



Exemplary Advances

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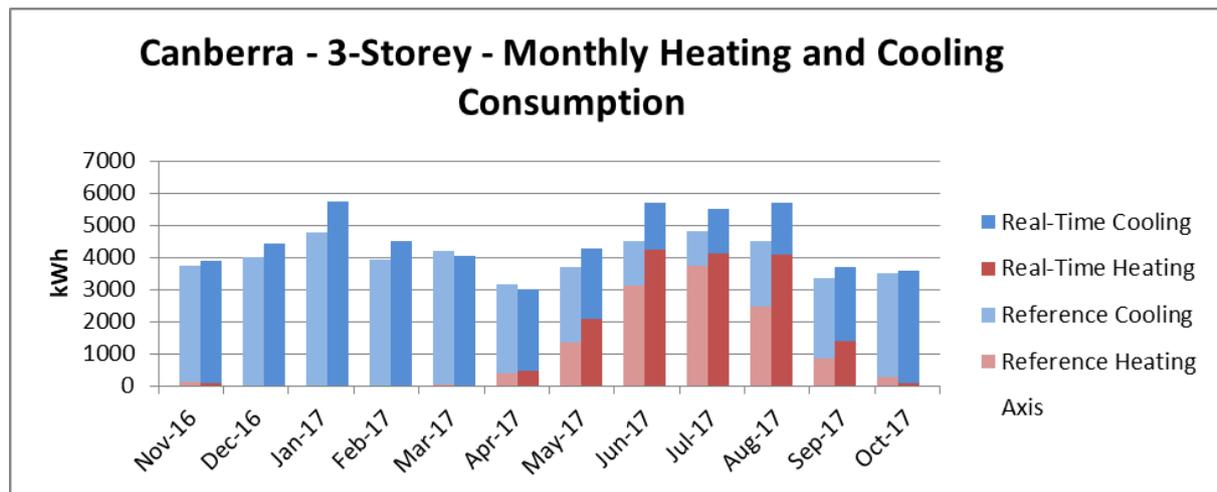
Exemplary Weather and Energy (EWE) Indexⁱ - October 2017

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

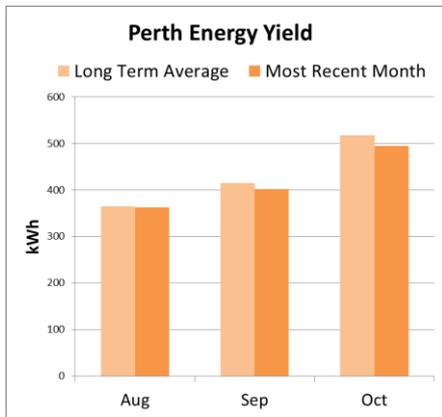
2017 October	Canberra		Perth		Sydney	
	Heat	Cool	Heat	Cool	Heat	Cool
10-Storey	-54%	3%	N/A	-2%	N/A	4%
3-Storey	-65%	8%	N/A	-4%	N/A	6%
Supermarket	-52%	60%	N/A	25%	N/A	35%
Solar PV	0.5%		-4.4%		9.8%	

Canberra had warmer and sunnier than average weather in October. The solar PV array had an energy yield that was 0.5% more in this weather. The mean average and minimum temperatures were higher by 1.8°C and 1.6°C respectively. Only the maximum was lower by 3.0°C. The heating consumptions of our 3 commercial building models were lower than the average as a result. The 10-storey office cooling consumption in the North and East-facing zone had 28% - 34% more than the average because the weather was warmer and sunnier than average.

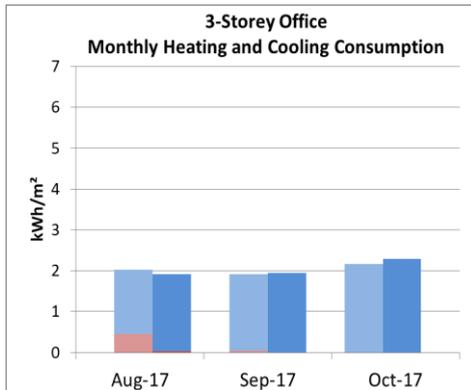
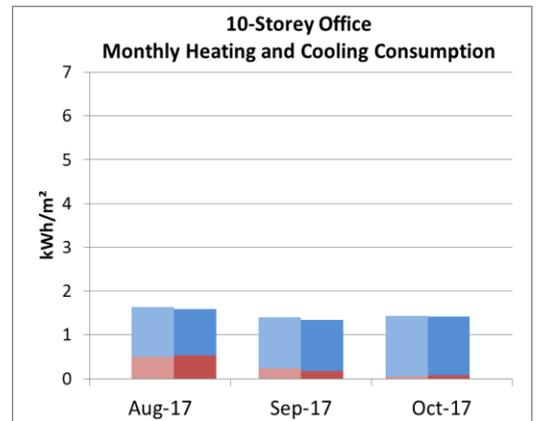
The South facing zones had around 42% excess to the norm in cooling consumptions due primarily to the average warmer air temperatures. The supermarket cooling consumption had 60% excess due to its long operating hours and warmer air temperature throughout the night.



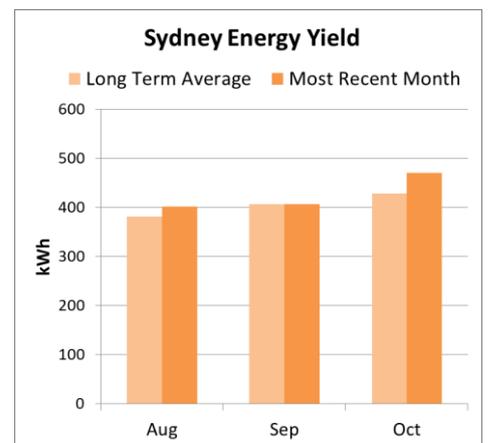
Perth was warmer than the average in October in terms of air temperature. The mean maximum was higher by 1.1°C, and minimum and average were both higher by 0.6°C. It was windier and cloudier as well, therefore, the two office building models had lower than average cooling consumptions as a result. The 10-storey office North-facing zone had over 13% less cooling than the average due to the cooler and breezier weather.



The West-facing zone also consumed 18% less cooling than the climatic norm. However, the air temperature remained higher than the long term average after sunset, therefore, the supermarket building model consumed 25% more cooling energy.



Sydney also had warmer than the average weather last month. The mean minimum and average temperature were higher by 0.3°C and 0.1°C respectively. Only the mean maximum temperature was lower than the average by 2.1°C. It was sunnier as well. The solar PV energy yield was 9.8% higher than the average in this weather. All our commercial building models had higher



cooling consumptions than the average. The North and East-facing zones of our 10-storey office model had simulated consumptions around 11% - 14% more cooling energy than the average.

The South-facing zone also had around 11.5% higher cooling consumption due to the warmer air temperature. The supermarket model had a higher cooling energy consumption due to the warmer air temperature continuing throughout the later afternoon and evening when the supermarket is still operating.

Mandatory Home Energy Rating in the ACT for 223 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.

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.

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.