

The Large Energy User Electrification Support program

Fuchs Lubricants' journey to lower costs through electrification



Fuchs Lubricants, a global manufacturer of automotive and industrial lubricants, is making big moves towards a cleaner, more energy-efficient future.

As part of the Victorian Government's Large Energy User Electrification Support program, Fuchs explored ways to electrify operations at its Sunshine facility.

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

Using a \$49,000 grant through the program, Fuchs undertook a feasibility study. The study compared three potential electrification options: replacing gas boilers with electric ones, upgrading its thermal oil heating system, and installing an air-sourced heat pump to pre-heat base oils.

The study found that the air-sourced heat pump was the best choice, offering the greatest efficiency, cost savings, and ease of installation.

The program outlined that:

- The heat pump can be installed in a way that ensures unobstructed air intake and exhaust, as well as easy access and inspection.
- It can heat base oils to 50 °C before they enter the blending vessel and operate at off-peak hours meaning that it can achieve lower energy costs when there is less demand.
- The storage tank offers a containment for the hot oils which minimise the loss of heat and uses less energy as the oils are pre-heated from the pump.
- The heat pump's Coefficient of Performance (COP) was estimated as highly efficient providing 4.7 units of thermal energy for every unit of electricity consumed.

The air-sourced heat pump upgrade could save Fuchs:

\$124,800 per year through improved energy efficiency and lower labour costs.

Offer a quick payback period of 1.65 years with a net value of **\$1.28 million over 20 years**.

Reduce **25 per cent** of the site's gas usage.

Cutting emissions by **123 tonnes CO₂ annually**.

VEU upgrades potentially worth **\$45,000** in financial incentives.



Blending vessels



Storage tank

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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.

Fuchs 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 allows accredited providers create Victorian Energy Efficiency Certificates. Each certificate represents one tonne of greenhouse gas prevented from entering our atmosphere.

Approved businesses sell these certificates to energy retailers. This sale funds discounts and rebates which are given back to homes and businesses.

Energy retailers use the certificates to meet annual emissions targets set by the Victorian Government.

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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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