VICTORIAN BIOENERGY NETWORK
ENERGISE - UNITE - REGENERATE

VBN CASE STUDY

REWASTE WOLLERT

33,000 tonnes
Of commercial and retail waste diverted annually

8 full time
Jobs created

22,000 kilowatt
hours of electricity per day
the equivalent power demand of around 1,300 homes

To drive its sustainability goals and transition toward a circular economy, Yarra Valley Water developed the ReWaste Wollert facility, a pioneering co commercial anaerobic digestion solution that converts food waste into renewable energy and nutrient-rich by-products.

The ReWaste Wollert concept was developed following the impacts of the Millennium Drought, aimed at addressing rising energy demands, high power costs, and waste management pressures. Following feasibility studies and international knowledge sharing, planning began in 2010 with milestones culminating in full operation in 2017.

ReWaste Wollert facility, a Yarra Valley Water project.

Key Features of the Project

Organic Feedstock Utilisation

ReWaste Wollert processes approximately 33,000 tonnes of commercial and retail food waste per year, primarily sourced from hospitality, manufacturing, and produce operations.

Anaerobic Digestion & Technology Selection

The facility uses anaerobic digestion technology to convert food waste into biogas and digestate which is a nutrient-rich residue suitable for soil amendment. While initial assessments considered co-digestion with biosolids, the business case ultimately favoured using only food waste due to regulatory and market considerations.

Energy Generation and Grid Integration

Biogas is combusted via combined heat and power (CHP) engines to generate heat and electricity. The plant is designed to produce up to 1 MW of electricity. About 20% is consumed by the site, another 20% serving the adjacent sewage treatment plant, and the surplus exported to the AusNet grid. Generated heat is recovered and utilized to maintain digester temperature and pasteurization of Digestate.

Circular Economy Outcomes

ReWaste Wollert plays a pivotal role in advancing Yarra Valley Water's 2030 Strategy, which includes reporting net zero Scope 1 and 2 emissions for the 2025-26 financial year and embracing circular economy principles.

The project diverts waste from landfill, reduces greenhouse emissions, and creates valuable by-products for nutrient cycling.

Expansion: ReWaste Lilydale

Following the success of ReWaste Wollert, Yarra Valley Water proceeded with its second waste to energy facility Lilydale, which is under construction and is expected to begin operations by end of 2025 This expanded plant is:

- Sized for 1.5 MW of electricity generation
- Diverting approximately 50,000 tonnes of organic waste annually
- Projected to meet 35% of Yarra Valley Water's energy needs
- Will include front end processing for the de-packaging of food waste products ■