

Delivering Energy to Industry
Combined Heat and Power in Practice

Dow Corning – Barry



'Dow Corning is very happy to be working with cogen, a recognised industry leader in this field.'

Robin Pitcher, Director, Dow Corning Ltd.

Dow Corning – Barry

Dow Corning Limited, part of Dow Corning Corporation the global leader in silicon based products, has invested in a new silicone facility at its Barry plant in South Wales. Dow Corning has a 15 year contract with npower cogen to supply electricity, steam and water from a CHP plant.

CHP at Dow Corning

The CHP plant has been built in two phases to coincide with the development of Dow Corning's chemical plant. It comprises 28MWe of gas and steam turbine generation plant with multiple high pressure waste heat recovery boilers and low pressure boilers, providing a total of 250 tonnes per hour steam capacity. In addition three water treatment streams provide boiler feed water and process water to Dow Corning. Phase One of the CHP scheme entered commercial operation in June 1998 and Phase Two began in late 1999.

The technology

With two 6.5MW Tornado gas turbines and a 15MW Thermodyn steam turbine the CHP plant has an overall efficiency of around 85%. The plant uses substantially less fuel than conventional methods of generating heat and power. The heat and electrical efficiencies achieved qualify the scheme as 'Good Quality CHP' under DEFRA's 'CHP Quality Assurance Programme'.



Contract terms

npower cogen has built, owns and operates the £38 million CHP scheme supplying electricity under a long-term contract to Dow Corning along with the steam and process water it produces. npower cogen exports power to, and provides backup electricity supplies from the grid.

How Dow Corning gains

The scheme's fuel efficiency and the contract terms result in Dow Corning making significant savings in their energy expenditure. They also benefit from having a new utilities plant on their site without major capital expenditure. Meanwhile, the environment gains from Dow Corning's 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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