

Case study

The Large Energy User Electrification Support program

Ball Australia's growing vision for energy efficient future



Ball Australia, a leading horticultural business focused on plant production, research and distribution, is planting the seeds for a more energy-efficient future.

As part of the Victorian Government's Large Energy User Electrification Support program, Ball Australia has explored electrifying operations at its 42,600 m² greenhouse in Skye, Victoria.

The Large Energy User Electrification Support program is a \$1.6 million initiative helping Victorian commercial and industrial gas users identify ways they can electrify their operations to reduce energy use, cost and emissions.

Using a \$24,000 grant provided through the program, Ball Australia undertook a feasibility study, which assessed the option of replacing its natural gas boiler with high-temperature heat pumps and the installation of a thermal storage buffer tank to improve efficiency and reduce the site's reliance on gas.

The program found that:

- The heat pump could be installed and integrated with the current piping of existing boiler systems.
- A staged implementation that retained one existing gas boiler - which contributes 6 per cent of the site's gas usage would ensure reliability during peak demands and minimise investment risks.
- The recommended 30,000-litre buffer tank could provide 22 minutes of thermal storage at 75°C (delivered)/60°C (return).
- Full electrification could be achieved with infrastructure upgrades to the main switchboard, cables and gantry, which could be subsidised with Victorian Energy Upgrade discounts and offer long-term financial savings.
- The work would contribute to Ball Australia's sustainability goals including increasing waste recycling and introducing stronger water management systems.

The heat pump and thermal storage buffer tank offers a quick payback period over five years with a net present value of \$2.41 million and could result in:

\$748,664 savings on annual gas consumption.

A 36,080 GJ reduction in gas usage per year.

A **96 per cent reduction** in the facility's overall gas use.

VEU upgrades potentially worth **\$706,050** in financial incentives.

If pursued, the heat pump and thermal storage tank could provide Ball Australia with 7,845 Victorian Energy Efficiency Certificates (VEECs).





Building Victoria's renewable energy future

The Large Energy User Electrification Support program forms part of the Victorian Energy Upgrades (VEU) program, the flagship program which helps Victorians upgrade their homes and businesses with energy-efficient products and services by offering discounts and rebates.

Ball Australia formed one of 36 facilities which participated in the program. Grants of up to \$60,000 per facility were available to support innovative electrification feasibility assessments of commercial and industrial businesses that use between 10 to 100 terajoules of gas per annum.

These feasibility assessments provided a business case for bespoke energy efficiency upgrades through the VEU program's Project Based Activity (PBA) method, such as upgrading hot water boilers, furnaces, ovens and dryers, by tailoring the best way forward to transition from gas to electricity.

Homes and businesses which become more energy-efficient through the VEU program allow accredited providers to create VEECs. Each certificate represents one tonne of greenhouse gas prevented from entering our atmosphere.

Approved businesses create certificates for every upgrade they perform. Energy retailers are required to purchase certificates each year corresponding to their share of energy they sell and to meet annual emissions targets set by the Victorian Government. Energy savings achieved in the program benefit all energy consumers as they reduce the need for upgrades to energy infrastructure.

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Questions?



For more information on switching to electrification see the VEU page at www.energy.vic.gov.au/victorian-energy-upgrades/about

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