

Client – Austrey Farm AD Plant – PreMix Feed System

Location – Tamworth

Feedstock – Energy Crops

Design Output – 1 MWe



Marches Biogas were asked by Austrey Farm AD to install a Vogelsang PreMix feed system as a replacement to the existing Vogelsang QuickMix feed system, in order to reduce running & maintenance costs, and increase reliability of larger feed volumes.

The reliability of the feed system is key to any plant, consistently presenting the feed material to the process in order that it can operate at its design output.

Issues associated with the existing QuickMix feed system included:

- A high wear rate on the pump lobes from non-organic objects and high fibre feedstocks
- Seal failures
- Steam in the feed box from the warm return liquid interfering with level transducers
- Large feed quantities pushing feeding times to the limit.

The PreMix system employs a dry feed auger that conveys the material to a primary macerator, there it is mixed with incoming return liquid, and a large dropout box allows the removal of any foreign objects. The enclosed nature of the system increases reliability, with the absence of exposed level transducers which can be affected by steam. The fast transfer rate of the auger and macerator significantly increase the feed rate and reduce feed times. This results in a lower wear rate and consistent feeds.

Marches Biogas was brought in to design the integration of the new PreMix system into the front end of the plant. Marches Biogas carried out the mechanical and electrical installation using their engineers who kept down-time to a minimum which coincided with other onsite scheduled maintenance. Commissioning was carried out by Marches Biogas who integrated the process control with the existing plant control system. *“Given the time pressure on the installation Marches Biogas worked very effectively to complete the job in a professional manner. The PreMix system is extremely reliable, and every feed cycle is identical. This in turn has stabilised biogas production and the consistency of output from our gas consumers.”* Christian Corbett, Austrey Farm AD.



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