

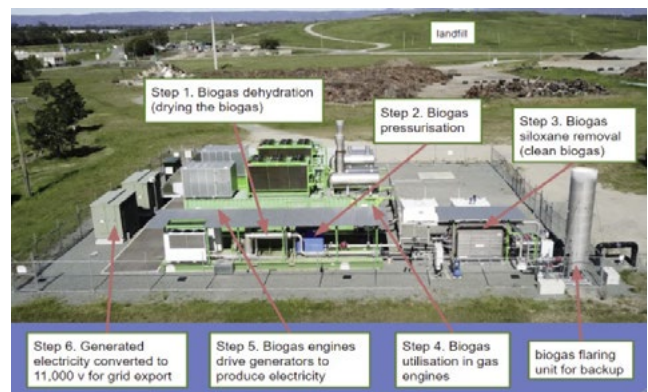


SRS increases power generation efficiency

LGI pioneered the integration of the Siloxane Removal System (SRS) into their bespoke gas conditioning for power generators in Australia. Initially developed and trialled at their renewable power generation site in Caboolture, QLD in 2018, by 2020 the SRS was determined commercially viable and later installed at Mugga Lane Landfill, ACT; Dakabin QLD, and Toowoomba QLD biogas to power generation sites in 2021. Today there are plans for other SRS to be installed throughout their power generation fleet.

LGI extracts and destroys harmful biogas from landfill sites and abates carbon through biogas flaring; and where there is sufficient biogas, a power generation facility is developed to also deliver renewable and dispatchable electricity into the local grid.

Siloxanes are often described as silicones and are abundant in landfill because they are a commonly used additive in everything from beauty products to fire retardants, packaging, furniture and more. On landfill biogas power generation sites siloxanes accumulate in the generators, gumming up the engine and causing wear and tear. LGI developed a process to safely capture and remove siloxanes from harvested landfill biogas, improving the efficiency and extending the life of power generation engines. See Diagram.



DIAGRAM

Based on the results of the trial and first commercial installation, the efficiency gains have extended the engine life and improved output efficiency.

Two other power generation sites have had SRS installed with plans to bring other legacy sites up to the same standard. Moving forward, all new power generation sites are planned to also have SRS included.

Each biogas from landfill power station site is monitored both remotely and via in person site visits to ensure consistency of biogas and electricity production. Skilled field technicians make adjustments on each landfill site to ensure the gas field and the power generator is operating efficiently to achieve maximum gas extraction and power generation. Planned maintenance and repairs ensure the smooth operational continuity of the gas wells and power generation engines.



**CLEAN ENERGY &
CARBON ABATEMENT**

As of 1 December 2023 our impact has been:

- ✓ Biogas Captured - 680 million m³
- ✓ Renewable Energy - 493 GWh
- ✓ Carbon Abatement - 6 million tonnes (tCO₂e - environmental benefit or the equivalent of 108 million seedlings planted for 10 years)
- ✓ ACCUs - 1.5 million

**People engineering,
clean energy, zero
carbon future**

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

IMAGE:
SRS Removal System at Caboolture Site



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Adam Bloomer
LGI Founder

