average, 792,000 MWh of renewable electricity into Western Power’s network.

Located near Merredin it will be fully operational towards the end of the year.

International recognition for streamlining project

Western Power’s Reverse Logistics Project won the Best Improvement Project 2011 at the Australasian International Quality and Productivity Centre (IQPC) Awards.

The Reverse Logistics Project required a comprehensive re-think of complete life cycle management of all materials used on Western Australia’s

electricity network. The project which focused on the entire supply chain reduced environmental impact, promoted innovative and commercially sustainable work practices and delivered significant cost savings.

With a focus on building strong business partnerships the project delivered \$6.3 million in material returns, improving value for money for the Western Australian community and diverting resources away from landfill.

The future is electric

As part of our latest submission to the Energy Minister's Strategic Energy Initiative, Western Power is promoting the need to study further the economic and environmental implications of developing energy storage technology.

As part of our own investigations, Western Power has become one of the first Western Australian corporations to include the Mitsubishi electric vehicle (i-MiEV) to its fleet.

Western Power is leasing two Mitsubishi i-MiEVs for three years, and is one of only a handful of companies across Australia to do so. Electric vehicles (EVs) have the potential to dramatically affect the way we use and store energy. This is new and developing technology

and there is a great deal to learn and understand about how these technologies will affect power use.

If the charging of electric vehicles could be managed through a smarter grid that provides incentives for charging during low demand periods, batteries in electric vehicles could be used to smooth the daily demand for electricity.

In the longer term, EV batteries may also be used to feed electricity into the grid during periods of peak demand, thus playing an important role in energy storage and supply. When used in these ways, electric vehicles have the potential to significantly benefit the network.

"The vehicles will assist us to understand customer behaviours and potential benefits for the electricity network," said

Western Power Acting Smart Grid Development Manager, Louise Avon-Smith.

"EVs also present some potential challenges such as adding significant extra demand to the evening electricity usage if large numbers of them were to be charged at that time.

"Initially we are looking at how people utilise EVs, including behaviours and usage patterns, which will assist us in making informed decisions in the future. Western Power needs to be ready to pursue these emerging opportunities and innovative technologies and the electric vehicle is just one of many avenues currently being explored," Ms Avon-Smith added.

\$11 million

amount to be spent on substation safety and communication infrastructure improvements during 2011/12



Global news

The dawn of baseload solar energy

A 19 MW solar tower plant located in southern Spain has delivered electricity continuously over a 24-hour period. The plant is equipped with molten salt storage facilities that can provide power for 15 hours without the sun. It is the first time that a commercial-scale solar power plant has been capable of generating electricity through the day and night and has come less than a month since the plant begun commercial production.

(source: *Climate Spectator*, 7 Jul)

Panasonic and partners plan showcase green suburb

Panasonic and eight partner companies have announced plans to construct a green community on the vacant site of a former Panasonic factory 50 km from Tokyo. The town will demonstrate efficient use of energy by promoting widespread use of energy saving devices that integrate measures for energy creation, storage and management.

(source: *CleanbizAsia.com*, 1 Jun)

BlueGen mini power stations

Homeowners, small businesses, governments and schools worldwide are installing fuel cell 'mini power stations' to produce their own electricity from natural gas. Unlike solar panels, these fuel cells, developed by Australia's CSIRO, generate power constantly, and the power output can be controlled in response to changes in demand or price.

(source: *ecogeneration.com.au*, 1 Jul)

Mapping tool makes planning more transparent

In an Australian first, a Network Capacity Mapping Tool has been created to provide customers with the ability to geospatially view network capacity and future expansion plans across the Western Power Network.

The new tool was developed in collaboration with the Department of Planning, the Western Australian Planning Commission and will be hosted by Landgate, as the State's primary source of land information and geographic data.

"This initiative reflects Western Power's effort to provide greater transparency around its network expansion plans," said Network Planning and Development Manager David Bones.

Information available includes:

- substation capacity presented by forecast year for 20 years
- potential network connection points for renewable energy generators
- a list of distribution and transmission network projects approved for future development
- community engagement session schedules - location and details
- high voltage supply catchment area for each existing Western Power substation
- showing the actual single and three phase High Voltage feeder reticulation
- potential network connection points for energy generators
- an urban land development outlook
- District Level Planning (District Structure Plans)

The Network Capacity Mapping Tool is available at westernpower.com.au



People

New Strategy Manager

Glenn D'Vauz has been appointed as Western Power's Strategy Branch Manager to guide the corporate planning process and provide strategic advice across the business. Glenn brings with him extensive experience from working with organisations such as Telstra, RACWA and CPA Australia.

Paul Underwood, non-executive director and finance & risk committee member

Paul Underwood was appointed to the Western Power Board in 2009. He has more than 30 years experience in chartered accounting and corporate advisory, with 25 years experience in oil and gas production and exploration. In 2003 Mr Underwood won the Ernst and Young Western Australian Entrepreneur of the Year Award.

Acting General Manager, Finance

Daniel Kennedy, currently Acting General Manager of Western Power's Finance Division, has led the Business Planning and Analysis Branch for more than two years. Daniel has over 20 years of financial experience with companies including Coca-Cola, Masterfoods (Mars), London Underground, and HSBC Bank.



Events

15 August 2011

State Asset Investment Program 2011
Burswood Entertainment Complex, Perth

17 - 18 August 2011

Energy in WA Conference 2011 - Pan Pacific Hotel, Perth

13 - 14 Sept. 2011

WA Mining and Energy Infrastructure Conference
Perth Convention and Exhibition Centre

Energy Quarterly is produced by Western Power's Corporate Communications Branch.



This information is available in alternative formats and languages on request.

