

## Site Voltage Report - Restaurant

**Voltage as a Service (VAAS)**<sup>TM</sup> 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

<b>Objective</b>	Report on grid supply voltages
<b>Site Location</b>	Site #1027 Melbourne, Victoria, Australia
<b>Facility Type</b>	Food restaurant
<b>Time Period</b>	A 6 month period, from 1 <sup>st</sup> July 2023 through to 31 <sup>st</sup> December 2023

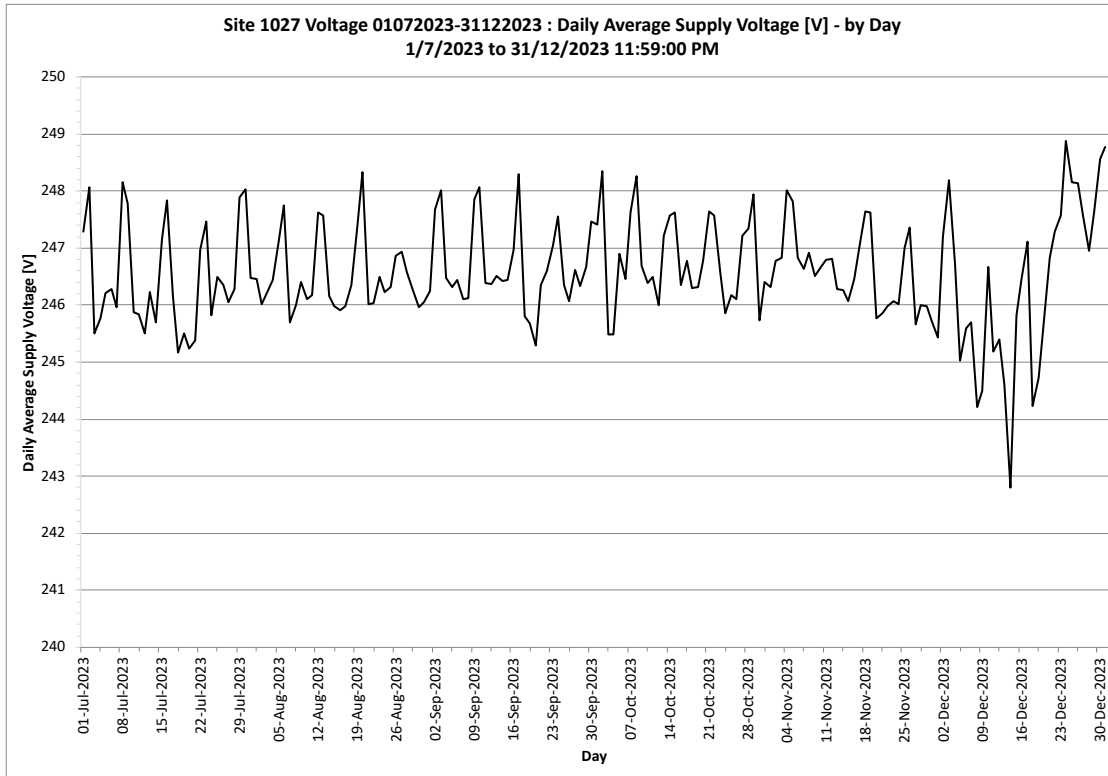
### Methodology

<b>Data Collection</b>	3 phase voltage meter
<b>Communication</b>	4G wireless. 1 minute interval messaging
<b>Sample interval</b>	1 minute interval data
<b>Data storage</b>	iStar Cloud Repository
<b>Accuracy</b>	Class 1 accuracy

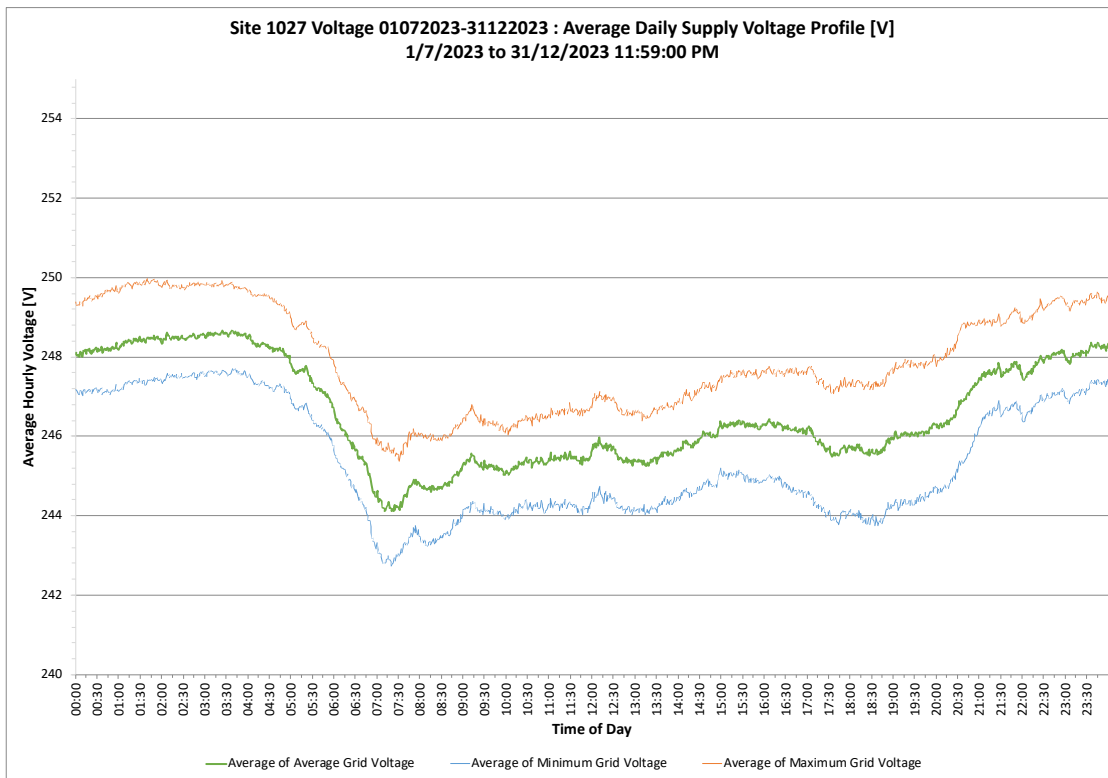
### Summary Statistics

Statistic	Average Grid Voltage	Minimum Grid Voltage	Maximum Grid Voltage
Mean	246.57	245.36	247.89
Median	246.81	245.59	248.17
Mode	247.99	246.77	249.03
Minimum	234.30	232.80	234.84
Maximum	252.83	251.83	254.62
Range	18.53	19.03	19.78
Standard Deviation	2.08	2.28	2.10
Sample Variance	4.31	5.20	4.43
Kurtosis	0.32	0.23	0.23
Skewness	(0.57)	(0.55)	(0.55)
# Samples Read	257,449	257,449	257,449
Start date	1/7/2023	1/7/2023	1/7/2023
End date	31/12/2023	31/12/2023	31/12/2023
Days	184.00	184.00	184.00

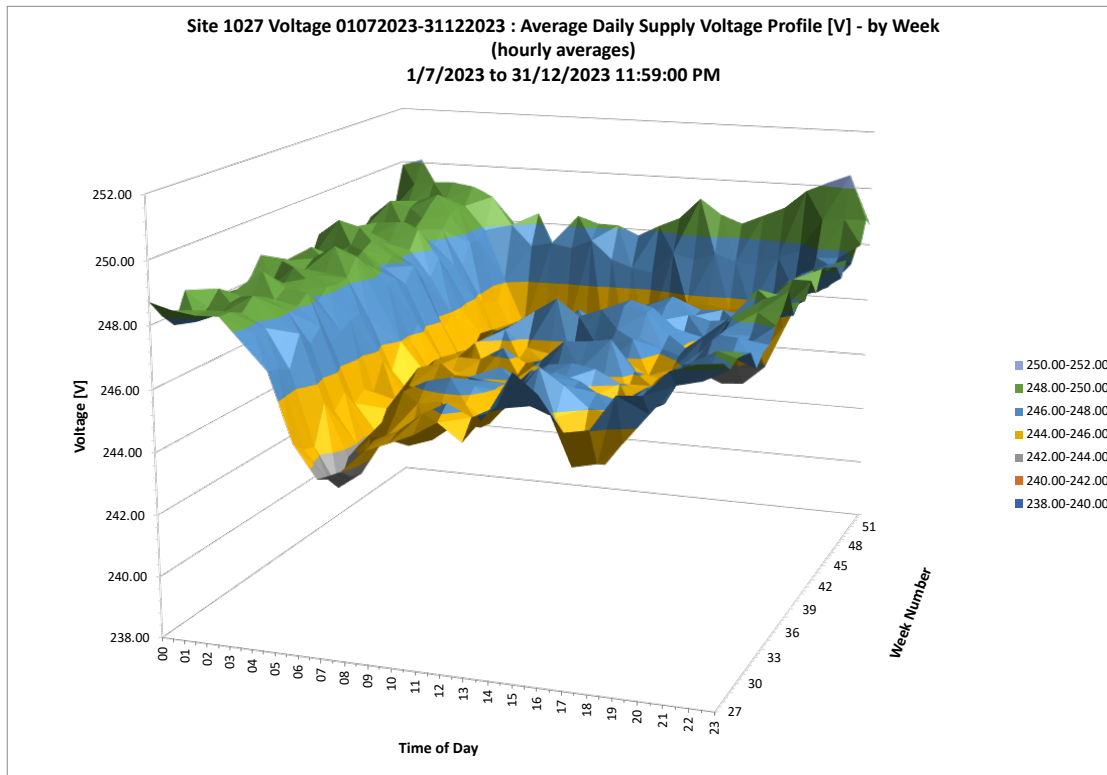
**Figure 1 Average Grid Voltage – 1 minute average - 6 month period**



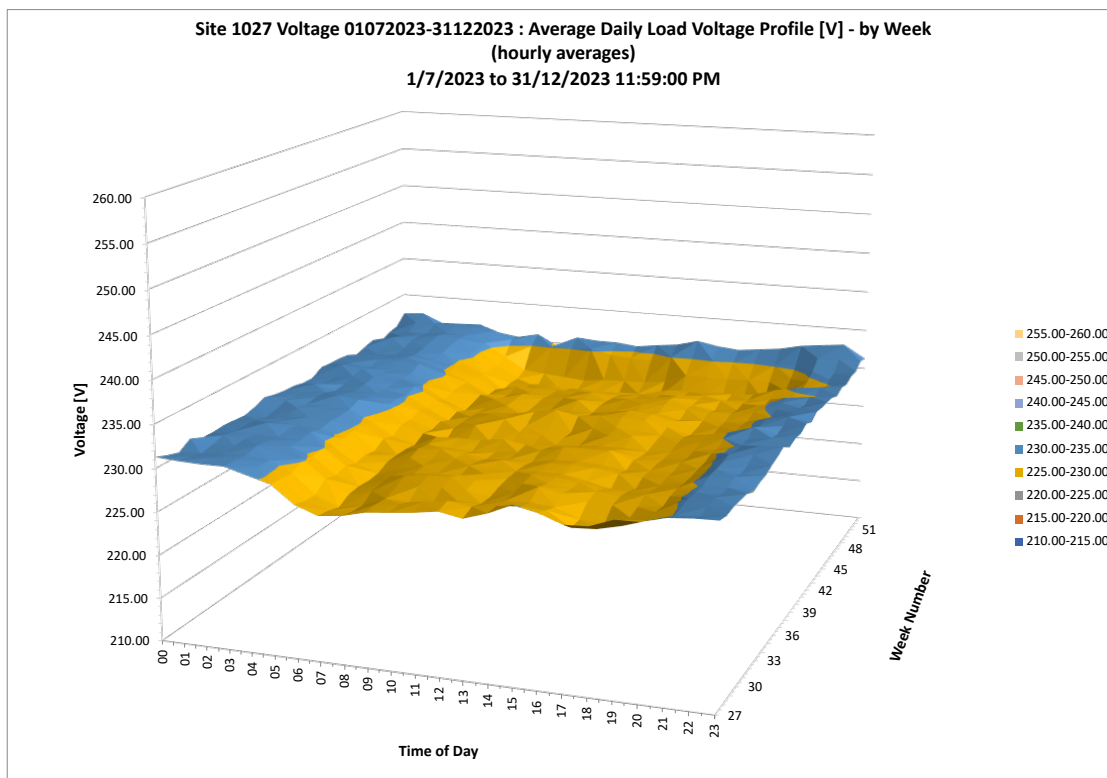
**Figure 2 Average Time of Day Grid Voltage – Min, Avg and Max 1 minute average - 6 month period**



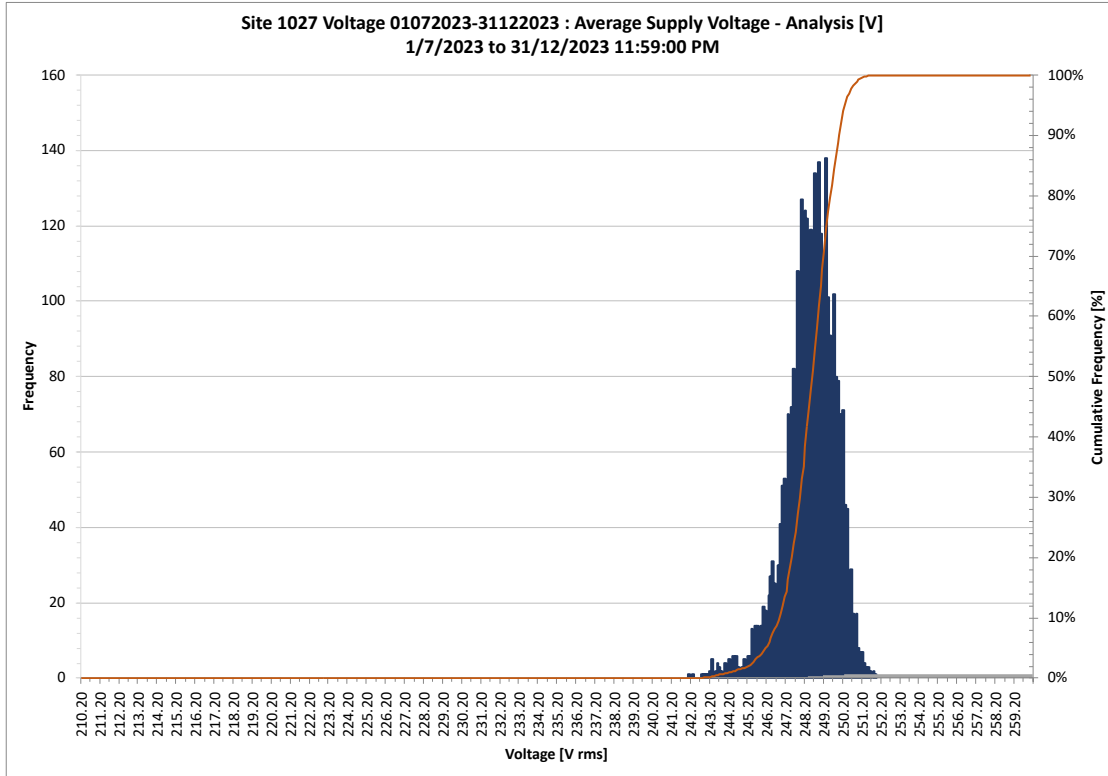
**Figure 3** Average Time of Day Grid Voltage – 1 minute average – By week - 6 month period



**Figure 4** Average Time of Day Load Voltage (using VO) – 1 minute average – By week - 6 month period



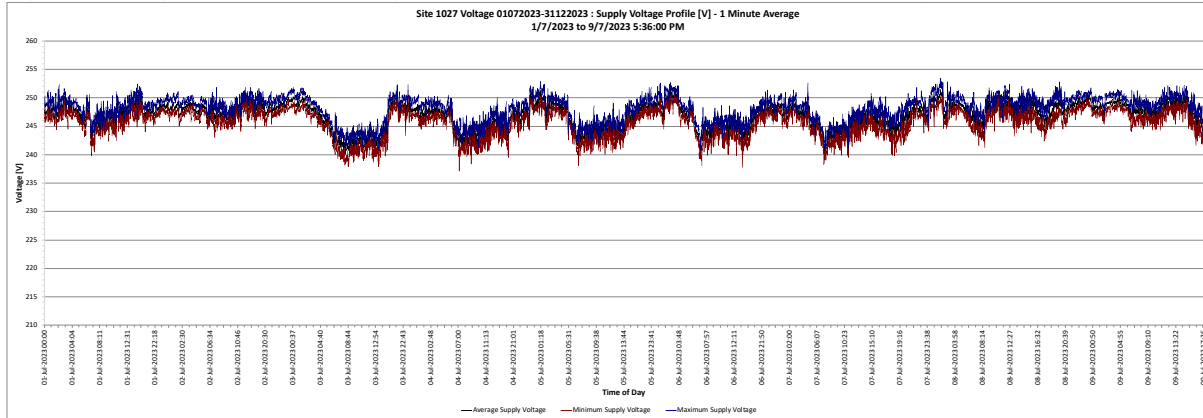
**Figure 5 Average Grid Voltage - Histogram – 1 minute average – 6 month period**



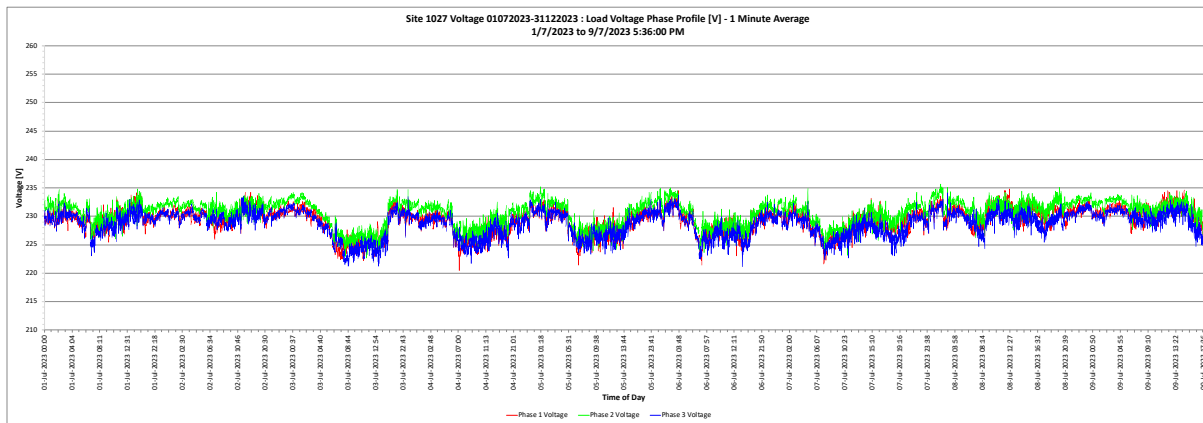
**Figure 6 Average Grid Voltage - Box Whisker Plot – 3 phases - 1 minute average – 6 month period**



**Figure 7 Voltage – Minimum, Average and Maximum 1 minute average over 1 week period**



**Figure 8 Three Phase Voltage – 1 minute average over 1 week 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.

For further information, contact us at [sales@vaasco.net](mailto:sales@vaasco.net)

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