Aalborg Energie Technik a/s



Press Release

Aalborg, Denmark, 16 May, 2019

Aalborg Energie Technik a/s (AET) hands over turnkey biomass-fired cogeneration plant in France

In 2016, Akuo Energy entrusted AET with the supply of AET Biomass Boiler, steam turbine, condenser, balance of plant, connection to the Gemdoubs paper mill and with the buildings for the Cogénération Biomasse de Novillars (CBN) plant.

AET is happy to announce that the plant is handed over to Akuo Energy, and this is done within time, budget and guaranteed performance. At the same time, the plant has been handed over to AET Biomasse de Novillars S.A.S. (ABN), and the company has started a 16 year operation and maintenance contract of the cogeneration plant in cooperation with Akuo operation teams (in charge of asset management, fuel supply and O&M for fuel handling).



Cogénération Biomasse de Novillars.

Supply within Time, Performance and Budget

AET has, since the contract was signed, strived to reach each individual milestone as agreed in the time schedule. The steel work for the boiler house was erected on the promised day: 22 DEC 2017. The plant was synchronised on the agreed date: 08 AUG 2018. The start of 24 hour operation was 17 SEP 2018; several days ahead. The plant was handed over at the beginning of 2019: On time.

The technical guarantees were tested by Bureau Veritas and consisted among others of:

 The performance was guaranteed at cogeneration mode and at condensing mode. Both performance guarantees were fulfilled as the overall net efficiency was better than promised. It was

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also noted that the in-house power consumption for condensing mode at 20 MW_e gross was less than 1,100 kW. This is only 1,9% of fuel heat input, for a 63 MW_t/20 MW_e plant at 120 bara.

- All emissions were lower than the guaranteed values and without use of SNCR, also for very dry fuel.
- Furthermore, the internal and external noise levels were guaranteed and fulfilled.

Moreover, the plant was successfully stress-tested in various operational situations, proving that it trouble-free handles quick changes in fuel quality, plant load as well as rapidly changing steam consumption (>10 tonnes/hour per min) from the paper mill.

The professionalism by and the trust between the two parties also had an economical benefit. When comparing the contract value in the original contract and with the realised project, the variation of the contract value was close to 1%; only due to some minor scope changes.

John H. Jakobsen, project manager, AET: "We strive to go for the right solution, which gives us a unique performance and we focus on fulfilling our schedule or even supplying before the scheduled date".

When doing business with AET, the investor is ensured a high degree of safety, as we supply on time, budget and performance.

EPC: Working Together

Pierre Adrien, Asset Manager, Akuo Energy: "On behalf on CBN and the Akuo project team, I would like to address our sincere thanks and respect for AET's professionalism, patience and result oriented attitude. We hope that we'll be able in the future to renew our cooperation on the construction of another project and we look forward to carry on this new phase of the Novillars project alongside with AET".

Hans Erik Askou, CEO, AET: "We are pleased and proud of having handed over yet another successful AET biomass-fired cogeneration plant. This success was possible, when Akuo Energy and AET cooperated in a positive, constructive and proactive way as if we were partners. We also look forward to working closely with you all, to carry the success of a well-constructed plant into a well-performing plant, for the benefit of all of us".

16 year Operation and Maintenance by AET Biomasse de Novillars S.A.S. (ABN)

Now ABN has to perform 16 years' operation and maintenance of the cogeneration plant, primarily with a team based at Novillars and secondly with support from AET's head office in Aalborg, Denmark. ABN is responsible for supplying power and steam to Gemdoubs paper mill above an agreed number of operation hours per year and above an agreed overall efficiency. To support the high availability, there is an event based maintenance system and all operational information is available at AET's head office.

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About the Akuo Group:

Akuo Energy develops, finances, builds and operates renewable energy power plants all over the world. Akuo Energy is the first French green IPP. It develops and operates power plants that go beyond simply producing renewable power and create additional social benefits for the inhabitants of the areas in which they live. In 2019 Akuo Energy has 1192 MW_e capacity in service and under construction. Group revenues of the Akuo Group were 205 mEUR in 2017. As a pure player in renewable energy, Akuo Energy has diversified both in terms of technologies (wind, solar, biomass cogeneration, hydro, marine thermal) and geographies. At the end of 2017 Akuo Energy had fourteen branches and implantations in the world – following an approach that is both opportunistic and focused on niche markets.



About Gemdoubs:

Gemdoubs is a paper mill located in Novillars (25), with a 100 years' tradition for producing paper products. It produces annually 80,000 tonnes of paper for packaging from recovered paper and cardboard. It exports more than 35% of this paper destined mainly to the manufacturers of corrugated packaging for agro-food, industry and e-commerce.





About Aalborg Energie Technik (AET):

The Danish company AET is a leading, independent engineering and contracting company supplying biomass-fired boiler plants, power plants, and combined heat and power plants (CHP) in the size range of 25 to 170 MW_t .

The AET business comprises design, engineering, delivery and service of plants fired with all types of biomass. The well-proven AET Biomass Boiler and AET Combustion System are based on more than 30 years of hands-on experience with industrial processes, steam generation and biomass combustion.

The company has a well-known and recognised reputation for supplying biomass-fired boilers and plants with exceptionally high efficiencies, high availabilities, high fuel flexibility and low emissions. Moreover, with very low maintenance costs, the AET biomass-fired plants ensure the investor a viable business case.

AET Biomasse de Novillars S.A.S. (ABN) is a subsidary company of AET.

www.aet-biomass.com