

West Burton B power station



West Burton B is a new CCGT (Combined Cycle Gas Turbine) gas power station and has a capacity of 1305 MW. It is situated in the county of Nottinghamshire in England, approximately 250km north of London. West Burton B is adjacent to the West Burton A coal-fired power station (2000 MW) and close to the Cottam coal-fired power station (2000 MW). These power plants are all operated by EDF Energy and employ a total of 500 employees.

West Burton B in numbers

- It provides enough power for approximately **1.5 million homes**
- During peak construction, there were **2,000 construction workers on site** at the same time
- The power station has created around **50 permanent new jobs** in the area
- During construction the project used **70,000 cubic meters of concrete**, 5,500 tonnes of steel framework and 1,500 kilometers of cable

N'imprimez ce message que si vous en avez l'utilité.

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Background and history

2005: decision to build a new gas fired power station of 3 units with 435 MW each

2007: Site preparation work at West Burton and planning permission granted in April of that year.

2008: The construction site officially opened and civil works commenced.

2011-2012: Works completed and first tests

2013: Units came into commercial operation.

West Burton B: an innovative and efficient power station

This project demonstrates EDF's commitment to generate electricity from a diversified energy mix. West Burton B is a new design gas power station, which is fully flexible.

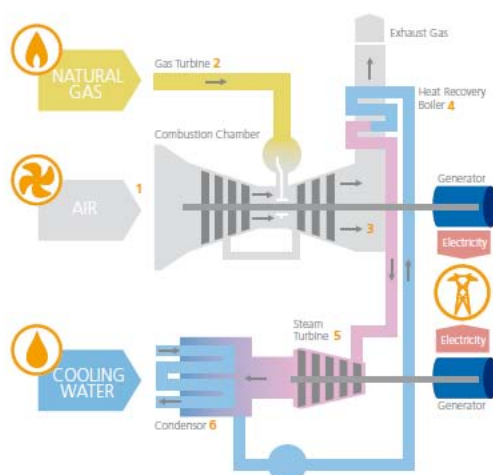
It can be switched on and off in less than one hour in order to respond to market demand and it can provide back up to low carbon energy, such as nuclear and renewables.



From an environmental viewpoint, the CCGTs are the best performing of all the thermal resources. Because they use gas (a fuel that is cleaner than coal or oil) and due to their exceptional output efficiency (57% against 35% for a conventional phase), they discharge less than half the CO₂ of the conventional resources.

How does a CCGT work?

Natural gas is a relatively clean fuel and readily available.



- 1 Ambient air is compressed and mixed into natural gas.
- 2 This is burnt in the combustion chambers of the gas turbine.
- 3 The gas expansion rotates the turbine side of the gas turbine. An associated generator produces electrical power.
- 4 Exhaust heat is recovered by the heat recovery steam generator to produce good quality steam.
- 5 Steam is used by a steam turbine and associated generator to produce electrical power.
- 6 Condensate is cooled and allows the demineralised water from the cycle to be re-used in a closed loop.
- 7 Electrical energy is sent to the grid via the 400kV substation.