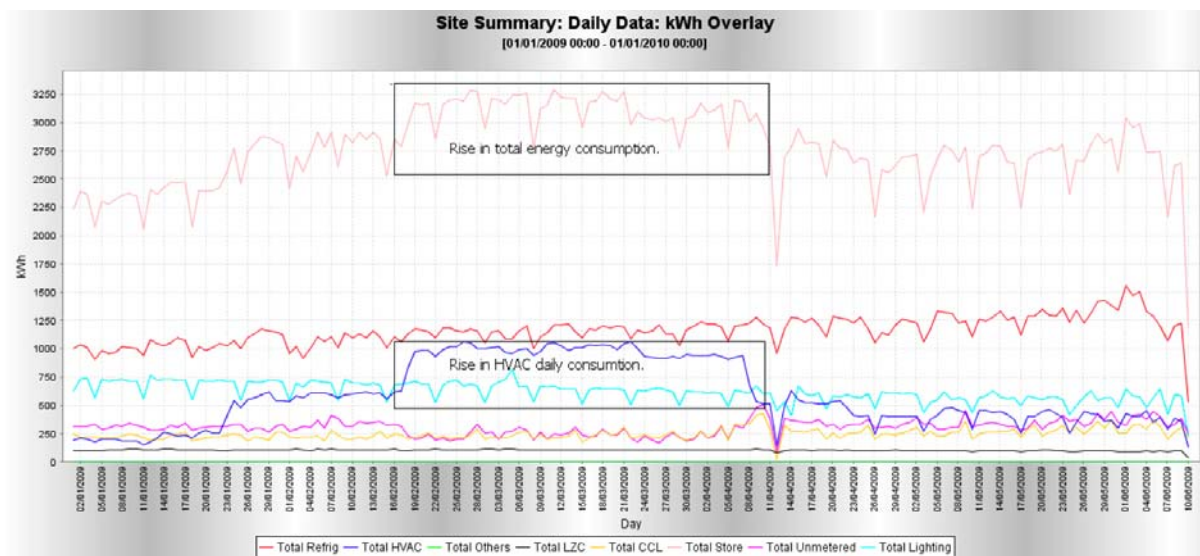


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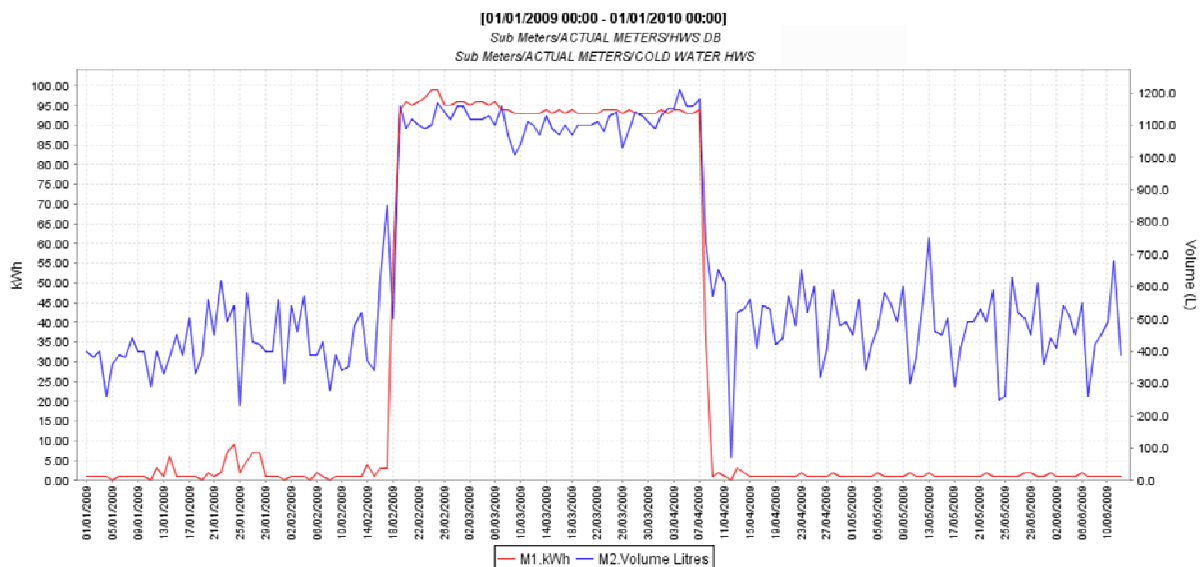
Case Study: Hot Water Leak

Study Description

The importance of energy reporting and sub-metering came to light in this case study. The graph below shows an unexpected daily consumption increase of approximately 400 kWh. With sub-metering and the ability to overlay graphs of sub-metered circuits it was plain to see that the HVAC circuit was responsible for the increase.



The total HVAC graph was made up from several different circuits, one of which is the hot water system (HWS DB; graph below). The HWS supply matched the increase in energy consumption.



Further investigation of the data also led to the discovery of a water leak in the hot water system which obviously was the cause for the increased energy consumption. The problem was quickly rectified.

Conclusion

Had this not been detected and rectified the wasted energy would have totalled 36,500 kWh/yr (19.6 Tonnes CO₂/ year). The cost of this problem included not only the wasted energy but also the wasted water and the additional maintenance costs caused by the hot water system working to its optimum 24 hours a day.

Note: The carbon trust conversion factor used is 0.537 kg/kWh.