

Delivering Energy to Industry
Combined Heat and Power in Practice

Millennium Chemicals – Grimsby



'Over the past 18 months we have built a strong relationship with Millennium Inorganic Chemicals. The acquisition of the CHP plant was an excellent opportunity to grow our business, while offering stability and security of supplies to the customer.'

Ian Russell, O&M Director npower cogen

Millennium Chemicals – Grimsby

Millennium Chemicals manufactures Titanium Dioxide which is used to provide the white pigment colouring in a wide range of products including paint, plastics and pharmaceuticals. npower cogen bought the CHP plant in 2004 after TXU (the previous owners of the CHP plant) went into administration, and now operates the CHP plant to meet the energy demands of the production site.

The scheme

The scheme is based on two gas turbine generators and two supplementary/auxiliary fired waste heat recovery boilers combined with a steam turbine. The plant was acquired by npower cogen in February 2004.

The technology

Two 6MW gas turbines, two 60 tonne per hour waste heat recovery boilers and a 3MW steam turbine generator operate with an overall efficiency in excess of 80% compared with around 36% for a conventional power station and 56% for a CCGT. The heat and electrical efficiencies achieved qualify the scheme as 'Good Quality CHP' under DEFRA's 'CHP Quality Assurance Programme'.

Contract terms

npower cogen owns and operates the CHP scheme, selling electricity under a long-term contract to Millennium Chemicals as well as the steam produced at the plant. npower cogen provides backup electricity supplies from the grid.



How Millennium Chemicals gains

The scheme's fuel efficiency and the contract terms result in significant savings for Millennium Chemicals on their annual energy expenditure. In addition to this they originally benefited from replacing the old steam plant with a new utilities plant on their site without major capital expenditure. Meanwhile the environment gains from Millennium Chemicals' use of CHP technology to meet its energy needs.

To find out how a CHP scheme could benefit your organisation, contact us at:

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