Turkish Company developing a waste-to-energy solution using food waste to biogas seeks for technology providers and research partners

Summary

Profile type
Technology request

Company's country
Türkiye

POD reference
TRTR20250626004

Profile status
PUBLISHED

Type of partnership
Commercial agreement with technical assistance
Research and development cooperation agreement

Targeted countries
• World

Contact Person
Enrico FRANZIN

Term of validity
26 Jun 2025
26 Jun 2026

Last update
26 Jun 2025

General Information

Short summary

Turkish Company is developing a waste-to-energy solution using food waste to produce biogas for combined heat and power generation. The project aims to increase energy efficiency and reduce environmental impact. The company seeks technology providers and research partners to enhance reactor efficiency, integrate energy into factory operations, and explore system replicability.

Full description

A Turkish company is developing an on-site, waste-to-energy solution that focuses on converting food waste and other organic waste streams generated within its manufacturing facilities into valuable biogas. This biogas will be utilized in a combined heat and power (CHP) system to produce both electricity and heat, thereby improving energy efficiency and reducing the facility's environmental footprint.

The project aims to optimize anaerobic digestion processes to achieve higher biogas yields, ensure process stability, and fully integrate the system into the company's existing energy infrastructure. Through this initiative, the company targets significant reductions in waste disposal costs and greenhouse gas emissions, while advancing circular economy practices within the industrial environment.

The innovative aspect of this project lies in the development of modular, containerized, and scalable biogas production units that can be rapidly deployed on-site across various facilities. Unlike conventional large-scale biogas plants, this system is designed to be adaptable to different types of food waste profiles and varying production capacities. In addition, the project will incorporate advanced digital monitoring and real-time process optimization to ensure maximum efficiency and operational flexibility.

The company is actively seeking technology partners and solution providers experienced in reactor design, biogas system components, energy conversion technologies, and digital process management to co-develop and implement this system.

Advantages and innovations

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Technical specification or expertise sought

The company is seeking technology providers and research partners to jointly develop and supply key components and systems required for the successful implementation of the on-site biogas production solution.

Specifically, the company is looking for partners with expertise in:

Anaerobic Digestion Reactor Design:
Advanced, high-efficiency reactor systems tailored for food waste and adaptable to different industrial settings.

Energy Integration:
Technologies and solutions to effectively convert biogas into useful energy (heat and/or electricity) and integrate this energy into existing factory operations.

Modular System Design:
Experience in developing containerized, scalable, and easily replicable systems suitable for deployment in multiple industrial plants.

The company will focus on piloting and applying the system on-site. The primary need is for technology providers who can co-develop, supply, or customize the required biogas production and energy conversion technologies.

Stage of development

Concept stage

Sustainable Development goals

- **Goal 11: Sustainable Cities and Communities**
- **Goal 13: Climate Action**
- **Goal 6: Clean Water and Sanitation**

IPR Status

IPR granted

IPR Notes

Partner Sought

Expected role of the partner

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Type of partnership

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Type and size of the partner

- **R&D Institution**
- **SME <=10**
- **SME 50 - 249**
- **SME 11-49**
- **University**

Dissemination

Technology keywords

- **04007001 - Energy management**
- **04006 - Biogas and anaerobic digestion (AD)**
- **04002010 - Combined heat and power (CHP) engines**

Market keywords

- **06010003 - Energy for Industry**
- **06003009 - Biomass and Biofuels**
- **06003006 - Combined heat and power (co-generation)**

Targeted countries

- **World**

Sector groups involved

- **Retail**