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## Renewable energy from household food waste

On behalf of the Australian Government, the Australian Renewable Energy Agency has today announced a \$291,785 grant to Logan City Council to investigate renewable energy production from food and garden waste.

The \$648,411 feasibility study will look at diverting food and green organics (FOGO) waste from households to produce biomethane, biochar and fertiliser prill at the Loganholme Wastewater Treatment Plant.

At present, the majority of Australia's household FOGO waste is sent directly to landfill, producing methane emissions that are damaging the environment and wasting a potential source of bioenergy.

In the City of Logan, more than a third of household waste can be classified as FOGO.

Logan City Council introduced a successful 'opt-in' green waste collection service (for garden waste only) in mid-2021, with 20,000 households now participating.

The results of the FOGO study will help the Council investigate and plan for the introduction of a broader FOGO waste collection service in coming years.

The project is the first to be funded under ARENA's Industrial Energy Transformation Studies program (IETS). Launched in 2022, IETS is a \$43 million program to support feasibility and engineering studies, with a particular focus on agriculture, mining, manufacturing, water supply, waste services and data centre sectors.

ARENA previously awarded \$6.2 million to Logan City Council for a gasification facility at the wastewater treatment plant. The gasification facility has been operational since 2022 and uses biosolids from the plant to produce renewable energy and biochar.

The biochar from this can be used with liquid from FOGO waste to produce fertiliser prill, with Logan Water envisaging an integrated facility supporting an onsite bioenergy recovery ecosystem.

Logan Water, a wholly owned subsidiary of Logan City Council in Southeast Queensland, manages the water supply for more than 125,000 households in the City.

ARENA CEO Darren Miller said the study is an opportunity to divert energy resources from landfill.

"Household food and organics waste can be a valuable source of bioenergy, too much of which is currently going to waste. Logan City Council's feasibility study will look at how this can be captured, whilst reducing harmful emissions from household waste," Mr Miller said.

"This is the first of many such studies expected to be funded under IETS. Industry faces a pressing emissions reduction challenge that this program hopes to assist with."

"We've worked with Logan City Council before on the gasifier deployment and we're excited to support them in finding other ways to reduce emissions that can be integrated into their existing work."

City of Logan Mayor Darren Power said the FOGO study was another exciting milestone in the Council's sustainability journey.

"Having pioneered the gasification of biosolids in Australia, the repurposing of FOGO waste is the next logical step," Cr Power said.

"We're excited to be collaborating with ARENA and UQ on this study to create a greener future".

The study is due to be completed in 2024. A final report will be available on ARENA's [Knowledge Bank](#).

ARENA will also deliver the \$400 million [Industrial Transformation Stream](#) of the Australian Government's Powering the Region Fund. This program will support industrial facilities in regional Australia to reduce their scope 1 and scope 2 emissions in line with Australia's 2030 targets and transition to net zero by 2050. The Industrial Transformation Stream is expected to open later this year.

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