



Sustainability action · Project Renewable Energy and Energy Efficiency

Mamak landfill gas recovery, Turkey

This Gold Standard VER project is concerned with how the landfill gas, which is produced during the decay of the organic matter disposed of in landfills, is used to generate clean electricity.

Project

The two landfill sites are handling the waste of millions of inhabitants from two Turkish metropolitan regions. Approximately 60% of the waste consists of organic materials.

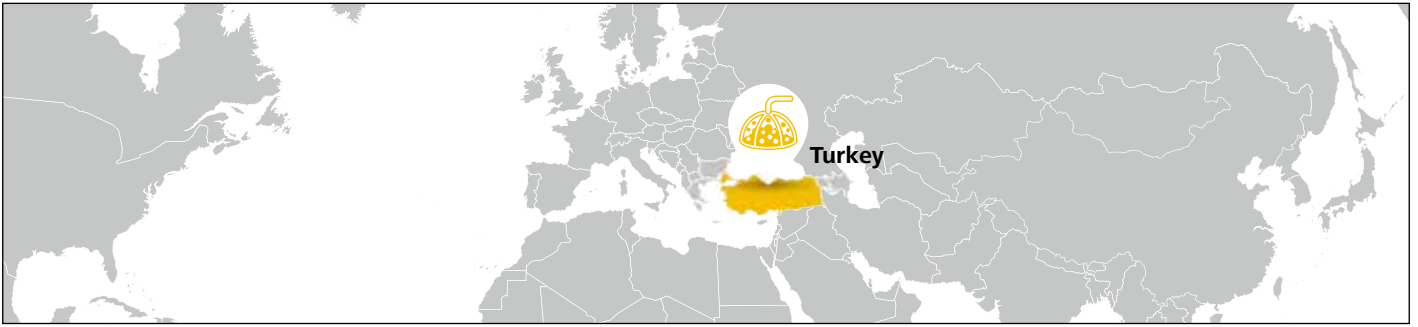
The project owner's vision is to develop the landfill as a "zero waste" landfill, where the environmental impacts of the existing and future land filled waste is limited, or even neutralised. This includes two solutions: the first for the existing waste and the second for the fresh waste entering the landfill. The solution for the existing waste is the implementation of a Land Fill Gas (LFG) extraction and

utilisation system. For the fresh (or future) waste, the envisaged solution is the implementation of a bio-digester and a gasifier. The successful implementation of this vision is considered to be only viable with the income from carbon credits.

Furthermore, the project includes a sorting facility and recycling centre. The successful implementation of the first two phases creates the financial stability required for the implementation of the third phase of the "zero-waste" vision. The collected landfill gas, consisting mostly of methane, one of the strongest greenhouse gases, is not only avoided from being released into the atmosphere but is also used for sustainable electricity generation in a 22.6MW gas engine, displacing fossil fuel power from the Turkish grid.

Directly on the project site in Ankara, huge greenhouses have been built to grow tomatoes and strawberries, heated by clean energy.

Checklist	Additionality and permanence	3 rd party verified	Transparency	Annual CO ₂ -reduction	Social and environmental benefits	Marketing material
Project 300 708	According to the rules of the Gold Standard Foundation	By TÜV Süd	Provided by the Gold Standard Registry	570,000 tCO ₂ e	As documented in our database	High resolution pictures available



Location

The landfill gas recovery project is located in the metropolitan regions of Turkey's capital Ankara in the center of the country, and in Adana, an important agricultural and industrial center close to the Mediterranean shore.

Project achievements

Socio-economic impact

- Waste heat from the Ankara project gas engines is also used for the heating of nearby greenhouses that produce cluster tomatoes without any demand for fossil fuels. Now that the city got rid of the landfill emissions, residents are provided with fresh high quality vegetables.
- 100% material recovery has been achieved within the sorting system.
- Temporary jobs for locals have been generated in the construction phase.
- The creation of permanent jobs in operation and maintenance of the waste sorting, in recycling, and in the power station, benefits the local employment situation.
- The rehabilitation of former landfill sites is enabling new residential areas.

Environmental impact

- The LFG collection wells led to a significant reduction of odours and to the amendment of local air quality.

Gold Standard



thesouthpolegroup.com/projects

Andrea Rumiz
Director Key Accounts

Phone +41 43 501 35 50
sales@thesouthpolegroup.com