

Ecogas Limited Partnership is a joint venture between Ecostock Supplies Limited and Pioneer Energy Limited. The business is converting organic food waste into beneficial products including renewable energy and CO<sub>2</sub> from biogas and organic bio-fertiliser suitable for direct application onto land.

Together, the Ecogas Partnership brings a unique New Zealand based business model that embraces supply partnering and blends commercial and public organic waste streams into the highest efficient and lowest cost solution to divert food waste from landfill.

Auckland Council has contracted with Ecogas LP to process the region's food scraps for the next 20 years, beginning in October 2021. Ecogas will be using anaerobic digestion technology to produce renewable energy from biogas and liquid bio-fertiliser for use on the land – creating a carbon-neutral circular economy solution.

### **What we do**

Ecostock Supplies currently converts 35,000 tonnes per annum of commercial food waste into stock feed, and Pioneer Energy runs a landfill gas generation and industrial process heating plant converting 30,000 tonnes per annum of local waste and woody biofuels. Ecogas brings the experiences of these two businesses together to own and operate utility scale anaerobic digestion (AD) facilities located in regional service hubs.

The anaerobic digestion process is a proven technology with thousands of plants operating worldwide. This technology processes food waste into renewable energy and bio-fertilisers. Bioenergy Association NZ has estimated that moving organic waste from landfills into anaerobic digestion processing would reduce our climate change emissions by up to 1.8 million tonnes per annum.

An Ecogas plant diverting 60,000 tonnes of commercial and consumer kerbside waste could produce enough renewable electricity to supply more than 1000 local homes. The same plant would produce enough bio-fertiliser to cover more than 3000 Ha of farmland, reducing our reliance on imported and artificial fertilisers.

### **How it works**

From the transfer station, instead of going to landfills, the food scraps will be taken to an Ecogas anaerobic digestion (AD) processing facility to separate any remaining contaminants such as metals, glass or plastics, and then blended into a digestible slurry for processing in larger AD digestion tanks.

The AD tanks are closed biological systems, much like our own stomachs, designed to further breakdown the organic component of slurry into biogas and nutrient by-products. The

biogas is collected from the top of the tanks and then used in a renewable generation plant to produce both heat and power. Nutrients are decanted from the middle of the tanks before undergoing a pasteurisation process to ensure no harmful pathogens are present in the final bio-fertiliser products.

### **Details on the Auckland Council contract**

The contract between Auckland Council and Ecogas LP has a twenty year term. Auckland Council and Ecogas have agreed on a high resilience design package that ensures food scraps are fully decontaminated, free of plastics and processed in a world-class facility that will meet internationally proven end-to-end processing standards. This contract agreement provides certainty to Auckland consumers that their food scraps will be kept out of landfill and used to grow more food.

Andrew Fisher, Ecogas Director and Development Manager, knows from over 12 years of commercial experience that the expansion of New Zealand's food repurposing industry will revolutionise the way we recover the embedded water and energy from what was waste. "Globally, there are over 2000 existing facilities of this nature, supporting the infrastructure and environmental needs of our modern urban lifestyles. We are pleased to be trusted with bringing it to New Zealand. Together, we will adding another resource recovery facility 'at scale,' joining an existing global community of like-minded, practical and future-focused custodians."

### **Ecogas contacts:**

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