



## AET Biomass Cogeneration Plant

The AET Biomass Cogeneration Plant is designed for you who want to produce heat and power and appreciate excellent and well-documented performance and availability.

### Benefits for You

The benefits of an AET Cogeneration Plant includes:

- The high performing [AET Biomass Boiler](#)
  - High boiler efficiency
  - Low in-house power consumption
  - Low flue gas emissions
  - [High fuel flexibility](#) - low operating cost
  - High combustion efficiency
  - Best Available Technology
- Fast load response
  - Plant reacts quickly in accordance with varying steam demands
- High plant efficiency
  - Optimised heat balance
  - Good business case for you
- High availability
  - Improved business case for you

Determining the optimal design for a biomass-fired combined heat involves in many parameters such as optimal operating conditions, fuel, boiler, turbine, steam/water cycle, heat requirements.

AET can assist you in optimising the plant parameters as our expert employees have many years of experience and extensive knowledge of steam cycles, boiler systems and steam turbines.

### AET Biomass Cogeneration Plant parameters

The AET combined heat and power (CHP) plants can be designed for all types of biomass. The high efficiency, very stable electricity production and extremely high availability ensure a good business case for you as the investor. The design parameters below form the basic platform for our plants:

Fuel heat input	25 – 170 MWth
Net electrical power output	7 - 60 MWe
Net plant efficiency	45 - 90% depending on steam requirements and process integration 70 - 190% depending on district heating requirements and process integration
Boiler design	Water tube boiler with natural circulation Single pressure or double pressure (reheat, e.g. 140 bar and 25 bar)
Operating time	At least 8000 hours without shutdown for manual cleaning
Boiler efficiency	91% - 94% depending on fuel moisture
Emission values	Better than European requirements (large boiler or WID)
Fuel flexibility	Fuel moisture content: 10 - 5%
Auxiliary burner	Not necessary
In-house power consumption	<2.5% of fuel heat input
Availability	Better than 96%.

To see some of AET Biomass Cogeneration Plants, click on the links below:

### Process integration:

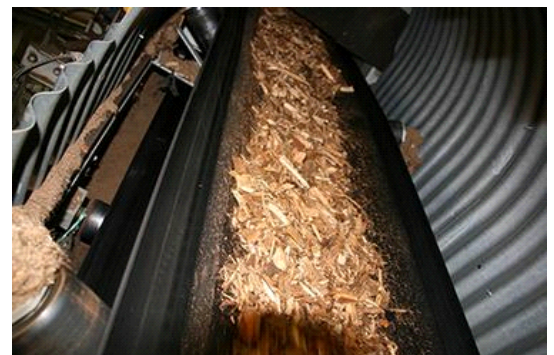
- [Solvay - Rheinberg](#)
- [Akvo Energy - CBN](#)
- [JG Pears - Newark](#)
- [ENGIE Cofely - Biolacq Energies](#)



18% of all district heating for Linz, the third-largest city of Austria, is served by a biomass-fired combined heat and power (CHP) plant.



Boehringer Ingelheim Pharma KG, Germany, a 70 MW power plant, using waste wood as fuel.



- [ENGIE Cofely - BES VSG](#)
- [Rothes CorDE - Speyside](#)
- [ENGIE Cofely - BCN](#)
- [FunderMax - Neudörf](#)
- [Best Wood Schneider](#)
- [Boehringer Ingelheim](#)
- [Swiss Krono - Heiligengrabe](#)
- [Pfleiderer - Gütersloh](#)
- [Pfleiderer - Neumarkt](#)

District heating:

- [Østkraft - Rønne](#)
- [ENGIE Cofely - SODC Orléans](#)
- [Zignago Power](#)
- [Verdo Production - Randers](#)
- [Linz-Mitte](#)

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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](#)



Tilbury Green Power is a 125 MW waste wood-fired plant, which commenced operations in 2017.

[Read more about Tilbury Green Power](#)



JG Pears – Newark is a 42 MW MBM-fired cogeneration plant, which commenced operations in 2018.

[Read more about JG Pears - Newark](#)



Akuo Energy - CBN is a 63 MW wood-fired cogeneration plant, which commenced operations in early 2019.

[Read more about Akuo Energy - CBN](#)

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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](#)

