Out Performers
Energy Measurement & Verification Specialists

Case Study: Compressed Air 1

Flow and Energy Demand Survey – Marine Maintenance

Out Performers demonstrated how air compressor use could be reduced by 20%, saving $120,000 per year in electricity costs, after conducting a compressed air flow and energy demand survey.

Situation:

The client – a large marine maintenance operation – didn't fully understand the impact from compressor operations across their complex industrial site and wanted to know if improvements were possible.

One side of the site had two 500kW compressors, while two 450kW compressors were on the opposite side. The client had thought it best to operate just one of the compressors from each set, in order to maximise air pressure across the whole site.

Solution:

- We conducted a Compressed Air Flow and Energy Demand Survey which showed that sufficient air pressure across the site could be supplied by only using one of the 450kW compressors.
- The client introduced new policies and procedures to:
  - only operate the compressor when there was a demand for compressed air.
  - eliminate or minimise the operation of the 500kW compressors, as these were shown to be the most energy intensive.

Benefits:

- Energy saved per year: **1,700 MWh**
- Saving **$120,000** in electricity costs per year
- CO_2 saved = 1,826 tonnes p.a.
- Energy Savings Certificates = **$121,000** (4,931 ESCS)
- Project cost = $30,000
- Payback = **2 months**.

Operational Benefits:

- Reduced the annual hours of operation from 8,342 to 6,640: a 21% reduction.
- Life expectancy of the current compressors was estimated to be in excess of 5 years, provided regular maintenance was performed. Therefore the savings would continue over this timespan.