

Case Study



Shirebrook Coal Mines Gas



Client	Capacity	Location	Operational
UK Coal	10MWe	Shirebrook Colliery, Derbyshire	2002

Manufacturer	Packager	Type	Primary fuel
GE Jenbacher	Clarke Energy Ltd, UK	5 x 2MWe JGS 616 GS-S.L	Coal Mines Gas

Site Description:

The versatility of the GE Jenbacher engine is demonstrated with the GE Jenbacher's first application in the UK in a mines gas operation. The 5 purpose built Jenbacher 616GS-S/L gas engine generators use methane gas produced from miles of abandoned mine tunnels at the former Shirebrook Colliery in Derbyshire. The 10MW available from the installation is enough to supply electricity to 10,000 homes. The methane gas that is prevented from escaping would otherwise contribute to the greenhouse effect (the equivalent of around 280,000 tonnes per year of carbon dioxide).

To support a mines gas operation, the site is connected to a natural gas transmission system, to allow a dual fuel facility. GE Jenbacher engines have the flexibility to switch from mines gas to natural gas without any loss of performance, important when the pressure of the mines gas fluctuates. The new site was officially opened by Energy Minister, Helen Liddell, who recognised the importance of coal methane as a sustainable source of energy when she described the mine gas scheme as an 'innovative and positive use of a natural resource'.

One of the practical features among many modern design highlights is a saving on servicing time by bringing oil tanks inside the warmer building and thereby speeding up pumping operations.



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