

FROM WASTEWATER TO GREENPOWER

AGL's \$16 million biogas utilisation project at Melbourne Water's Western Treatment Plant in Werribee is the largest biogas power station in the southern hemisphere.

The plant produces approximately 50,000 megawatt hours of renewable energy per annum and cuts Australia's greenhouse gas emissions by 50,000 tonnes a year.

That's enough electricity to power over 7000 households for an entire year - the equivalent of a town the size of Victoria's Traralgon, Tasmania's Burnie or Broken Hill in New South Wales.*

GreenPower—it's a gas

Every day, about 460 million litres of sewage and industrial waste flows into Western Treatment plant.

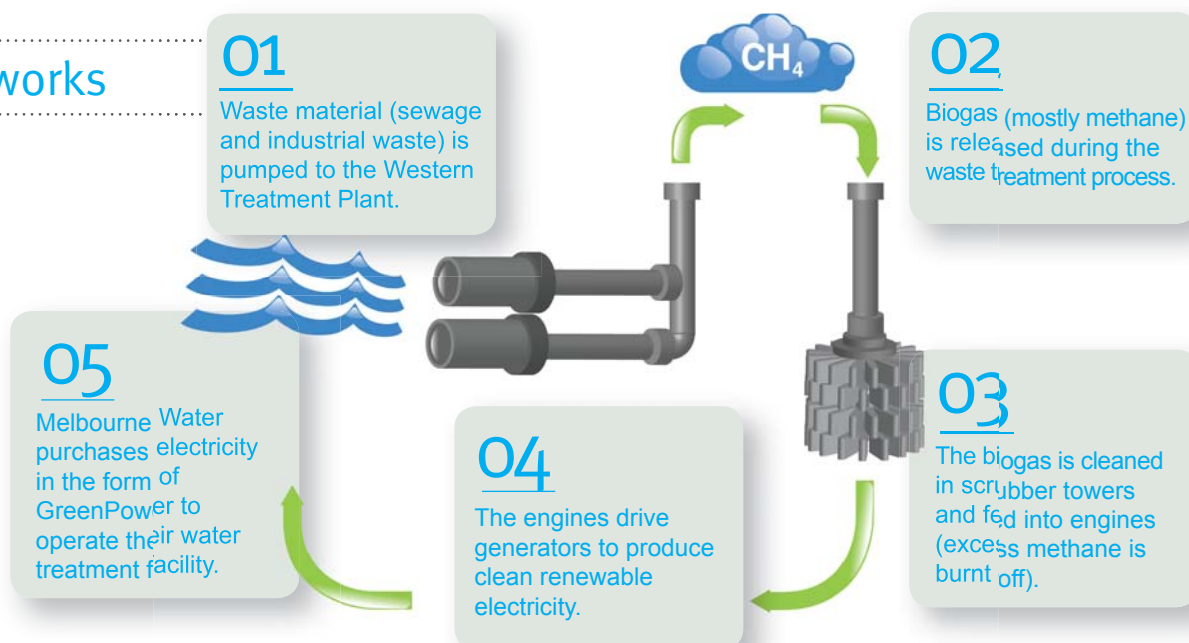
The biogas, mostly made up of methane, which is released during the waste water treatment process is captured to produce renewable energy which is GreenPower accredited.

Melbourne Water purchases this electricity in the form of GreenPower and uses it on site to operate the pumps, fans and aeration processes it uses in the waste water treatment facility.



Melbourne Water Western Treatment Plant

How it works





✓ At a Glance

Energy fuel:

Biogas from treated waste water

Owner/Operator:

AGL

Host:

Melbourne Water

Location:

Werribee Treatment Plant,
30 kms south-west of Melbourne

Energy Output:

50,000 megawatt hours - equivalent
to powering 7000 homes

Greenhouse Gas Abatement:

50,000 tonnes, equivalent to removing
11,500 cars from the road for one year

✓ The problem

It's the heat trapped in the atmosphere by greenhouse gases like carbon dioxide and methane that causes global warming. When it comes to the individual impact of greenhouse gases methane is more harmful as it traps 21 times more heat than carbon dioxide.

✓ The solution

Instead of the methane being released into the atmosphere as a gas AGL transforms it into a valuable resource.

Removing the methane gas and using it to produce renewable GreenPower, instead of traditional electricity made from burning fossil fuels like coal, is cutting greenhouse gas emissions by the equivalent of 50,000 tonnes of greenhouse gas emissions per annum, equal to removing more than 11,500 cars from the road each year.

✓ GreenPower is driving renewable energy

AGL's biomass plant is an accredited energy supplier for the GreenPower program.

GreenPower approved generators comply with stringent environmental standards and the GreenPower accredited component of electricity products must be 100 per cent 'new' renewable energy ('new' renewable energy is sourced from generators which have been built after 1 January 1997.)

GreenPower accreditation provides assurance that the renewable energy a customer purchases is reducing greenhouse gas pollution and helping to develop a robust renewable energy industry in Australia.

✓ Renewable energy is part of the solution

"Ethical investment is an important part of our mandate," explains Neil Cooke, AGL Asset Manager for eight sites and \$50m worth of green assets. "It's renewable energy where we see the most long-term potential. It's about providing a total energy solution as well as reducing greenhouse gas emissions."

✓ A greener future for all

Sewage treatment plants are just one of the ways biomass can be used to create accredited GreenPower. Australia is leading the way in terms of the technology needed to convert waste to clean, green energy. But if the environmental impact of these pollutants is going to be reduced long-term, then more Australian households and businesses need to purchase accredited GreenPower to fund the long-term development of clean, renewable energy. The result will be a better, brighter future for all Australians.

*Calculations: One mega watt hour of electricity equivalent to one tonne of greenhouse gas emissions. Each car generates 4.33 tonnes of greenhouse gas each year. Household numbers based on an average household's use of 6.47 megawatt hours per year, with an average 2.6 people.