

Generation Capacity

The demand for gas and electricity in the UK is very high and can vary from season to season. During the winter, the demand often increases when the weather gets colder. The energy sector has to make sure it is able to produce enough gas and electricity to meet demand all year round.

The energy sector has always maintained 'surplus capacity'; the cushion of additional energy that can be switched on to meet higher than normal demand. This protects against spikes in demand and means households and businesses have power when they want it. However, a number of power stations are reaching the end of their lifespan or being shut down for environmental or economic reasons. Power plants - across the coal, oil and nuclear industries - have already closed and more are likely to by the year 2023. Meanwhile, only a small number of new developments have been confirmed (due to policy uncertainty).

The facts

- ▶ **Plants being shut down:** A number of power plants due to be shut down between now and 2023. This includes coal and oil plants that have reached the end of their lifespans; are being shut down because they are no longer profitable; or are being closed due to the move towards a lower carbon energy mix.
- ▶ **Plants being mothballed:** A small number of gas plants are mothballed because they are not currently profitable. When a plant is mothballed it is taken out of service but it is not fully decommissioned. This means it could be turned back on if needed. The longer that it is out of use, the harder and more expensive it is to bring back into service.
- ▶ **Plants being built:** At the moment there are eight new plants under construction: seven wind farms and one gas plant. These are due to be completed by 2016.
- ▶ **Difference in capacity:** For the most part we are closing or mothballing larger plants than those we are opening. There is a growing gap between capacity coming off and capacity coming on which needs to be plugged if we are to maintain security of supply in the long term.
- ▶ **New Nuclear:** The Government has said it wants to build new nuclear generators as a way of reducing the UK's carbon emissions. One reactor, at Hinkley in Somerset with the potential to power thousands of homes has been given the go-ahead by the Government and there are proposals for more.
- ▶ **New renewables:** The renewables sector has seen a number of announcements recently. The Government has approved planning applications for a number of wind farms and biomass plants in recent months. This will further increase the size of the UK's low carbon generation sector.
- ▶ **Future construction:** The energy industry wants to invest in new generation but timing is key. There are many plants planned for the next few years, but they may never be built. There are many reasons why a planned power plant might not see the light of day, from planning permission to investment shortfalls, this makes it very hard to predict which planned plants will actually get built.