



PowerCrop - Russi

Akuo Energy - CBN

JG Pears - Newark

Tilbury Green Power

Østkraft

Cofely - Biolacq Energies

Cofely - BES VSG

Cofely - SODC Orleans

Rothes CoRDe

Zignago Power

Cofely - BCN

Verdo Production - Randers

Western Wood Energy Plant

FunderMax - Neudörfel

Linz-Mitte

Boehringer Ingelheim

Schneider - Biopower

Swiss Krono - Heiligengrabe

Pfleiderer - Neumarkt

Pfleiderer - Gütersloh

Egger - Pannovoges

EPR - Glanford

Aalborg Energie Teknik a/s (AET) Biomass Power Plant:

Western Wood Energy Plant, Wales, UK

The Western Wood Energy Plant (WWEP) is a biomass-fired power plant built and owned by Western Bio-energy Ltd.

The WWEP plant has an annual fuel input of 160,000 tons, which is supplied to the site as residual forestry timber, bark, brash bales, wood chips, saw mill residues and wood chips from clean/uncontaminated, recycled wood.

The biomass power plant was successfully commissioned and handed over in OCT 2008; 18 days ahead of schedule. A performance test showed that:

- | The overall cycle efficiency was 30%
- | The boiler efficiency was tested to 92%
- | The in-house power consumption for the whole plant was only: 2.4% of fuel heat input (1150 kW)

UK's Highest Availability

In 2009, a 6-month availability test was conducted and the overall availability for the whole power plant showed an impressive 99% (Apr - Oct 2009).

The initial high availability has continued for the first five years of operation and the plant still has the highest availability amongst all biomass-fired plants in the UK. Please see the data published by OFGEM.

Increase of Electrical Output

The electrical output has been increased by 1 MWe during an improvement made in 2009.

Turnkey Delivery

The delivery was carried out in a consortium between AET and a partner. AET designed, supplied, constructed and commissioned the following scope:

- | Fuel storage and preparation
- | AET fuel feeding and dosing system
- | [AET Combustion System](#) with AET Spreader Stoker and AET-Biograte
- | [AET Biomass boiler](#) with superheater and economiser
- | AET Combustion air system
- | Steam air preheaters
- | Feed water system
- | Oil burner
- | Ash handling system
- | Bag filter
- | Flue gas system and stack
- | Piping and ducting
- | Insulation
- | Structural steel for boiler house
- | Platforms and stairs
- | PLC control and SCADA system for the full plant
- | Instrumentation
- | Heat balance optimisation
- | AET, together with the consortium partner, also performed a [6 year O&M contract for the project](#).

Additional information

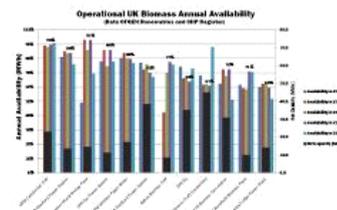
- | A presentation was made at [PowerGen 2011](#) and [All Energy 2012](#) about the project, showing the unique performance. [Please contact sales for further information.](#)

Boiler: 48 MW_{fuel heat input}
92 bara
512°C

Electrical: 16 MW_e



The biomass power plant has a 48MW_{th} Biomass Boiler with the newest [AET Combustion System](#) which fulfils stringent emission criteria without the use of SNCR and lime.



Western Wood Energy Plant had UK's highest availability - Data from OFGEM

- The Western Wood Energy Plant is Wales' first commercial scale biomass project which generates 14MWe by burning forestry wood and clean wood processing residues in an AET state-of-the-art combustion plant. [Read more](#)
- British Bioenergy News (2007): The £33 million flagship project, which will burn clean wood from sustainable forestry will be built in Port Talbot. The plant will only use clean wood material from sustainably managed forests and saw mills. This carbon neutral method of generating electricity will displace approximately 47,000 tonnes of carbon dioxide emissions. [Read more](#)

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 forestry wood, 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 Marzotto family empire, 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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