



Exemplary Advances

2015 February "Exemplary Advances" is the newsletter for Exemplary Energy Partners, Canberra. Feel free to forward it to friends and colleagues. Click here to [subscribe](#) or [unsubscribe](#). Feedback is most welcome.

Past editions of **"Exemplary Advances"** are available on our [website](#).

We have moved

On 2 February 2015 we started work in the TT Architecture Centre, 35 Kennedy Street, PO Box 5282, Kingston ACT 2604, Australia, tel: +61 437 373 844. Email and internet are unchanged.

Happy New Year
2015

Latest Real Time Year (RTY)

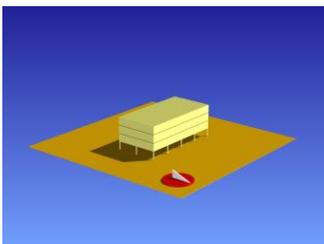
The RTYs to the end of January 2015 are now available for CBR, PER and SYD. Click [here](#) for details. Superseded RTYs are available at a discount of 10% per month past (20% for student, academic and other non-commercial use). So please [enquire](#) about formats and delivery times.



Chinese (Lunar) New Year

Chinese New Year begins with the New Moon on Thursday 19 February (and in China the celebrations don't stop until Tuesday 24 February 2015. It will be the Year of the Sheep (sometimes translated as Goat).

Exemplary Weather and Energy (EWE) Indexⁱ



2014 January	Canberra		Perth		Sydney	
	Heat	Cool	Heat	Cool	Heat	Cool
10-Storey	-	-1%	-	-2%	-	-
3-Storey	-	0%	-	-3%	-	-
Supermarket	-	-7%	-	0%	-	-
Solar PV	-5.4%		2.2%		-	

Canberra had a cooler January than the reference year – the mean maximum, minimum and average temperatures are lower (1.4°C, 1.3°C, 0.7°C lower respectively). This is reflected in the supermarket which has the longest operation hours. The cooling consumption is 7% lower.

The weather in Canberra was also cloudier in January. The PV model has energy yield of 5.4% lower than in the reference year. The 10-storey office cooling consumptions in the West and North facing internal zones are 11.7% and 1.2% respectively lower than in the reference year.

Perth had a slightly hotter January after the unusually cool weather at the end of 2014 – the mean maximum, minimum and average temperatures are higher by 1.8°C, 1.0°C and 0.4°C respectively.

It was also sunnier. The PV model has energy yield of 2.2% higher than in the reference year. It is expected that the cooling consumption, especially in the 10-storey office, would be higher due to more solar heat and warmer weather. However our 2 office models show that the total cooling energy consumptions are lower than in the reference year, only the supermarket model had an insignificantly higher cooling consumption (<0.2% higher).

Further analysis established that this is due to the drier weather. The HVAC systems do not have to work so hard to dehumidify the air. This is also reflected in our supermarket model which has an average latent cooling energy of 24% less than in the reference year.

Sydney data is not available in the short term. A power failure at Macquarie University disabled its weather station for several weeks. We will advise on this in more detail in the next edition.

Interns

Steffan Kosky has just graduated from Narrabundah College and will soon begin his tertiary studies in Engineering and Genetics at the Australian National University. In his short time with us he worked on the geometry of observation of cloud from a geostationary satellite as a function of latitude.

Energy Efficiency Ratings and Residential Prices

Since April 1999, the results of a NatHERS compliant Energy Efficiency Rating (EER) has been a mandatory inclusion in any advertisement to sell a residence in the Australian Capital Territory (and for leasing where an EER pre-exists). At that time, Denmark was the only other jurisdiction anywhere with that requirement. Now, by virtue of the "*EU Energy Performance of Buildings Directive*" in 2008, it is required throughout the European Union. Separate analyses of the ACTⁱⁱ and the EUⁱⁱⁱ schemes have established the effectiveness of those policies. Exemplary Energy Partners has been monitoring the nexus between EER and advertised price since the scheme's inception and occasionally publishes the results. No other Australian jurisdiction has replicated this scheme as yet despite repeated resolutions of the Council of Australian Governments (COAG) to do so.

Canberra – January 2015

The advertised house price in Canberra has been decreasing since December 2014. Our data shows that there was an average asking price drop of about 0.5% at the end of 2014, and our latest data shows the price continues to drop: last month, by 2.7%. The asking price for dwellings with 0-2 stars EER has the biggest drop: by over 5%. Houses with 3-4 stars and 5+ stars also decreased but only by about 2% and 1% respectively.

Although the average advertised house price decreased across Canberra as a whole, houses in the Gungahlin region (nor'nor'east of Civic) with higher EER have increased. The price for houses with 3+ stars has an increase by 1.7% and the 5+ stars increased by 7.4%.

ⁱ Exemplary publishes the [EWE](#) for three archetypical buildings and a residential solar PV system each month; applying the RTYs to [EnergyPlus](#) models developed using [DesignBuilder](#) for a 10-storey office, a 3-storey office and a single level supermarket as well as an [SAM](#) model of a typical 3 kW_{peak} solar PV system designed by [GSES](#). All values are % increase/decrease of energy demand/output relative to climatically typical weather. Especially during the mild seasons, large % changes can occur from small absolute differences.

ⁱⁱ Australian Bureau of Statistics report to the then Department of the Environment, Water, Heritage and the Arts "*Energy Efficiency Rating and House Price in the ACT*", 2008.

ⁱⁱⁱ "[An investigation of the effect of EPC ratings on house prices](#)" report for the UK Department of Energy and Climate Change, June 2013.