



# Exemplary Advances

2017 May “*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.

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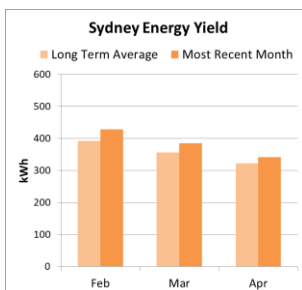
## Exemplary Weather and Energy (EWE) Index<sup>i</sup> - April 2017

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

2017 April	Canberra		Perth		Sydney	
	Heat	Cool	Heat	Cool	Heat	Cool
10-Storey	9%	-6%	N.A.	-1%	N.A.	-10%
3-Storey	6%	-7%	N.A.	0%	N.A.	-13%
Supermarket	1%	-79%	N.A.	12%	N.A.	-57%
Solar PV	3.1%		8.7%		5.4%	

**Canberra** had cooler and sunnier than average weather in April. It was the first cooler month after five consecutive warmer month (since November 2016). The mean maximum, minimum and average temperatures were lower by 2.3°C, 0.8°C and 0.7°C respectively. All our commercial building models have less cooling consumptions due to the cooler weather. The 10-storey office South-facing zone had over 24% less cooling consumption than the average due primarily to the cooler air temperature. The North-facing zone also consumed less cooling energy but by a lesser amount due to the cool but sunnier weather. The PV panel energy yield was 3.1% higher.

**Perth** had slightly cooler and sunnier than average weather in April. The mean maximum, minimum and average temperatures were lower by 2.7°C, 0.5°C and 0.3°C respectively. The 10-storey office South-facing zone had cooling consumption less than the average by around 3% due to the lower air temperature. In contrast, North-facing zone had higher cooling consumption than the average, by 13.5% due to the sunnier weather. The cooling consumption of the supermarket was 12% higher as the glazing is North-facing which allows more sun heat. The PV panel efficiency was benefitted from this weather and hence the energy yield was higher by 8.7%.



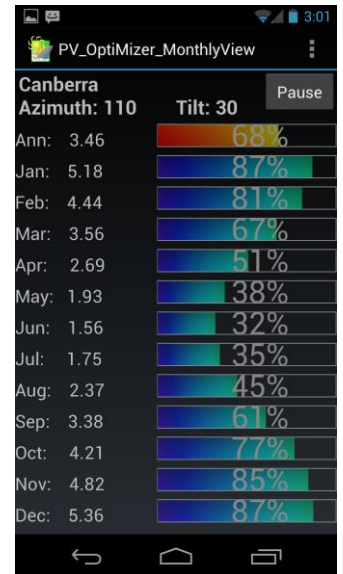
**Sydney** also had cooler and sunnier than average weather in April. The mean maximum and average were lower by 3.6°C and 1.5°C. Only the minimum was higher by 0.5°C. The PV energy yield was 5.4% higher. All 4 facing zones of the 10-storey office had cooling consumptions less than the average. The South-facing zone had over 29% less cooling due to the cooler air temperature. The North zone also consumed less cooling energy but by a lesser amount of 17% due to the sunnier weather.

## 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.

## PV\_OptiMizer – enhanced and available for free

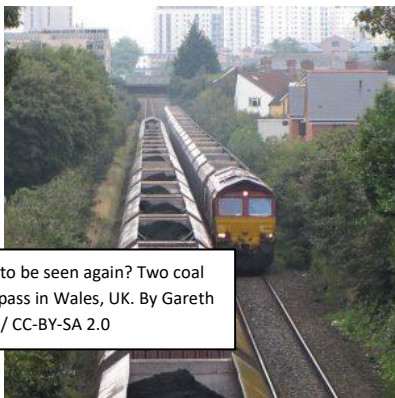
The latest version of our solar PhotoVoltaic (PV) evaluation app is now available without charge. The free download holds data for a tropical, an arid and a southern location. In-app purchases allow access to data for 100 locations and for editing the system components, making it a design tool for anywhere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



## Bureau of Meteorology switches to Himawari for Solar Data

Himawari, Japanese for sunflower, is the name of 2 new geostationary weather satellites operated by the Japan Meteorological Agency ([JMA](#)) offering significant improvements in frequency, resolution and precision. As reported in our August 2016 edition, they came into service for our Bureau of Meteorology ([BOM](#)) in March 2016. Once calibrated against the BOM ground-stations, that full year data will be published and used by our team in all future weather and climate data products.

## Britain's first coal free day in 135 years



Never to be seen again? Two coal trains pass in Wales, UK. By Gareth James / CC-BY-SA 2.0

As Australia was debating a \$900m subsidised coal train for export to India, National Grid UK was recording its first day since 1880 without [coal fired electricity](#). With increased gas turbine power to support new variable wind and solar, the longer spring sunlight meant that it just wasn't necessary for Britain to burn coal on Friday 21 April. About a quarter of Britain's power was nuclear that week.

Meanwhile, in Australia, AGL announced 'The Plan' to 'get out of coal' by 2050 and invited customers to join their vision for a low carbon future at home. And as the Prime Minister has announced a willingness for the Federal Government to intervene in east coast gas export, CSIRO and

Energy Networks Australia have issued their final [Roadmap](#) report outlining how the nation can deliver electricity needed while achieving zero net carbon emissions by 2050.

(with thanks to the [Warren Centre](#), University of Sydney)

## Mandatory Home Energy Rating in the ACT for 218 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.

<sup>i</sup> 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<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.