



# Exemplary Advances

2016 September "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](#).

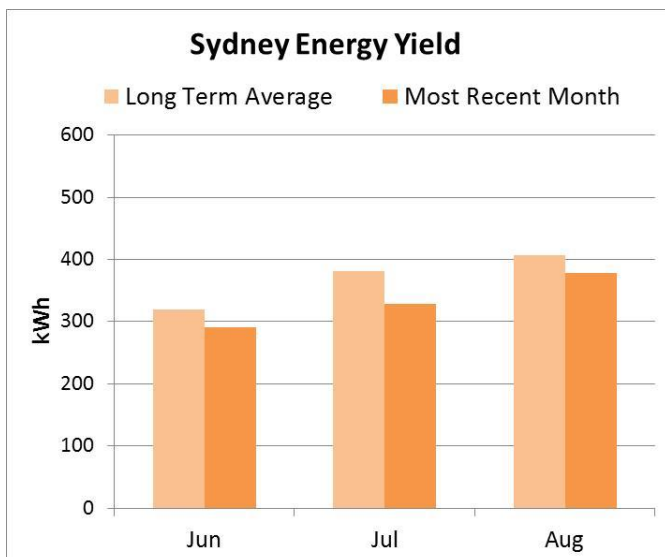
## Exemplary Weather and Energy (EWE) Index<sup>i</sup> - August 2016

Monthly tabulation and commentary relative to the climatic norm – the Reference Meteorological Years

2016 August	Canberra		Perth		Sydney	
	Heat	Cool	Heat	Cool	Heat	Cool
10-Storey	15%	-20%	30%	-13%	-37%	2%
3-Storey	12%	-20%	28%	-9%	-29%	2%
Supermarket	45%	-100%	121%	-100%	-19%	-87%
Solar PV	-1.9%		2.6%		-0.9%	

**Canberra** had cooler and cloudier than average weather in August. The PV panel had an energy yield of 1.9% less in this weather. The mean maximum and average temperature were lower by 1.7°C and 0.7°C respectively. Only the minimum was higher by 0.9°C. The heating consumptions of our 3 commercial building models were higher than the average as a result. The 10-storey office East facing zone had the highest difference in heating consumption, over 45% because there was less sun for solar warm up in the coolest part of the day. The North facing zone also required higher than average heating by around 24% due to the cloudier weather. The heating consumption of our supermarket had the biggest increment relative to the long term climate due to its longer operating hours.

**Perth** had cooler than average weather in August. The mean maximum, minimum and average temperatures were each lower by 0.1°C, 0.6°C and 0.4°C respectively. All our commercial building models had higher than average heating consumption under this weather. The cooler weather occurred mostly during the evening through to the early morning. The 10-storey office East facing zone had an over 150% increment in heating consumption with lower solar heat after the cold night. It was also slightly cloudier and windier than the average. However, the cooling effect from the wind improves the PV panel efficiency and therefore the energy yield was 2.6% higher.



**Sydney** has been warmer than average since May and the warm weather has continued through August. Although the mean maximum was lower by 1.3°C, the minimum and average temperature were higher by 1.7°C and 0.5°C respectively. The heating consumptions of our 3 commercial building models were all lower than the average. Similar to last month's record, the South and West perimeter zones of the 10-storey office had around 35% lower heating consumption as the warmest time of the day was mostly during the late afternoon. The cooling consumption of the supermarket was 87% less than the average but the actual value was negligible. It was also cloudier than average, therefore the PV panel energy yield was 0.9% lower.

## Mandatory Home Energy Rating in the ACT for 210 Months

Mandatory [rating](#) and disclosure of the energy efficiency of existing homes at the time of sale has been [law](#) in the ACT since April 1999 and we have tracked the \$/star value correlation since then. Recently, we have disaggregated the data by housing type and will be publishing those results soon.

## Call for a National Energy Efficiency Disclosure System

New research has found that Australian homeowners overwhelmingly support a national voluntary disclosure system to empower consumers to rate and value homes with lower running costs.

The research published by CRC for Low Carbon Living (CRCLCL) found 92 per cent of housing consumers want energy efficiency details revealed in building inspection reports; 82 per cent at open inspection and 72 per cent in property advertising, with half of home buyers and renters willing to pay for this information. Interestingly, the research also revealed that 90 per cent of building professionals and tradespersons supported providing this information at the time of sale or lease.

Funded by the CRCLCL, industry members of the EnergyFit Homes initiative and the NSW Office of Environment and Heritage supported the two-year research project.

For more details click [here](#).

## PV\_OptiMizer – enhanced and available free

The latest version of our solar PhotoVoltaic (PV) evaluation app is now available without charge. The free download holds data for a tropical, an arid and a southern location. In-app purchases allow access to data for 100 locations and for editing the system components, making it a design tool for anywhere in Australia. Use the following links for your own free trial of the [Android](#) or [iOS](#) version now.

## Home Energy Rating OptiMizer – HERO - available for free trial

The service is now available for AccuRate and BERS Pro files with a version to handle FirstRate5 files under advanced development. [Contact us](#) for your free trial.

## Eco-Estate Residential Development in Malua Bay NSW



Exemplary Energy Partners is engaging in an Eco-Estate Residential Development in Malua Bay NSW in which a Community Title of 15 lots is being developed with shared facilities and private road access. An [existing house](#) recently upgraded is also being offered for sale.

Called [Escape @ Malua](#), its neighbourhood management plan includes building approval conditions favouring care for the amenity of neighbours and



for environmental construction including energy efficiency beyond the current minima set out in [BASIX](#) for homes within NSW - generally lower standards than the 6 Stars ([NatHERS](#)) required elsewhere in Australia. More detail will be presented in future editions of *“Exemplary Advances”*.

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<sup>i</sup> Exemplary publishes the [EWE](#) for three archetypal 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<sub>peak</sub> 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.