



Exemplary Advances

2019 January “*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.

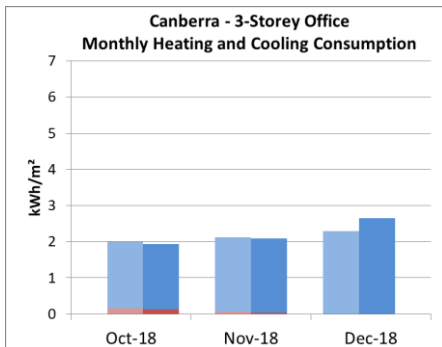
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Exemplary Weather and Energy (EWE) Indexⁱ - December 2018

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

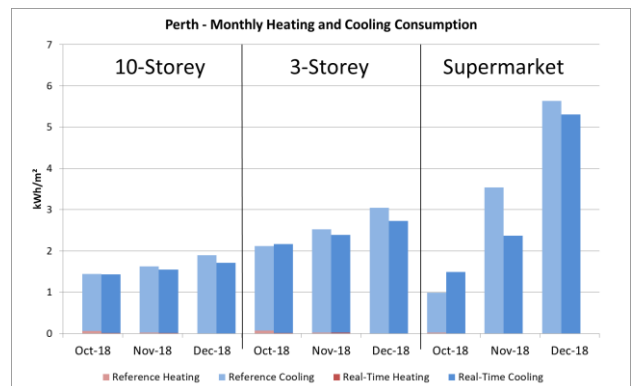
2018 December	Canberra		Perth		Sydney	
	Heat	Cool	Heat	Cool	Heat	Cool
10-Storey	N.A.	13%	N.A.	-10%	-	-
3-Storey	N.A.	15%	N.A.	-10%	-	-
Supermarket	N.A.	52%	N.A.	-6%	-	-
Solar PV	-0.1%		-4.2%			

The Exemplary Real Time Year weather files ([RTYs](#)) used for these monthly simulations are available for [purchase](#) to allow clients to simulate their own designs for energy budgeting and monitoring rather than rely on analogy with the performance of these [archetypical](#) buildings and systems.



Canberra had warmer than average weather in December. The mean maximum, minimum and average temperatures were higher by 4.9°C, 2.1°C and 2.8°C respectively. All the commercial building models had cooling consumptions higher than the averages. The 10-storey office North facing zones had cooling consumptions higher than the climatic averages by close to 25%. The South facing zones also were around 25% above the norm in cooling consumption due primarily to the warmer air temperatures. It was cloudier as well; therefore the solar PV energy yield was 0.1% lower.

Perth had cooler than average weather in December. Although the mean maximum temperature was 0.6°C higher, the mean daily average temperatures were lower by 1.3°C (there was no change in mean minimum temperature). It was cloudier as well; therefore the solar PV array had an energy yield 4.2% lower. All the commercial building models had cooling consumptions lower than the norm. The 10-storey office North facing zones had cooling consumptions 14% lower than average due to the cooler air temperature and cloudier weather. South facing zones had a cooling consumption around 15% lower due primarily to the cooler air temperatures.



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. RTYs are available for purchase for your own simulations.