



UK Gas and Electricity Prices

Posted by [Chris Vernon](#) on August 19, 2006 - 9:15am in [The Oil Drum: Europe](#)

Topic: [Economics/Finance](#)

Tags: [electricity](#), [gas](#), [powergen](#), [united kingdom](#) [[list all tags](#)]

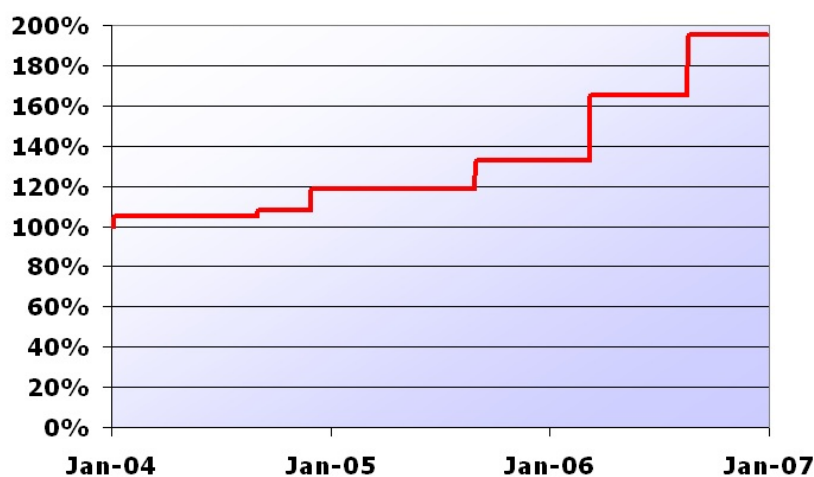
On Monday 21st August 2006 Powergen, one of the largest gas and electricity suppliers in the UK with around 9 million customers will be raising their domestic prices again. Electricity and gas prices will rise by 9.7% and 18.4% respectively, these rises being attributed to *"increasing wholesale costs, which have risen by 87% for both electricity and gas since the beginning of last year"* according to the Powergen [press release](#). Of course the interesting thing is *why* the wholesale prices have increased but companies and media don't tend to talk about that.

It seems we hear of similar price increases every few weeks these days, and in fact this announcement from Powergen now means that all the major suppliers (also British Gas, EDF, npower, ScottishPower and Scottish and Southern Energy) have announced two price rises this year.

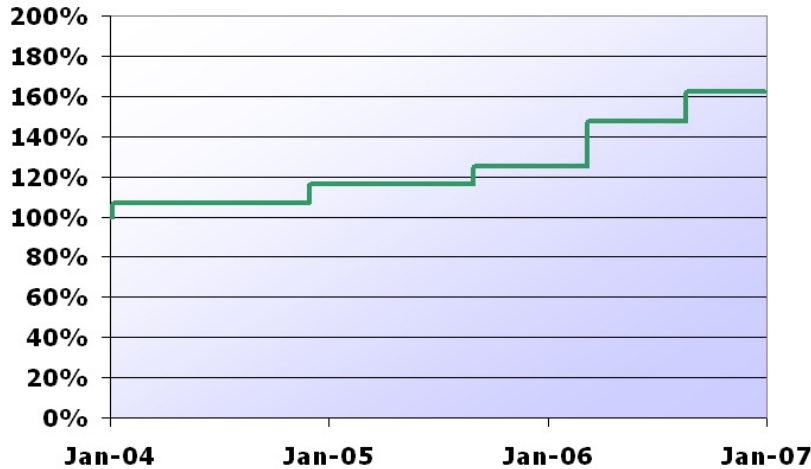
It's easy to lose track of the price rises when they are only announced as percentage increases (the absolute price per kWh varies slightly with location). I've recently been trawling the press releases as reported by BBC News Online[1] to see exactly what has happened with gas and electricity prices over the last few years.

I've only focused on Powergen but I don't expect there are any significant differences between the suppliers. Combining all the price rises announced since the beginning of 2004 results in the following graphs for Powergen's gas and electricity price increases since the start of 2004.

Powergen: Gas Price Increase
(Jan-04=100%)



**Powergen: Electricity Price Increase
(Jan-04= 100%)**



*Powergen's gas and electricity price rises since 1st Jan 2006 (=100%) as reported by BBC News Online.
Click to enlarge.*

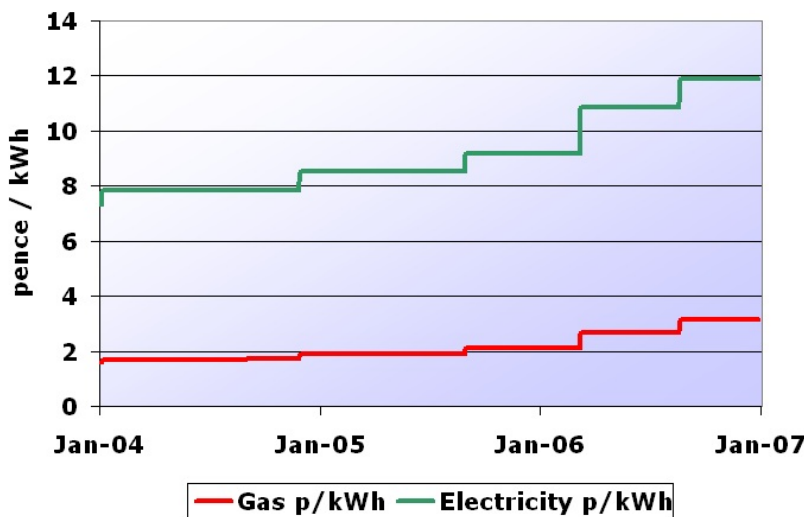
Assuming there won't be another price rise before the end of the year the last three years will have seen Powergen increase the price of gas 95% and electricity 62%.

The price rises have been driven by the price of gas, resulting in a smaller increase in the price of electricity (only 30-40% of electricity is generated from gas). Electricity will always be more expensive per kWh than gas due to the inherent inefficiency of thermal power generation.

After these latest price rises the average annual Powergen gas bill will be £644 and electricity bill will be £392.35 based on based Ofgem average consumption of 20,500 kWh for gas and 3,300 kWh for electricity resulting in 3.14p/kWh for gas and 11.89p/kWh for electricity.

From these numbers we can work back to see how the relative prices have risen.

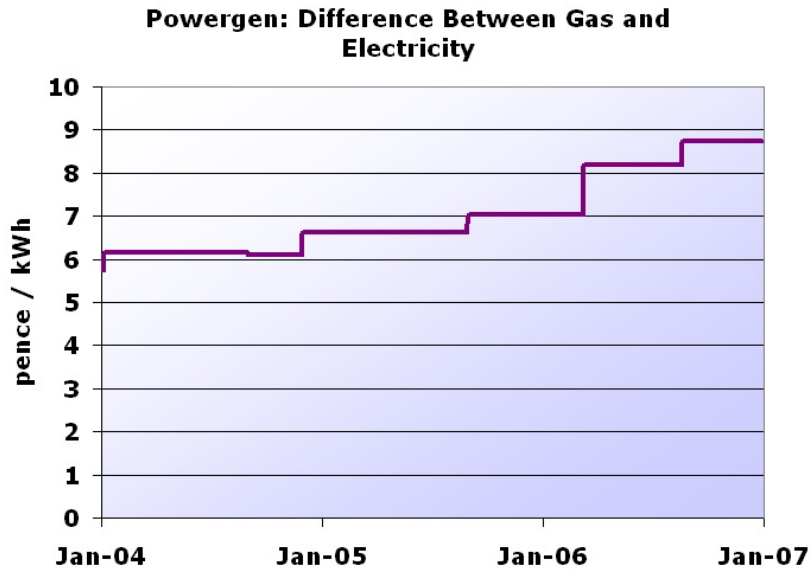
Powergen: Absolute Gas and Electricity Prices



*Powergen's gas and electricity prices (pence/kWh) since 1st Jan 2004.
Click to enlarge.*

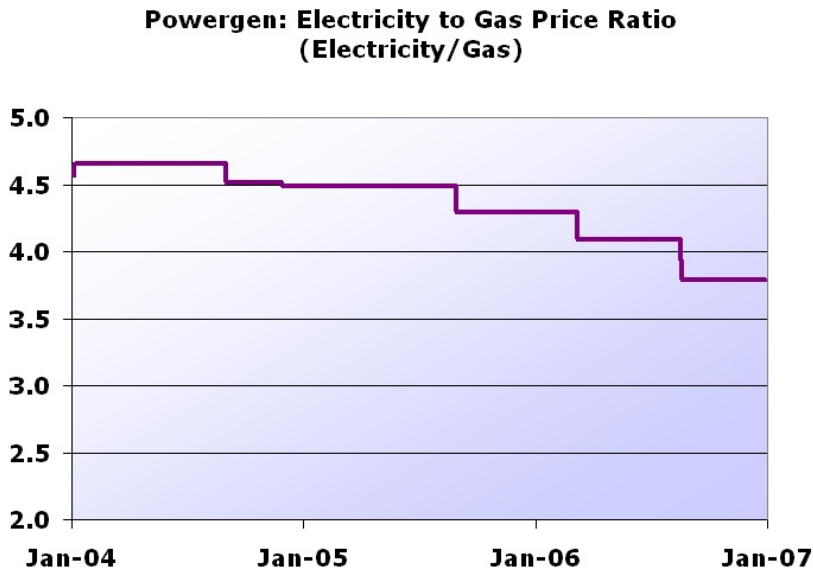
We can see that gas has increased from 1.61 p/kWh to 3.14 p/kWh and electricity has increased

The p/kWh spread between gas and electricity has increased over this period with electricity now commanding an 8.75 p/kWh premium over gas where at the beginning of 2004 this was only 5.73 p/kWh.



Powergen's electricity premium over gas (pence/kWh) since 1st Jan 2004.
Click to enlarge.

Whilst this absolute premium has increased, the relative difference, the ratio between electricity and gas prices has fallen.



Powergen's ratio of electricity to gas prices since 1st Jan 2004. Non-zero scaled.
Click to enlarge.

After the first rise at the start of 2004 electricity was 4.65 times more expensive than gas per kWh. With each subsequent increase this has fallen with the latest announcement reducing the difference to 3.79 times. This has implications for ground source heat pumps which, ignoring the capital costs, can offer 3-4 fold multiplier effect when comparing electricity consumed to heat output.

With gas becoming more expensive its use for electricity generation becomes less attractive. We

have recently seen a dramatic shift away from gas towards coal for this reason, with the data from the first quarter of 2006 revealing that:

Coal supplied 18 per cent more electricity than in the same period a year earlier, while gas supplied 17 per cent less.

[UK Energy Trends, Coal](#)

It's worth looking back just a little further through the BBC archive though. While today's stories are all about price rises, in 2002 there was a very different picture. Wholesale electricity prices had collapsed by half from 1994 to 2002:



Here are a few clippings from 2002:

Power firms brave pricing turmoil

22 October, 2002

You could be forgiven for thinking that the UK power industry is in the middle of a crisis. Powergen has warned that the market is "bust", US firms are deserting the market in droves, and wholesale electricity prices have fallen through the floor.

...the problem is a simple one - there is just too much electricity for sale.

<http://news.bbc.co.uk/1/hi/business/2347105.stm>

UK power crisis deepens

17 October, 2002

The financial crisis in the UK electricity industry has reached a new pitch, as cash flow problems caused fuel supplies to the country's biggest power station to be cut off.

AES, the US firm that owns the Drax plant near Selby in North Yorkshire, could not pay a £12m fuel bill to UK Coal, because it was waiting for a delayed £20m payment from power distributor TXU.

"It's absolute turmoil out there," said Derek Dixon, a consultant with Energy Services Partnership.

"I don't think there can be anybody in the industry making much money, and nobody can be happy with things the way they are."

<http://news.bbc.co.uk/1/hi/business/2337397.stm>

Powergen profits slip

21 February, 2002

UK gas and electricity group Powergen has reported a fall in profits last year.

The group also announced its planned merger with a German firm is on track to be completed by the spring. Powergen made pre-tax profits of £464m in 2001, down from £517m the previous year.

The fall in profits can in part be attributed to the sale of some of its generating assets,

with the money used to help finance its \$3.2bn purchase of US firm LG&E.
Falling electricity prices in the first part of the year also hit the company's balance sheet.
<http://news.bbc.co.uk/1/hi/business/1833279.stm>

So is the current price rise going to be as temporary as the previous price fall? Comparing prices in the UK with others in Europe shows the UK isn't any more expensive, even after these rises so perhaps the aberration was really the low prices at the start of the decade.

One thing I think we can be sure of going forward though is that gas and electricity prices are going to rise. Whether due to expensive imported gas, the construction of expensive nuclear power stations or scarcity bidding up the price due to reduced generation.

* * *

[1] Powergen BBC News articles:

[05-Jan-04](#)

[01-Sep-04](#)

[29-Nov-04](#)

[31-Aug-05](#)

[10-Mar-06](#)

[21-Aug-06](#)



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