

Omarunui Landfill Gas Limited Partnership

Council Waste to energy
partnership

Pioneer
energy

LANDFILL GAS ENGINE

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with a
generating
capacity of
0.9MW sufficient for
approx 1000 houses

As part of Pioneer Energy's long-term vision to provide sustainable energy futures for New Zealand businesses, Pioneer has established long term partnerships with a number of leading manufacturers, processors, hospitals, institutions, councils and service providers throughout New Zealand.

The Omarunui Landfill Gas Limited Partnership is an excellent example of a successful public/private sector partnering which delivers sustainable environmental and commercial outcomes which have long term benefits for all parties including the Hastings District Council.

Located 20km north-east of Hastings and 15km from Napier, the landfill is jointly owned by the Napier City and Hastings District Councils, who sell methane gas to the Limited Partnership with Pioneer Energy.

The plant is capable of providing electricity to around 1000 homes.

PIONEER ENERGY'S ROLE

Council partnered and formed a strategic relationship with Pioneer Energy for the conversion of gas to energy and its subsequent sale.

Pioneer began construction of the 900kWe landfill gas generation plant in April 2014 in a limited partnership with the Hastings District Council for a term of 30 years.

The landfill, jointly owned by the Napier City Council and Hastings District Council had been operating since 1988 with the landfill gas being flared.

Older parts of the landfill had been closed for a number of years, with the new area of landfill developed for best practice LFG collection. This included the use of horizontal collection pipes located under the active part of the landfill.

Pioneer is responsible for the day to day operation and maintenance of the generation plant, including asset management and plant optimisation.

The plant has been designed to operate continuously with remote access and monitoring technology which enables management of the plant from Pioneer Energy's Silverstream Landfill Gas Generation Station.



POSITIVE OUTCOMES

The experience gained from the Omarunui project is transferable to other local authorities.

It demonstrates that Councils can partner with private sector partners who have the capital, skills and experience to achieve outcomes that they would be unable to do on their own but enables them to leverage their skills and experience and combine that with a private sector counterpart to achieve success.



COMMERCIAL AND ENVIRONMENTALLY SUSTAINABLE

Tapped from around 30 gas extract wells on the face of the landfill, the gas is typically 55% methane, 35% carbon dioxide with the remainder mainly nitrogen.

Methane is the most significant component of the landfill gas and is one of the most potent greenhouse gases.

Pioneer's system involves using vacuum pumps to suck the gas out of the landfill's pipe network. The gas is then treated in a process where it is dried and filtered to remove small particles before combustion in the gas engine.



- Embedded generation in the local network
- Income from gas for the landfill instead of flaring to waste
- Additional revenue for Council and Pioneer Energy as partners in the limited partnership
- Offset electrical generation from other generation plant

Pioneer Energy has a proud record of delivering successful projects in partnership with other Councils' throughout New Zealand and this helped the Hastings District Council mitigate risk in the development of the Oamarunui project.

Pioneer Energy can help you reduce energy use, lower your operating costs, free up capital, and contribute to a cleaner energy future.

From a suite of intelligent energy management solutions, Pioneer works with you to build the right energy solution for your business.

Contact us to find out more about how we can help.

Facts at a glance

Project Description

Foundation Customers:
Hastings District Council,
Napier City Council

Location:
Oamarunui, Hawkes Bay

Application:
Landfill gas generation

Scope of Work:
Build, Own, Operate.

Capacity:
0.9MW

Fuel:
Gas from landfill

System Highlights

Commissioned date:
2014

Successful Public Private/
partnership delivering financial
benefits to ratepayers.



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