

## HUNGARY: Palhalma Biogas Project

Kyoto Mechanism:	Joint Implementation
Project Category (UNFCCC):	Construction of generating plants operated with renewable energy sources (biogas)
Location:	Palhalma/Dunaujvaros
Emission Reductions purchased:	162.608 t CO <sub>2eq</sub>

The project foresees the installation of a biogas plant that is fed with agricultural waste primarily from the own animal husbandries. The biogas plant and its storages solve the manure management problems of Palhalmai Agrospecial Kft, as the project displaces the old and leaking system. Approximately **15.000t cattle manure** and **40.000t pig manure** as well as wastewater from pig husbandries and slaughterhouse waste will be used in the biogas plant. The biogas plant is located at Palhalmai Agrospecial Kft which is about 60 km to the southwest of Budapest.

The biogas is combusted in two biogas engines (combined heat and power engines each with a capacity of 836 kW<sub>el</sub> and 934 kW<sub>therm</sub>), where electricity (13.376 MWh/a) and heat (14.944 MWh/a) is generated.

The electricity is sold and feed into the public Hungarian electricity grid. Heat is used in the nearby prison laundry. Hot water for washing machines is produced and water for steam production is preheated. The digested substrates are used to fertilize the fields and thus Palhalmai Agrospecial Kft is able to reduce its chemical fertilizer demand.

Due to the controlled anaerobic fermentation, the biogas capturing and the combustion of the biogas in combined heat and power engines, methane emissions are avoided. In addition electricity and heat is produced from renewable energy and displaces electricity and heat from fossil fuel fired power plants.

