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Title: UCT students unveil energy box to turn waste into electricity

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BOXING CLEVER: Chelsea Tucker, left, and Carol Ngwenya are part of the University of Cape Town team developing an 'energy box'. Picture: ESA ALEXANDER

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Imagine turning garbage or landfill gases into electricity so people don't have to rely on Eskom.

Or capturing the mining industry's methane by-product and turning it into energy.

Or turning food waste into reusable water and fuel for transportation. Most of us wouldn't know where to start.

For postgraduate students at SA universities, however, these are real projects, and they were on show at the recent Africa Utility Week in Cape Town.

Finalists from Wits University, the University of Cape Town (UCT) and Stellenbosch University put together proposals for the initiate! Impact Challenge, which focuses on the energy sector.

Team members included

chemical engineers, environmental scientists and energy planners.

The UCT students unveiled their "energy box", which turns organic waste into electricity.

"Across Southern Africa, there are over 700 waste digesters which turn organic waste . . . into a mixture of carbon dioxide and methane gas called biogas," said team members Chelsea Tucker and Carol Ngwenya.

"Many of these digesters can be found in rural areas and off-grid communities But only 10% are being used to their full potential.

"The energy box can be retrofitted onto a waste digester to convert this biogas into electricity for the community."

The device is up to 30% more efficient than conventional systems.

The system could bring electricity to those who are off the grid