

CASE STUDY

Case Study - Sustainability

SITUATION: An international leader in cement and concrete production identified energy as their highest operating cost. Although electricity represented 13% of the total energy consumption, electricity accounted for 48% of total energy costs. Compressed air production accounted for a significant portion of this electricity usage and cost. They estimated a 30% annual kWh reduction potential through leak reduction, better control practices, and modernizing the compressors and distribution piping. The company undertook a progressive program over several years to evaluate and optimize its compressed air production in five US plants having a combined power consumption of 44 million kWh annually for compressed air.

SOLUTION: They conducted extensive air system audits and implemented system wide improvements to address poor controls, leaks, inefficient equipment, and aging piping. Their new systems included controls that more accurately track consumption in real time.

OUTCOME:

The results:

- A reduced carbon footprint by 23 million lbs of CO₂
- An 8% improvement in specific power (kW/100cfm)
- Improved pressure stability in all five plants
- An average of 43% reduction in kWh per plant (range was 23 to 64%)
- Total energy savings over 19 million kWh annually

IN SUMMARY

For many companies, especially publicly traded companies, sustainability has become a buzzword that the public relations or marketing team infuses into corporate brochures, ads, and press releases to positively influence public opinion about the company. Sustainability is not just good for garnering positive, public relations. Fortunately, when it comes to compressed air, the actions that reduce its carbon footprint and waste stream are also making real and significant contributions to the bottom line, sustaining profitability in addition to environment benefits.