Case study: Bathurst Landfill Methane Capture System Upgrade



Equivalent benefit of planting 163 thousand seedlings over the next 10 years

Biogas Captured
1030 thousand m3

CO2 Emissions Reduced
9 thousand tonnes

Operational
24hrs/day
7 days/week

Cars off the road
2,113
(Last 12 months)

Methane capture system gets an upgrade at Bathurst Landfill

Saving the Environment with a planned 60% emission cut by 2035

Decomposing waste in landfills around Australia is a major source of greenhouse gas pollution leaking into the atmosphere. With toxic methane from the Bathurst Waste Management Centre at Mount Panorama generating up to 80% of the council's carbon footprint, something more needed to be done.

Bathurst Regional Council's outdated and under-performing methane gas extraction system and flare were scheduled for replacement in partnership with LGI. After 16 years in operation, the original system had been capturing close to 14% of the site's methane. In contrast, the new system has been built to achieve closer to 80% with the addition of 38 new gas wells and a network of new pipes that vacuum the captured methane into the flare.

Australian Carbon Credit Unit (ACCU) revenue generated by the project brings even greater benefits. Councils can sell the ACCUs they earn to businesses and other entities that need to offset their carbon emissions, providing an additional revenue stream. In addition, participating in carbon markets in this way also helps councils to offset the costs of installing and maintaining their landfill gas flaring systems.

In every way, this critical upgrade is an important step towards meeting council's emissions reduction targets of 25 per cent by 2025 and 60 per cent by 2035, while increasing the safety for everyone on site.

"This is a major difference between the old and the new. The old system goes out and has to be re-lit every couple of days, where this new system will automate that by itself."

Simon Isbester | Project Manager

"Higher flaring rates at landfill sites is much better for the environment and much safer for the workers because you are prone to getting fires up at the tip site if the methane is just trickling through all the rubbish."

Mr Jess Jennings | Bathurst Mayor

LGI
CLEAN ENERGY & CARBON ABATEMENT

CLEAN ENERGY &
CARBON ABATEMENT

LGI's partnership with Bathurst Regional Council comes at no cost to local ratepayers, while also providing significant financial returns now and into the future.

Australian Carbon Credit Unit (ACCU) revenue generation is just the beginning. The future looks promising as this pioneering project aims to use the captured methane to create renewable energy for the local area.

This has turned yet another costly waste management facility into a highly productive asset that no longer poses a risk to environmental or human health.

- ✓ **Provides for a future of dispatchable, renewable energy**
- ✓ **Converts methane into less harmful CO2 to cut greenhouse gas emissions**
- ✓ **Improves local air quality and reduces landfill odours**
- ✓ **Creates an income stream for council**
- ✓ **Reduces demand for fossil fuels**
- ✓ **Best practice landfill management**

This is another example of how sustainable energy generation continues to reach new heights and expand into territories previously thought unreachable. It's an exciting time to be part of such important work and at LGI, we are focused on maximising the benefits across Australia, one landfill at a time.

People engineering, clean energy, zero carbon future

07 3711 2225
enquiries@lgi.com.au
www.lgi.com.au

> Our reports are suggesting that the methane quality that is coming out of here is actually very good as an energy source so it would be great to complete that picture of recycling the byproducts of our rubbish into an energy source.

Mr Jess Jennings
Bathurst Mayor

