

Brewing A Sustainable Energy Solution

A joint project between the University of Queensland (UQ) and Foster's to turn beer waste water into electricity has received a \$140,000 grant from the Queensland government's Sustainable Energy Innovation Fund.

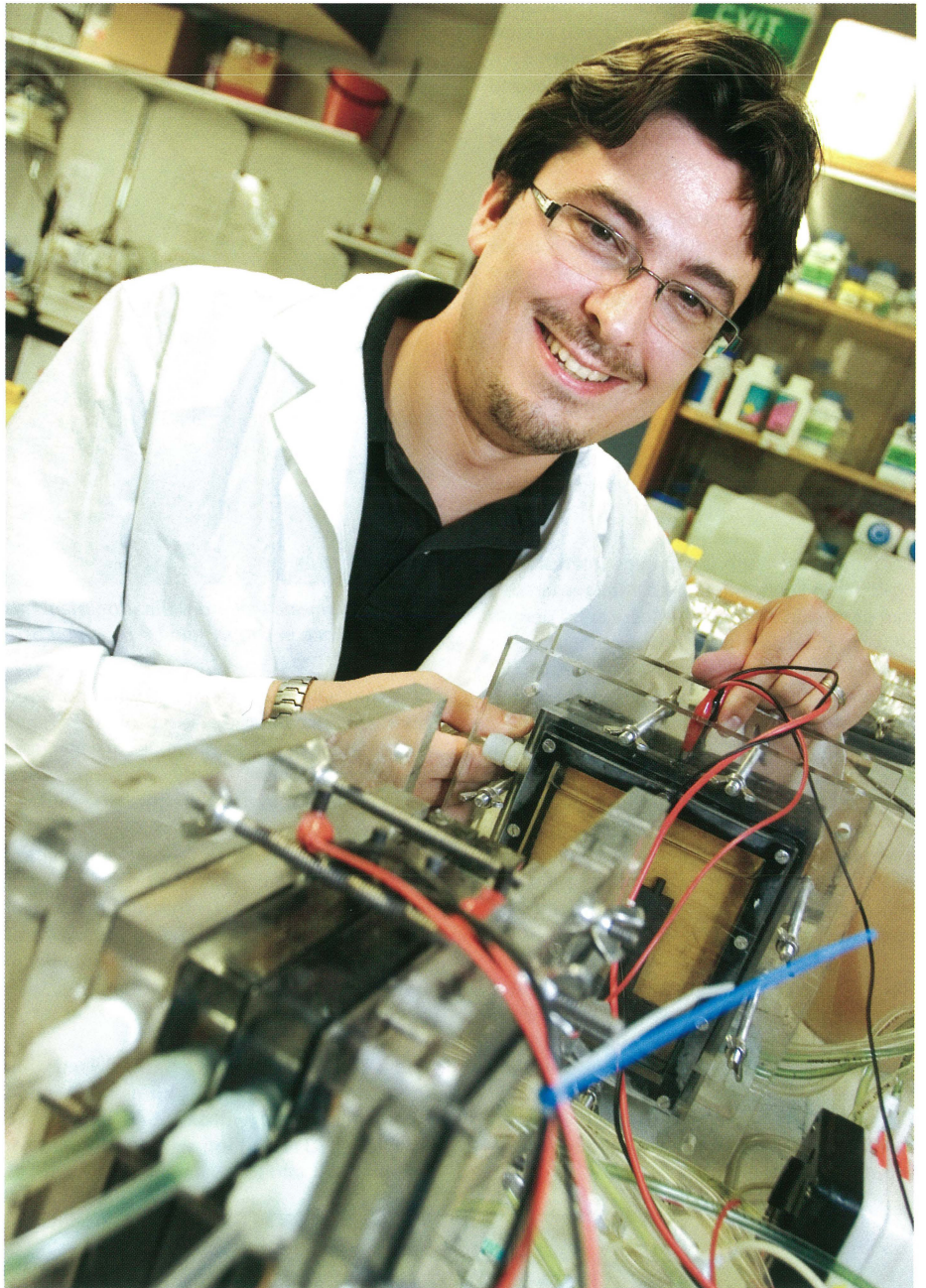
Doctor Korneel Rabaey from UQ's Advanced Wastewater Management Centre (AWMC) said the technology worked by creating a microbial fuel cell, which feeds continuously on the organics in the brewery waste water, turning it into watts. The process also produces clean water and renewable (non-polluting) CO₂.

Rabaey said with the current drought, the smart use of natural resources had never been more important. "Energy and water supply are among the biggest challenges we will face in the coming decades", he said. "We must learn how to diversify our portfolio of fuels and we must learn to reduce our energy and water usage."

AWMC Director, Professor Jurg Keller, said the focus in wastewater management had shifted away from simply treating waste, to recovering valuable resources such as water, energy and nutrients. "Technology that can do this should be supported, therefore the decision by the Queensland government to support this project is a very important signal, both to universities and industry", he said.

The team's work is in collaboration with the University of Ghent, Belgium, and is backed by a \$1.3 million Australian Research Council Discovery grant in addition to on site and financial support from Foster's, who have been recognised for their innovative water reduction and recycling programmes.

A patent is pending for the technology, believed to be a world first, which is designed for small to medium operations and could be used across a number of food, beverage and manufacturing industries. Keller said the team is achieving good progress with a 10 litre prototype, with plans to have a pilot-scale model up and running to coincide with an international bio-energy conference hosted by the university in September. ■



Postdoctoral research fellow Korneel Rabaey at the University of Queensland's Advanced Wastewater Management Centre.