



TESLA ECO SOLUTIONS

EXPERIENCE WITH 100% COW MANURE REFINERY



Using renewable energy for private use is part of Heiko and Reinhold Hofmann's farming concept. Together with their families, 5 employees and one trainee both brothers run a dairy farm with 420 livestock units - amongst which are 300 young animals and 50 breeding bulls - in Hungen, a village located in the area of Gießen, Germany.



The farm's premises consists of 400 acres of arable land, 200 acres of grassland, three stable buildings and three residential buildings. Installing the liquid manure processing system took place after three months of earthworks and the plant was commissioned one month after that. The fermenter comprises 600 cubic meters and the combined heat and power CHP unit generates a 75 kilowatts per hour output which results in yearly savings of about 10.000 liters of fuel oil.

Until the plant was commissioned the manure was simply spread on the fields. With the slurry processing plant the slurry is now used to generate electricity and gas. With the CHP unit not only the farm's three residential buildings are heated, their neighbors are provided with heat also. The electricity generated is fed fully into the grid.



The daily farm routine also involves a quick fermenter check by one of the brothers. One of the farmer's son inspects the plant more closely later on. He checks if it's running at full load. If this is not the case, he regulates the feed via a pump. Every now and then the engine's oil has to be changed.