

HUME CITY COUNCIL

BUSINESS EFFICIENCY NETWORK

SUPPORTING BUSINESS IN A CHANGING CLIMATE



CASE STUDY: TRI TECH CHEMICAL COMPANY

Tri Tech Chemical Company was established in the Melbourne region of Australia in 1984 as a manufacturer of specialty lubricant additives and surfactants. Now based in Sunshine West, the company services clients globally in the mining, agriculture, lubricant and other industries. Many of the products manufactured by Tri-Tech Chemical Company utilise renewable resources such as canola and other vegetable oils. These products are finding increasing acceptance in industry as replacements for traditional petrochemical solvents and lubricants due to their improved biodegradability and better performance in some areas.

Managing Director of Tri Tech Chemicals, Greg Weston, became actively involved in the BEN a couple of years ago and through network events met Jon Fettes from Genesis Now, a consultancy employing engineers skilled in energy and process efficiency. Tri Tech Chemicals subsequently started using Eco-Tracker monitoring software to better understand the company's energy use, and analyse energy efficiency opportunities throughout the business. Genesis Now also helped the company to submit a successful application for the AusIndustry Clean Technology Investment Program (CTIP).

Changes that have occurred as a result of these initiatives include replacement of the current fixed speed compressor with a variable speed drive compressor to generate significant energy and cost savings. The energy monitoring analysis also revealed that their main boiler used a lot of energy whilst operating under a small load, with waste heat comprising 40% of their gas bill. Further investigation using Eco-Tracker helped pinpoint the main culprit down to a faulty steam trap. The CTIP program also included variable speed drives for fan motors and the cooling tower. Other interventions include the installation of a 59kW solar electricity array, insulation of boilers and pipes, and the company is currently in the process of retrofitting energy efficient lighting with motion sensing technology. These combined actions are expected to annually save:

- Approximately 200 tonnes of greenhouse gas emissions, of which roughly half will be due to the solar system
- \$30,000, and the cost savings will be greater in later years as the business grows and the price of grid electricity increases
- 30% of gas consumption due to detection of a faulty steam trap

"Our company has been attending BEN events for a couple of years now, and they have all been both informative and inspirational. There have been some great stories about how companies have decided to reduce their environmental footprint whilst maintaining a profitable bottom line. One message that I consistently see is that in addition to environmental benefits these companies are usually very successful in their fields and their clean technology investments have quickly proven to become profitable.

After a while the message rubbed off on me. I was a bit skeptical about the claim that we would see inefficient use of energy with the energy monitoring software, but in fact the benefits were significant. We have been able to reduce gas consumption by nearly 30% due to detection of a small faulty steam trap, and electricity savings have also been substantial.

If I can summarise this in one sentence, it is that you might be pleasantly surprised at the benefits of investments in clean technology, and attending some BEN events may well persuade you to investigate the issue in more detail to the greater benefit of your business."

Greg Weston, Managing Director, Tri Tech Chemical Company

