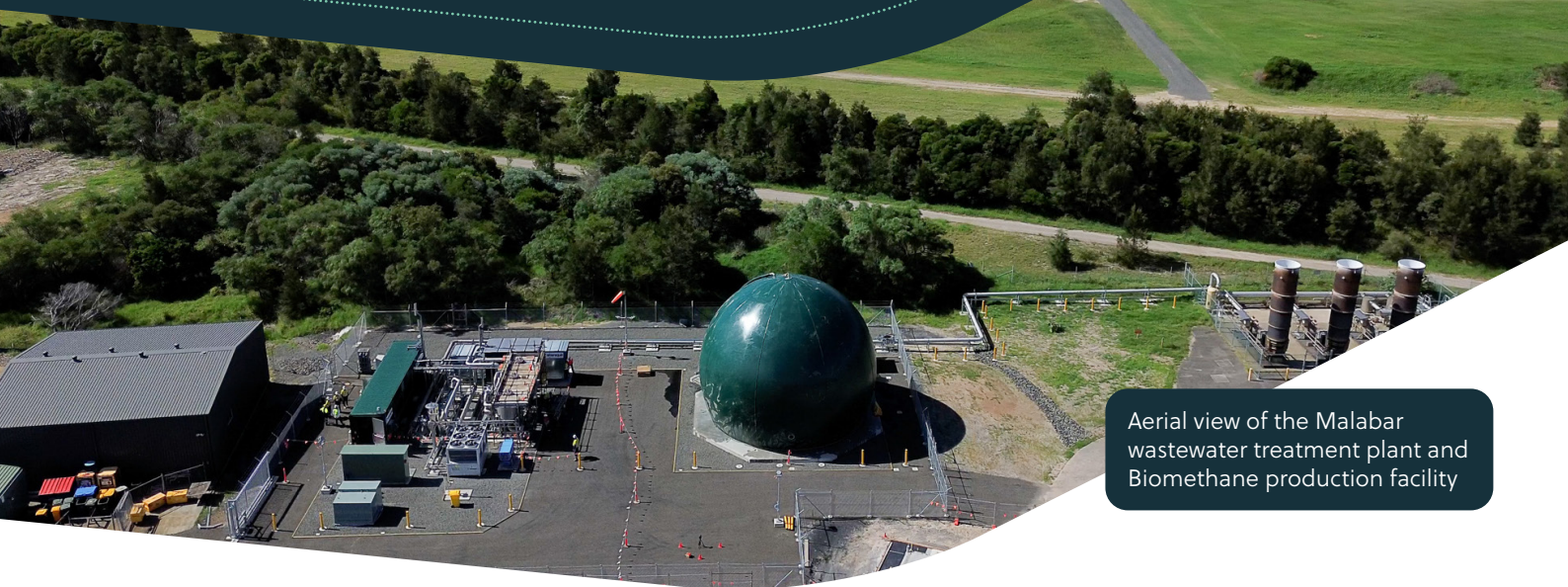


# Malabar Biomethane Facility



Aerial view of the Malabar wastewater treatment plant and Biomethane production facility

## Australia's first biomethane-to-gas network project will see thousands of Sydney customers using renewable gas, sourced from biowaste and blended with natural gas, for cooking, heating and hot water.

Jemena and Sydney Water are working together to generate biomethane at the Malabar wastewater treatment plant in South-East Sydney. The high quality biomethane gas is being injected into Jemena's New South Wales gas distribution network – the largest in Australia with around 1.5 million customers.

Initially, the Malabar facility will produce renewable biomethane (by volume) equivalent to the gas usage of approx. 6,300 homes per year with the potential to scale up to around 200TJs each year – equivalent to the natural gas usage of approx. 13,300 NSW homes per year, if put to use in the residential network.

The multi-million dollar project is jointly funded by Jemena and the Australian Renewable Energy Agency (ARENA) who will provide up to \$5.9 million in grant funding.

### What is Biomethane?

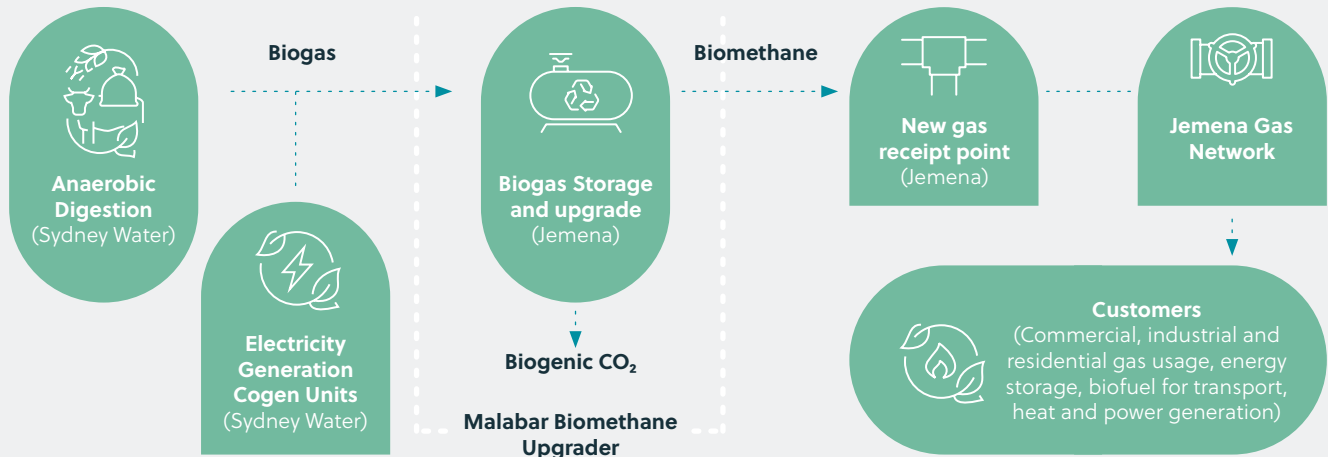
Biogas is derived from plant and animal by-products, agriculture, farming, forestry and human wastes. Once upgraded and converted into biomethane, it is a reliable, sustainable and responsive energy source that can help us transition to a low carbon gas network.

Bioenergy and waste-to-energy projects are widespread in the US and Europe, with the US Department of Agriculture stating that in 2016 the total economic contribution of the US biofuels industry was \$459 billion, employing 4.65 million direct and indirect workers. The World Bioenergy Association estimates that more than a million terajoules of biogas were produced globally in 2014, about 1.5 per cent of the international renewable energy supply. In Australia, according to ARENA's Bioenergy Roadmap 2021, by the 2030's the bioenergy sector could contribute around \$10 billion in extra GDP per annum, create 26,200 new jobs, reduce emissions by about 9 per cent, divert an extra 6 per cent of waste from landfill, and enhance fuel security.



## Malabar Biomethane Injection Facility

Biomethane produced at Malabar will displace natural gas when it is injected into the gas network. Methane is captured, optimised and re-used, instead of being naturally released into the atmosphere from its original waste source, so there are no additional emissions in the production process.



## Biomethane: Boosting the Circular Economy

Biomethane is an example of waste recovery and reuse in the circular economy. It can be created by capturing biogas from decomposing agricultural, organic, and domestic waste, and removing the carbon dioxide. At our Malabar facility biomethane is being produced from wastewater, or biowaste.

Biomethane is indistinguishable to regular natural gas. It can be blended seamlessly into the existing Jemena gas network, and over the coming years will provide enough renewable energy to supply thousands of homes and businesses.



The Malabar Biomethane facility will demonstrate the potential of a waste-to-energy industry which can reduce carbon emissions by replacing other natural gas sources, while creating jobs and many other circular economy benefits.

The Malabar pilot production plant is co-funded by Jemena and ARENA (Australian Renewable Energy Agency).

Jemena's gas distribution network is the largest in NSW. It delivers natural gas to around 1.5 million residential and business customers, across Greater Sydney and parts of regional NSW.

ARENA is the government agency responsible for supporting the transition to net zero emissions by accelerating innovation for the benefit of Australian consumers and business.



## According to ARENA's Bioenergy Roadmap 2021, the Australian bioenergy sector could contribute:

	By the 2030's	By the 2050's
<b>Additional \$ GDP</b>	\$ 10 billion	\$ 14 billion
<b>Additional jobs</b>	26,200	35,300
<b>Emissions reductions (% of 2019 levels)</b>	9%	12%
<b>Extra landfill waste diverted (vs. 2019 levels)</b>	6%	7%

## Learn more about the Malabar Biomethane Production Plant

The Malabar Biomethane facility is demonstrating how biomethane, as part of a renewable gas industry, can create commercial opportunities for local governments, industry and business, as well as helping to meet sustainability commitments and emissions targets. Ask us how.



Visit [gorennewablegas.com.au](https://gorennewablegas.com.au)

Contact us to explore the biomethane production facility, get involved and to find out how renewable gas can benefit households, businesses and communities across NSW.



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