



Reporoa Full-Scale Demonstration Biogas Project

Project overview

Name of the project	Reporoa Full-Scale Demonstration Biogas Project
Region	Bay of Plenty
Tier and type	Tier 2: Sectors – Waste
Applicant	Eco Stock Supplies Limited
Total project value	\$ <small>Commercial Information</small>
Amount of funding sought from the PGF	\$8.9 million
Financial instrument	Loan or equity
PDU recommendation	Approve

206. Eco Stock Supplies Ltd (Eco Stock) seek \$8.9 million to build a full-scale demonstration biogas plant which will recover energy, carbon dioxide and nutrients from food waste. The biogas will be used to fuel an engine for electricity and heat generation.

207. The proposed Reporoa Organic Waste Recovery Facility is being built on a two hectare site within the 74.4 hectare T&G Global glasshouse operation (T&G). This will replace current fossil-fuel dependency of the site (currently uses natural gas) and use renewable energy to power/heat the expanded facility.

208. This project will take 20,000 tonnes a year of food waste from Rotorua, Repora and Taupo (which would otherwise go to a landfill) and convert it into biogas. It will take industrial organic waste materials for significant local food manufacturers such as dairy factories, commercial bakeries, cool stores and fruit-grading facilities, and has the capacity to take milk shed washings from dairy cow and goat operations. A portion of this food waste will come from Commercial.Commercial Information

209. New Zealand has no commercial scale food waste anaerobic digesters (AD). This project could act as a catalyst to build Comme regional AD biogas facilities. It will confirm the commercial viability of AD plants in New Zealand environment.

210. The Ministry for the Environment is supportive of this project but could not fund it through the Waste Minimization Fund because of the large amount requested.

PDU recommendation

211. The PDU recommends that you approve one of two options:

- i. A \$8.9 million loan on commercial terms with interest rate and repayment schedule as agreed by PDU; or



**PROVINCIAL
DEVELOPMENT
UNIT**

- ii. A combination of loan and equity totalling \$8.9 million with loan terms and equity valuation as agreed by PDU.

Local support

212. Rotorua Lakes District Council and Waikato Regional Council are supportive of this project. Local iwi are also supportive of the initiative and have indicated they would in the project in future.

Governance

213. Eco Stock has 11 years of experience in collecting, processing and reselling food waste to stock feed in New Zealand. They are recognised as New Zealand's largest domestically owned collector, processor and reseller of food waste to stock feed.

214. A project steering committee will be formed including the project manager, T&G and the two engineering firms for the construction phase with appropriate project management tools in place.

215. Eco Stock will operate the proposed plant and will own some equity in the project. Investors along with the applicant will own the plant.

Benefits

216. If successful, the project is expected to have the following benefits:

- i. Create ^{Comme} jobs in the region
- ii. Act as a catalyst for similar plants in other regions
- iii. It aligns strongly with regional priorities.

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Costs and funding sources

218. Eco Stock has invested over \$^{Commercial Information} in this project on research. It has been developing the project for the last four years.

219. The project will have five commercial income streams – waste disposal, electricity, carbon dioxide, heat and fertiliser – which will provide sustained income for the future.

Possible investors

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PDU assessment of the project

223. This section provides an overview of PDU's assessment against the PGF eligibility and assessment criteria.

Assessment against PGF criteria

Criteria	Rating (1✓ to 5✓)	Comment
Sustainable regional economic development	✓✓✓	New jobs will support local economic development and deliver benefits to local communities.
Productivity and innovation	✓✓✓✓	The plant, if successful, will act as a catalyst for similar plants in other regions. Over energy AD plants will be built in New Zealand and will create jobs.
Increased employment, training or work readiness for the sectors workforce	✓✓✓✓	This project will create jobs. T&G Global's project using biogas to grow tomatoes will create jobs.
NZ's ability to meet climate change commitments	✓✓✓	The project will generate electricity from food waste and will help New Zealand to achieve its low carbon emissions target.
Māori aspirations for utilising land and other resources and achieving cultural objectives	N/A	
Additionality	✓✓✓	New Zealand generates good waste which currently goes into landfills. This project will leverage the food waste to generate energy.
Connections and alignment with regional priorities	✓✓✓✓	Aligns with Waikato Regional Council's Waikato waste and resource efficiency strategy 2015-2018. The project also aligns with Bay of Connections' Energy Strategy.



Criteria	Rating (1✓ to 5✓)	Comment
Environmental sustainability and/or productivity of natural assets	N/A	

Agency comments

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Treasury

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Risk assessment

226. The PDU has identified the following remaining risk:

Type of risk	Mitigation
Build risks are present in terms of delays and cost over-runs.	This risk will be mitigated via geotechnical studies, options analysis and robust project management support from <small>Commercial Information</small>

Recommendations and next steps

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- ii. A combination of loan and equity totalling \$8.9 million with loan terms and equity valuation as agreed by PDU.