

Dry Anaerobic Digestion Plant Fife

BIOFerm Dry AD plant; 1.6 MW_{el}



References

Biogas plant to feed into the electrical grid and the local district heating network.

■ Project data:

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|---------------------|---|
| Owner and operator: | Council of Fife, Schottland |
| Plant engineering: | JV Lochhead Energy; Schmack Biogas GmbH (subcontractor) |
| Location: | Fife, Scotland |
| Start of operation: | July 2013 |

■ Energy balance:

| | |
|---------------------|---|
| Feed-in capacity/a: | Approx. 13 million kWh/a electric and 14 million kWh/a thermal output; potential electric power requirement for approx. 3.300* households* as well as heat supply for approx. 800 households*. <small>*3-person household in Germany with 120m² living area incl. hot water generation.</small> |
| Energy efficiency: | High energy efficiency through the utilisation of heat in the local district heating network and electricity (feed-in the grid) all year round. |
| Feed-in: | Electrical grid and local district heating network. |

■ Input material:

40,000 t organic waste (brown bin) and 3,000 t food waste per year

■ Plant data:

| Quantity | Plant component | Dimension/Capacity |
|----------|--|----------------------------|
| 1 | Delivery hall with material processing | 950 m ² |
| 1 | Food and kitchen waste delivery with material processing and hygienization | 4,000 t/a |
| 1 | Aeration basin | 200 m ³ |
| 11 | Digester | 30 x 7 x 5 m each |
| 1 | Perkolate tank | 1,600 m ³ |
| 8 | Aeration area | 35 x 7 m each |
| 4 | Hygienization tunnel | 25 x 6.30 x 5 m each |
| 1 | Abluftanlage with Biofilter | 100,000 m ³ |
| 2 | CHP decentral (1 x 1 MW _{el} , 1 x 600 kW _{el}) | 610 kW _{el} total |
| 1 | Boiler with dual-fuel burner | 400 kW _{th} |
| 1 | Control-/ administration building | 350 m ² |