

# Gas and steam efficiency upgrades deliver robust returns for Fletcher International Exports



Roger Fletcher (Managing Director), Melissa Fletcher (CEO) and Gabrielle Ryan (Graduate Engineer, Energy Projects)



## THE CHALLENGE

Fletcher International Exports is a world-class supplier of sheep meat, skins, wool, co-products, cotton, grain and pulses to the global market.

A family-owned private company with interests across Australia, Fletcher has capacity to process 4.5 million head of sheep per year, and has grown to become one of the nation's great agribusiness success stories.

For 30 years, Fletcher has operated a large modern abattoir and rendering plant in Dubbo, New South Wales. The site is a large energy user, relying heavily on substantial volumes of natural gas to produce steam for further processing and hot water production .

Fletcher has invested in energy efficiency measures for the plant in the past, however recent gas price escalations highlighted a pressing need to further reduce site energy consumption. At the same time, Fletcher's Managing Director and Founder, Roger Fletcher, was eager to take advantage of the New South Wales Government's Gas Efficiency Program and Energy Savings Scheme. Run by the Office of Environment and Heritage (OEH), the scheme offers subsidies to offset the size of any energy saving investments, and ultimately improve returns.

## THE SOLUTION

The Fletcher team responded pro-actively to the price shocks by embarking on a program of significant energy upgrades across its Dubbo facility.

With project opportunities in the boilerhouse and steam system identified as the fastest path to cutting gas consumption, the company turned to Spirax Sarco to work with its on-site engineering team.

As a global leader in steam system solutions, Spirax Sarco was the ideal partner for the project. To complete the picture, Out Performers was engaged as independent engineers to measure and verify the energy savings achieved and facilitate obtaining appropriate government funding.

As Spirax Sarco's National Sales Manager, Craig McKnight, explained, "The growing pressure of rising gas prices has made businesses evaluate their gas consumption, and the government support programs, particularly in New South Wales but also across Australia, are increasingly the trigger for action. Working closely with the team at Fletcher, we were able to identify a number of areas where we could save and reuse steam energy and therefore reduce gas consumption."

### The project team focused on 4 key opportunities



Flash steam recovery to reuse in other processes



Increased condensate return



Various boilerhouse efficiency improvements



Improved steam distribution



BEFORE: Boiler feed tank system

BEFORE: Vented waste from pump package

AFTER: Boiler feed tank system

AFTER: Cold water make up to feed tank going into Flash Condensing Dearator Head

Spirax Sarco’s proprietary heat transfer technology proved critical to the creative technical solutions required to maximise cost savings to the business. Out Performers’ extensive measurement and verification experience ensured transparency over the energy savings achieved, and helped Fletcher take full advantage of the government subsidies on offer.

## THE RESULT

**\$45k**

Approximate gas savings per month

**12 months or less**

Payback on projects based on gas savings

**8ML**

Reduction in boiler water consumption per annum

**\$10k-\$15k**

Reduced chemical use per annum

**+**

Additional hot water available for site use

### Breakdown of financial inputs and savings across the project (preliminary data/ESCs pending)

	Stage 1: Metering	Stage 2: Initial upgrades	Stage 3: Total upgrades
Fletcher input	\$28,000	\$24,500	\$351,000
OEH input	\$15,000	\$24,500	
Total cost	\$43,000	\$49,000	\$351,000
Gas savings	-	1,265 GJ/yr	24,817 GJ/yr
Gas savings	-	1% of total	21% of total
ESCs created	-	1370 ESCs	-

Roger Fletcher was delighted with both the immediate outcome, and the way the efficiencies align with his longer-term vision for the business. “The recent energy saving projects undertaken with Spirax Sarco and my own engineering team have returned an excellent improvement in our efficiencies and a large reduction in our gas usage,” he said.

“The New South Wales government support programs provided the catalyst we needed to make the significant investments back into our business to improve energy efficiency. We want Fletcher International Exports to continue to grow and expand for the benefit of the business, the people and the future of the central west.”

Craig McKnight says while Fletcher’s results were outstanding, both in terms of gas savings and the associated government subsidies secured, they’re not unique across process industry. “There are many opportunities, some repeatable, in abattoirs and rendering plants and process industry in general, where gas consumption can be reduced.”

“As a business, we believe we are best placed to deliver energy efficient solutions from a technical and technology perspective. Our alliance with Out Performers as a measurement and verification partner ensures transparency over the energy savings realised and that our clients are aware of all government funding programs across Australia that can assist with their plant upgrades.”

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