

Case study – BE Campbell Young Abattoir



Saving power at the new-look Young abattoir

By upgrading the refrigeration plant at its newly acquired Young abattoir, BE Campbell will reduce its annual power consumption by a third, cut carbon emissions by more than 2800 tonnes and achieve ongoing annual savings of nearly \$300,000.

One of Australia's largest family-owned meat wholesalers, BE Campbell is a Sydney based company that has been providing quality pork, beef and chicken products to supermarkets, butchers, restaurants and distributors since 1969. The company, which employs 385 people, also runs a small export business.

In 2010, Managing Director Ted Campbell decided to diversify the company's operations by buying an abattoir that had recently closed in Young. Campbell says that while the move had obvious synergies – the abattoir had been supplying meat to BE Campbell – a significant refrigeration upgrade was needed to make the new business viable.

Having recently completed Energy Saver audits at its Sydney premises, BE Campbell asked the Office of Environment and Heritage for an audit of the refrigeration plant at the newly acquired abattoir.

The audit's objective was to determine whether the existing commercial refrigeration systems should be recommissioned and expanded to meet anticipated production demands or if a larger industrial solution would be more cost-effective.

It investigated options for each stage of the reopening of the abattoir, as BE Campbell will resume beef operations at the abattoir in 2013 and expand the business to include lamb in 2014.

In brief

Meat wholesaler BE Campbell used its Energy Saver audit to decide the best options for upgrading the refrigeration plant at its newly acquired Young abattoir before resuming operations. With the installation of water-cooled industrial ammonia chillers and glycol pipe work, potential annual electricity savings of 2684 megawatt hours or nearly \$300,000 can be made.

Results

When the abattoir's beef and lamb facilities are fully operational:

- estimated total savings of 2684 megawatt hours of electricity a year or nearly \$300,000
- a 32 per cent reduction in energy consumption
- annual reduction in carbon pollution of about 2800 tonnes
- creation of 200 local jobs in Stage 1 and a further 100 in Stage 2
- Energy Savings Certificates will help subsidise capital works.



- ▶ 'While the beef refrigeration equipment at the abattoir had been upgraded in 2006, it used synthetic refrigerants,' says Campbell. 'With the HFC refrigerant levy, synthetic refrigerants will become very expensive. Rising power prices and network charges also meant energy efficiency was a key consideration.'

The proposed upgrade to the beef refrigeration facilities includes the installation of an 880 kilowatt water-cooled industrial ammonia chiller, glycol pipe work and a 1320 kilowatt cooling tower at an estimated cost of just over \$2 million. A similar upgrade for lamb operations will cost just over \$1.5 million.

Both business cases considered the installation of CO₂ refrigeration units for offal blast freezing, but Campbell is reluctant to pursue this option. 'Ammonia is old school, so every refrigerant company can service it,' says Campbell. 'Whereas, finding a specialist to service CO₂ in Young might be more problematic.'

Campbell says the audit was very thorough and quantified the potential benefits from various options. 'Refrigeration has always been an integral part of our business, so we had a good idea about what could work,' he says. 'What surprised me most about the audit's findings was the extent of the savings that could be achieved.'

'The new beef ammonia chiller will enable us to save around \$190,000 per annum in electricity and maintenance costs. And the expected savings from the new lamb chiller will be around a quarter of a million dollars.'

'BE Campbell is a relatively small company competing against multinationals, so our margins are slim. We're constantly looking for ways to improve our operating costs and efficiencies.'

'I'd highly recommend an Energy Saver audit to other businesses with significant refrigeration plant. Having a thorough going over of your systems by independent auditors who are not trying to sell you anything is very worthwhile.'

The abattoir's refrigeration upgrade is expected to qualify for Energy Saving Certificates, which will help to significantly subsidise the capital investment proposed in the audit.

When the first stage of the abattoir reopens, 100 new jobs will be created. The NSW State Government provided BE Campbell with some stamp duty concessions and 12 months' payroll relief to help get the abattoir back up and running.

Your next step

To find out how your business can access support contact the Energy Saver team

Email energysaver@environment.nsw.gov.au

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