



## Østkraft

Tilbury Green Power

Cofely - Biolacq Energies

Cofely - BES VSG

Cofely - SODC Orleans

**Rothes CoRDe**

Zignago Power

Cofely - BCN

Verdo - Randers

Western Wood Energy Plant

FunderMax - Neudörf

Linz-Mitte

Schneider - Biopower

Boehringer Ingelheim

Swiss Krono - Heiligengrabe

Pfleiderer - Neumarkt

Pfleiderer - Gütersloh

Egger - Pannovoges

EPR - Glanford

Aalborg Energie Teknik a/s Biomass Cogeneration Plant

## Rothes CoRDe LTD, SCOTLAND, UK

**The Rothes CoRDe Ltd. Plant is a biomass-fired CHP plant located in Rothes, Speyside, Scotland with an annual fuel input of 115 000 tons of wet draff from local whisky distilleries and 60 000 tons of clean uncontaminated wood chips.**

The plant utilises a combination of whisky distillery by-product (draff) and wood chips and generates 7.2 MWe – enough to supply 9 000 homes with electricity.

The cogeneration plant also supplies approx. 12 t/h of process steam to an evaporation plant. The CHP plant saves 64 000 tons of CO<sub>2</sub>/year.

### Performance Test

The biomass fired CHP plant was successfully commissioned and handed over in mid-2013. The official performance test, witnessed by Fichtner, indicated the following performance figures:

- | Net power production (compared to guarantee): 104 %
- | Specific fuel consumption (compared to guarantee): 88–92 %
- | Emissions were well below required emission limits

### AET turnkey supply

As a turnkey supplier, AET has designed, supplied, constructed and commissioned the following:

- | Fuel reception, handling and storage systems for draff and wood chips
- | Draff pressing and drying system
- | AET Fuel feeding and dosing system
- | [AET Combustion System](#) with AET Spreader Stoker and AET-Biograte
- | AET Draff combustion system
- | AET Combustion air system
- | Natural gas burner
- | [AET Biomassboiler](#) with superheater and economiser
- | [AET SNCR deNOx system](#)
- | AET Steam air preheaters
- | Bag filter with lime injection system
- | Flue gas system and stack
- | Ash handling system
- | Steam turbine generator
- | Condenser and cooling tower
- | Water/steam system
- | Water treatment plant
- | Platform and stairs
- | Electrical system
- | Instrumentation
- | PLC control and SCADA system
- | Boiler, turbine and service building

### Additional information

- | Two interesting articles have recently been published about the Helius CoRDe Rabobank Ltd. project:
  - | Food & Drink Business Europe (AUG/SEP 2013): "Successful start of new biomass fired cogeneration plant", which provides information about the overall performance and Renewable Obligation Certificate (ROC) in UK. [Read more.](#)
  - | Bioenergy Insight (SEP/OCT 2013): "Cheers to that!" which explains the fuel handling, AET Combustion System and AET Biomass Boiler. [Read more.](#)
- | Official opening Helius CoRDe Biomass plant. On 16th April 2013. HRH The Prince

Boiler: 34 MW<sub>fuel heat input</sub>  
80 bara  
450°C

Electrical: 8,3 MW<sub>e</sub>

Process energy: 8,0 MW<sub>thermal</sub>



*The Rothes CoRDe cogeneration plant produces heat and power.*



*The plant utilises draff which is a by-product of whisky production. This comes from 17 different distilleries and is mixed 50/50 with wood chips.*



*On 16th April 2013, HRH The Prince Charles, Duke of Rothesay, officially opened the Rothes CoRDe 8.3 MWe biomass fired combined heat and power plant at Rothes, Morayshire, Scotland.*

- Charles, Duke of Rothesay, officially opened the Helius CoRDe 8.3 MWe biomass-fired combined heat and power plant at Rothes, Morayshire in Scotland. [Read more.](#)
- Contract awarded for the construction of the biomass combined heat and power plant at Rothes in Speyside that by 2013 will use the by-products of the whisky-making process for energy production. The Rothes project burns the draff with wood chips to generate enough electricity to supply 9 000 homes. [Read more in The Guardian \(04.05.2011\).](#)
- "Fuel flexible biomass boilers are the key word in the modern biomass power and CHP plant industry. AET has supplied plants that combust a wide range of biomass, such as agricultural and forest residues, poultry litter, meat and bone meal etc. Draff from the whisky industry is yet another interesting biomass source. Combusting such by-products is the ideal utilisation of biomass for energy production", says Hans Erik Askou, managing director and one of the founders of AET. (The Bioenergy Site - 31.05.2011). [Read more.](#)
- AET made a presentation at [All Energy 2011](#) and [Power Gen 2011](#) in Milan on the topic: "Efficient Utilisation of Distillery By-products" with the Rothes CoRDe plant as a case study.

#### Questions? Need detailed information?

To obtain more information about this biomass plant and/or generally about Aalborg Energie Technik a/s:

[Contact AET sales here](#)

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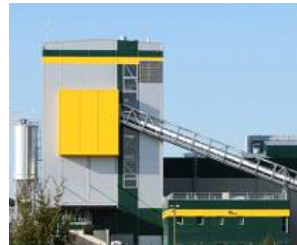
Rothes CoRDe Ltd is a biomass fired cogeneration plant in Scotland fuelled by a whisky by-product and clean wood.

[Read more about Rothes CoRDe.](#)



The SODC Orléans cogeneration plant supplies district heating to 15,000 homes, equivalent to 27% of the city of Orléans.

[Read more about SODC Orléans](#)



In Landes, France, a 50 MW biomass fired plant was successfully delivered to Cofely Engie (former GDF SUEZ) in May 2015.

[Read more about BES VSG.](#)



The Biolacq Energies project, in Lacq, is a biomass fired CHP plant of 54 MW, that utilises forestrywood, and clean, uncontaminated residues from wood processing.

[Read more about Biolacq](#)

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#### Zignago Power s.r.l.–successfully producing Green Energy in Italy

The 49 MW Zignago Biomass power plant in Italy, owned and managed by Zignago Power s.r.l., belonging to the wellknown Marzotto family, has since its installation in 2013 been running with a very high availability (98.8%). The plant utilises wood residues and agricultural waste such as straw, miscanthus and maize. [>Read more](#)



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