OutPerformers
Energy Measurement & Verification Specialists

Case Study: Compressed Air 3

Flow and Energy Demand Survey – Printing Company

One compressor was taken off-line, providing much-needed redundancy, and saving over $26,000 in electricity costs per year.

Situation:

The client's Printing Plant had three, 160kW compressors that were operating at partial loads. All compressors were short-cycling for much of the time, resulting in increased energy consumption, and increasing the risk of compressor failure.

Solution:

- We conducted a **Compressed Air Flow and Energy Demand Survey** which identified average and peak demand flows of compressed air, and recommended that compressor controls be fitted to the machines so only the required quantities of air had to be generated.
- The client installed compressor controls to sequence the operation of all three compressors.
- A third compressor was identified as redundant and taken off-line.
- No additional modifications to the system were required.

Benefits:

- Energy saved per year: **244 MWh and 74.6 kVA (Demand)**
- Saving **$26,131** in electricity costs per year
- CO_2 saved = 217 tonnes p.a.
- Energy Savings Certificates = **$14,504** (699 ESCS)
- Project cost = $30,000
- Payback = **9 months**.

Operational Benefits:

- Avoided capex costs by delaying the need to buy a new compressor for a further two to three years.
- Controls were installed without taking the compressors off-line, avoiding disruption to production.
- The third compressor was taken off-line and now provides redundancy where before there was none.
- Increased life expectancy of compressors due to less short-cycling and reduced operational times.