



The City of Cockburn is turning food waste into energy | Photo source Ben Kerckx from Pixabay

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## GIANT MECHANICAL STOMACH TURNS FOOD WASTE TO ENERGY

 AGRICULTURE & ENERGY

### A new green initiative in Perth, Australia is seeing tonnes of food scraps converted to green energy

**Spotted:** The City of Cockburn in Perth, Australia, is using an anaerobic digester to turn the city's food waste into green energy. The digester, located at a nearby fertiliser plant, is fed food scraps collected from restaurants and supermarkets. It is currently producing enough methane to power around 3,000 homes.

After collecting the food waste, it is put through machinery which removes any packaging and other non-food contamination. The waste is then mixed with water and pulped to form a slurry, before being pumped into the digesters. Inside the digesters, bacteria breaks down the organic molecules in the waste and produces methane gas.

The methane gas is then siphoned off and used to run two large generators that together produce up to 2.4 megawatts of electricity – enough to power the company's entire operation, along with around 3,000 neighbouring homes. The City estimates that it has so far recycled 43 tonnes of food waste and saved 81,000 kilograms of CO<sub>2</sub> that would have otherwise entered the atmosphere, if the food had been left to rot in landfill.

On top of this, the digesters produce a liquid that is a certified organic natural fertiliser. The company, RichGro, sells some of this to local farmers and uses the rest to augment its own compost. **According to** RichGro managing director Tim Richards, the digesters work like a stomach and just like a stomach, they need to be fed a balanced diet. "Certainly, you can overdo a good thing – you wouldn't want too much fats, oils and greases", he says. "A lot of fruit and veg, starchy, sugary products are good. They produce a lot of energy."

This type of project is growing in popularity around the world, as businesses and governments realise it is a win-win for everyone. The Australian Federal Government is currently co-funding the construction of a biomethane production facility at a Sydney wastewater treatment plant. Moreover, at Springwise we have also covered innovations in biomethane production, such as a [street lamp](#) powered by dog poo and supermarket [delivery trucks](#) that use biomethane for fuel.

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### **Takeaway:**

Cockburn's waste manager, Lyall Davieson, has reported that the community is fully behind the project. He points out that local businesses have been embracing the initiative. In many ways, it is a natural progression for after plastic bag bans, increasing recycling and the use of other types of renewable energy. In fact, as awareness of the need for sustainability grows, resistance to these types of measures seems to be decreasing. In fact, while this plant is one of the first of its kind in Australia, similar plants are already common in Europe and elsewhere. The future will likely hold many similar projects – for Australia and elsewhere.