

## Next meeting

There will not be a CROW meeting in December.

### **But there is a great alternative:**

You are invited to an informal **pre-Christmas catch up of the Wagga Sustainability Social Network** to be held on **Thurs 18 Dec**. There will be no guest presentations and the session will be purely an opportunity to get into the festive spirit and mingle with some great company. It will also be a handy time to throw some ideas around about the timing, format and other key details for networking events to be held in 2015.

**Venue:** The Duke Hotel (Upstairs seating area overlooking the Murrumbidgee), 125 Fitzmaurice St.

**Time:** 5.30 pm, Thur 18 Dec

## Local news

### **Smart Homes Seminars**

The Smart Homes seminars, organised by Andrew Wallace and the Wagga Council were a great series on information sessions for those interested in building or renovating homes or just interested in sustainable living.

The talks were practical, sensible and useful, featuring local tradespeople and architects. Everyone who attended walked away with many practical ideas about designing, building or renovating smart, energy efficient homes.

Let's hope for a repeat next year.

### **CROW's OEH Application**

The CROW committee has finalised an application to the NSW Office of Environment and Heritage for funding to carry forward our plan to set up a Solar Farm on the roof of a local organisation or business.

Much of the funding is to ensure that we deal with the legal, accounting and business issues that then scheme has to solve. As CROW is among the first organisations in the state to work its way through these issues, we hope that the answers we come up with will be of use to sustainability organisations in other places and to establishing subsequent solar farms in Wagga.

## Christmas Wrapping

Australia has copped such a hiding on the climate politics front over the last month, leaping to the bottom of the league table for countries doing anything useful about global warming.

**So,**

because it is Christmas let's just look at some nice news in the hope that it brings us some comfort and joy.

### **[Move over big power – the micropower revolution is here](#)**

There is no shortage of shouting and dire warnings about the state of the climate and our need to phase out fossil fuels. But there is a more silent revolution happening too — in

micropower.

Small-scale electricity generation is slowly replacing big fossil-fuel driven power plants, which are currently the world's single largest contributor to greenhouse gas emissions. These micro-electricity producers are relatively small scale, inexpensive, and most importantly, produce little to no carbon emissions. Last year micropower contributed to around a quarter of the world's energy, up from 10% in 2000.

### **[The first 500+ megawatt solar plant in the US, and the largest solar plant in the world came online recently.](#)**

Called the Topaz Solar Farm, it was built on the Carrizo Plain, located between San Francisco and Los Angeles, due east of San Luis Obispo. The farm is now producing 550 megawatts, enough to keep the lights on in 160,000 homes and displace 370,000 tons of carbon emissions.

### **[In world first, researchers convert sunlight to electricity with over 40 percent efficiency](#)**

UNSW Australia's solar researchers have converted over 40% of the sunlight hitting a solar system into electricity, the highest efficiency ever reported.

The record efficiency was achieved in outdoor tests in Sydney, before being independently confirmed by the National Renewable Energy Laboratory (NREL) at their outdoor test facility in the United States.

"This is the highest efficiency ever reported for sunlight conversion into electricity," UNSW Scientia Professor and Director of the Advanced Centre for Advanced Photovoltaics (ACAP) Professor Martin Green said.

"We used commercial solar cells, but in a new way, so these efficiency improvements are readily accessible to the solar industry," added Dr Mark Keevers, the UNSW solar scientist who managed the project.

The 40% efficiency milestone is the latest in a long line of achievements by UNSW solar researchers spanning four decades. These include the first photovoltaic system to convert sunlight to electricity with over 20% efficiency in 1989, with the new result doubling this performance.

### **[Australian scientists have developed graphene-based supercapacitors that are so light they can be used to create electric vehicles that are powered by their own body parts, instead of batteries.](#)**

Electric cars are often touted as the future of sustainable transport, but they're held back by the fact that they require really heavy, slow-releasing batteries to power them - even the top-end Lithium-ion batteries on the market charge extremely slowly and weigh a lot. A far better option would be to use supercapacitors - devices that can release energy in large bursts - but they're unable to store as much energy as batteries, and so it would take a lot of them in order to power something as big as a car.

Scientists have instead been working on ways to combine batteries and supercapacitors in order to make batteries more powerful and lighter in the short-term. But the ultimate goal is to develop a supercapacitor that could also store large amounts of energy.

Now nanotechnologists from [Queensland University of Technology \(QUT\)](#) in Australia have developed an ultra lightweight supercapacitor that can easily be combined with regular batteries to dramatically boost their power while decreasing their weight - and within five years could eliminate the need for batteries altogether.

[New 'Solar Cloth' Allows Solar Cells To Be Stretched Across Parking Lots, Stadiums](#)

A British start-up has developed a way for parking lots and structures with roofs that can't take much weight to harness the power of the sun. The Cambridge, England-based Solar Cloth Company is beginning to run trials of its solar cloth, which uses lightweight photovoltaic fabric that can be stretched across parking lots or on buildings that can't hold heavy loads, such as sports stadiums with lightweight, retractable roofs. Perry Carroll, Solar Cloth Company's founder, [told BusinessGreen](#) that the company is working to close deals to install solar cloth on 27,000 parking lots.

And finally, Australia's very own oops moment

[Carbon trading edges closer as UN brokers deal](#)

The world is on the brink of enlisting market forces in the fight against climate change on a truly global scale for the first time, United Nations officials have claimed. After years of opposition, hundreds of the world's major companies and investment firms – including several oil giants – have agreed that there should be a charge for the damage done to the planet by greenhouse gases. **This means that an international carbon market – in which companies buy and sell the right to produce harmful emissions – is now close to becoming a reality.** Even China, the world's biggest polluter, plans to set up a carbon pricing system next year. It is hoped that market forces will inevitably drive down the level of greenhouse gases as money flows from companies that produce emissions to those that reduce them, such as renewable energy firms.