

Emley Anaerobic Digester

- **Local authority area:** Kirklees Metropolitan District Council (Emley)
- **Stakeholders:** Clayton Hall Farm, CO2Sense

Summary

CO2Sense has helped Clayton Hall Farm negotiate the technical and financial aspects of the anaerobic digestion (AD) facility that has been built on the farm, and given the farm owners a £200,000 loan to help finance the plant.

Background

- Clayton Hall Farm, located in Emley, West Yorkshire, decided to change from rearing livestock to creating an AD facility and growing energy crops on the farm.
- An AD plant will enable the farm to generate a new income by processing food waste with energy crops and selling the clean electricity generated by the plant back to the national grid.
- The AD facility will process a combined total of 10,000 tonnes of food waste and energy crops per year. This biogas produced by this process will generate 2,400MWh of clean electricity each year, enough to power 500 homes, and save 36,000 tonnes of carbon dioxide over the next ten years.
- It will be the first plant in Yorkshire to use both food waste and crops grown specifically to generate energy.

Method

- After submitting a planning application for the AD plant, the owners contacted CO2Sense to get technical and financial support for the development of the plant. Using knowledge from our experts, CO2Sense helped the farm to complete their grid connection application, successfully submitting the initial grid connection enquiry on behalf of the farm.
- CO2Sense also helped the farm to develop their applications to regional and national funding bodies. Through CO2Sense's experience with funding, the project was able to give the right information to the right contacts to make sure they had as many financial opportunities as possible. This has in turn helped to attract £850,000 of private sector funding.



- CO2Sense has also directly funded the AD plant with a £200,000 loan. This will be paid back once the plant is generating electricity and making income. This means that these funds can then be recycled to support other renewable energy projects in the region.
- Once the project had secured the permits and funding, CO2Sense then helped Clayton Hall Farm to plan the establishment of the actual plant. We were able to write the business plan for the plant, establish financial models and make sure there was a structured plan in place for the building of the facility.
- Andy Lowe, CO2Sense Project Manager, who worked with Clayton Hall Farm in developing the AD plant, said, “Because of the funding and support provided by CO2Sense, Clayton Hall Farm AD plant will be able to process a significant amount of food waste, generate clean electricity as well as saving carbon and creating profit for a farm-based business.”
- CO2Sense also helped the plant to find new sources of food waste that can be processed to generate electricity.
- The farm had intended to pay for food waste, but CO2Sense helped them to find a source that would pay the farm to remove the waste. So the AD plant has made more savings and more food waste has been diverted from landfill.

Result - Key outcomes and impact

- CO2Sense was able to provide the skills and funding that the farm needed to make this plant viable and to speed up development. The AD plant is now constructed operational.

Key contact

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