

COOLNOMIX[®] saves 26% on Air-Conditioning at Caltex North Ryde



Caltex installed COOLNOMIX[®] AC-01 at its North Ryde retail site in February 2016, in two packaged air-conditioning units serving the retail outlet. The sites air-conditioning achieved savings of over 26%.



CALTEX



Site	Caltex North Ryde 41-43 Epping Rd, North Ryde NSW 2113
Type	Petrol station retail
System Details	2x Actron 28.3kW reverse cycle split ducted systems 2x 8.51kW input capacity
Control System Types	HEVAC HTC-4 Reverse cycle controllers
Operation	7 days per week, 24 hours per day Internal set point temperature 22°C
Case Study Details	Monitoring period: 2 th Feb 2016 to 19 th March 2016
Results	Air-Conditioning saving in excess of 26%

Westpac COOLNOMIX® Case Study Methodology

Demonstrating savings in air-conditioning is challenging due to the number of external variables involved in energy usage. Our methodology involves comparing *control period* energy use without COOLNOMIX® to *test period* with COOLNOMIX® ensuring the set points and outdoor temperatures are the same between samples.

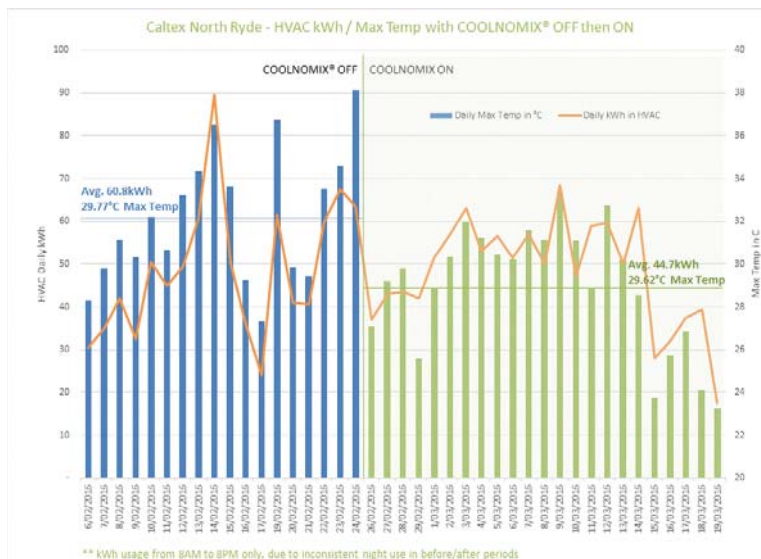
The following methodology was followed:

- Collect internal temperatures to ensure matching set points.
- Collect HVAC avg. daily kWh for the *control period* and *test period*.
- Collect Max. Temp. data from closest BOM weather station.
- Match the *control period* and *test period* avg. Max. Temp. data sets to eliminate the influence of temperature on the samples.

Results

Overall the average daily usage dropped from 60.8kWh to 44.7kWh (26.4%) and the weather conditions were similar during the COOLNOMIX® trial period: 29.7°C vs 29.6°C average max temp at 3PM.

COOLNOMIX®	kWh	Temp
OFF	60.80	29.77
ON	44.74	29.62
Savings		
kWh	16.06	
%	26.4%	



Extrapolating Savings

- Average daily savings of 16-18kWh.
- Assuming 10 months of cooling per year, it is equivalent to saving 5,170kWh or 5.48 tCO2e per year.
- At \$0.20/kWh these savings amount to \$1,034/year saving.
- Equivalent to saving approximately \$19/kW cooling capacity per year.