Distributed Generation
"The way forward"

What is distributed generation?

Distributed generation, sometimes called embedded generation, is electricity generation, which is connected to the distribution network rather than the high voltage transmission network. It is typically smaller generation such as renewable generation, including small hydro, wind and solar power and smaller Combined Heat and Power.

The development of distributed generation has an important part to play in meeting the Government's long-term environmental targets.

The obstacles facing distributed generation

- Today's distribution networks have been built to deliver power from the national transmission network to the end customer. Distributed generation, however, requires more active distribution networks which allow electricity to flow in two directions – to the electricity user for consumption in homes or businesses, and on to the network when the user is exporting excess generation capacity.
- Under the current arrangements, smaller renewable generators have found it difficult and expensive to connect to the distribution networks.

Ofgem's role in helping remove these obstacles

Ofgem is addressing the issues facing distributed generation to ensure that its development is not unfairly treated by the way in which networks are currently operated and regulated.

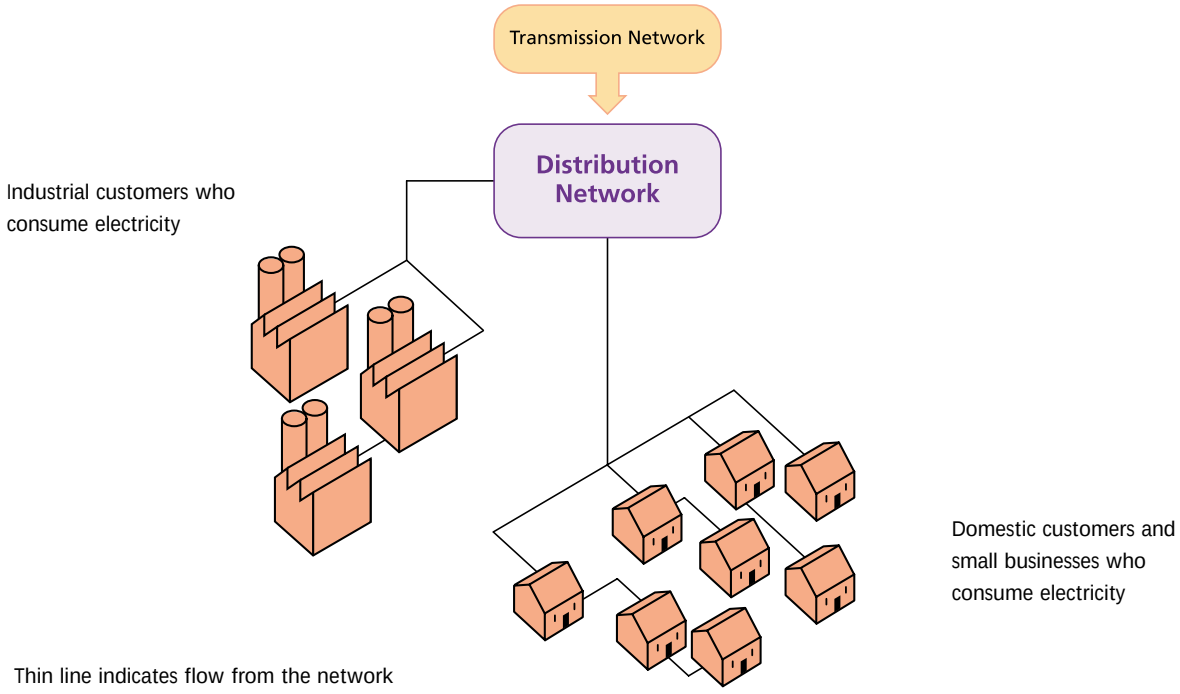
Following a consultation in September 2001, Ofgem is now proposing some initial measures to embrace technological developments and provide a fair and transparent regime for distributed generation, so it can establish itself in the UK's electricity market. Ofgem has also identified further changes that should be actively considered over the coming months.

In looking at these issues, Ofgem's overriding aim is to ensure that any future changes continue to deliver to electricity customers a safe and secure, good quality electricity supply at a fair price.

Ofgem's proposals

These proposals are aimed at helping remove obstacles which might unfairly prevent development of distributed generation by looking at **a)** what should be done to change the regulatory regime in the short term and **b)** what should be considered in the next distribution price control review, which is due to start this year.

Distribution network – conventional



a) Removing barriers to connection by:

- allowing generators the option of spreading the cost of connecting to the distribution network
- making it easier for domestic Combined Heat and Power generators (customers who have heating systems which can generate electricity) to connect to the networks by establishing a standard connections procedure
- reimbursing distributed generators some of the initial connection fee when another generator connects to the same part of the network, which they have already paid for.

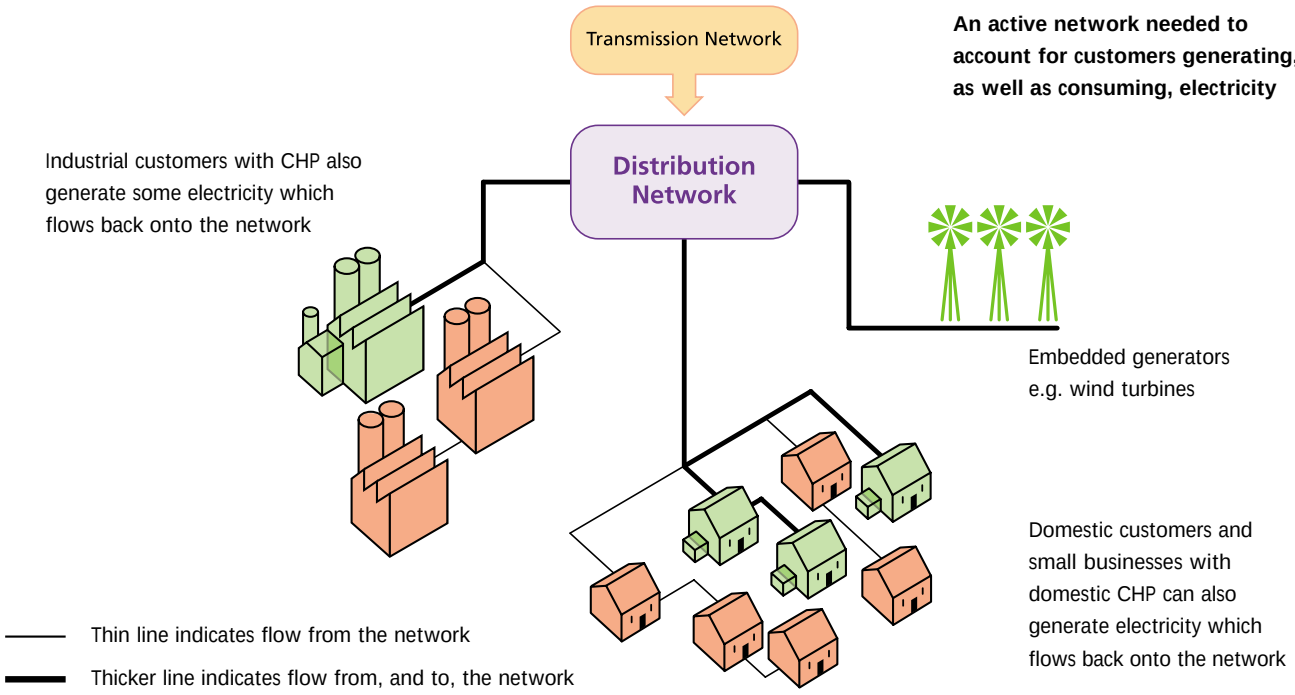
Network issues

- clear information from distributors on preparation of quotations for connections to the network
- clarify the technical and commercial benefits of distributed generation.

Metering

- look at the best way to record and meter the amount of electricity that is used against the amount that is put back onto the distribution network by a home with domestic CHP – and consequently how their bills should be calculated to reflect it. This will make it easier for people to have domestic CHP in their homes.

Distribution network – with distributed generation



b) The next distribution price control review should consider:

- developing appropriate incentives in the price control for distributors to connect distributed generation to their systems
- setting out more clearly the difference between the amount that generators are charged for connecting to the system and the amount they pay to put electricity on to the network more clearly
- how distributed generation should be taken account of within the distribution price control process.

Types of distributed generation

- **Wind power** – is experiencing growth and is becoming more efficient as technologies develop.
- **Central heating boilers (domestic CHP)** – domestic central heating boilers that generate electricity as well as produce heat for the home. Highly energy efficient. This is not yet available commercially.
- **Combined Heat and Power** – a power station produces electricity and power and heat for use locally.
- **Photovoltaic solar cells** – can be built into the roofs of homes to provide power.

Work that has already taken place

January 2001	Embedded Generation Working Group (EGWG) published their draft report on the implications which an increase in embedded generation would have on access to the electricity networks
6 April 2001	Ofgem published response to EGWG recommendation proposals
May 2001	EGWG published supplementary document
27 September 2001	Ofgem published first consultation paper on issues surrounding embedded generation
26 March 2002	Ofgem published a summary of responses to the September consultation together with recommendations

Future work

April 2002	Supplement new interim changes, if agreed
Later 2002	Work begins on Distribution Price Control review
April 2005	New distribution price control takes effect

The joint DTI/Ofgem Distributed Generation Co-ordinating Group has now been established, together with a technical steering group to support its work.

For more information about Ofgem's work regarding distributed generation, you can contact:

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