

Case Study

Energy is Expensive to Start With!

Border Express Underwood

Double-counting results in a refund of over \$160,000 within one financial year.

This case study shows that it's always worth keeping a close eye on your businesses energy consumption, and why a 'deep dive' by specialists can be worthwhile.

The Brief.

Recent years have seen national logistics company Border Express undertake a program to reduce energy use and costs across its sites nationally. This has seen solar panels, LED lighting and electric vehicle chargers installed across their portfolio, with more to come in 2023. This is business as usual for energy consultants, Sustainable Energy Solutions (SES) and energy & carbon services company, Ecovantage, but the Border Express Queensland site at Underwood presented a unique challenge.

In May 2022, Border Express approached their energy consultants, SES, about abnormally high energy usage at their new site. Border Express had already spent considerable amounts of money and time on contractors familiar to the site trying to identify the cause.

SES provided advice and guidance to Border Express which included engaging Ecovantage. This made sense since Ecovantage has already established a good working relationship with Border Express having undertaken other work and projects at sites across Australia.



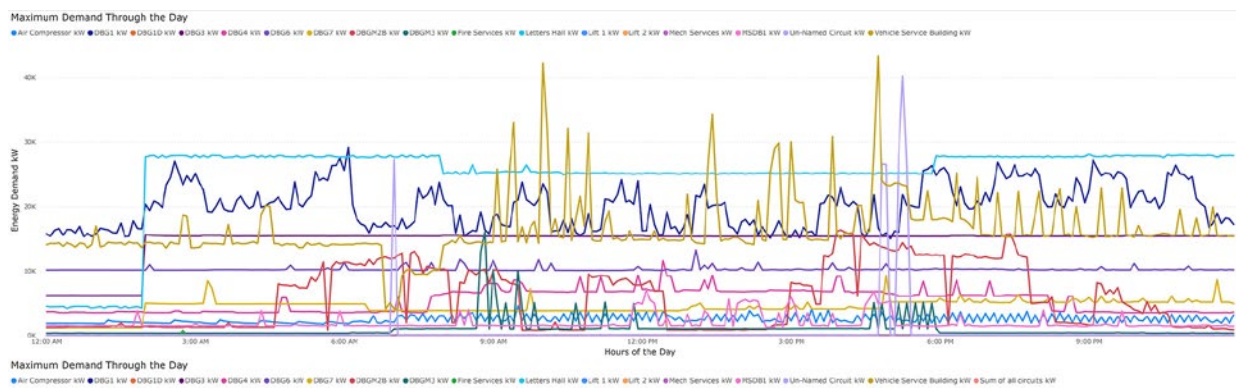
The Project.

After spending time with the client on site and understanding the brief, it became apparent the site had several High Voltage supplies and had been subject to considerable expansions and reconfigurations by the previous tenants. Due to this and the lack of accurate single line diagrams, Ecovantage recommended extensive sub metering to identify the source of any unknown energy loads, and to reference check the accuracy of the site's retail meters.

On site, Ecovantage specialists mapped the site's circuits, creating an accurate high level single line diagram and installed 17 sub meters. These were set up, in place and interrogated for several months.

The Outcome.

The results were compelling and clear. The submeters created a usage pattern identical to the site's retail meter, but at much lower values. Ecovantage's report was sent to the energy retailer and triggered a formal inhouse review of the sites metering calibration and topography.

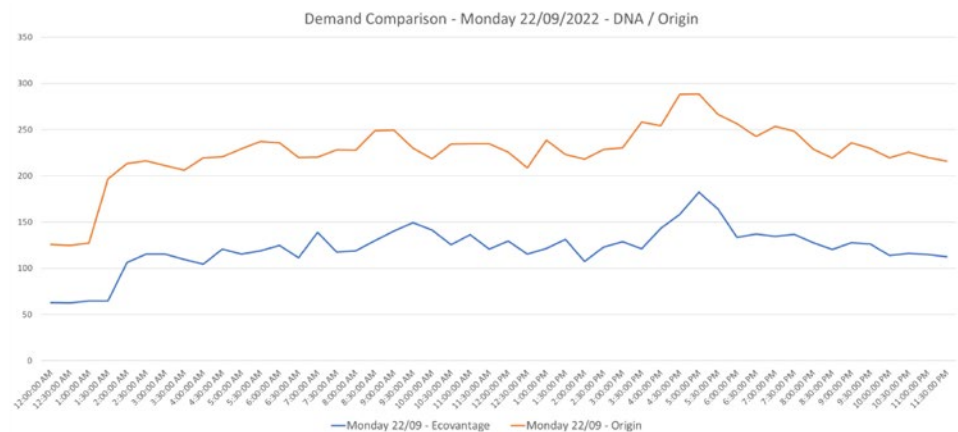


Above: Source data from each of the sub meters - interesting but something still didn't add up.

It was found that the sites check meter* was being read as a consumption meter - in essence double counting the energy consumed from one of the site's two High Voltage supplies.

This resulted in a refund of \$164,000 based on the usage over a single financial year. Retrospective claims may be pursued as well.

Right: The blue line shows the total consumption on site. The orange line is the meter reading from the retailer, which was close to double the consumption. The gap is the over charged amount.



Conclusion.

It was found that the sites check meter* was being read as a consumption meter - in essence double counting the energy consumed from one of the site's two High Voltage supplies.

This resulted in a refund of over \$150,000 based on the usage over a single financial year. Retrospective claims may be pursued as well.

*A check meter is when you have a retail meter on a load (such as a building) and one on the transformer supplying that building (the check meter). If they both read the same value, it proves the energy reading from the retail meter is correct and has been 'checked'. In this case, both meters were being billed as retail meters.