

## Investing in Britain's energy transmission networks

**Energy regulator Ofgem has published its final proposals for the revenues the companies that run the four gas and electricity transmission networks can raise from customers between 2007 and 2012. Ofgem's proposals represent an unprecedented 100 per cent increase in authorised investment since the last price controls were set.**

### Who are the transmission companies?

The four gas and electricity transmission companies are:

- National Grid Electricity Transmission (NGET), which owns the network in England and Wales
- Scottish Hydro-Electric Transmission Limited (SHETL), which owns the northern Scotland networks, and
- Scottish Power Transmission Limited (SPTL), owner of the southern Scotland network
- National Grid Gas (NGG) owns the national high-pressure gas transportation system.

### Major challenges facing the energy networks between 2007 and 2012

These four companies face major challenges over the next five years to adapt the networks to the changing needs of their customers.

- Investment is needed so the companies can replace infrastructure, particularly electricity network equipment, so that current high levels of reliability can be maintained.
- There has been major growth in the amount of renewable generators wanting to connect to the electricity networks, particularly in Scotland. This means new transmission connections will need to be built and parts of the networks will need to be reinforced.
- Around £10 billion is being invested in Britain's gas infrastructure including import pipelines, terminals and storage projects. Investment in the gas network is needed to accommodate these facilities.

## Capital expenditure

The companies require significant increases in their capital expenditure allowances to undertake these challenges. The table below summarises Ofgem's final proposals for the companies' capital expenditure requirements.

National Grid Gas NTS	National Grid Electricity Transmission Limited	Scottish Power Transmission Limited	Scottish Hydro-Electric Transmission Limited	Total
£825m	£2997m	£608m	£181m	<b>£4.6bn</b>
Already agreed investment to connect new low-carbon generation during the price control period.		<b>£530m – already authorised for investment in the networks in Scotland and northern England under the Transmission Investment for Renewable Generation regime in 2004.</b>		
				<b>Grand total £5.1bn</b>

**These allowances represent an unprecedented 100 per cent increase in authorised investment since the last price controls were set.**

## Safety net mechanism

To safeguard consumers against any under-investment, if a company's investment falls by more than 20 per cent below its allowance in any year, this will trigger an automatic review of its capital expenditure allowance.

## Cost of capital

Ofgem sets the cost of capital which is the allowed rate of return the companies can recoup when they invest in their networks. Ofgem has proposed a real post-tax cost of capital of 4.4 per cent for all four companies. This is lower

than the 4.8 per cent set for the electricity distribution companies in the light of continuing evidence of relatively low interest rates.

## Flexibility in the price control

As part of the review Ofgem is introducing new flexible mechanisms enabling it to adjust the companies' revenue allowances, either up or down, in response to the needs of users of the networks. The need for this arises from uncertainty over which low-carbon generation or gas import projects will go ahead and when they will be

completed. If these projects do go ahead then the flexibility will allow the transmission companies to make additional investments. If the companies' high case estimates prove correct, this could add a further £1 billion of investment, potentially increasing the total to as much as £6 billion.

## Impact of the price controls on customer bills

To fund these investments, overall transmission charges to consumers will initially increase by 8 per cent against the companies' current revenue allowances for 2006-2007. To reflect rising investment levels, electricity transmission revenues will then increase by a further 2 per cent above the rate of inflation each year thereafter, while gas

transmission revenues will increase in line with inflation. However, the effect on domestic customers will be relatively small as transmission only makes up around 3 per cent of household energy bills. Customer bills will therefore rise by £2.75 for 2007/08 and increase by £3.80 in 20011/12 (in current prices).

## Making the energy transmission networks more sustainable

Two important initiatives have been proposed to tackle the impact the transmission systems have on the environment.

- An innovation funding incentive will encourage them to invest 0.5 per cent of their revenue in research and development for programmes targeted on environmental improvement. This equates to a minimum of £500,000 per year for each company. In electricity, research and development may, for example, include examining alternative designs for pylons so that their visual impact could be reduced.
- Another incentive will encourage the network businesses to reduce leakage of sulphur hexafluoride – a potent greenhouse gas used in high-voltage apparatus.

## Additional work to help renewables

Ofgem is tackling concerns that viable low-carbon electricity generation projects which are ready to proceed may face delays in obtaining network connections. Fourteen gigawatts of low-carbon generation, mainly in Scotland, have been proposed, but these projects are at varying degrees of development and many need to obtain planning permission.

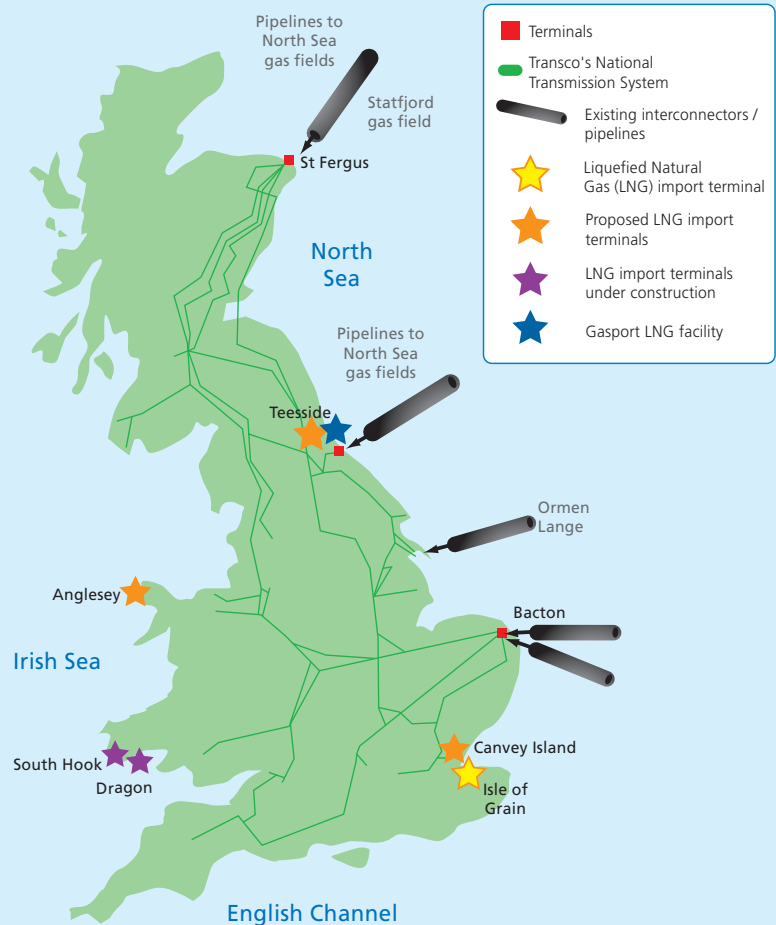
Ofgem has proposed that generators should be required to confirm their readiness to proceed by making a financial commitment to pay transmission charges prior to a

connection being built. This new initiative could remove the need for the financial guarantees that generators currently have to provide to secure their connection. The price control would then automatically respond to provide funding for the necessary investment in the network. The industry is now developing this approach into proposals for changing the codes of practice which govern connections to electricity networks.

## Next steps

The companies have until January 8, 2007 to respond to the final proposals. If accepted by the companies the finalised controls will take effect from 1 April 2007 and run to 31 March 2012.

### Proposed improvements to Britain's gas infrastructure



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