

Site Energy Report – Bottle Shop

Voltage as a Service (VAAS)TM is an energy-saving service solution for regulating and optimising the voltage supplied to electrical equipment to the optimal level for efficient operation. The purpose of VAAS is to reduce energy consumption, lower electricity bills, and decrease carbon emissions by ensuring that electrical devices operate at their most efficient voltage level.

Executive Summary

Objective	Report on energy usage, and Voltage Optimisation energy savings
Site Location	Site #1030 Regional City, Western Australia, Australia
Facility Type	Bottle Shop
Time Period	A 6 month period, from 3 rd January 2024 through to 28 th August 2024

Methodology

Data Collection	3 phase energy meter
Communication	4G wireless. 1 minute interval messaging
Sample interval	1 minute interval data, 30 minute integration
Data storage	iStar Cloud Repository
Accuracy	Class 1 accuracy

Summary Statistics

Statistic	Total Energy Usage kWh	Total Energy Savings kWh	Savings %
Mean	28.97	3.95	12.00%
Median	27.66	3.77	
Mode	25.57	3.49	
Minimum	-	-	
Maximum	55.85	7.62	
Range	64.23	8.76	
Standard Deviation	8.51	1.16	
Sample Variance	72.34	1.35	
Kurtosis	0.92	0.92	
Skewness	0.06	0.06	
# Samples Read	11,449	11,449	
Start date	3/1/2024	3/1/2024	
End date	28/8/2024	28/8/2024	
Days	238.81	238.81	
Total (Period)	331,648	45,225	
Total (Annualised)	506,890	69,121	
Maximum Demand (kW)	112		

Figure 1 Energy Usage – Daily Total - 8 month period

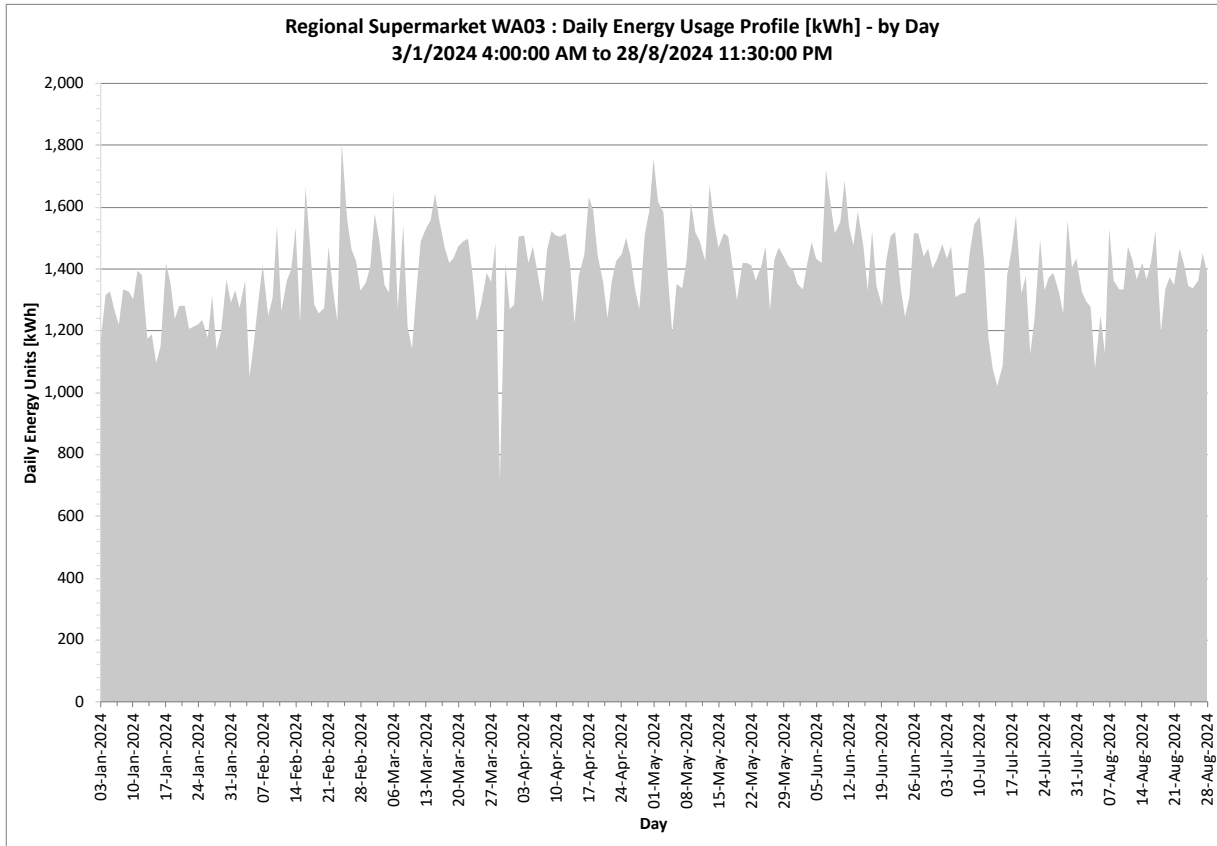


Figure 2 Energy Usage – 30 minute interval - 8 month period

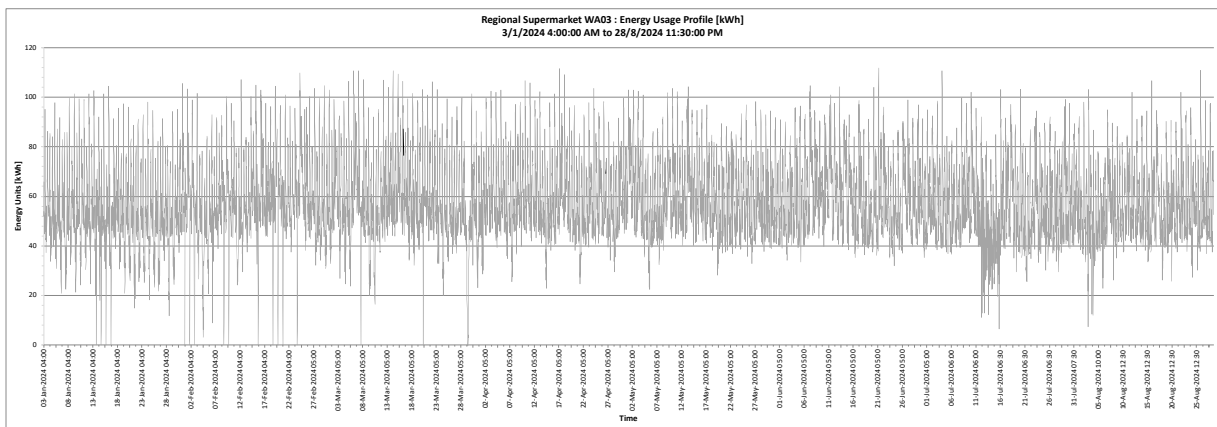


Figure 3 Energy Usage & VO Savings – Average Time of Day – 30 minute interval - 8 month period

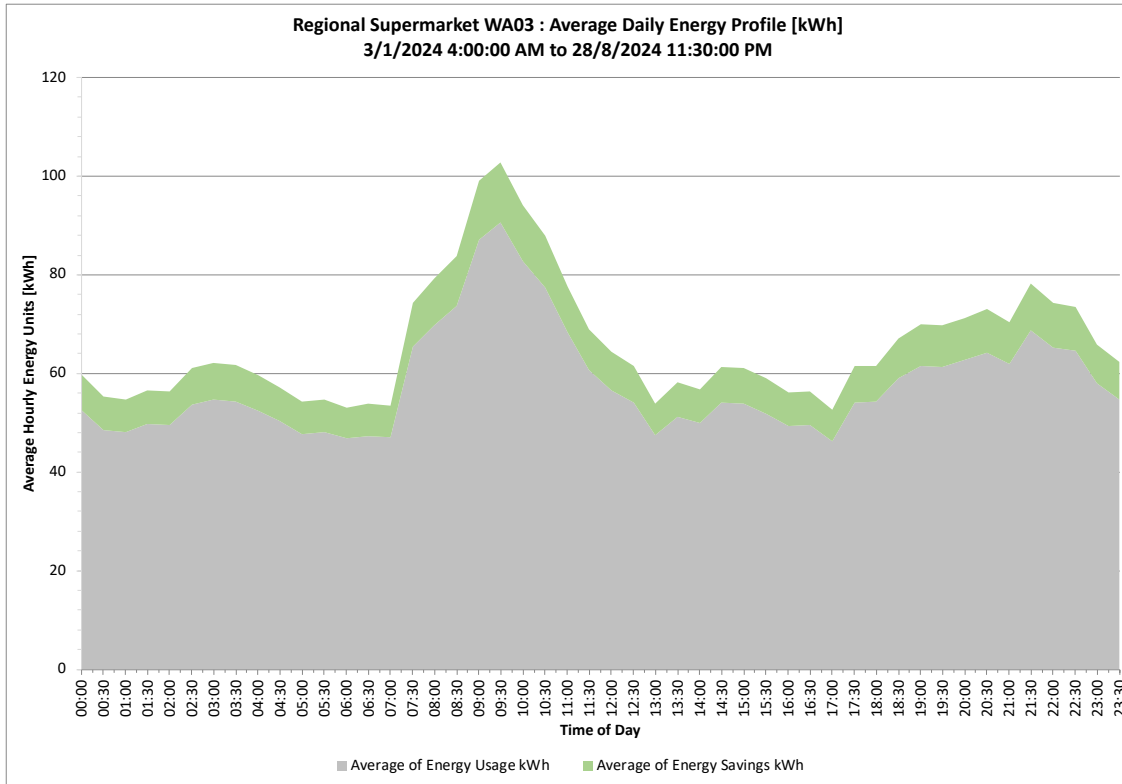


Figure 4 Energy Usage – By Average Time of Day – By Week – 30 minute interval - 8 month period

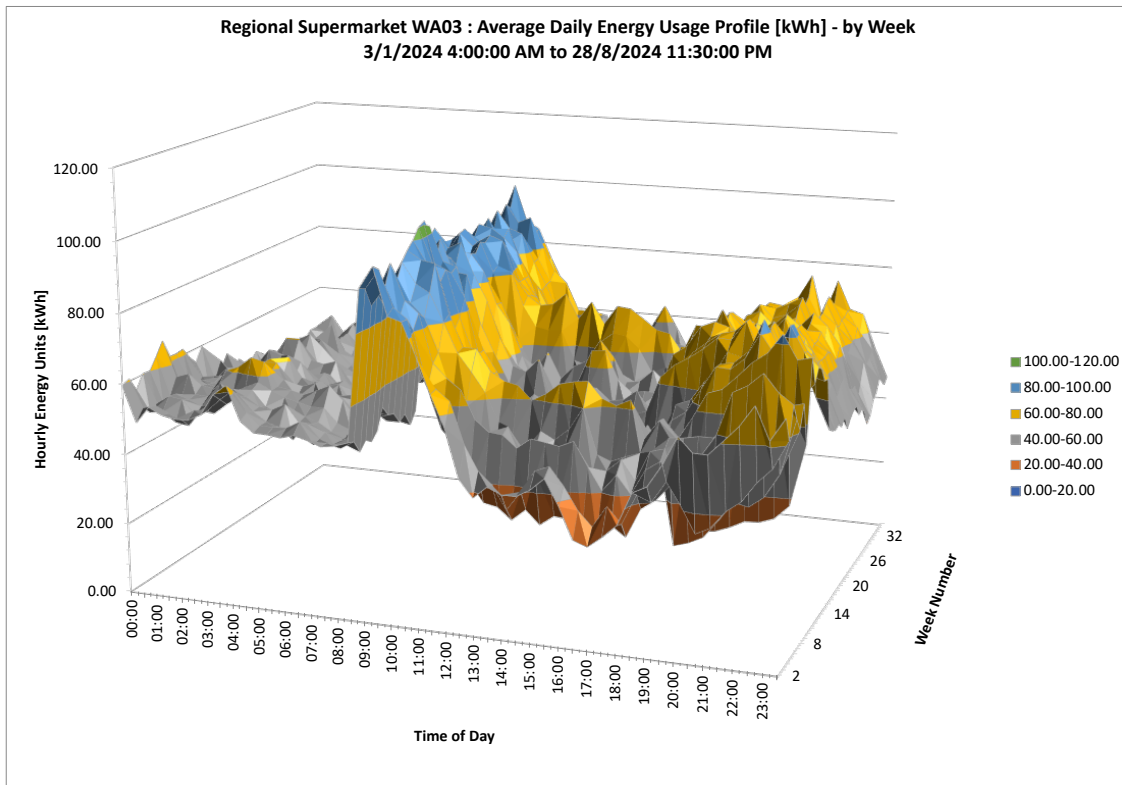


Figure 5 Energy Usage – By Time of Day – By Day – 30 minute interval - 8 month period

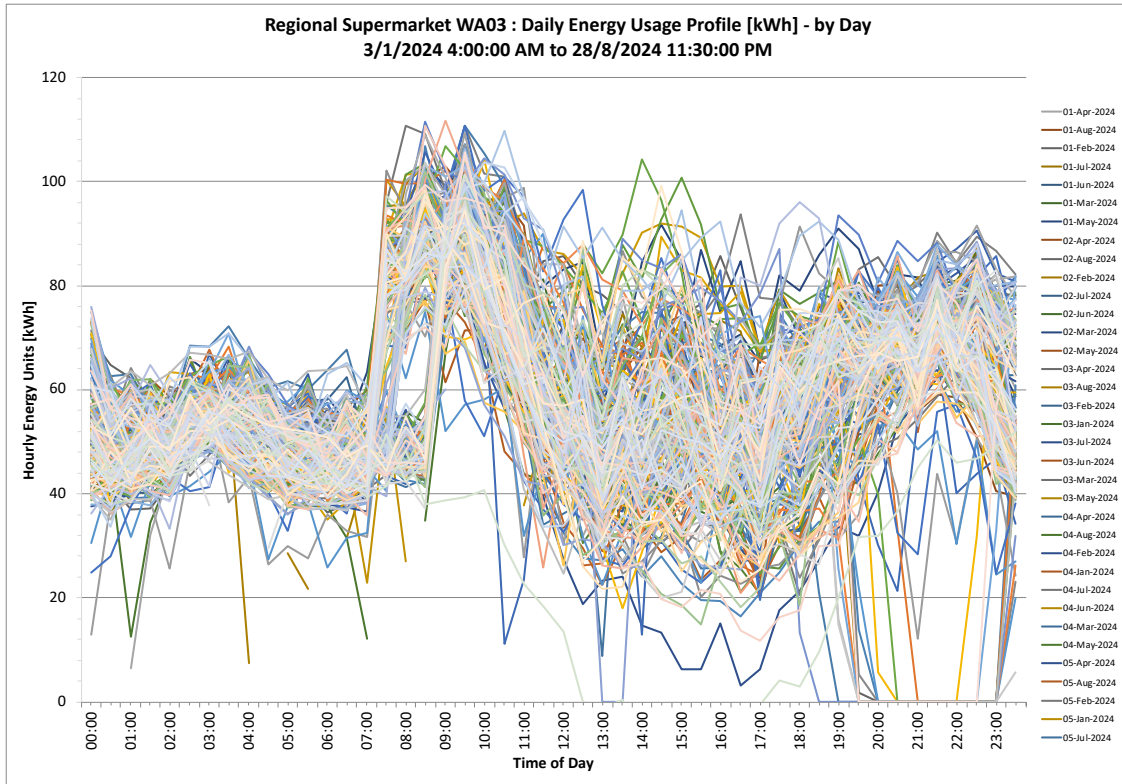


Figure 6 Energy Usage – By Time of Day – By Day of Week – 30 minute interval - 8 month period

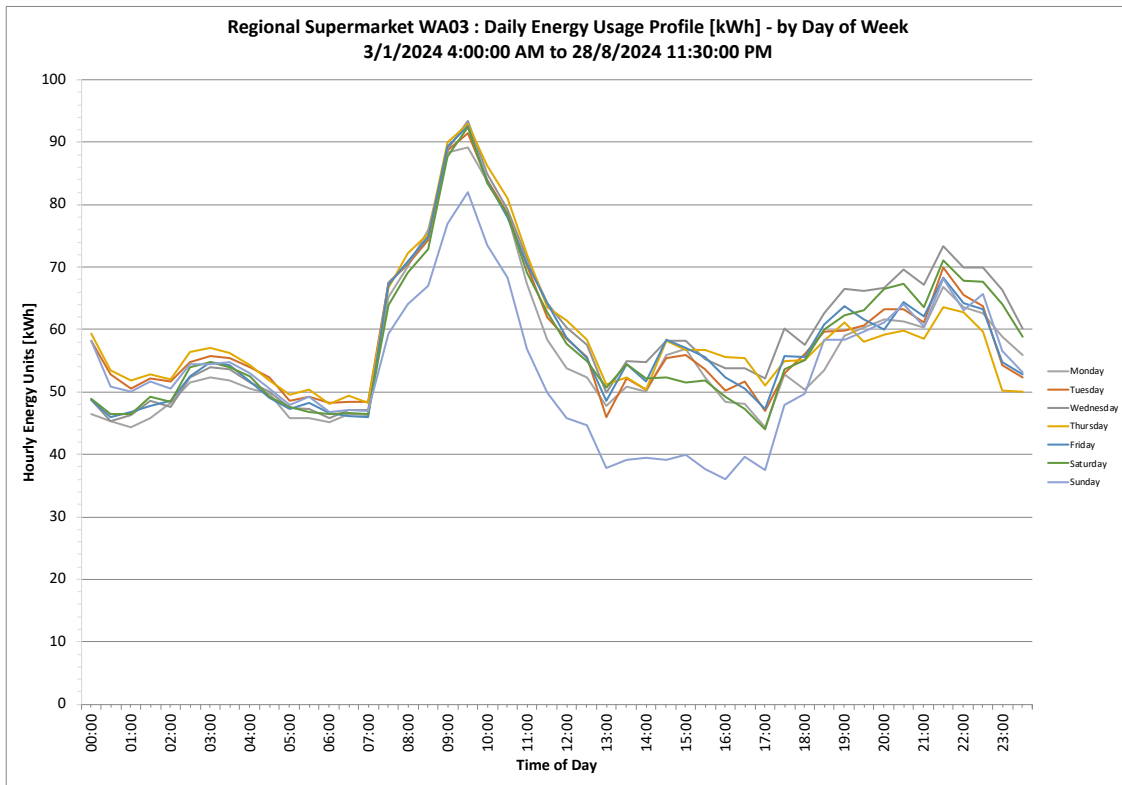


Figure 7 Energy Usage – By Time of Day – By Week – 30 minute interval - 8 month period

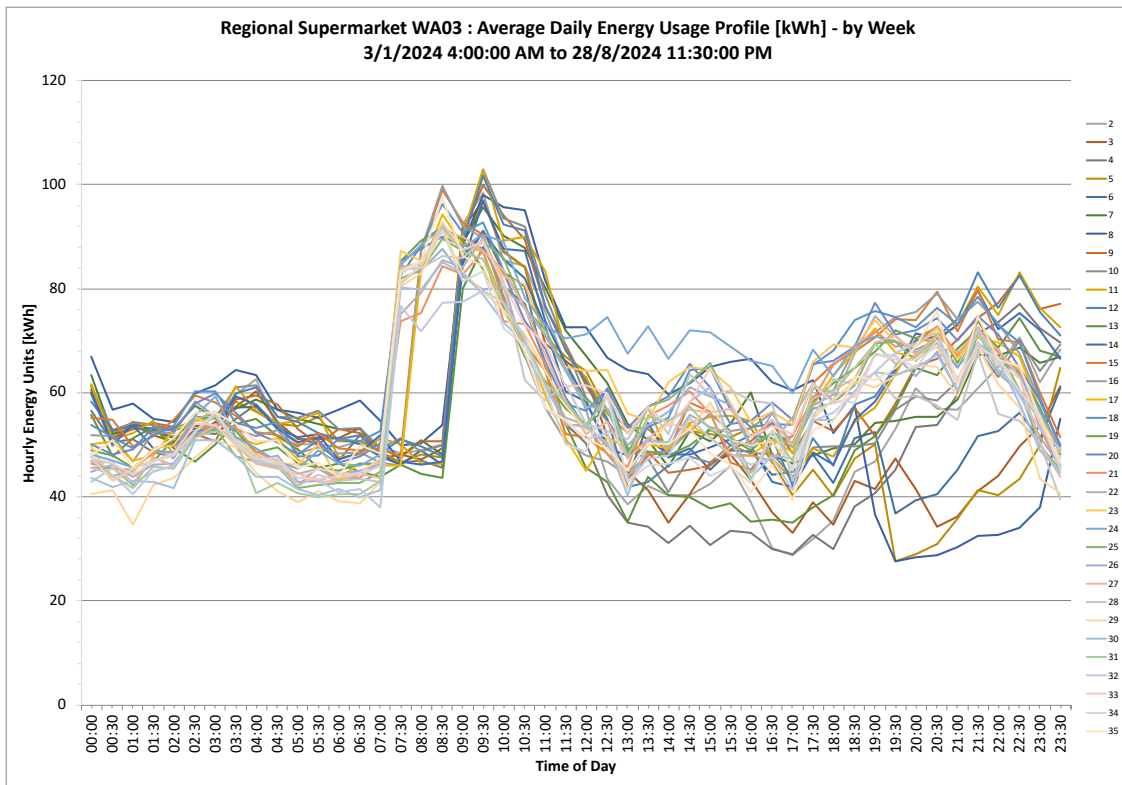


Figure 8 Energy Usage – By Time of Day – By Month – 30 minute interval - 8 month period

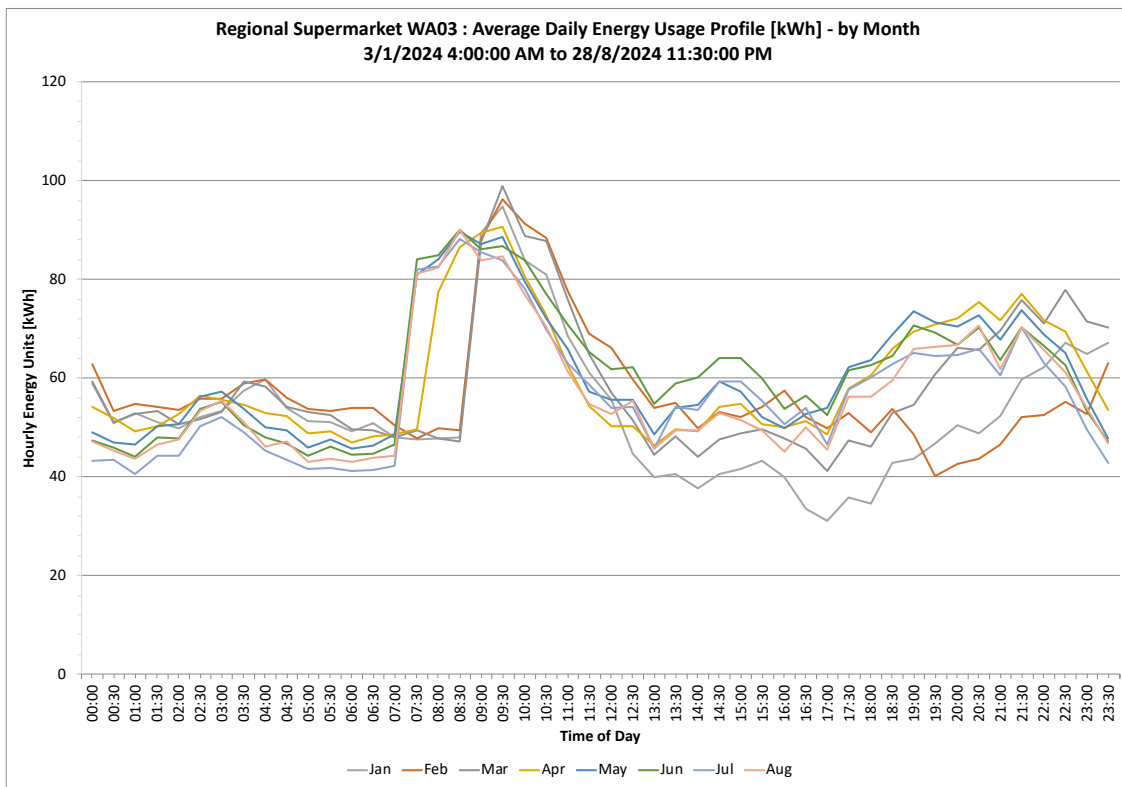


Figure 9 Energy Usage – Totals - By Day of Week - 8 month period

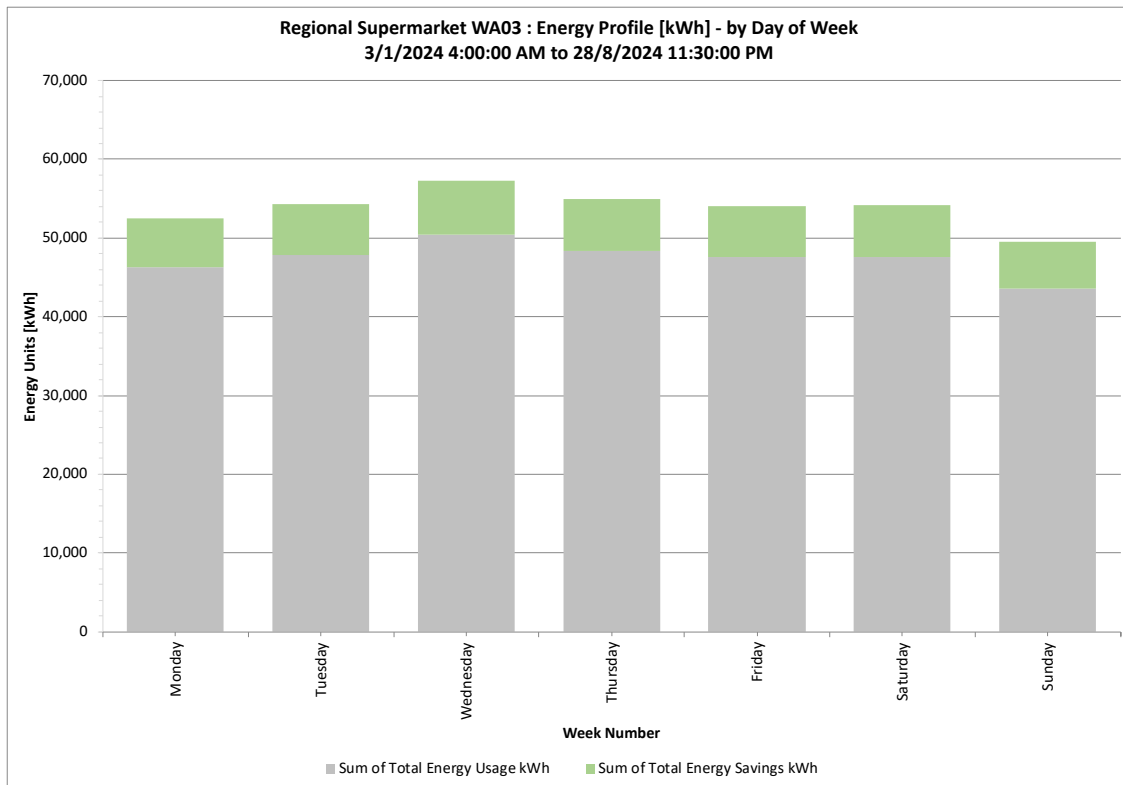


Figure 10 Energy Usage – Daily Average - By Month - 8 month period

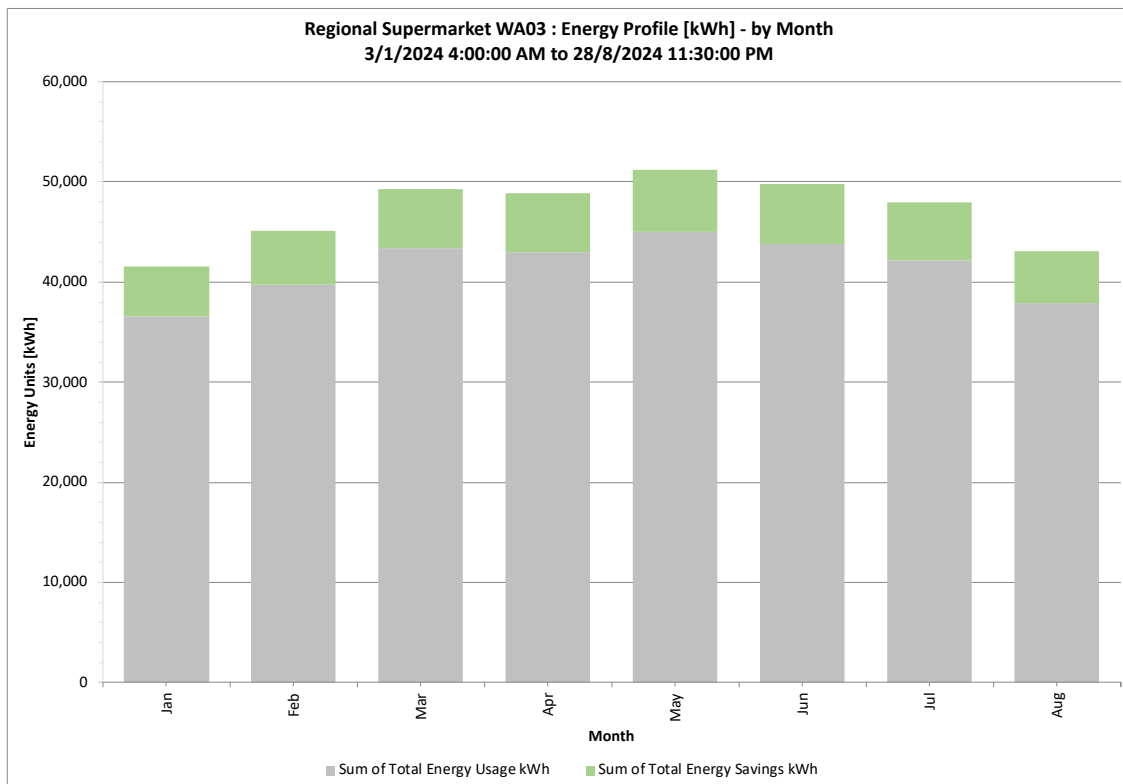
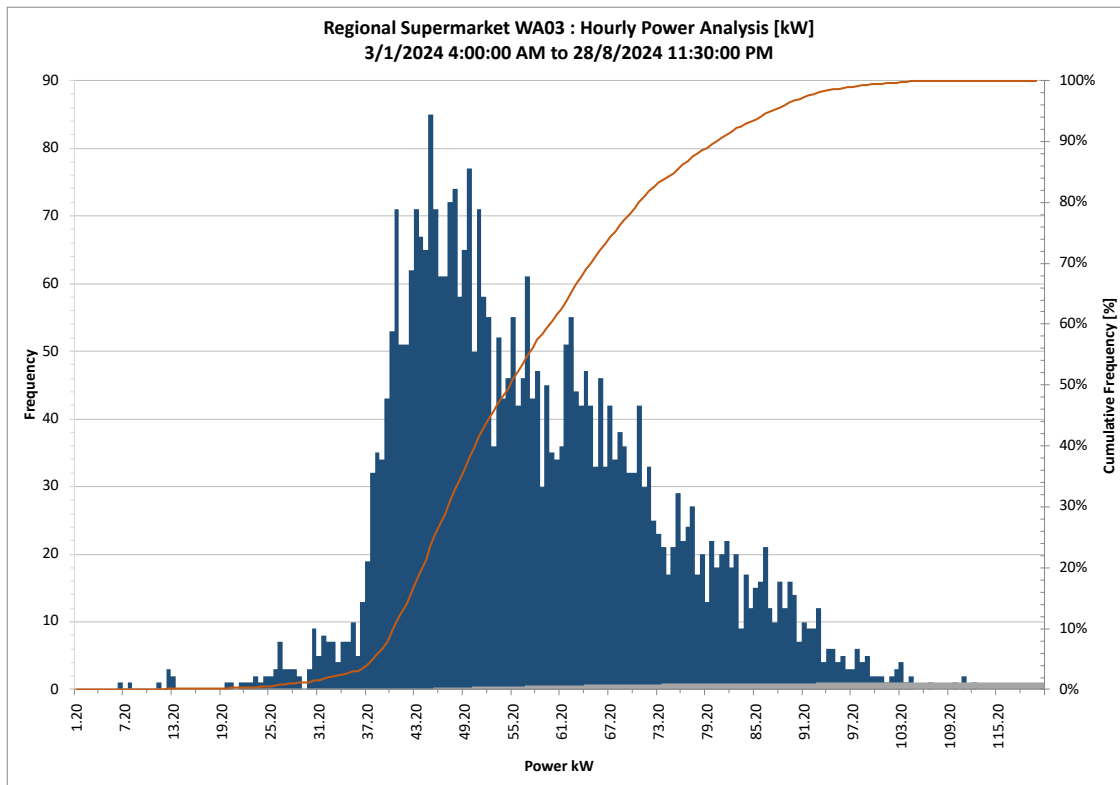


Figure 11 Energy Usage – Histogram - 30 minute interval - 8 month period



Conclusion

Voltage Optimisation offers both immediate and long-term financial benefits while aligning with broader strategic goals related to sustainability, operational efficiency, and risk management. These benefits make VO an attractive proposition for businesses looking to reduce energy costs, enhance their environmental credentials, and improve their overall competitiveness.

VAAS can provide a very useful contribution to a company’s plans to meet its Carbon emission targets, as well as reporting requirements. VAAS provides the right voltage to electrical equipment, ensuring efficiency, cost savings, environmental benefits and performance reporting while maintaining equipment performance and longevity.

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