

**WASTE WOOD-FIRED POWER PLANT, 40 MWe****Margam  
Port Talbot, South Wales**

The developer Eco2 secured the site and planning consent to develop the biomass facility in Margam, Port Talbot. Following a competitive tender, Babcock & Wilcox Vølund and Interserve were awarded an EPC/turnkey contract for the facility. To further de-risk the project for the plant owner, Glenmont Partners, who secured financing for the scheme and purchased the project at financial close, B&W Vølund entered a 15-year contract to provide full operations and maintenance services.

The new biomass plant will be capable of processing waste wood, including contaminated wood and fuel containing metals, with no pre-treatment required.

The plant will generate 40 MW of green electricity, which is enough to supply 78,000 homes, and provide local employment opportunities through the construction and operational phases.



# Margam

## Port Talbot, South Wales

### The solution

B&W Vølund were selected due to their solution-based approach and ability to de-risk the project for the plant owner, including the following features:

- **EPC solution** – A turnkey solution will be provided.
- **Construction partner in the UK** – B&W Vølund always work with UK construction partners who have track records in the renewable energy sector and ensure that all UK regulation and associated requirements are fully complied with, e.g. CDM and health and safety regulations.
- **Technology** – B&W Vølund supply a proven and bankable technology giving excellent fuel flexibility and maximised efficiency, availability and plant performance backed by operational references and guarantees.
- **Funding support** – A Danish government guarantee was provided through Denmark's Export Credit Agency (EKF) for 80% of the debt finance. As well as support from EKF, B&W Vølund also work with other renewable energy investors to support future biomass and WtE projects.
- **Construction programme** – The plant will be delivered within a tight time frame set in the ROC subsidy scheme.
- **Operation and maintenance (O&M)** – A long-term O&M contract backed by performance and availability guarantees has been entered.

All of the above features significantly de-risk the project for the project developers and the plant owner.

### The technology

B&W Vølund's technology concept is based on in-house knowledge and many years of experience and provides high efficiency, availability and performance combined with a robust design to give an extended design life.

B&W Vølund's solution is based on the patented DynaGrate® technology, providing excellent fuel flexibility.

The key benefits for the plant owner are:

- Many good references
- Few fuel constraints
- Improved and simplified fuel handling
- Fly ash disposal costs significantly reduced
- Full recovery of ferrous metal from bottom ash

B&W Vølund have signed three 15- year O&M contracts in the UK, including one for the Margam plant in Port Talbot. All of these plants and future UK plants will benefit from B&W Vølund having a UK-focused structure in place with the added benefits of prompt servicing and provision of spares.



Plant design data		
Process parameters	Values*	Units
Waste capacity	35	t/h
Heat value	13.1	MJ/kg
Steam output	159.9	t/h
Steam temperature	500	°C
Steam pressure	80	bar
Boiler outlet flue gas temp.	227	°C
Feed water temperature	194	°C

\* All values refer to 11% O<sub>2</sub> dry gas

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