South Pacific Laundry

The Sustainable Laundry

A showcase of the business and environmental benefits achieved through a continuous improvement attitude, a commitment to resource efficiency plus investment in new technology.

Overview

The natural lifecycle of successful businesses includes a need for growth and expansion. As demand for goods or services rise, stress is placed on all aspects of the business, from human resources to the machinery and technology.

One Victorian business reacting to these pressures is East Brunswick based, South Pacific Laundry. Established in 1996, South Pacific Laundry is a large industrial laundry servicing the requirements of hotels, restaurants, and other hospitality establishments across metropolitan Melbourne.

South Pacific Laundry operates a niche laundry service and offers a guaranteed turnaround time of less than 24 hours; in an industry that typically offers turnaround times of 48 hours.

In response to the increased demand for their service, South Pacific Laundry undertook a $4.5 million upgrade and relocation to their new site in East Brunswick, allowing them to increase laundry capacity 60 percent (from 28 to 45 tonnes of linen per day).

South Pacific Laundry major share holder, and CEO, Mr Choon Ming Tang strongly believes that an important aspect of improving the performance of their business is to raise process efficiency and reduce its environmental footprint. Mr Tang's project has confirmed that business relocation is a fantastic opportunity to implement environmental and economic enhancements.

South Pacific Laundry have calculated energy, gas and water cost saving of approximately $250,000 per annum.

Project Description

Sustainability Victoria has worked closely with the "hands-on" owners of South Pacific Laundry from the beginning of the project to support the implementation of four sustainable technologies, which have arguably resulted in the most Resource Smart laundry in the industry.

The new technologies include:

Status: Complete

Snapshot

Partner
South Pacific Laundry (E-Laundry & Drycleaning Service Pty Ltd)
Project title
The Sustainable Laundry
Objective
To apply sustainable technologies to a ne industrial laundry facility in order to achie significant energy efficiency and water recycling gains.
Plant type
Commercial laundry
Technology description
Application of a range of energy efficient, water recycling and water saving equipm
Plant capacity
45 tonnes per day
Energy savings
20,500 GJ per annum
Water savings
68ML per annum
$saving
$250,000 per annum (apporximately)
GHG pollution offset
1,200 tonnes per annum (equivalent to removing 280 cars off Victorian roads)

Factsheet

Read up on applied technologies in these related factsheets

Boiler optimisation

Manufacturing Directory

Go to the Manufacturing Directory to find appropriate suppliers under these catego

- Automation
- Process Heat
- Water Treatment
- Boilers
- Heat Exchangers
- Design & Engineering
- Energy Management
- Product Developers
- Control Gear
- Gas/Water Heaters
- Metering/Monitoring/Control Systems
- Consulting Engineers
- Non Manufacturing

Related articles

Find out more information about related technologies in these articles

- > Direct contact water heater installatic for a saving of 3,600 GJ and $15,000 p

- Ecolab *Energy Optimiser*, to recover heat from the discharged hot water resulting in a reduction in drying time and less energy used per cycle.
- Ecolab *Aquamiser* filtration System, used to recycle approximately half of the facilities' waste water that would otherwise be discharged to the sewer.
- Humidity sensors, which reduce dryer gas usage by preventing over-drying.
- Boiler efficiency measures, which have resulted in an approximate 10 percent reduction in natural gas use for the primary boiler, and an approximate 4 percent reduction in natural gas use for the standby boiler.

Other improvements that have contributed to improved efficiencies and cost savings include:

- Installation of a new energy efficient variable speed drive rotary screw air compressor.
- Flushing of toilets with recovered rinse water.
- Frequent and close monitoring of water and energy used per kilogram of goods processed
- Use of modern Compressed Batch Washers
- Lighting improvements including task lighting
- Optimisation of plant scheduling
- Staff education and training
- Installation of a variable speed drive on the boiler supply fan
- Reduction to electricity and gas maximum demand tariffs

Benefits

The project is now generating strong environmental and economic returns. SPL is now processing an additional 60 percent of goods, in a far more efficient manner. This efficiency gain equates to a saving of $250,000 on utilities per annum. The estimated energy saving for this project is 20,500 giga joules per annum with an associated greenhouse pollution reduction of 1,200 tonnes per annum, equivalent to removing 280 cars from Victorian roads each year.

In addition to this, South Pacific Laundry are recycling significant volumes of water resulting in overall water consumption reductions in both potable water use and trade waste discharged to sewer. Annual water consumption is estimated to be 68 mega litres per annum less than if SPL were now operating at the previous rate of water consumption.

Water usage was a key focus area for South Pacific Laundry otherwise water consumption would have doubled as a result of the business expansion. Listed in Yarra Valley Water's Top 100 users of water, management of the new facility's water usage is paramount.

Finally, general productivity and quality improvements are also being enjoyed.

South Pacific Laundry's new facility has brought many environmental and economic benefits, not only setting a new benchmark for other large industrial laundries but across many other industries that use large amounts of processed hot water and/or discharge the water to sewers, including such as hospitals, large hotels, small food processors and the food-manufacturing sector.

The 'Sustainable Laundry' is currently consuming (at May 2007) 5 litres water plus 5 megajoules energy per kg of goods laundered. This is an overall measure of the business and arguably a new benchmark in the resource efficiency of commercial laundering. This excludes transport fuel. Further performance improvements are anticipated as the plant is fine-tuned and workload schedules further optimised.

There are 1 comments on this post. Latest by John Donovan
Add your own comment